Chapter 5. Projections of Aviation Demand

5.1. Introduction

Insight into aviation activity occurring in North Dakota since the 2014 North Dakota State Aviation System Plan (NDSASP) was provided in **Chapter 1. Introduction**. As noted, North Dakota aviation has evolved significantly over the past 10 or more years, with cycles of growth and challenges tied to energy markets, the COVID-19 pandemic, and broader economic shifts. Despite these disruptions, aviation in the state has demonstrated resilience and sustained growth across commercial service, air cargo, general aviation, and agricultural aviation.

This chapter examines and projects several components of aviation in North Dakota over the next 20 years. Forecasts developed in the 2025 NDSASP provide a framework to guide analysis for future development. It should be recognized that there are always short- and long-term fluctuations in demand projections due to a variety of factors that cannot always be anticipated, but the forecasts provide a general indication of expected aviation demand in the state.

Projections of aviation demand developed for system airports are documented in the following sections:

- National Aviation Trends
- Socioeconomic Trends
- Projections of Aviation Demand
  - Commercial Service Activity
  - General Aviation Activity
  - Military Activity
- Summary

Data for each aviation indicator are derived from Federal Aviation Administration (FAA) sources, the 2025 NDSASP Airport Manager Survey, and other industry reports that assess aviation activity. Projections of aviation activity for the state were prepared for the near-term (2029), mid-term (2034), and long-term (2044) timeframes, with a base year of 2024. These projections are unconstrained and assume system airports will be able to develop the various facilities necessary to accommodate future activity.

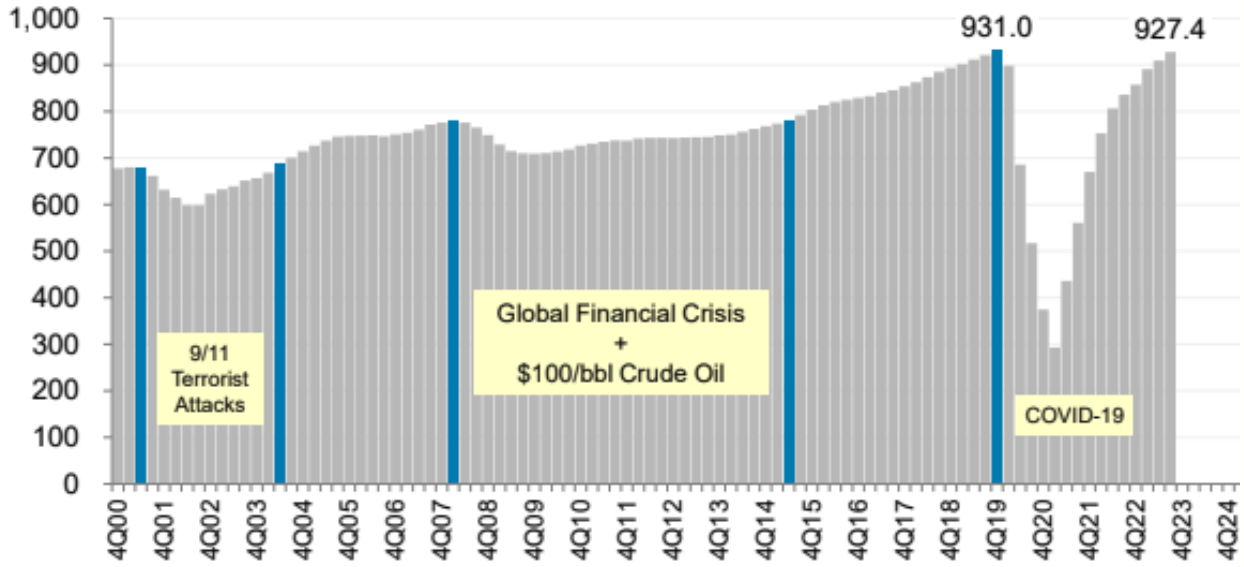
5.2. National Aviation Trends

Trends in national aviation activity are summarized for both commercial service and general aviation in the following sections. The two types of aviation activity are influenced by some similar factors, but also by others that are specific to each industry.

5.2.1. Commercial Service

The following commercial service trends are highlighted for their potential impact on commercial service indicators like enplanements and commercial service operations in North Dakota. **Figure 5-1** presents the changes in U.S. enplanements since 2000. There have been several disrupters that changed the airline industry over the last several decades including 9/11, the financial crisis of 2007-2009 and subsequent recession coupled with high jet fuel prices, and the COVID-19 pandemic. These events have shaped today's commercial service airline industry in various ways.

Figure 5-1. Four-Quarter Rolling Scheduled Service and Charter Passengers Enplaned (millions) on U.S. Airlines



Sources: Airlines for America, 2024; Bureau of Transportation Statistics (Form 41 Schedule T1); Marr Arnold Planning, 2025.

The entire airline industry shifted after the deadliest terror attack on the U.S. on 9/11. Changes in security, increased employee training, and massive layoffs led to changes in commercial airline operating models. The Great Recession of 2007-2009 further strained airline operations. In response to dire financial impacts, the network airlines looked to mergers and hub prioritization to cut costs and operate more efficiently. The Delta/Northwest, United/Continental, American/US Airways mergers left many travellers and communities with fewer travel options. The network airlines continued to prioritize high traffic routes and maximized connections at hubs. As a result, some smaller communities were left with limited, inconvenient, or expensive options. In addition, airline load factor (passengers per flight compared to number of available seats) rose and airlines began ancillary charging fees for meals, bags, and seats assignments to increase profitability.

The COVID-19 pandemic, which began in early 2020, had an even more dramatic impact on the aviation industry. Similar to the airlines' response to the recession of 2007-2009, air service trends shifted significantly during and after the pandemic in conjunction with airline management attempts to focus on recovery and profitability. According to Airlines for America (A4A), U.S. enplanements surpassed 2019 levels in the fourth quarter of 2023. A few key challenges airlines now face include:

- **Workforce Shortages:** Workforce shortages, especially for pilots and air traffic control (ATC), have not allowed airlines to meet demand and more flight disruptions and cancellations than usual have resulted. The FAA continues to face ATC staffing shortages as airline service has returned to pre-pandemic levels. ATC facilities remain understaffed, and the FAA has been unable to quickly address the shortages. This, along with the pilot shortage, has led to airlines reducing flight frequencies or up gauging aircraft in several key markets like New York City.
- **Airline Capacity Discipline:** During the pandemic, airlines operated extremely reduced schedules to cut costs; but as demand roared back, travelers were left with fewer options and limited air service in many markets. Airlines selectively added back routes, reduced redundant flights, and minimized the number of empty seats. A conservative approach in their capacity planning was implemented and still continues. While some carriers increased market share by keeping some of their older equipment in service, increased costs reinforced intentions to retire older equipment, leading most airlines to remain capacity disciplined.
- **Fleet Simplification:** The pandemic led to the early retirement of several types of aircraft in order to cut costs and simplify fleets. This allowed airlines to benefit from higher pilot productivity, lower training costs, lower maintenance expenses, and better fuel efficiency as new aircraft are purchased over the next several years. Delta Air Lines and American Airlines announced the most accelerated fleet retirement schedules. American Airlines retired the Airbus 330, Boeing 757, Boeing 767, and Embraer E190 during the pandemic. Delta Air Lines retired its MD-88s, MD-90s, 737-300s, and 777-200s and phased out its Boeing 717s and 737-300s as well as all 50-seat CRJ-200 aircraft flown by regional partners by 2023. This move not only helped reduce operational costs but also contributed to meeting industry sustainability goals.
- **Shift to Narrowbody Aircraft:** U.S. airlines have shown a preference for narrowbody aircraft, especially for domestic and short-haul routes. Aircraft like the Boeing 737 and Airbus A320 families are popular choices due to their versatility and fuel efficiency. Average seats per domestic U.S. flight have grown from 97 in 2011 to 133 in 2023.[1] According to A4A, passenger airlines operated 402 fewer regional aircraft in 2025 compared to 2019. However, they operated 731 more single-aisle mainline aircraft by 2025.
- **Regional Airlines:** Several regional airlines ceased operations due to the pandemic. Compass and sister carrier Trans States ended operations in April 2020. In addition, United Airlines ended its contract with ExpressJet, whose entire business was operating United Express-branded flights in an attempt to consolidate regional operations.

[1] Airline Data Inc., Schedules database

- **Rebound of Low Cost Carriers**: Low cost carriers (LCCs) led the charge as domestic leisure travel bounced back after travel restrictions were lifted during the pandemic. By 2022, LCC revenue nearly reached prepandemic levels while network carriers, who are more dependent on international and business flying took longer to recover. LCCs have entered more secondary markets and have grown their international presence simultaneously. Shifting dynamics with inflation, fuel costs, new technologies, and labor shortages will continue to impact LCCs profit margins.
- **Fuel Efficiency and Sustainability**: Airlines are increasingly focused on sustainability, with a particular emphasis on investing in fuel-efficient and environmentally friendly aircraft. This included the introduction of new-generation planes with advanced engines and materials, as well as exploration of sustainable aviation fuels.

5.2.2. General Aviation

The FAA provides an annual analysis and projection of both commercial service and general aviation activity, with the *FAA Aerospace Forecasts Fiscal Years 2024-2044* being used for the 2025 NDSASP.[2] The FAA's 20-year projections of general aviation activity are typically conservative and consider the economic environment of the United States and the world. Error! Reference source not found.Error! Reference source not found. highlights historic and projected national trends in general aviation aircraft orders, active aircraft fleet, and operations from the FAA and other national sources.

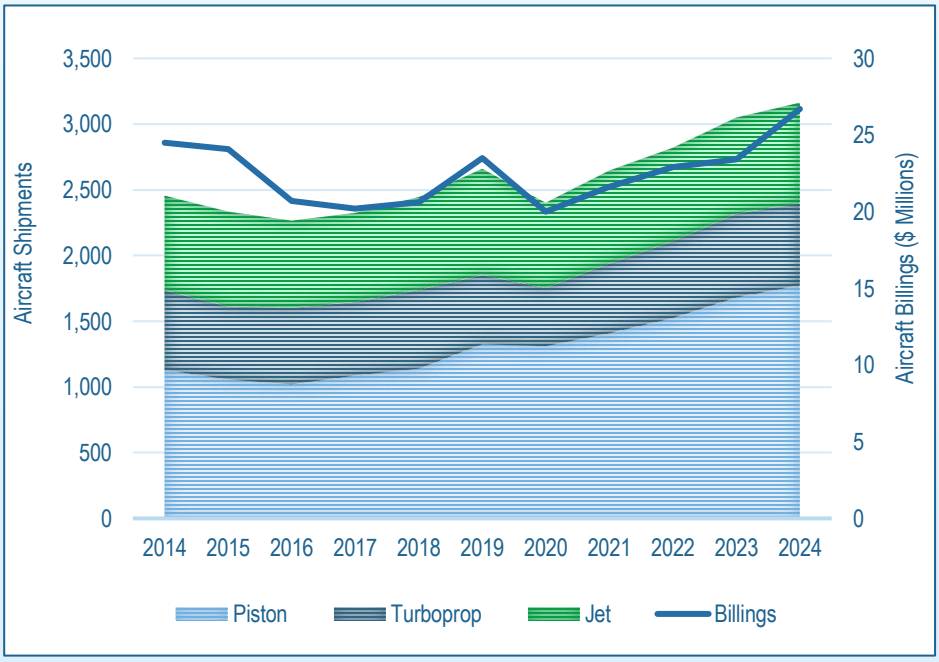
Like all aspects of aviation, the future of general aviation will also be influenced by the evolution of technology and sustainability best practices. The following trends will likely impact general aviation operations at airports in North Dakota over the next 20 years:

- **Electric and Hybrid Aircraft**: Electric and hybrid propulsion systems are becoming more popular in general aviation due to their improved efficiency and lower emissions compared to traditional combustion engines. With advances in battery technology, electric planes are becoming more viable, and many companies are investing in the development of electric aircraft.
- **Drones and Autonomy**: Drones (or uncrewed aircraft systems, UAS) are replacing and/or complementing the use of general aviation aircraft. These vehicles are being used more frequently in general aviation for a variety of applications, including aerial photography, aerial agricultural chemical application, surveying, and search and rescue operations. While fully autonomous large-scale aircraft may be some years away, the use of automation to assist pilots is becoming more common.
- **Advanced Air Mobility (AAM)**: The development of AAM, and specifically urban air mobility (UAM), which is the use of small, electric vertical takeoff and landing (eVTOL) aircraft to transport passengers and cargo in urban areas is an emerging trend in general aviation. These aircraft have the potential to revolutionize transportation in urban areas by providing faster and more efficient transportation options, both in commercial and general aviation applications.

[2] The 2025-2045 FAA Aerospace Forecast was released in May 2025, but the 2024-2044 FAA Aerospace Forecast was used to align with the 2024 base year.

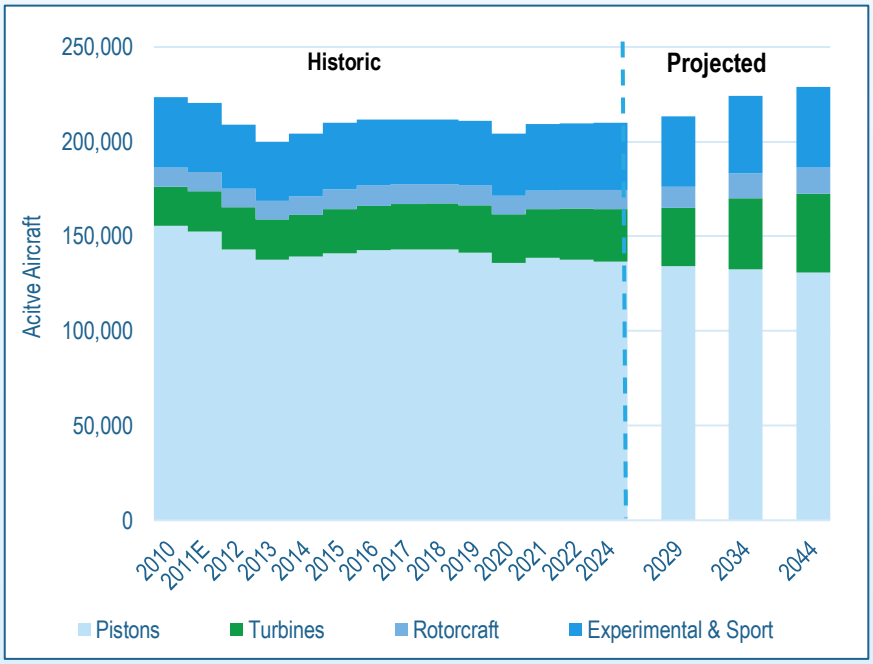
- **New Technologies**: General aviation is seeing increased integration of new technologies that make flying safer and more efficient. Newer aircraft are being equipped with advanced avionics, including synthetic vision, automatic dependent surveillance-broadcast (ADS-B), and enhanced ground proximity warning systems (EGPWS). General aviation aircraft are also becoming more connected, with the use of wi-fi, Bluetooth, and other technologies.
- **Sustainability**: Many general aviation aircraft manufacturers and operators are focusing on sustainability by utilizing sustainable aviation fuels (SAF), reducing waste and emissions, and exploring new ways to reduce their carbon footprint. Many airports now offer SAF, and more aircraft are being designed to run on it. Another aspect of sustainability specific to general aviation is unleaded aviation fuels. While several low-leaded aviation fuels are available in smaller quantities, a compatible wholly unleaded aviation fuel is still under development and testing.

Figure 5-2. National General Aviation Trends and Projections



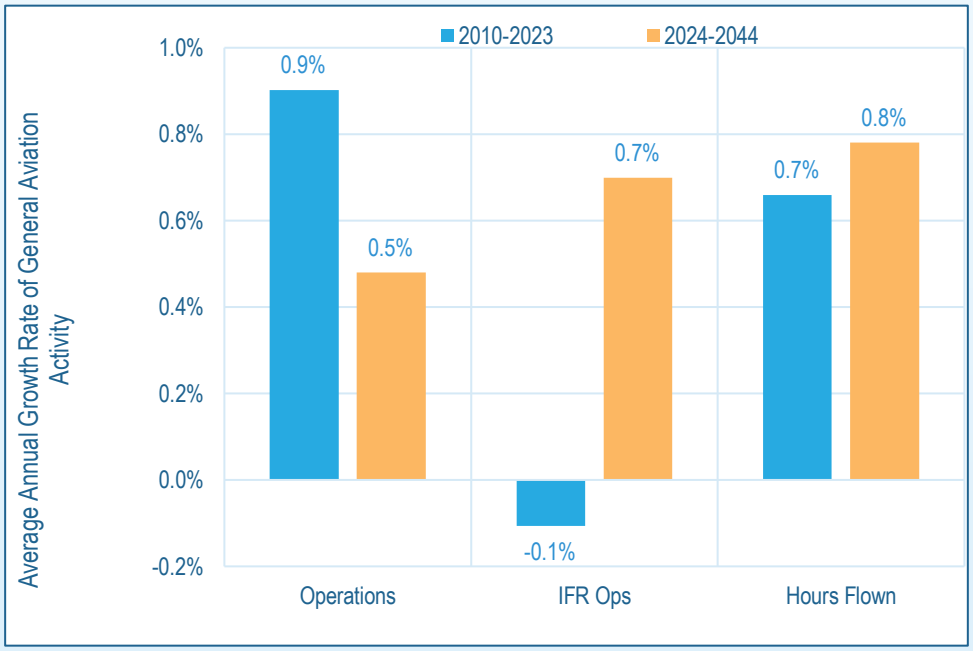
Ten-Year Upward Trend of General Aviation Aircraft Shipments

- Between 2014 and 2024, aircraft production fluctuated slightly and has demonstrated an upward trend over the last 10 years.
- Over 3,000 aircraft shipments occurred in 2024. Piston deliveries reached a 10-year high in 2024, fueled by increased flight training.
- Although total shipments were down 10% in 2020 due to the COVID-19 pandemic, a full recovery had occurred in all segments by 2022.
- Aircraft billings returned fully to pre-COVID levels in 2023.



Limited National Growth in Active Fleet over the Next 20 Years

- Historic 2010-2023: -0.5 % average annual decline in total aircraft driven by declines in piston aircraft.
- Projected growth in jets and turboprops and rotorcraft offsets single-engine and multi-engine piston declines.
- Experimental and light sport aircraft are growing in popularity and becoming an increasingly larger part of the GA fleet.
- 2024-2044 average annual growth rates (AAGRs):
    - Total aircraft: 0.4%
    - Single engine: -0.2%
    - Multi-engine: -0.3%
    - Turboprop: 1.0%
    - Jet: 2.6%
    - Rotorcraft: 1.7%
    - Experimental: 0.7%
    - Sport: 3.0%



Slightly Higher Growth Projected for General Aviation Activity

- 2020 and 2021 GA operations, IFR operations, and hours flown declined due to COVID-19 pandemic but returned to pre-pandemic levels by 2022.
- General aviation operations at towered airports are projected to grow 0.6% per year.
- General aviation instrument flight rule (IFR) operations are projected to increase 0.6% per year.
- Hours flown by general aviation aircraft are projected to increase 0.8% per year.
- 2024-2044 projected annual growth in turbine (2.1%), rotorcraft (2.1%) and experimental aircraft (1.2%) hours flown is expected to offset a decline in fixed wing piston hours flown (-0.6%).

Sources: FAA Aerospace Forecasts Fiscal Years 2024-2044, 2025; GAMA Quarterly Shipments and Billings, 2025; Marr Arnold Planning, 2025.

5.3. Socioeconomic Trends

There are several factors that may influence future aviation activity which are independent of historical airport activity and aviation industry trends. It is worthwhile reviewing socioeconomic and demographic trends to determine how they may also impact future growth. Socioeconomic characteristics are examined to derive an understanding of the dynamics of historical and projected growth within the state, which are likely to influence aviation demand. As socioeconomic activity increases, commercial service and general aviation activity tend to increase as well.

North Dakota and its 53 counties promote healthy and growing economies. The following highlights the current business climate in the state:

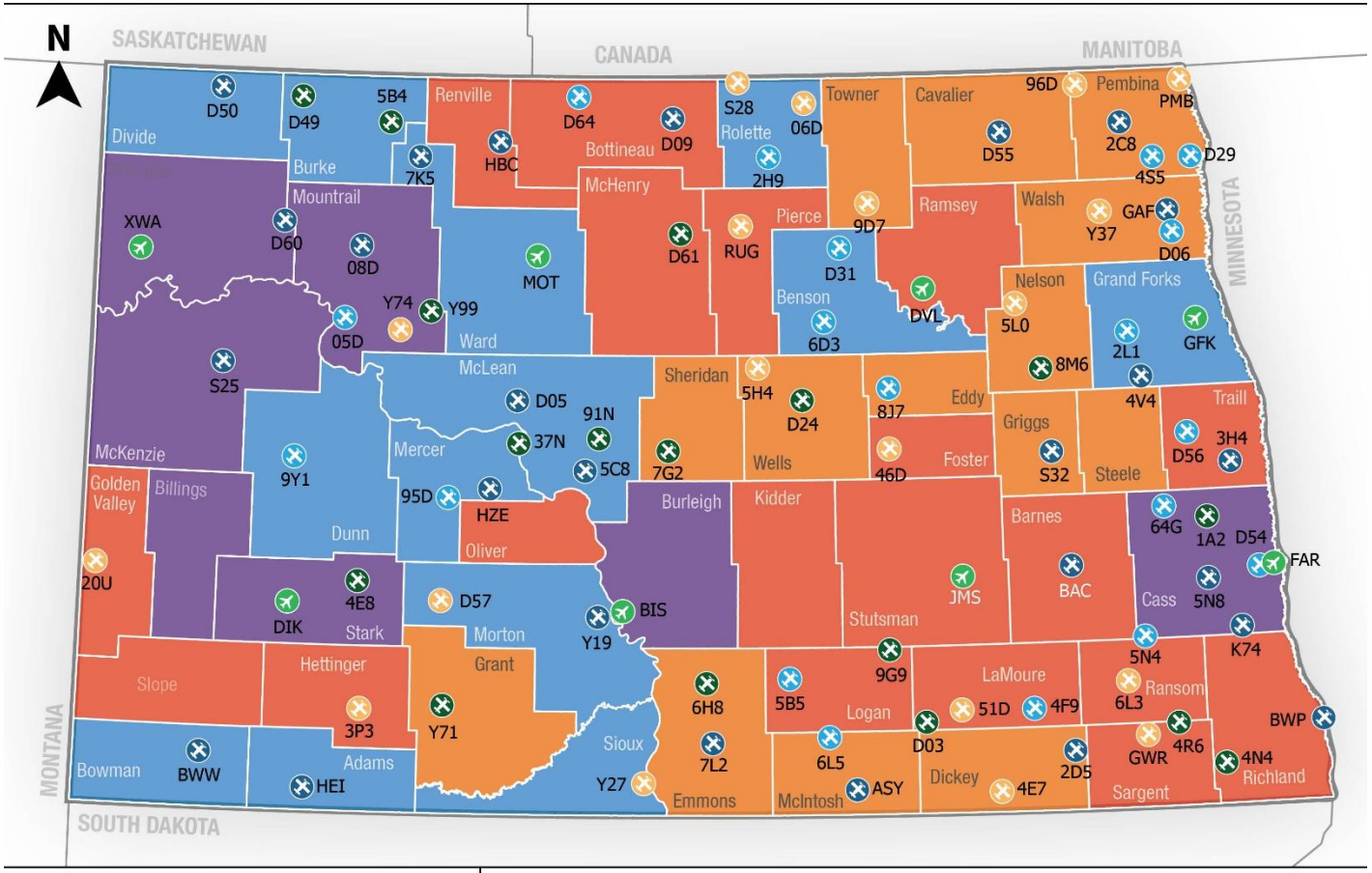
- The top industries in the state include energy and natural resources, food and agriculture, autonomous systems, information technology, tourism, and advanced manufacturing.
- North Dakota's UAS ecosystem is home to nearly 50 UAS companies and leads the nation in supporting the energy industry, public safety, and first responder missions, commercializing intellectual property, and operationalizing federal requirements.[3]
- The state offers financial packages and tax incentives to assist new and expanding businesses.
- The state's Job Service North Dakota program is a one-stop shop for workforce training programs and financial assistance.

North Dakota's statewide population and employment are expected to grow at a compound annual growth rate (CAGR) of 0.57 percent and 1.10 percent, respectively, over the next 20 years.[4] **Figure 5-3** and **Figure 5-4** depict projected population and employment growth by county. More than half of the state's counties are expected to experience population decreases, with compound annual growth rates ranging between -0.06 percent and -1.10 percent for population, likely due to workforce migration within North Dakota. On the other hand, employment declines are projected in far fewer counties, only nine, with CAGRs between -0.02 percent and -0.51percent.

Projections do indicate that over the 20-year planning period, growth will be concentrated in specific geographic regions, primarily in urban centers and the western oil-producing counties. Bismarck and Fargo, two of the largest urban centers, are in Burleigh and Cass Counties and are expected to experience both population and employment growth rates of one percent CAGR or greater over the planning period. The Bakken oil fields located in western North Dakota continue to be a driver of population and employment growth. Four counties (Dunn, McKenzie, Mountrail, and Williams) show similar patterns of growth between population and employment with CAGRs between 1.02 percent and 2.42 percent.

[3] www.nd.gov
[4] Woods and Poole Economics, Inc.

Figure 5-3. Projected Population Growth Rates by County (2024-2044)



COUNTY POPULATION CAGR*

- (-1.10%) – (-0.62%)
- (-0.62%) – (-0.09%)
- (-0.09%) – (0.57%)
- (0.57%) – (2.42%)

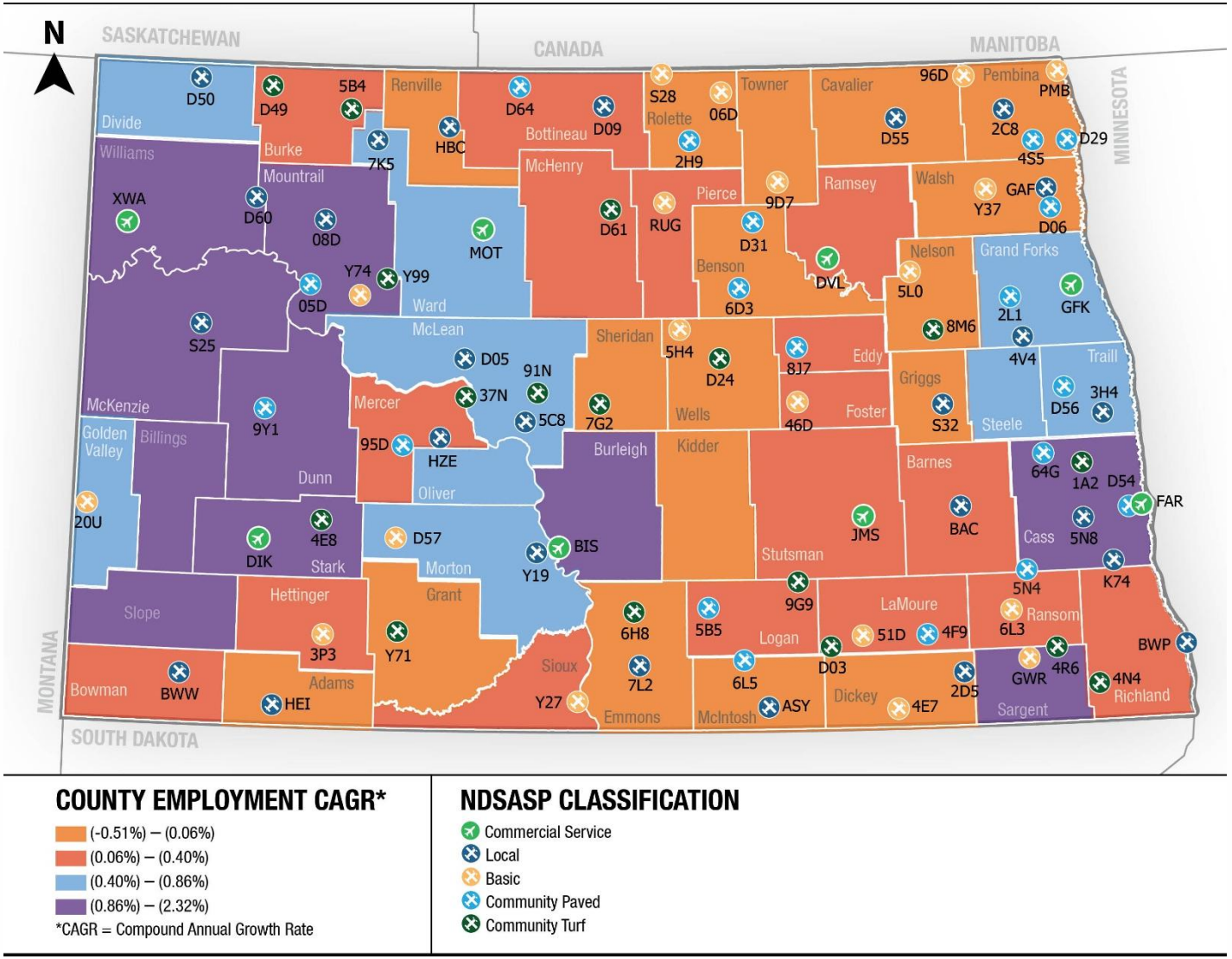
*CAGR = Compound Annual Growth Rate

NDSASP CLASSIFICATION

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

Sources: Woods & Poole Economics, Inc., 2025; Kimley-Horn, 2025.

Figure 5-4. Projected Employment Growth Rates by County (2024-2044)



COUNTY EMPLOYMENT CAGR*

- (-0.51%) – (0.06%)
- (0.06%) – (0.40%)
- (0.40%) – (0.86%)
- (0.86%) – (2.32%)

*CAGR = Compound Annual Growth Rate

NDSASP CLASSIFICATION

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

Sources: Woods & Poole Economics, Inc., 2025; Kimley-Horn, 2025.

5.4. Projections of Aviation Demand

5.4.1. Commercial Service Airport Enplanement and Commercial Operations Projections

North Dakota has eight commercial service airports that served 1.2 million enplanements in 2024. Most enplanements (68 percent) occurred at two airports: Hector International (FAR) and Bismarck Municipal (BIS). Three airports are part of the U.S. Department of Transportation's (DOT) Essential Air Service (EAS) program: Devils Lake Regional (DVL), Dickinson/Theodore Roosevelt Regional (DIK), and Jamestown Regional (JMS). The FAA Terminal Area Forecasts (TAF) published in January 2025 were adopted for enplanements and commercial service operations for these eight airports.

Table 5-1 presents the FAA TAF enplanement projections for North Dakota's commercial service airports. At JMS, 2024 enplanements were lower than 2023 (10,245) because their commercial service runway was closed for five weeks during a pavement construction project. Therefore, projections for JMS are based on 2023 enplanements.

Williston Basin International (XWA) is expected to see the highest rate of growth in enplanements, with a CAGR of 5.51 percent, resulting in more than 283,000 enplanements in 2044, an additional 186,000 enplanements over the forecast period. FAR is anticipated to see the largest numerical increase in enplanements at over 260,000 (1.98 percent CAGR), while BIS is anticipated to have over 170,000 additional enplanements (2.40 percent CAGR) by 2044. It is anticipated that DIK, FAR, and Minot International (MOT) will grow at 1.90 percent, 1.98 percent, and 1.93 percent, respectively. DVL and JMS will grow at CAGRs of 0.68 percent and 0.48 percent over the next 20 years. Statewide, North Dakota's enplanements are projected to increase from 1.2 million in 2024 to more than 2.0 million in 2044, representing a 2.53 percent CAGR.

Table 5-1. Commercial Service Airport Enplanement Projections

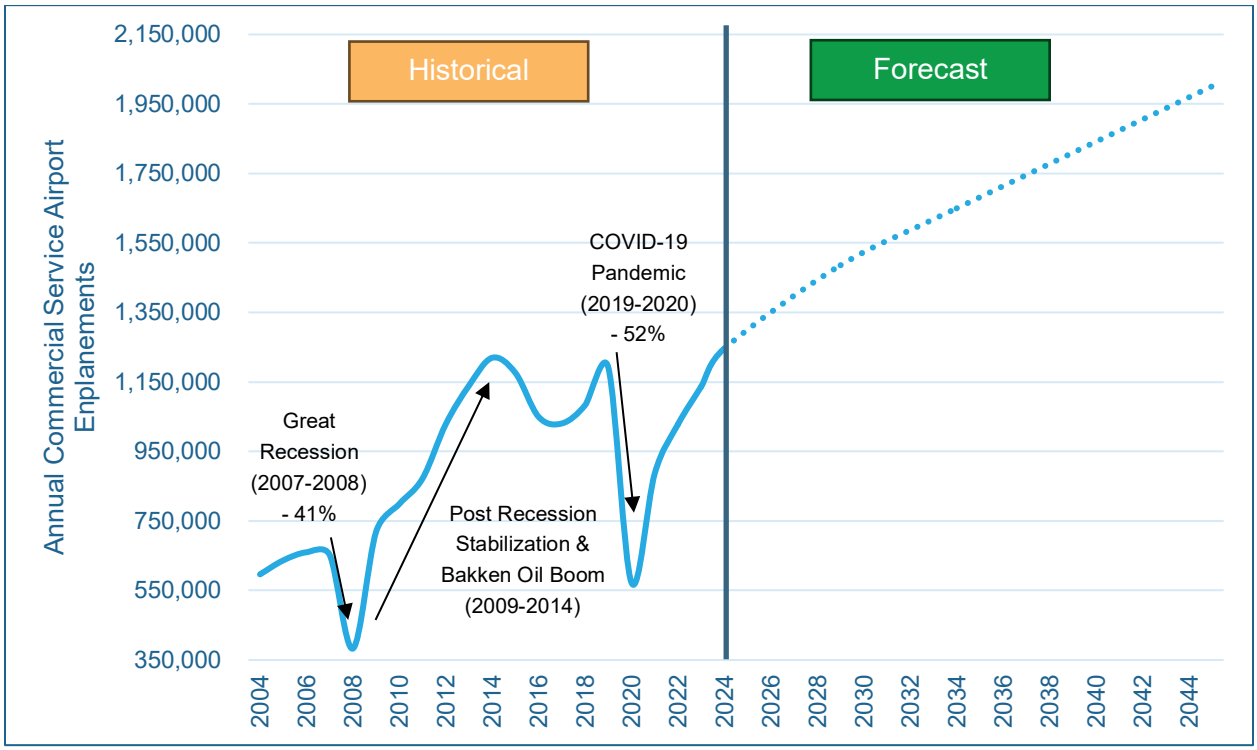
Airport Information			Base Year	Forecast			Growth
Associated City	Airport Name	FAA ID	2024	2029	2034	2044	2024-2044 CAGR
Bismarck	Bismarck Municipal Airport	BIS	284,553	354,110	386,450	456,920	2.40%
Devils Lake	Devils Lake Regional Airport	DVL	9,248	9,570	9,910	10,600	0.68%

Airport Information			Base Year	Forecast			Growth
Associated City	Airport Name	FAA ID	2024	2029	2034	2044	2024-2044 CAGR
Dickinson	Dickinson – Roosevelt Regional Airport	DIK	25,783	28,330	31,130	37,570	1.90%
Fargo	Hector International Airport	FAR	540,783	636,870	686,520	800,900	1.98%
Grand Forks	Grand Forks International Airport	GFK	91,776	108,040	124,670	157,920	2.75%
Jamestown	Jamestown Regional Airport	JMS	9,491	10,500	10,750	11,280	0.48%
Minot	Minot International Airport	MOT	165,598	195,030	210,190	242,570	1.93%
Williston	Williston Basin International Airport	XWA	96,935	143,450	190,020	283,150	5.51%
State Total			**1,224,167**	**1,485,900**	**1,649,640**	**2,000,910**	**2.53%**

Note: JMS base year data is 2023 because the runway was closed in 2024, resulting in lower enplanements. CAGR = Compound Annual Growth Rate. Sources: Marr Arnold Planning, 2025; FAA Terminal Area Forecasts - January 2025, 2025.

Figure 5-5 compares historic commercial service airport enplanements with TAF enplanement projections as shown above. Like trends seen at the national level, North Dakota continues to weather periods of uncertainty and experience growth. Over the last 20 years, enplanements have grown from 596,000 to a record high of 1.2 million representing a 3.76 percent CAGR, as well as fully recovering from the impacts of COVID in early 2024, mirroring post-COVID recovery at the national level.

Figure 5-5. Historic and Projected Commercial Service Airport Enplanements (2004-2044)



Sources: NDAC, 2025; FAA Terminal Area Forecasts - January 2025, 2025; Marr Arnold Planning, 2025.

Commercial operations include takeoffs and landings by scheduled air carriers (airlines) and air taxi activity occurring at the eight commercial service airports. Like enplanements, FAA's TAF projections were used for commercial operations. **Table 5-2** shows the forecasts for commercial operations for North Dakota's eight commercial service airports. Statewide total commercial operations (air carrier and air taxi) at these eight airports are projected to increase at a modest 0.60 percent CAGR over the 20 years, from 180,594 in 2024 to 203,520 in 2044. Commercial service operations at BIS, FAR, and MOT are expected to grow more than 1.0 percent per year on average over the next 20 years. It is important to note that enplanements can grow at a faster rate than operations, given changing trends in the aircraft fleets used by airlines. At present, the smallest commercial airline passenger aircraft operating in the state is a Canadair CRJ 200, and the largest are the Airbus A320 and Boeing 737-900.

Table 5-2. Commercial Service Airport Commercial Operations (Air Carrier & Air Taxi) Projections

Airport Information			Base Year	Forecast			Growth
Associated City	Airport Name	FAA ID	2024	2029	2034	2044	2024-2044 CAGR
Bismarck	Bismarck Municipal Airport	BIS	12,583	12,640	13,770	16,270	1.29%
Devils Lake	Devils Lake Regional Airport	DVL	3,680	3,680	3,680	3,680	0.00%
Dickinson	Dickinson – Roosevelt Regional Airport	DIK	2,452	2,510	2,570	2,700	0.47%
Fargo	Hector International Airport	FAR	35,127	39,550	41,520	45,810	1.34%
Grand Forks	Grand Forks International Airport	GFK	113,409	112,170	114,800	120,070	0.29%
Jamestown	Jamestown Regional Airport	JMS	2,856	2,860	2,860	2,860	0.00%
Minot	Minot International Airport	MOT	6,599	7,000	7,400	8,240	1.12%
Williston	Williston Basin International Airport	XWA	3,888	3,890	3,890	3,890	0.00%
		State Total	**180,594**	**184,300**	**190,490**	**203,520**	**0.60%**

Note: CAGR = Compound Annual Growth Rate. Sources: Marr Arnold Planning, 2025; FAA Terminal Area Forecasts - January 2025, 2025.

5.4.2. Based Aircraft Projections

Historic general aviation activity data for airports provides a baseline from which future activity can be projected. While historic trends are not always reflective of future periods, historic data does provide insight into how aviation-related trends may be tied to future growth.

According to the FAA, a based aircraft is an aircraft that is operational and airworthy and typically based at an airport for most of the year. In 2024,1,858 aircraft were reported based at North Dakota's 89 system airports. The based aircraft counts were obtained from the FAA's National Based Aircraft Inventory (NBAI) database for airports included in the NPIAS and from the 2025 NDSASP Airport Manager Survey for non-NPIAS airports. Additionally, there are an estimated 295 additional aircraft located at the 220 private use airstrips when comparing the total number of registered aircraft (2,148) in the state[5] to the number of based aircraft at system airports. The aircraft based at the private use airstrips are not considered in the based aircraft forecast for the 2025 NDSASP.

Several methodologies were developed to project based aircraft at North Dakota's airports that consider historic trends, socioeconomic growth, and national aviation projections. The three methodologies evaluated to develop based aircraft projections in North Dakota are summarized below, with statewide based aircraft projection results shown in **Table 5-3**.

- **Historic Based Aircraft Growth and FAA Active General Aviation Fleet**. This methodology analyzes the growth in based aircraft at each system airport between 2013 and 2024, as well as the number of based jets in 2024. Each airport is then assigned a percentage of the FAA Aerospace Forecasts, Fiscal Years 2024-2044 projections of turbo jet aircraft, based on overall historical growth in based aircraft and the presence of a based jet. A growth rate was then applied if an airport had historic growth in based aircraft and/or a jet aircraft based at the airport in 2024. Thirty-four (34) airports have at least one based jet and 34 have a positive historical growth rate in their based aircraft. Based on this methodology, statewide based aircraft would increase from 1,858 to 2,100 at a CAGR of 0.64 percent.
- **County Population Growth.**[6] This methodology assumes that the growth in based aircraft at each system airport will be equal to the rate of projected population growth (2024-2044) for the county in which the airport is located. Using this methodology, statewide based aircraft are projected to grow at a compound annual growth rate of 0.51 percent.
- **Market Share – FAA's TAF Growth Rate.** The TAF projects North Dakota's total based aircraft at NPIAS airports to grow at a CAGR of 0.66 percent between 2024 and 2044. This top-down methodology assumes that all system airports will maintain their share of the total North Dakota fleet through the forecast period. Additionally, growth rates are only applied to NPIAS airports due to the FAA not projecting forecasting growth at non-NPIAS airports.

[5] North Dakota Aeronautics Commission.
[6] Based on population data from Woods & Poole Economics, Inc.

Table 5-3. Comparison of Based Aircraft Projection Methodologies

Methodology	Base Year	Forecast			Growth
	2024	2029	2034	2044	2024-44 CAGR
Historic/FAA Active GA Fleet Growth	1,858	1,920	1,980	2,110	0.64%
County Population Growth	1,858	1,900	1,950	2,060	0.51%
Market Share/TAF Growth Rate	1,858	1,920	1,980	2,120	0.66%

Note: CAGR = Compound Annual Growth Rate. Source: Marr Arnold Planning, 2025.

Preferred Forecast Methodology for Based Aircraft

Through discussions with NDAC and their intimate knowledge of the airports in the state, it was determined that no singular methodology appeared reasonable for all airports. As a result, a blended approach was developed that applied the market share methodology to airports included in the NPIAS and the historic growth/FAA active general aviation fleet growth methodology to non-NPIAS airports. Additional analysis was then conducted to determine if the results seemed reasonable for each airport. The review considered airport location, socioeconomic/demographic growth rates by county, historical data, hangar waitlists, and current grants for hangars and other projects likely to result in additional based aircraft. Based on the additional review and consideration, projections at 10 airports were adjusted to produce a more realistic forecast. The airports that were adjusted and the reasoning include the following:

- **Dunn County Weydahl Field (9Y1)** – A recently completed large hangar will accommodate three aircraft currently on the hangar waitlist. Combined with ongoing regional growth driven by oil field activity, a new terminal, and expanded hangar capacity, these developments support a projected increase of five additional based aircraft over the next 20 years resulting in 17 based aircraft and a 1.76 percent CAGR.
- **Harvey Municipal (5H4)** – The airport has secured funding for a new hangar scheduled for construction in 2025, which will accommodate four additional aircraft. Following completion, based aircraft are expected to increase from 10 in 2024 to 14 in 2044, reflecting a 1.7 percent CAGR over the planning period.
- **Kulm Municipal (D03)** – The airport is well utilized with two fully occupied hangars. A recent grant will enable land acquisition and hangar expansion, including the addition of a private hangar to house multiple aircraft. Based aircraft are projected to increase from nine in 2024 to 12 by 2044, representing a 1.45 percent CAGR.
- **Leeds Municipal (D31)** –Recent years have seen airport leadership pursue a rededication of hangar space for aeronautical use. With this shift and the current available hangar capacity, the airport is anticipated to gain at least one additional based aircraft over the next 20 years.

- **Mandan Regional/Lawler Field (Y19)** – With a hangar waitlist exceeding 20 aircraft, the airport is advancing plans to develop a new hangar area. Wetland mitigation is underway to support forthcoming engineering and construction. Given historic growth, geographic location, and national general aviation trends, based aircraft are forecast to grow from 101 in 2024 to 124 by 2044, at a 1.01 percent CAGR.
- **Sky Haven (5N4)** –In the years since the last NDSASP, the airport has acquired and redeveloped a private hangar for public use, which provides added capacity for based aircraft. As a result, based aircraft are expected to increase from nine to 10, reflecting a 0.53 percent CAGR over the 20-year forecast period.
- **Turtle Lake Municipal (91N)** – The airport's existing hangar can accommodate two aircraft. After losing one based aircraft in 2024, the vacant space is expected to be filled shortly, with based aircraft increasing from one to two before the end of the planning horizon.
- **Watford City Municipal (S25)** – As the largest general aviation airport in the heart of the Bakken oil fields, the airport continues to support business aviation demand. Socioeconomic growth in the region is expected to drive continued increases in based aircraft, which are forecast to rise from 34 in 2024 to 55 by 2044, equating to a 2.42 percent CAGR.
- **West Fargo Municipal (D54)** – Due to limited capacity for general aviation at Hector International (FAR), where activity is focused primarily on business jets, this airport is expected to absorb spillover demand. The airport has designated a significant area of its property for future hangar development, which is expected to fill steadily as the Fargo-Moorhead area's population continues to grow. Supported by location advantages and broader aviation trends, based aircraft are projected to increase from 41 in 2024 to 50 by 2044, equating to a 1.0 percent CAGR.
- **Williston Basin International (XWA)** – After opening in 2019 as a response to regional oil-related growth, the airport continues to benefit from expanding population and employment. Two large community hangars included in the airport's Capital Improvement Plan (CIP) will support additional based aircraft. Overall, based aircraft are expected to grow from 32 in 2024 to 43, representing a 1.44 percent CAGR.

The combination of the blended approach (market share for NPIAS and historic growth for non-NPIAS) with the adjustments noted above was applied to establish the preferred projection for North Dakota's based aircraft. This hybrid methodology results in an additional 321 aircraft based in North Dakota over the next 20 years, increasing from 1,858 aircraft to 2,179 at a 0.80 percent CAGR. The preferred based aircraft projections for individual airports are presented in **Table 5-4.**

Table 5-4. North Dakota Based Aircraft Projections

Airport Information			Base Year	Forecast			Growth
Associated City	Airport Name	FAA ID	2024	2029	2034	2044	2024-2044 CAGR
Commercial Service							
Bismarck	Bismarck Municipal Airport	BIS	105	109	113	122	0.75%
Devils Lake	Devils Lake Regional Airport	DVL	39	40	42	45	0.72%
Dickinson	Dickinson – Roosevelt Regional Airport	DIK	35	36	38	41	0.79%
Fargo	Hector International Airport	FAR	217	225	233	251	0.73%
Grand Forks	Grand Forks International Airport	GFK	143	148	154	166	0.75%
Jamestown	Jamestown Regional Airport	JMS	36	37	39	42	0.77%
Minot	Minot International Airport	MOT	133	138	143	154	0.74%
Williston	Williston Basin International Airport*	XWA	32	37	39	43	1.49%
General Aviation							
Arthur	Arthur Airport	1A2	2	2	2	2	0.00%
Ashley	Ashley Municipal Airport	ASY	15	16	16	17	0.63%
Beach	Beach Airport	20U	11	11	12	13	0.84%
Beulah	Beulah Municipal Airport	95D	21	21	21	21	0.00%
Bottineau	Bottineau Municipal Airport	D09	21	22	23	24	0.67%
Bowbells	Bowbells Municipal Airport	5B4	2	2	2	2	0.00%

Airport Information			Base Year	Forecast			Growth
Associated City	Airport Name	FAA ID	2024	2029	2034	2044	2024-2044 CAGR
Bowman	Bowman Regional Airport	BWW	23	24	25	27	0.80%
Cando	Cando Municipal Airport	9D7	11	11	12	13	0.84%
Carrington	Carrington Municipal Airport	46D	12	13	13	14	0.77%
Casselton	Casselton Robert Miller Regional Airport	5N8	52	54	56	60	0.72%
Cavalier	Cavalier Municipal Airport	2C8	17	18	18	20	0.82%
Columbus	Columbus Municipal Airport	D49	2	2	2	2	0.00%
Cooperstown	Cooperstown Municipal Airport	S32	17	18	18	20	0.82%
Crosby	Crosby Municipal Airport	D50	18	19	19	21	0.77%
Drayton	Drayton Municipal Airport	D29	5	5	5	5	0.00%
Dunseith	International Peace Garden Airport	S28	0	0	0	0	0.00%
Edgeley	Edgeley Municipal Airport	51D	11	11	12	13	0.84%
Elgin	Elgin Municipal Airport	Y71	2	2	2	2	0.00%
Ellendale	Ellendale Municipal Airport	4E7	11	11	12	13	0.84%
Enderlin	Sky Haven Airport*	5N4	9	9	10	10	0.53%
Fessenden	Fessenden – Streibel Municipal Airport	D24	0	0	0	0	0.00%
Fort Yates	Standing Rock Airport	Y27	0	0	0	0	0.00%

Airport Information			Base Year	Forecast			Growth
Associated City	Airport Name	FAA ID	2024	2029	2034	2044	2024-2044 CAGR
Gackle	Gackle Municipal Airport	9G9	0	0	0	0	0.00%
Garrison	Garrison Municipal Airport	D05	15	16	16	17	0.63%
Glen Ullin	Glen Ullin Regional Airport	D57	11	11	12	13	0.84%
Grafton	Hutson Field	GAF	19	20	21	22	0.74%
Gwinner	Gwinner – Roger Melroe Field	GWR	11	11	12	13	0.84%
Harvey	Harvey Municipal Airport*	5H4	10	10	11	12	0.92%
Hazelton	Hazelton Municipal Airport	6H8	1	1	1	1	0.00%
Hazen	Mercer County Regional Airport	HZE	18	19	19	21	0.77%
Hettinger	Hettinger Municipal Airport	HEI	33	34	36	38	0.71%
Hillsboro	Hillsboro Municipal Airport	3H4	36	37	39	42	0.77%
Kenmare	Kenmare Municipal Airport	7K5	30	31	32	35	0.77%
Killdeer	Dunn County – Weydahl Field*	9Y1	12	15	15	17	1.76%
Kindred	Robert Odegaard Field	K74	28	29	30	33	0.82%
Kulm	Kulm Municipal Airport*	D03	9	10	11	12	1.45%
La Moure	La Moure Rott Municipal Airport	4F9	3	3	3	3	0.00%
Lakota	Lakota Municipal Airport	5L0	13	14	14	15	0.72%
Langdon	Robertson Field	D55	16	17	17	19	0.86%

Airport Information			Base Year	Forecast			Growth
Associated City	Airport Name	FAA ID	2024	2029	2034	2044	2024-2044 CAGR
Larimore	Larimore Municipal Airport	2L1	22	22	23	23	0.22%
Leeds	Leeds Municipal Airport*	D31	2	2	3	3	2.05%
Lidgerwood	Lidgerwood Municipal Airport	4N4	0	0	0	0	0.00%
Linton	Linton Municipal Airport	7L2	18	19	19	21	0.77%
Lisbon	Lisbon Municipal Airport	6L3	12	13	13	14	0.77%
Maddock	Maddock Municipal Airport	6D3	11	12	12	14	1.21%
Mandan	Mandan Regional – Lawler Field*	Y19	101	105	115	124	1.03%
Mayville	Mayville Municipal Airport	D56	8	8	8	8	0.00%
McClusky	McClusky Municipal Airport	7G2	0	0	0	0	0.00%
McVille	McVille Municipal Airport	8M6	3	3	3	3	0.00%
Milnor	Milnor Municipal Airport	4R6	4	4	4	4	0.00%
Minto	Minto Municipal Airport	D06	2	2	2	2	0.00%
Mohall	Mohall Municipal Airport	HBC	26	27	28	30	0.72%
Mott	Mott Municipal Airport	3P3	13	14	14	15	0.72%
Napoleon	Napoleon Municipal Airport	5B5	4	4	4	4	0.00%
New Rockford	Tomlinson Field	8J7	4	4	4	4	0.00%
New Town	New Town Municipal Airport	05D	12	12	12	13	0.40%

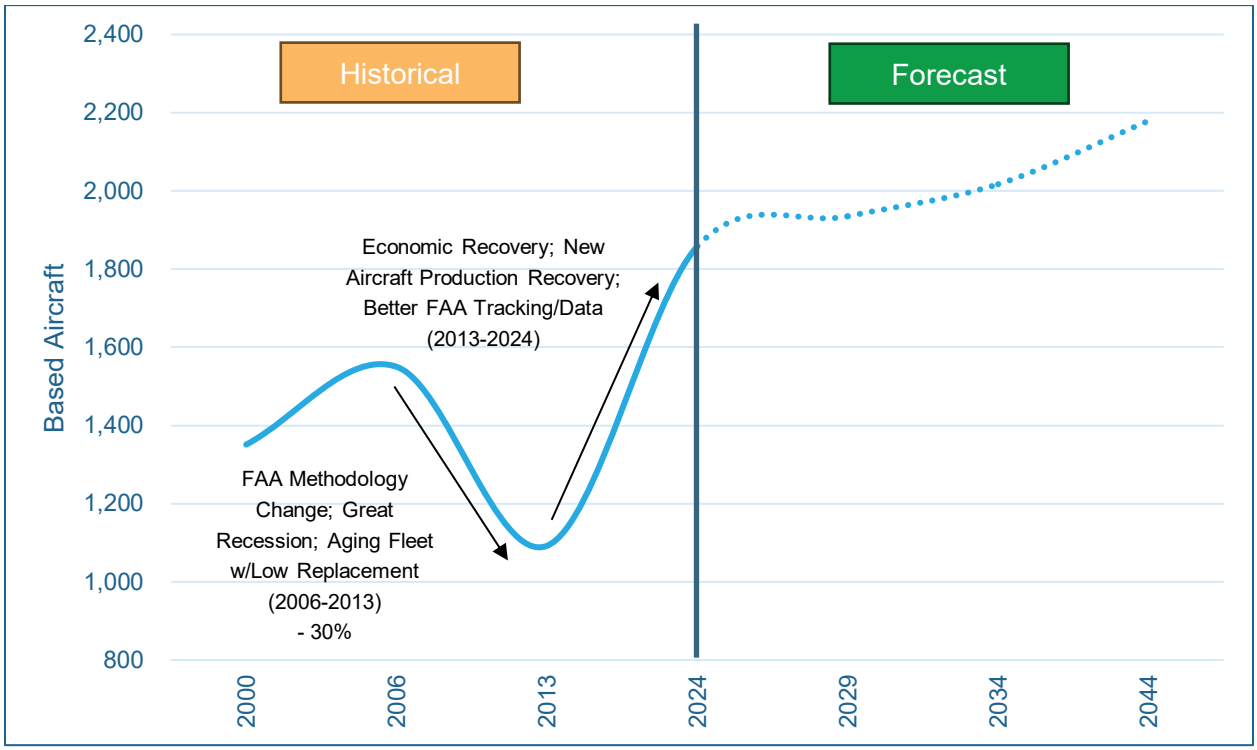
Airport Information			Base Year	Forecast			Growth
Associated City	Airport Name	FAA ID	2024	2029	2034	2044	2024-2044 CAGR
Northwood	Northwood Municipal – Vince Field	4V4	19	20	21	22	0.74%
Oakes	Oakes Municipal Airport	2D5	15	16	16	17	0.63%
Page	Page Regional Airport	64G	11	11	12	12	0.44%
Park River	Park River – W C Skjerven Field	Y37	9	9	10	11	1.01%
Parshall	Parshall – Hankins Airport	Y74	10	10	11	12	0.92%
Pembina	Pembina Municipal Airport	PMB	14	15	15	16	0.67%
Plaza	Trulson Field	Y99	0	0	0	0	0.00%
Richardton	Richardton Municipal Airport	4E8	0	0	0	0	0.00%
Riverdale	Garrison Dam Recreational Airpark	37N	0	0	0	0	0.00%
Rolette	Rolette Airport	2H9	2	2	2	2	0.00%
Rolla	Rolla Municipal Airport	06D	10	10	11	12	0.92%
Rugby	Rugby Municipal Airport	RUG	10	10	11	12	0.92%
St Thomas	St. Thomas Municipal Airport	4S5	3	3	3	3	0.00%
Stanley	Stanley Municipal Airport	08D	27	28	29	31	0.69%
Tioga	Tioga Municipal Airport	D60	42	44	45	49	0.77%
Towner	Towner Municipal Airport	D61	4	4	4	4	0.00%
Turtle Lake	Turtle Lake Municipal Airport*	91N	1	2	2	2	3.53%

Airport Information			Base Year	Forecast			Growth
Associated City	Airport Name	FAA ID	2024	2029	2034	2044	2024-2044 CAGR
Valley City	Barnes County Municipal Airport	BAC	26	27	28	30	0.72%
Wahpeton	Harry Stern Airport	BWP	32	33	34	37	0.73%
Walhalla	Walhalla Municipal Airport	96D	11	11	12	13	0.84%
Washburn	Washburn Municipal Airport	5C8	18	19	19	21	0.77%
Watford City	Watford City Municipal Airport*	S25	34	38	43	55	2.43%
West Fargo	West Fargo Municipal Airport*	D54	41	43	45	50	1.00%
Westhope	Westhope Municipal Airport	D64	6	6	6	6	0.00%
Wishek	Wishek Municipal Airport	6L5	4	4	4	4	0.00%
		State Total	1,858	1,935	2,017	2,179	0.80%

*Note: *Airports with an adjusted forecast as discussed in Section 5.4.3. CAGR = Compound Annual Growth Rate. Source: Marr Arnold Planning, 2025.*

Figure 5-6 compares historic based aircraft to the based aircraft projections as shown above. The data source for historical based aircraft is the 2007 and 2014 NDSASPs. Since 2000, based aircraft has steadily increased at a 1.40 percent CAGR, while mirroring national trends that include changes in both economic factors and better data and tracking methods. Looking forward, North Dakota's projected growth in based aircraft is similar to what is anticipated nationally.

Figure 5-6. Historic and Projected Based Aircraft (2000-2044)



Sources: 2007 NDSASP, 2025; 2014 NDSASP, 2025; Marr Arnold Planning, 2025.

5.4.3. General Aviation Operations Projections

As noted previously, an operation is defined as either an aircraft landing or taking off. Current (2024) general aviation operations for the 2025 NDSASP are estimates provided by NDAC that are based on FAA Master Record 5010 data. It is important to note that operational data are either estimates or come from actual counts reported by an airport's air traffic control tower (ATCT). NDAC's operations data set was compared to FAA's Traffic Flow Management System Counts (TFMSC) data to gain a more comprehensive understanding of the operations activity in North Dakota. Annual general aviation operations at airports in North Dakota for 2024 are estimated to be 705,860. This number includes estimates and actual ATCT counts from 2024 from the four airports (BIS, FAR, GFK, and MOT) with an ATCT.

This analysis considers all general aviation operations at all airports, including commercial service airports. General aviation operations include local and itinerant, including air taxi. Different factors impact the number of general aviation aircraft operations occurring at an airport, whether it is a commercial service or general aviation airport. These factors include but are not limited to:

- Total based aircraft
- Area demographics
- National trends
- Airport location

Several methodologies were considered in the development of projections of annual general aviation operations for each system airport. Methodologies considered and their statewide results are summarized in **Table 5-5** and discussed below:

- **FAA Projected General Aviation Operations Growth and IFR Jets Operations**. Analyzing FAA instrument flight rules (IFR) data recorded at each airport, this methodology assigns each airport a rating of high, medium, low, limited, or none in terms of the number of jet operations that were captured by the FAA's Traffic Flow Management System Counts (TFMSC) in 2024. Each airport is then assigned a percentage of the *FAA Aerospace Forecasts, Fiscal Years 2024-2044* projections of general aviation operations based on the number of IFR jet operations they currently accommodate. Based on this methodology, statewide general aviation operations would increase at a CAGR of 0.72 percent.
- **County Employment Growth**.[7] This methodology assumes that the growth of general aviation operations at each system airport in North Dakota will be equal to the rate of projected employment growth for the county in which the airport is located. Airports that are in counties with declining growth are projected to show no growth. This methodology produces a statewide CAGR of 0.68 percent over the next 20 years.
- **FAA Hours Flown**. This methodology applies FAA's projected rate of growth for general aviation aircraft hours flown[8] to the 2024 total general aviation operations for the state. Each airport's share of the 2024 operations is maintained throughout the forecast period. The CAGR for total general aviation operations using this methodology is 0.78 percent.

Table 5-5. Comparison of General Aviation Operations Projection Methodologies

Methodology	2024	2029	2034	2044	2024-44 CAGR
FAA General Aviation Ops/IFR Jet Ops	705,860	730,330	756,560	813,980	0.72%
County Employment Growth	705,860	729,370	754,240	808,350	0.68%
FAA Hours Flown	705,860	727,400	762,870	824,500	0.78%

Note: CAGR = Compound Annual Growth Rate. Source: Marr Arnold Planning, 2025.

[7] Based on employment data from Woods & Poole Economics, Inc.
[8] *FAA Aerospace Forecasts 2024-2044.*

Preferred Forecast Methodology for General Aviation Operations

The results of general aviation operational demand can be viewed as a range for future statewide landings and takeoffs by this large sector of activity in the state. In the lowest of the three methodologies, total annual general aviation operations could increase from their 2024 estimated level of 705,860 to 808,350 at the end of the 20-year planning period. If mid-growth is achieved, annual operations for system airports could reach 813,980. The high-growth methodology presents a projection of general aviation demand that will reach 824,500 operations at the end of the forecast period in 2044. All results are generally consistent with CAGRs ranging from 0.68 percent to 0.78 percent.

Employment growth acts as both a driver and predictor of general aviation activity. As discussed in **Chapter 1** and previously, general aviation operations have been resilient over the last decade during times of economic uncertainty. This has correlated with employment growth in North Dakota, underlining the close relationship between job creation and aviation demand. The low growth scenario (employment growth) presents a conservative, yet realistic projection of general aviation operational demand and was selected as the preferred methodology for all airports. The preferred general aviation operations projections for individual airports are presented in **Table 5-6**.

Table 5-6. North Dakota General Aviation Operations Projections

Airport Information			Base Year	Forecast			Growth
Associated City	Airport Name	FAA ID	2024	2029	2034	2044	2024-2044 CAGR
Commercial Service							
Bismarck	Bismarck Municipal Airport	BIS	17,130	18,200	19,340	21,830	1.22%
Devils Lake	Devils Lake Regional Airport	DVL	19,700	19,840	19,970	20,250	0.14%
Dickinson	Dickinson – Roosevelt Regional Airport	DIK	2,030	2,180	2,340	2,710	1.47%
Fargo	Hector International Airport	FAR	51,680	55,500	59,610	68,760	1.44%
Grand Forks	Grand Forks International Airport	GFK	172,140	177,720	183,480	195,580	0.64%
Jamestown	Jamestown Regional Airport	JMS	9,000	9,150	9,290	9,590	0.32%
Minot	Minot International Airport	MOT	27,290	28,380	29,520	31,930	0.79%
Williston	Williston Basin International Airport	XWA	2,560	2,790	3,030	3,580	1.68%
General Aviation							
Arthur	Arthur Airport	1A2	1,000	1,070	1,150	1,330	1.44%
Ashley	Ashley Municipal Airport	ASY	4,700	4,700	4,700	4,700	0.00%

Airport Information			Base Year		Forecast		Growth
Associated City	Airport Name	FAA ID	2024	2029	2034	2044	2024-2044 CAGR
Beach	Beach Airport	20U	3,600	3,700	3,800	4,010	0.54%
Beulah	Beulah Municipal Airport	95D	2,960	3,000	3,050	3,130	0.28%
Bottineau	Bottineau Municipal Airport	D09	5,060	5,160	5,260	5,460	0.38%
Bowbells	Bowbells Municipal Airport	5B4	260	260	270	270	0.21%
Bowman	Bowman Regional Airport	BWW	5,800	5,890	5,990	6,190	0.32%
Cando	Cando Municipal Airport	9D7	5,110	5,120	5,120	5,140	0.03%
Carrington	Carrington Municipal Airport	46D	5,600	5,680	5,760	5,930	0.28%
Casselton	Casselton Robert Miller Regional Airport	5N8	15,200	16,330	17,530	20,220	1.44%
Cavalier	Cavalier Municipal Airport	2C8	6,200	6,200	6,200	6,200	0.00%
Columbus	Columbus Municipal Airport	D49	120	120	120	130	0.21%
Cooperstown	Cooperstown Municipal Airport	S32	3,300	3,300	3,300	3,310	0.01%
Crosby	Crosby Municipal Airport	D50	3,800	3,960	4,140	4,500	0.85%

Airport Information			Base Year	Forecast			Growth
Associated City	Airport Name	FAA ID	2024	2029	2034	2044	2024-2044 CAGR
Drayton	Drayton Municipal Airport	D29	3,010	3,010	3,010	3,010	0.00%
Dunseith	International Peace Garden Airport	S28	800	800	800	810	0.05%
Edgeley	Edgeley Municipal Airport	51D	4,600	4,660	4,720	4,840	0.25%
Elgin	Elgin Municipal Airport	Y71	190	190	190	190	0.00%
Ellendale	Ellendale Municipal Airport	4E7	4,600	4,610	4,630	4,660	0.06%
Enderlin	Sky Haven Airport	5N4	4,660	4,720	4,770	4,890	0.24%
Fessenden	Fessenden – Streibel Municipal Airport	D24	560	560	560	560	0.00%
Fort Yates	Standing Rock Airport	Y27	250	250	250	260	0.11%
Gackle	Gackle Municipal Airport	9G9	50	50	50	50	0.40%
Garrison	Garrison Municipal Airport	D05	4,050	4,220	4,400	4,770	0.82%
Glen Ullin	Glen Ullin Regional Airport	D57	950	990	1,030	1,130	0.86%
Grafton	Hutson Field	GAF	26,300	26,300	26,300	26,300	0.00%

Airport Information			Base Year	Forecast			Growth
Associated City	Airport Name	FAA ID	2024	2029	2034	2044	2024-2044 CAGR
Gwinner	Gwinner – Roger Melroe Field	GWR	5,600	6,020	6,470	7,460	1.45%
Harvey	Harvey Municipal Airport	5H4	1,700	1,700	1,700	1,700	0.00%
Hazelton	Hazelton Municipal Airport	6H8	1,010	1,010	1,010	1,010	0.00%
Hazen	Mercer County Regional Airport	HZE	1,500	1,520	1,540	1,590	0.28%
Hettinger	Hettinger Municipal Airport	HEI	4,900	4,900	4,900	4,900	0.00%
Hillsboro	Hillsboro Municipal Airport	3H4	25,250	25,970	26,710	28,250	0.56%
Kenmare	Kenmare Municipal Airport	7K5	3,900	4,060	4,220	4,560	0.79%
Killdeer	Dunn County – Weydahl Field	9Y1	3,100	3,350	3,630	4,250	1.59%
Kindred	Robert Odegaard Field	K74	5,950	6,390	6,860	7,920	1.44%
Kulm	Kulm Municipal Airport	D03	2,500	2,530	2,560	2,630	0.25%
La Moure	La Moure Rott Municipal Airport	4F9	3,500	3,540	3,590	3,680	0.26%
Lakota	Lakota Municipal Airport	5L0	2,530	2,530	2,530	2,530	0.00%
Langdon	Robertson Field	D55	11,200	11,200	11,200	11,200	0.00%

Airport Information			Base Year	Forecast			Growth
Associated City	Airport Name	FAA ID	2024	2029	2034	2044	2024-2044 CAGR
Larimore	Larimore Municipal Airport	2L1	13,010	13,430	13,870	14,780	0.64%
Leeds	Leeds Municipal Airport	D31	2,610	2,610	2,610	2,610	0.00%
Lidgerwood	Lidgerwood Municipal Airport	4N4	310	310	320	330	0.32%
Linton	Linton Municipal Airport	7L2	6,250	6,250	6,250	6,250	0.00%
Lisbon	Lisbon Municipal Airport	6L3	6,100	6,170	6,250	6,390	0.24%
Maddock	Maddock Municipal Airport	6D3	6,510	6,510	6,510	6,510	0.00%
Mandan	Mandan Regional – Lawler Field	Y19	26,100	27,240	28,420	30,960	0.86%
Mayville	Mayville Municipal Airport	D56	9,600	9,870	10,160	10,740	0.56%
McClusky	McClusky Municipal Airport	7G2	100	100	100	100	0.00%
McVille	McVille Municipal Airport	8M6	810	810	810	810	0.00%
Milnor	Milnor Municipal Airport	4R6	950	1,020	1,100	1,270	1.45%
Minto	Minto Municipal Airport	D06	2,000	2,000	2,000	2,000	0.00%
Mohall	Mohall Municipal Airport	HBC	8,620	8,640	8,660	8,690	0.04%

Airport Information			Base Year		Forecast		Growth
Associated City	Airport Name	FAA ID	2024	2029	2034	2044	2024-2044 CAGR
Mott	Mott Municipal Airport	3P3	1,850	1,870	1,880	1,920	0.18%
Napoleon	Napoleon Municipal Airport	5B5	3,750	3,830	3,900	4,060	0.40%
New Rockford	Tomlinson Field	8J7	1,330	1,340	1,350	1,370	0.16%
New Town	New Town Municipal Airport	05D	1,350	1,510	1,690	2,120	2.28%
Northwood	Northwood Municipal – Vince Field	4V4	11,100	11,460	11,830	12,610	0.64%
Oakes	Oakes Municipal Airport	2D5	8,300	8,330	8,350	8,400	0.06%
Page	Page Regional Airport	64G	4,050	4,350	4,670	5,390	1.44%
Park River	Park River – W C Skjerven Field	Y37	8,700	8,700	8,700	8,700	0.00%
Parshall	Parshall – Hankins Airport	Y74	2,160	2,420	2,710	3,390	2.28%
Pembina	Pembina Municipal Airport	PMB	3,200	3,200	3,200	3,200	0.00%
Plaza	Trulson Field	Y99	100	110	130	160	2.28%
Richardton	Richardton Municipal Airport	4E8	60	60	70	80	1.47%
Riverdale	Garrison Dam Recreational Airpark	37N	200	210	220	240	0.82%

Airport Information			Base Year		Forecast		Growth
Associated City	Airport Name	FAA ID	2024	2029	2034	2044	2024-2044 CAGR
Rolette	Rolette Airport	2H9	1,230	1,230	1,240	1,240	0.05%
Rolla	Rolla Municipal Airport	06D	4,010	4,020	4,030	4,050	0.05%
Rugby	Rugby Municipal Airport	RUG	4,200	4,270	4,340	4,490	0.33%
St Thomas	St. Thomas Municipal Airport	4S5	2,100	2,100	2,100	2,100	0.00%
Stanley	Stanley Municipal Airport	08D	5,900	6,610	7,390	9,270	2.28%
Tioga	Tioga Municipal Airport	D60	6,300	6,850	7,440	8,790	1.68%
Towner	Towner Municipal Airport	D61	920	930	950	980	0.30%
Turtle Lake	Turtle Lake Municipal Airport	91N	700	730	760	820	0.82%
Valley City	Barnes County Municipal Airport	BAC	11,750	11,820	11,900	12,050	0.13%
Wahpeton	Harry Stern Airport	BWP	17,800	18,080	18,370	18,960	0.32%
Walhalla	Walhalla Municipal Airport	96D	3,520	3,520	3,520	3,520	0.00%
Washburn	Washburn Municipal Airport	5C8	5,300	5,520	5,750	6,250	0.82%
Watford City	Watford City Municipal Airport	S25	7,250	8,130	9,120	11,470	2.32%

Airport Information			Base Year	Forecast			Growth
Associated City	Airport Name	FAA ID	2024	2029	2034	2044	2024-2044 CAGR
West Fargo	West Fargo Municipal Airport	D54	13,200	14,180	15,230	17,560	1.44%
Westhope	Westhope Municipal Airport	D64	2,060	2,100	2,140	2,220	0.38%
Wishek	Wishek Municipal Airport	6L5	3,600	3,600	3,600	3,600	0.00%
		State Total	**705,860**	**729,370**	**754,240**	**808,350**	**0.68%**

Note: CAGR = Compound Annual Growth Rate. Source: Marr Arnold Planning, 2025.

5.4.4. Military Operations

Military aircraft operations statewide are estimated to be 14,200 in 2024 as reported by NDAC. Several airports (BIS, GFK, and MOT) support 40 percent, or 6,220 operations, of all military operations statewide. Military activity is assumed to be constant, since changes in this type of activity are not directly related to airports and aviation trends, but to other national and state issues that cannot be predicted. Therefore, military operations projections were not developed and are not included in this forecasting effort.

5.5. Projection Results Summary

Table 5-7 summarizes activity demand projections developed for North Dakota's system airports at the statewide level. **Table 5-8** compares the forecasts developed for the 2025 NDSASP with the outlook prepared by the FAA in their TAF, most recently published in January 2025. Note that the TAF only includes those airports designated by the FAA for inclusion in the NPIAS. While all commercial service airports are included in the NPIAS, the 2025 NDSASP forecasts for based aircraft and general aviation operations have been adjusted to show only the results for NPIAS airports for an accurate comparison between the two forecast sources. As shown, all 2025 NDSASP projections are within an acceptable range (within 10 percent at year 5 and 15 percent at year 10) of the FAA's TAF projections. The FAA TAF forecasts were used for both enplanements and commercial operations at the eight commercial service airports.

Table 5-7. North Dakota's Preferred Statewide Activity Projections

Activity Demand Component	2024	2029	2034	2044	2024-44 CAGR
Commercial Service Airport Enplanements	1,214,676	1,485,900	1,649,640	2,000,910	2.53%
Commercial Service Airport Commercial Operations	180,594	184,290	190,490	203,520	0.60%
Based Aircraft	1,858	1,935	2,017	2,179	0.80%
General Aviation Operations	705,860	729,370	754,240	808,350	0.68%

Note: CAGR = Compound Annual Growth Rate. Source: Marr Arnold Planning, 2025.

Table 5-8. North Dakota SASP Forecast Comparison to the FAA's Terminal Area Forecasts (TAF) - *NPIAS Airports Only*

Activity Demand Element	Year	NDSASP Preferred Forecast	TAF	% Difference
Commercial Service Passenger Enplanements				
Base Year	2024	1,214,676	1,214,676	0.0%
Base Year + 5 Year	2029	1,485,900	1,485,900	0.0%
Base Year + 10 Year	2034	1,649,640	1,649,632	0.0%
Base Year + 20 Year	2044	2,000,910	2,000,920	0.0%
CAGR 2024-2044		2.53%	2.53%	
Commercial Service Commercial Operations				
Base Year	2024	180,594	180,594	0.0%
Base Year + 5 Year	2029	184,290	184,292	0.0%
Base Year + 10 Year	2034	190,490	190,482	0.0%
Base Year + 20 Year	2044	203,520	203,513	0.0%
CAGR 2024-2044		0.60%	0.60%	
Based Aircraft*				
Base Year	2024	1,646	1,627	1.17%
Base Year + 5 Year	2029	1,706	1,684	1.32%
Base Year + 10 Year	2034	1,771	1,768	0.19%
Base Year + 20 Year	2044	1,939	1,883	2.97%
CAGR 2024-2044		0.88%	0.73%	
General Aviation Operations*				
Base Year	2024	612,376	604,011	1.38%
Base Year + 5 Year	2029	632,990	630,464	0.40%

Activity Demand Element	Year	NDSASP Preferred Forecast	TAF	% Difference
Base Year + 10 Year	2034	654,770	644,106	1.66%
Base Year + 20 Year	2044	702,120	673,613	4.23%
CAGR 2024-2044		0.69%	0.55%	

Note: For comparison purposes, the 2025 NDSASP projections of based aircraft and operations included in this table are only for the airports included in the FAA's NPIAS and do not match the statewide totals presented in prior tables. Further, military operations are not included in the preferred forecasts or the TAF forecasts. CAGR = Compound Annual Growth Rate.
Sources: Marr Arnold Planning, 2025; FAA Terminal Area Forecasts - January 2025, 2025.

5.6. Summary

The 2025 NDSASP plan adopted a conservative, top-down approach to forecasting future aviation demand across North Dakota's system airports, consistent with broader national and socioeconomic trends. It is important to recognize that these projections are not as detailed as those developed during individual airport master planning efforts. While the overall outlook is conservative, the plan recognizes areas of growth, particularly in the western portion of the state where activity related to the Bakken oil fields has continued to drive increased aviation demand. The projections presented in this chapter will help assess the current and future capabilities of the airport system and inform future facility planning across all system airports.