Reno-Tahoe Airport Authority

RENO-STEAD AIRPORT MASTER PLAN

FORECAST OF AVIATION DEMAND | JULY 2026

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CHAPTER 2. FORECAST OF AVIATION DEMAND

Forecasting future aviation activity is a critical component of airport planning and facility development. This chapter evaluates historical trends and develops projections of aircraft operations and based aircraft at Reno-Stead Airport (RTS) for the 20-year planning horizon. These forecasts provide the foundation for determining airfield, landside, and facility requirements as well as for evaluating the timing of capital improvements.

The aviation activity forecasts presented in this chapter are developed using a combination of historical airport data, regional socioeconomic indicators, and national aviation trends. Forecasts are presented in five-, 10- and 20-year increments, beginning with the baseline year of federal fiscal year (FFY) 2025 and extending through FFY 2045.

General Aviation Trends

In forecasting aviation demand at RTS, national trends must be interpreted through the lens of the Airport's diverse operational profile. As the designated general aviation reliever for Reno-Tahoe International Airport (RNO) and a base for multiple public-sector and private operators, RTS supports a diverse range of aviation activities. This includes business aviation, flight training, public safety operations, wildfire response, military activity, test and evaluation flights, and unmanned aircraft systems (UAS) operations. The following national and regional aviation trends provide context for evaluating activity at RTS for the 2025–2045 planning horizon.

- **Pilot training demand:** Across the nation, continued airline hiring and instructor utilization sustain demand for pilot training activity. At RTS, uncongested airspace relative to RNO supports a high share of local pattern work and influences seasonal runway utilization.
- **Fleet age and composition:** Nationally, consistent with the FAA Aerospace Forecast, the turbine general aviation fleet continues to grow while the piston fleet remains broadly flat to slightly declining. At RTS, this translates to a gradual shift toward turboprops and business jets in itinerant activity and based-aircraft mix, even as single-engine piston aircraft remain the backbone of local training and owner-flown operations.
- **Aerial wildland firefighting:** The use of aircraft for fighting wildland fires in the Mountain West is increasing due to more frequent and severe wildfires as well as the continued advancement of aircraft capabilities. Reno-Stead Airport is home to a Bureau of Land Management (BLM) airtanker firefighting base that supports small to large airtankers owned and operated by private contractors. The fleet of contract airtankers in the U.S. is expected to increase to meet demand, and this will, in turn, influence facility needs at airports across the country, including RTS.
- **Rotary-wing and public mission usage:** Regionally, Northern Nevada's wildfire environment and public-safety mission requirements generate consistent and evolving helicopter activity throughout the region. At Reno-Stead Airport, these operations include aerial firefighting support, law enforcement flights, search-and-rescue missions, and medical response. In particular, law enforcement aviation activity is expected to increase over the planning horizon, with the Washoe County Sheriffs Office potentially expanding their helicopter fleet and operational presence.

These combined missions sometimes create concentrated operational surges during wildfire season, increased night operations, and specialized ramp, fueling, and support requirements that differ from typical general aviation activity.

- **Military and Government Support:** Reno-Stead Airport accommodates the Nevada Army National Guard Army Aviation Support Facility (AASF), which operates a permanently based rotary-wing fleet that includes CH-47 Chinook and UH-60L Black Hawk helicopters used for training, mission readiness, and regional response operations. Aircraft assigned to the facility conduct routine training flights and operational support missions throughout northern Nevada and surrounding states.

  These operations represent a consistent component of aviation activity at Reno-Stead Airport that includes day-to-day training flights, interagency coordination missions, and readiness exercises. As mission requirements at the state and federal level continue to evolve, military aviation activity and fleet at RTS are expected to increase over the planning period.

  The presence of the AASF contributes a sustained military operations element to the airport's activity mix, which requires ongoing coordination between military operators and airport management to ensure safe and efficient use of the airfield.
- **Business aviation and on-demand charter:** Nationwide, digital charter platforms, fractional programs, and private jet use continue to expand access to business aviation. As a reliever airport with quick roadway access to regional employment centers, RTS is well positioned to capture incremental itinerant turbine operations. The airport also has capacity to accommodate future hangar development, which could support additional business aviation activity over time.
- **Test/experimental and research activity:** Across the general aviation industry, flight testing and experimental programs continue to support certification, performance evaluation, and research activities. Reno-Stead Airport accommodates occasional test and evaluation flights—jet and turboprop—that require higher approach speeds, longer runway occupancy, specialized ground support, and heightened airfield coordination due to the uncongested airspace surrounding the airport and its other regional infrastructure assets.
- **Unmanned Aircraft Systems (UAS) and emerging aviation:** Nationally, the FAA anticipates continued growth in UAS activity, particularly for research, testing, training, and specialized operations. At RTS, UAS operations are already an established element of airport activity and are expected to evolve over the planning horizon as additional operators, technologies, and regulatory frameworks mature. This master plan recognizes both existing activity levels and the Airport's long-term potential as a UAS operating location.

Federal Aviation Administration Aerospace Forecast

The FAA Aerospace Forecast for FFY 2025–2045, released in June 2025, provides national aviation projections over the next 20 years. General aviation activity is projected to experience modest long-term growth, with the FAA forecasting the total active general aviation fleet to increase at an average annual rate of approximately 0.5 percent. This growth is driven primarily by expansion in the turbine powered aircraft segments, jets, and turboprops, which are projected to increase at an average annual rate of approximately 2.7 and 1.0 percent, respectively. In contrast, the fixed-wing piston fleet is projected to decline slightly, at approximately -0.1 percent annually, reflecting rising ownership costs and the aging piston aircraft fleet.

While a modest decline in the national piston aircraft fleet is anticipated, this trend may be less pronounced at Reno-Stead Airport. The Airport serves a regional general aviation market where single-engine piston aircraft continue to play a significant role in flight training and personal transportation. The Airport's function as the primary general aviation reliever for Reno-Tahoe International Airport, combined with its uncongested airspace, multiple runways, and land available for new hangar facilities, supports sustained demand for piston aircraft that may be displaced from busier airports.

The FAA Aerospace Forecast recognizes UAS and advanced air mobility (AAM) as emerging elements of the national aviation system but concludes that it remains too early to develop formal quantitative forecasts for these activities. The FAA notes that continued advancements in technology, evolving regulatory frameworks, and ongoing integration efforts will shape the pace and scale of UAS and AAM deployment over the planning horizon.

While the timing and extent of widespread AAM and electric vertical takeoff and landing (eVTOL) operations remain uncertain, the FAA anticipates that UAS activity—particularly for research, testing, training, and specialized operations—will continue to expand. The forecast emphasizes that the integration of these emerging aviation sectors will have implications for airspace management, operational procedures, safety oversight, and infrastructure planning at airports across the national system. At Reno-Stead Airport, these considerations represent a prominent element of this master plan and are discussed in greater detail in subsequent sections.

See Table 2-1 for an overview of the FAA Aerospace Forecast for the national fleet mix.

Table 2-1 FAA Aerospace Active General Aviation Fleet Forecast

Data Type	FFY	Single Engine	Multi-Engine	Turbo prop	Jet	Rotor	Exp.	Light Sport	Other	Total
Historical	2010	139,519	15,900	9,369	11,484	10,102	24,784	6,528	5,684	223,370
	2015	127,887	13,254	9,712	13,440	10,506	27,922	2,369	4,941	210,031
	2016	129,652	12,986	9,779	13,751	10,577	27,585	2,478	4,986	211,794
	2017	129,833	13,083	9,949	14,217	10,511	26,921	2,551	4,692	211,757
	2018	130,179	12,861	9,925	14,596	9,989	27,531	2,554	4,114	211,749
	2019	128,926	12,470	10,242	14,888	10,198	27,449	2,675	4,133	210,981
	2020	124,059	11,947	10,317	15,316	9,746	26,367	2,570	3,818	204,140
	2021	126,735	11,885	10,391	15,270	10,032	27,960	2,650	4,271	209,194
	2022	126,076	11,652	10,713	16,126	9,769	28,062	2,666	4,476	209,540
	2023	127,573	11,727	10,951	16,537	10,051	30,114	3,007	4,262	214,222
Estimated	2024	127,105	11,645	11,030	17,010	10,230	30,295	3,175	4,450	214,940
Forecast	2025	126,690	11,580	11,100	17,505	10,420	30,425	3,285	4,595	215,600
	2030	125,265	11,275	11,425	20,235	11,440	31,190	3,865	4,710	219,405
	2035	124,340	11,085	11,935	23,335	12,520	32,325	4,500	4,765	224,805
	2040	123,800	10,950	12,660	26,565	13,620	33,475	5,180	4,800	231,050
	2045	123,925	10,925	13,540	29,865	14,715	34,670	5,870	4,840	238,350
CAGR	**2010-2024**	**-0.7%**	**-2.2%**	**1.2%**	**2.8%**	**0.1%**	**1.4%**	**-5.0%**	**-1.7%**	**-0.3%**
	2025-2045	**-0.1%**	**-0.3%**	**1.0%**	**2.7%**	**1.7%**	**0.7%**	**2.9%**	**0.3%**	**0.5%**

Source: FAA Aerospace Forecast, 2025 (https://www.faa.gov/data_research/aviation/aerospace_forecasts); Ardurra, 2026

Note: Compound Annual Growth Rate (CAGR)

Airport Service Area and Socioeconomic Analysis

In determining demand at an airport, it is helpful to examine the demographic and socioeconomic conditions of the airport's service area. An airport service area is a broadly based geographical area around the airport where it is reasonable to assume a market exists for airport services. In forecasting aviation demand, the socioeconomic characteristics of the service area are examined to identify correlation with previous patterns and forecasted trends as it relates to aviation activity.

Reno-Stead Airport serves the northern Nevada region from its location approximately 10 miles northwest of downtown Reno. The airport has direct access to US-395/I-580 and Interstate 80, providing convenient surface connections to population and employment centers in Washoe County and adjacent counties, as well as the Truckee–Tahoe corridor in California. The Airport's role as a designated general aviation reliever to RNO, combined with its proximity to other regional general aviation airports such as Carson City Airport and Truckee Tahoe Airport, influences the Airport's service area and the mix of

aviation activity it supports, including based aircraft, business aviation, flight training, and wildfire support operations.

To evaluate the service area, socioeconomic data was reviewed for the Reno–Sparks Metropolitan Statistical Area (MSA), which includes Washoe County and Storey County. Additionally, the Washoe County Consensus Forecast, which is specifically focused on Washoe County, was reviewed.

Washoe County Consensus Forecast 2024-2044[1]

To ensure consistency with adopted county planning assumptions, the Washoe County Consensus Forecast 2024-2044 was reviewed as part of the socioeconomic analysis for this master plan. Prepared by the Truckee Meadows Regional Planning Agency (TMRPA), the Consensus Forecast represents the County's officially adopted long-range outlook for population, employment, and income growth. Although RTS is located within Washoe County, the Airport serves a broader regional market; therefore, county-level forecasts provide a useful baseline but do not fully capture all factors influencing aviation demand.

The Washoe County Consensus Forecast is developed using a consensus-based methodology that evaluates projections prepared by S&P Global, Woods & Poole, the Nevada State Demographer, and the Truckee Meadows Water Authority. These projections are reviewed for consistency and, where appropriate, averaged to produce a single adopted population forecast for Washoe County. Employment and income projections are based on Woods & Poole and S&P Global forecasts, with S&P Global employment data calibrated to reflect total employment. Per capita income values presented in the Washoe County Consensus Forecast are expressed in current dollars, which reflect both real economic growth and the effects of inflation over time.

For the 2024–2044 planning horizon, the Consensus Forecast projects continued growth in Washoe County, with total population increasing from approximately 515,000 in 2024 to just over 602,000 by 2044 and total employment rising from approximately 326,000 to 376,000. This represents a compound average growth rate (CAGR) of 0.79 percent and 0.72 percent, respectively. Table 2-2 summarizes these projections.

While these trends provide important context for understanding regional growth, aviation activity at RTS is influenced by a range of additional factors, including national and regional economic conditions, fuel costs, tourism, and specialized aviation activity, and therefore may not directly correspond to county population or employment growth alone.

[1] Truckee Meadows Regional Planning Agency (TMRPA), Washoe County Consensus Forecast 2024–2044, adopted by the Regional Planning Governing Board, 2024.

Table 2-2 Washoe County Consensus Forecast Summary

Year	Total Population	Total Employment	Total Per Capita Income (2024)	Per Capita Income (2024)
2024	515,085	325,765	$37,162,527,172	$83,917
2029	542,057	338,574	$44,480,341,315	$102,857
2034	564,343	350,380	$53,031,350,569	$125,965
2039	584,273	362,870	$63,008,051,019	$154,101
2044	602,455	376,161	$75,344,671,818	$189,541
Projected 20-Year CAGR	**0.79%**	**0.72%**	**3.60%**	**4.16%**

Source: Washoe County Consensus Forecast, Table 1, 2024

Note: Per capita income data is presented in 2024 dollars.

Reno–Sparks MSA Socioeconomic Characteristics

Reno-Stead Airport serves a regional market that extends beyond Washoe County and is influenced by economic activity across the broader Reno–Sparks metropolitan area. This regional draw supports the use of metropolitan-scale socioeconomic data to characterize the market influencing aviation demand at the airport.

For this analysis, population, employment, and per capita income forecasts for the Reno–Sparks Metropolitan Statistical Area (MSA 39900) were obtained from Woods & Poole[2] and used as the primary socioeconomic inputs. The MSA includes Washoe and Storey County and represents the core economic region most strongly associated with aviation activity at RTS. The Woods & Poole forecasts provide a consistent, long-range dataset suitable for aviation demand modeling and are compatible with FAA forecasting guidance.

The growth trends forecasted in the Woods & Poole MSA-based projections align with those identified in the Washoe County Consensus Forecast. When comparing the Consensus Forecast with the Woods & Poole MSA, it is critical to note the difference in how per capita income values are expressed. As noted, the Consensus Forecast is expressed in current dollars, which includes estimated inflation through the forecast.

The use of constant 2017 dollars in the Woods & Poole MSA forecast removes the effects of inflation and allows for a more accurate assessment of income growth. This provides a better correlation to aviation demand. As such, the Woods & Poole MSA forecast with constant 2017-dollar values was used in this master plan. Population and employment projections from the MSA-based forecast were also used for this master plan because the MSA is more representative of the service area for RTS.

Table 2-3 summarizes the population, employment, and per capita income projections used in this forecast.

[2] Woods & Poole Economics, Inc. (2025). *Complete economic and demographic data source: MSA 29900*. Woods & Poole Economics, Inc.

Table 2-3 Woods & Poole Personal Income, Population, and Employment Projections

Year	Population	Employment	Per Capita Income (2017)
1990	279,445	183,002	$37,783
2000	379,591	252,087	$49,039
2010	478,285	269,381	$46,302
2015	504,027	295,070	$48,760
Forecast Years			
2025 (Baseline)	582,067	382,644	$66,434
2030	616,845	401,719	$71,619
2035	651,171	420,073	$76,783
2045	717,773	457,415	$87,687
Historical 10-Year CAGR	**1.4%**	**2.6%**	**3.1%**
Projected 20-Year CAGR	**1.1%**	**0.9%**	**1.4%**

Source: Woods and Poole, 2025

Note: Per capita income data is presented in 2017 dollars.

Historical Activity and Forecast Review

Understanding historical activity levels is essential to developing forecasts of future aviation demand. Historical trends provide insight into how the airport has been used over time, how economic and regional factors influence activity, and how the airport's role has evolved within the broader aviation system.

This section reviews available data related to aircraft operations and based aircraft at RTS and compares those records with the FAA Terminal Area Forecast (TAF).

Historical Operational Activity

An aircraft operation is defined by the FAA as a takeoff or a landing. Operations are categorized based on the nature of their activity and are classified into four primary categories: air carrier, air taxi/commuter, military, and general aviation (GA). These categories distinguish between commercial service, on-demand or charter operations, military activity, and the broad range of noncommercial flying that defines general aviation.

FAA operational categories are defined as follows:

- **Air Carrier:** Operations involving aircraft carrying passengers or cargo for hire with a seating capacity greater than 60 passengers or a maximum payload of more than 18,000 pounds carrying passengers or cargo for hire or compensation. At RTS, this category includes certain aerial firefighting airtankers that meet FAA air carrier classification thresholds based on payload capacity.

- **Air Taxi / Commuter:** Operations by scheduled or nonscheduled commercial operators using aircraft with 60 or fewer seats or payloads of 18,000 pounds or less, typically under 14 CFR Part 135. These include passenger and cargo charter flights for hire or compensation. This category also includes smaller aerial firefighting airtankers that meet FAA classification criteria based on aircraft size or payload.
- **Military:** Operations conducted by U.S. military aircraft, owned and operated by the federal government. RTS records a consistent level of military activity associated primarily with the Nevada Army National Guard's based Army Aviation Support Facility, which operates a rotary-wing fleet used for training, mission readiness, and regional response.
- **General Aviation:** All civil aviation operations not classified as air carrier, air taxi/commuter, or military. This includes privately-owned and corporate aircraft operated for business, training, public safety, and recreational purposes. General aviation constitutes the majority of operations at RTS, encompassing single-engine piston, turboprop, jet, and helicopters.

Operations are further categorized into itinerant and local operations. Itinerant operations refer to aircraft movements departing from or arriving at the airport from another location outside the local airspace. These flights typically involve travel between different airports, or at a minimum, outside the immediate vicinity and airspace. Local operations consist of aircraft movements remaining within an airport's general vicinity and traffic patterns. At RTS, many local operations include flight training conducted by operators based at RNO, which utilize RTS for touch-and-go operations and practice instrument approaches.

Historical operations data for RTS is derived from the TAF and Virtower. Virtower is a third-party operations tracking software that utilizes automatic dependent surveillance-broadcast (ADS-B), a transponder-based system that broadcasts an aircraft's information. These datasets establish the 2025 baseline operational year used in subsequent forecast development.

Historical Terminal Area Forecast Data

The FAA Terminal Area Forecast (TAF) provides the FAA's official estimates of historical and projected aviation activity for individual airports nationwide and serves as a reference point for airport master planning.

At non-towered airports like RTS, the data within the TAF is usually based on estimates reported to the FAA by airport staff. The data for RTS is slightly more precise. Every three years, RTAA calculates approximate operational data for RTS during ongoing noise assessments for RNO, which is then reported to the FAA to use in the TAF. Thus, the historical data shows three consecutive years with the same numbers before a change is noted. Overall, data provided in Table 2-4 indicates a decline in operations from 2015 to 2025, albeit the years between 2016 and 2025 indicate a very small decline that can be considered flat overall.

Table 2-4 Historical Terminal Area Forecast Operations

FFY	Itinerant				Local		Total Historical Operations
	Air Carrier	Air Taxi & Commuter	GA	Military	GA	Military	
2015	-	-	19,000	10,000	42,000	-	71,000
2016	-	-	16,207	8,100	29,000	-	53,307
2017	-	-	18,600	8,700	30,000	-	57,300
2018	-	-	18,600	8,700	30,000	-	57,300
2019	-	-	18,600	8,700	30,000	-	57,300
2020	-	-	14,340	6,719	23,141	-	44,200
2021	-	-	14,340	6,719	23,141	-	44,200
2022	-	-	14,340	6,719	23,141	-	44,200
2023	-	-	15,000	6,800	28,000	-	49,800
2024	-	-	15,000	6,800	28,000	-	49,800
2025	-	-	15,000	6,800	28,000	-	49,800

Source: FAA Terminal Area Forecast, 2025

Virtower Data

Reno-Stead Airport recently implemented Virtower, a third-party aircraft operations tracking system that uses transponder-based flight data to identify aircraft operations. A full calendar year of data closely aligned with the 2025 federal fiscal year (FFY) was captured by Virtower equipment and examined for use as a baseline operational level. Compared with traditional estimation methods, Virtower provides improved accuracy by capturing observed activity and providing specific operational and aircraft details.

A review of Virtower data indicates that a limited number of aircraft operations meet the FAA's definitions for air carrier and air taxi/commuter activity, despite the absence of scheduled commercial passenger or commuter service at RTS. These classifications are based on FAA definitions that rely on aircraft payload capability rather than passenger enplanements. At Reno-Stead Airport, air carrier operations consist almost entirely of large aerial firefighting aircraft whose retardant payloads meet the FAA air carrier thresholds. In addition, a small number of operations fall within the air taxi/commuter category by FAA definition.

Table 2-5 presents the resulting breakdown of FFY 2025 operations, reflecting a total of 54,502 recorded aircraft operations. This data was used as the baseline for this forecast.

Table 2-5 Baseline Annual Operations Data

FFY	Itinerant				Local		Total Historical Operations
	Air Carrier	Air Taxi & Commuter	GA	Military	GA	Military	
2025	436	1,629	14,301	1,813	35,918	405	54,502

Source: Virtower, 2025

To better understand the composition of aircraft activity at Reno-Stead Airport, Table 2-6 provides an overview of aircraft type and total operations from the baseline year. This breakdown provides insight into the operational characteristics of the airport and highlights the types of aircraft that drive overall activity levels.

Single-engine piston aircraft dominate activity at RTS, accounting for approximately 91 percent of total operations. This reflects the Airport's role as a general aviation reliever and a center for flight training, personal aviation, and owner-flown operations. The combination of uncongested airspace and multiple runways supports a high volume of local training and pattern activity, which generates a large number of operations relative to other aircraft types.

Together, all other aircraft categories comprise less than ten (10) percent of total operations but remain operationally significant. Turboprop aircraft and jets support business travel and specialized missions like aerial firefighting that generate fewer movements but place significant demands on airfield infrastructure.

Military and helicopter operations, together representing approximately six (6) percent of total activity, reflect the presence of the Nevada Army National Guard and the Airport's role in supporting rotary-wing training, public safety, and wildfire response.

Overall, the Virtower aircraft-type distribution illustrates that while activity at RTS is numerically dominated by single-engine piston aircraft, the airport supports a diverse mix of aircraft and mission types that influence facility planning and operational considerations.

Table 2-6 Total Operations by Engine Type

Aircraft Type	Total Operations	Percent
Single Engine Piston	49,633	91.1%
Single Engine Turboprop	343	0.6%
Multi-Engine Piston	548	1.0%
Multi-Engine Turboprop	461	0.8%
Jet	518	0.10%
Military	1,476	2.7%
Rotor	1,523	2.8%
Total	54,502	100%

Source: Virtower, 2025

Note: Percent total does not add due to rounding.

Runway utilization identified by Virtower data is summarized in Table 2-7. Runway 8-26 supports the majority of day-to-day operations due to its orientation relative to the prevailing wind and accessibility to the Airport's terminal area. However, Runway 14-32 remains an integral component of the airfield system, providing operational flexibility during shifting wind conditions, accommodating the Airport's only instrument approach procedure, and offering additional runway length to serve larger and faster aircraft, such as those used by firefighting contractors and Tactical Air.

The remaining runway activity at RTS occurs on a dirt strip, unofficially designated Runway 7-25 Dirt, which supports operations by small single engine aircraft, including tailwheel aircraft. These aircraft are most commonly used for recreational flying and specialized operations such as backcountry flying, short-field (short runway) takeoffs and landings, and are designed to operate from unpaved or improved surfaces. The dirt strip provides a more suitable operating environment for these aircraft and allows for reduced tire wear compared to paved surfaces.

Additionally, helicopter operations occur throughout the airfield at designated locations. The BLM, Guard, and West Ramp helicopter operating areas are used exclusively for helicopter operations.

Table 2-7 Runway Utilization

Runway	Landing	Takeoff	Total	Percent
RWY 08	13,165	12,862	26,027	47.8%
RWY 26	6,679	6,504	13,183	24.2%
RWY 14	2,468	2,020	4,488	8.2%
RWY 32	3,429	4,575	8,004	14.7%
RWY 07 Dirt	984	625	1,609	3.0%
RWY 25 Dirt	0	329	329	0.6%
BLM Helo	24	25	49	0.1%
Guard Helo	164	164	328	0.6%
West Ramp Helo	243	242	485	0.9%
Total			**54,502**	**100%**

Source: Virtower, 2025

Aircraft operations by time of day are summarized in Table 2-8. A review of this data indicates that the average annual peak hour of activity occurs between 10 a.m. and 11 a.m., reflecting the concentration of daytime general aviation activity, including flight training, itinerant departures, and mission-based operations.

Operations during nighttime hours, defined as the period between 10 p.m. and 7 a.m., account for approximately 2.6 percent of total annual operations. Night activity at RTS is limited and generally associated with military, public safety, and occasional training or mission-related operations rather than routine general aviation use.

Table 2-8 Runway Utilization

Time	Landing	Takeoff	Total	Percent
7:00	1,664	1,870	3,534	6%
8:00	2,620	2,902	5,522	10%
9:00	3,501	3,779	7,280	13%
10:00	4,341	4,419	8,760	16%
11:00	3,593	3,473	7,066	13%
12:00	2,432	2,422	4,854	9%
13:00	1,823	1,727	3,550	7%
14:00	1,660	1,557	3,217	6%
15:00	1,508	1,410	2,918	5%
16:00	1,084	1,039	2,123	4%
17:00	737	654	1,391	3%
18:00	586	516	1,102	2%
19:00	415	375	790	1%
20:00	300	251	551	1%
21:00	218	187	405	1%
22:00	106	95	201	0%
23:00	14	7	21	0%
0:00	5	2	7	0%
1:00	-	1	1	0%
2:00	-	-	-	0%
3:00	-	-	-	0%
4:00	-	1	1	0%
5:00	30	39	69	0%
6:00	524	615	1,139	2%
Total	**27,161**	**27,341**	**54,502**	**100%**

Source: Virtower, 2025

Traffic Flow Management System Counts

Instrument flight activity at Reno-Stead Airport was evaluated using data from the FAA's Traffic Flow Management System Counts (TFMSC) database. This is a national data system that captures operations flying under Instrument Flight Rules (IFR), which are required to file a flight plan with the FAA.

During the baseline year, TFMSC data indicates a total of 736 IFR flight plans were filed for RTS. When compared to the 54,502 total aircraft operations recorded for the same year, IFR operations account for approximately 1.4 percent of total activity.

The relatively small proportion of IFR operations is consistent with RTS's role as a general aviation airport supporting operations predominantly conducted under Visual Flight Rules (VFR). It is also typical of the geographic region, which generally experiences favorable weather conditions and visual meteorological conditions throughout much of the year.

Reviews of aircraft types associated with filed flight plans indicate that several are small single-engine aircraft. These operations are assumed to include instrument training activity, likely associated with flight schools operating from RNO that utilize RTS for practice approaches and training missions.

Overall, IFR operations represent a limited but important component of activity at RTS, supporting instrument training, proficiency flights, and occasional business aviation.

Based Aircraft

Historical based aircraft data, as reported in the TAF, is summarized in Table 2.9. The data indicates the number of aircraft based at RTS has fluctuated in recent years, ranging from approximately 93 to 197. Despite these variations, the overall trend reflects gradual growth in the total number of based aircraft.

As shown in Table 2-9, the increase in based aircraft from 2019 to 2020 reflects an improvement in data collection by RTS due to efforts to more accurately identify and document based aircraft.

Table 2-9 FAA TAF Historical Based Aircraft

Year	Landing
2015	106
2016	108
2017	93
2018	93
2019	93
2020	189
2021	189
2022	188
2023	188
2024	197
2025	197

Source: FAA Terminal Area Forecast, 2025

According to Airport records, there was a total of 218 based aircraft for 2025. Table 2-10 summarizes the current fleet composition by engine and aircraft type.

The based aircraft fleet consists of 167 single-engine piston aircraft, eight (8) multi-engine piston aircraft, two (2) turboprop aircraft, and 26 jets. The airport also accommodates six (6) rotorcraft and nine (9) gliders that are included in the total based aircraft count.

This 2025 inventory provides the most current and comprehensive count available and serves as the baseline for projecting future based aircraft through the 2045 planning horizon.

Table 2-10 Baseline Based Aircraft Fleet

Aircraft Type	Based at RTS
Single Engine Piston	167
Multi-Engine Piston	8
Turboprop	2
Jet	26
Rotor	6
Other	9
Total	**218**

Source: Reno-Stead Airport, 2026

Prior Aviation Forecasts Review

Reviewing prior aviation forecasts provides context for understanding how activity at RTS has been projected historically and how those projections compare with current conditions and future expectations. Previous forecasts prepared by the FAA, statewide aviation planning efforts, and prior airport planning documents are examined to identify historical assumptions, projected growth trends, and differences between forecast methodologies. This review helps ensure that the forecasts developed for this Master Plan are reasonable, consistent with available planning guidance, and appropriately reflect the Airport's role within the regional and national aviation system.

2025 Federal Aviation Administration Terminal Area Forecast

The 2025 TAF provides the FAA's official projections of annual operations at RTS for the 2025–2045 forecast period.

The TAF projects no growth for either based aircraft or total operations at RTS throughout the forecast period. The flat projection is typical of FAA forecasting practices for non-towered airports, where future activity levels are generally assumed to remain consistent with recent conditions unless sustained, system-wide growth trends are evident.

The lack of projected growth rates by the FAA is not to be used as an indicator of projected demand. It is simply a method used by the FAA for airports that do not have a prominent impact on the national airspace system, which typically includes airports with fewer than 100,000 annual operations.

Table 2-11 presents the TAF operations forecast for RTS. The number of based aircraft was noted at 197 and held constant throughout the planning period.

Table 2-11 2025 FAA Terminal Area Forecast

FFY	Itinerant				Local		Total Historical Operations
	Air Carrier	Air Taxi & Commuter	GA	Military	GA	Military	
2025	-	-	15,000	6,800	21,800	-	49,800
2030	-	-	15,000	6,800	21,800	-	49,800
2035	-	-	15,000	6,800	21,800	-	49,800
2045	-	-	15,000	6,800	21,800	-	49,800
CAGR 2025-2045	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**

Source: FAA Terminal Area Forecast, 2025

2022 Nevada Airport and Heliport System Plan[3]

The 2022 Nevada Airport and Heliport System Plan (NAHSP), prepared by the Nevada Department of Transportation (NDOT) Aviation Program, evaluates aviation activity and infrastructure needs across the statewide system of public-use airports. The NAHSP includes forecasts of aircraft operations and based aircraft to support long-range aviation planning and guide statewide airport development priorities.

Forecasts in the NAHSP were developed using a combination of aviation activity trends and socioeconomic indicators. Multiple forecasting methodologies were evaluated, including projections based on population, gross regional product (GRP), per capita personal income (PCPI), and national aviation forecasts. These socioeconomic projections were derived from Woods & Poole's economic and demographic forecasts prepared for Nevada counties and the state. Compound annual growth rates were applied to the 2020 base year to project aviation demand through the 2040 planning horizon.

Based aircraft forecasts were influenced primarily by county-level population growth projections, while aircraft operations forecasts reflected anticipated changes in general aviation activity across the statewide airport system.

Table 2-12 provides an overview of the NAHSP forecast for RTS.

[3] Nevada Department of Transportation (NDOT) Aviation Program, Nevada Airport and Heliport System Plan (NAHSP), Final Technical Report, 2022.

Table 2-12 Nevada Airport and Heliport System Plan Forecast

Data Type	Year	Total Operations	Based Aircraft
Baseline	2020	42,000	172
Forecast	2025	46,630	183
	2030	51,400	195
	2040	61,250	217
CAGR 2006-2040		**1.90%**	**1.17%**

Source: Nevada Airport and Heliport System Plan Forecast, 2022

2010 Reno-Stead Airport Master Plan Forecast

The 2010 Reno-Stead Airport Master Plan forecasted aviation demand using 2006 as the baseline year and projections extending through 2030. The preferred based aircraft forecast combined several methodologies into a single baseline projection and incorporated adjustments for anticipated local conditions. This resulted in an average annual growth rate of 3.1 percent. Total aircraft operations were estimated using a historical ratio of operations per based aircraft (OPBA), applying the 1990–2006 average value of 273 to the projected based aircraft levels. Using this approach, aircraft operations were projected to grow by 3.5 percent annually. The 2010 Reno-Stead Airport Master Plan forecasts are summarized in Table 2-13.

Table 2-13 2010 Reno-Stead Airport Master Plan Forecast

Data Type	Year	Local Operations	Itinerant Operations	Based Aircraft
Baseline	2006	35,000	29,000	261
Forecast	2010	47,487	39,326	318
	2015	53,205	44,062	356
	2020	60,343	49,974	404
	2025	69,278	57,372	464
	2030	80,506	66,672	539
CAGR 2006-2040		**3.50%**	**3.50%**	**3.10%**

Source: Reno-Stead Airport Master Plan, 2010

Federal Aviation Administration Aerospace Forecast

The FAA Aerospace Forecast, released in June 2025, extends national aviation projections over the next 20 years, building on prior insights with newer trends and emerging sectors.

As discussed in Section 2.1.1, general aviation continues to show positive trends. The FAA maintains its projection of 0.5 percent annual growth in the total active general aviation fleet. Of that growth, the turbine fleet is expected to increase 2.1 percent, while the fixed-wing piston aircraft is expected to shrink nationally at an average annual rate of -0.1 percent due to the cost of ownership and an aging fleet.

The 2025 FAA Aerospace forecast integrates emerging aviation sectors, such as unmanned aircraft systems (UAS) and advanced air mobility (AAM), into its long-term outlook, but it remains too early for a formal forecast. These technologies, especially electric vertical takeoff and landing (eVTOL) aircraft, are expected to play an increasingly prominent role in future aviation systems. However, their deployment in rural and regional markets will likely lag behind larger metropolitan areas. Still, their eventual integration into the National Airspace System has implications for infrastructure compatibility, airspace coordination, and regulatory oversight at all airports.

Aircraft operations at towered airports are projected to grow steadily, increasing at an average annual rate of 1.1 percent between 2025 and 2045. Commercial activity is expected to be the primary driver of this growth with a projected increase of 1.9 percent annually, nearly four (4) times the rate of non-commercial operations. The forecast also reaffirms the growth and transformation of the air taxi and charter sector, driven by digital booking platforms, membership programs, and flexible ownership models that are expanding access to private air travel. The 2025 FAA Aerospace Forecast projections for aircraft operations at towered airports are summarized in Table 2-14.

Table 2-14 FAA Aerospace Aircraft Operations at Towered Airports (In Thousands) Forecast

Data Type	FFY	Air Carrier	Air Taxi / Commuter	Itinerant GA	Local GA	Itinerant Military	Local Military	Total
Historical	2010	12,658	9,410	14,864	11,716	1,309	1,298	51,255
	2015	13,755	7,895	13,887	11,691	1,292	1,203	49,724
	2016	14,417	7,580	13,905	11,633	1,317	1,145	49,997
	2017	15,047	7,180	13,839	11,732	1,326	1,200	50,325
	2018	15,686	7,126	14,130	12,354	1,319	1,155	51,770
	2019	16,195	7,274	14,459	13,373	1,401	1,134	53,836
	2020	11,742	5,514	12,791	12,597	1,245	1,020	44,907
	2021	12,214	5,893	13,891	13,652	1,339	1,075	48,064
	2022	15,150	6,522	14,635	14,029	1,268	986	52,591
	2023	16,158	6,456	14,582	15,270	1,194	866	54,526
Estimated	2024	17,052	6,733	14,917	15,971	1,131	697	56,502
Forecast	2025	17,529	7,029	15,348	16,456	1,145	722	58,229
	2030	20,076	7,108	16,180	17,289	1,145	722	62,521
	2035	22,024	7,753	16,480	17,621	1,145	722	65,744
	2040	24,138	8,430	16,788	17,963	1,145	722	69,187
	2045	26,382	9,143	17,106	18,316	1,145	722	72,813
CAGR	2010-2024	2.2%	-2.4%	0.0%	2.2%	-1.0%	-4.3%	0.7%
	2025-2045	2.1%	1.3%	0.5%	0.5%	0.0%	0.0%	1.1%

Source: FAA Aerospace Forecast, 2025; Ardurra, 2026

Aviation Activity Forecast

The aviation activity forecast establishes the projected levels of based aircraft and aircraft operations at Reno-Stead Airport for the 2025 baseline year through the 2045 planning horizon. This forecast forms the foundation for evaluating future facility requirements, airfield capacity, landside development needs, and capital improvement timing.

Forecasts were developed using a combination of historical airport data, regional socioeconomic indicators, and local operational characteristics specific to RTS.

Based Aircraft Forecast

The based aircraft forecast for Reno-Stead Airport was developed using growth rates derived from the FAA Aerospace Forecast by engine type, with adjustments to reflect local conditions.

As shown in Table 2-15, the total number of based aircraft is projected to increase from 218 aircraft in 2025 to 251 aircraft by 2045, representing an overall compound annual growth rate (CAGR) of approximately 0.7 percent.

While the Reno–Sparks region has experienced steady population growth and increasing per capita income, these broader socioeconomic trends have not translated directly into proportional growth in based aircraft at Reno-Stead Airport. Historical data indicates that based aircraft levels have increased, but at a rate much slower than socioeconomic trends, reflecting constraints related to hangar availability, development costs, and overall affordability of aircraft and aircraft storage at RTS and nationally.

Although demand for hangar space at RTS remains strong, the cost of new hangar construction has limited the pace at which additional capacity can be delivered. As a result, based aircraft growth is expected to occur gradually and in line with the growth anticipated for the general aviation fleet.

Accordingly, this forecast relies on FAA Aerospace Forecast growth rates, which reflect national trends in general aviation fleet composition and provide a conservative and defensible basis for long-term projections.

Single-engine piston aircraft are projected to grow from 196 aircraft in 2025 to 217 aircraft in 2045, reflecting a 0.5 percent CAGR. While the FAA Aerospace Forecast anticipates a slight national decline in this category due to the aging piston fleet and a gradual transition toward turbine aircraft, local conditions at RTS support the application of a modest positive growth rate. Demand for general aviation facilities in the region remains strong, and several nearby airports have limited available hangar capacity. Existing demand for hangar space at RTS exceeds available supply, and additional hangar development is planned to begin in 2026. Given these regional factors, a modest positive growth rate for single-engine piston aircraft is considered reasonable.

Multi-engine piston aircraft are projected to remain relatively stable, increasing slightly from five (5) to six (6) aircraft over the planning horizon. Turboprop aircraft are projected to increase from one (1) to two (2) aircraft, consistent with national trends toward modest turbine fleet growth.

Jet aircraft are projected to grow from 11 aircraft in 2025 to 19 aircraft by 2045, reflecting a 2.7 percent annual growth rate consistent with national business aviation trends. Helicopter operations are also projected to increase from five (5) to nine (9) aircraft, representing a 2.7 percent CAGR, consistent with both FAA projections and the Airport's support of specialized rotorcraft activity.

Table 2-15 Based Aircraft Forecast

Year	SE-Piston	ME-Piston	Turboprop	Jet	Helicopter	Total
2025	196	5	1	11	5	**218**
2030	201	5	1	13	6	**225**
2035	206	5	1	14	7	**233**
2045	217	6	2	19	9	**251**
CAGR	**0.5%**	**0.5%**	**2.1%**	**2.7%**	**2.7%**	**0.7%**

Source: Ardurra, 2026

Operations Forecast

The aircraft operations forecast was developed by evaluating and projecting activity within each operational category reflected in the airport's historical data and FAA reporting structure. As shown in the forecast tables, operations are segmented into itinerant and local activity, with further breakdown by air carrier, air taxi, general aviation, military, and civil classifications as applicable.

Recognizing that different operational segments are influenced by different demand drivers, multiple forecasting methodologies were reviewed to determine the most appropriate approach for each category. These methodologies included historical trend analysis, FAA TAF comparisons, FAA Aerospace Forecast growth rates, and consideration of socioeconomic indicators.

The following provides details of how the operations forecast was established, and Table 2.16 details the results.

Local Operations Forecast

Local aircraft operations consist of general aviation activity associated with flight training and recreational flying. Because local operations are closely tied to aircraft ownership and discretionary flying activity, several socioeconomic indicators were evaluated to identify the most appropriate forecasting variable.

Per capita income (PCI) was selected as the preferred forecasting method. PCI is widely recognized in airport planning as a strong indicator of general aviation demand, as aircraft ownership and recreational flying are closely correlated with disposable income. Higher income levels typically support increased aircraft ownership, flight hours, and local training activity.

The PCI-based forecast reflects an average annual growth rate of approximately 1.4 percent over the planning horizon. This growth rate is consistent with regional economic expectations and historical activity at RTS and provides a reasonable projection of local operations through 2045.

In addition to civil local operations, RTS supports military activity associated with the Nevada Air National Guard. Local military operations occur in support of training, readiness, and mission-related requirements. Military activity levels are influenced by national defense priorities, funding, and mission assignments, which are not directly correlated with local socioeconomic conditions and are difficult to reliably project over a long-term planning horizon.

Consistent with standard airport forecasting practice, local military operations are therefore held flat from the last reported year of annual operations throughout the planning period.

Itinerant Operations Forecast

Itinerant operations include air carrier, air taxi, general aviation, and military activity. Each segment was evaluated independently to determine the most appropriate forecasting methodology based on its operational drivers and historical characteristics.

Air Carrier Operations

Air carrier operations at RTS primarily consist of large aircraft supporting seasonal wildfire suppression and related emergency response activities. Although these aircraft are not engaged in scheduled commercial passenger service, they meet the FAA air carrier classification based on aircraft weight and payload capacity, as discussed earlier in this chapter.

Because firefighting activity is highly dependent on seasonal conditions, wildfire intensity, and federal resource deployment, annual activity levels can vary significantly from year to year. To establish a representative planning level, historical firefighting operations were evaluated over the past decade. This analysis indicates that during active fire seasons, air carrier operations at RTS have averaged approximately 1,000 annual operations.

For the purpose of this forecast and master plan, air carrier operations are held constant at this representative level throughout the planning horizon.

Air Taxi Operations

Air taxi operations are classified based on aircraft passenger or cargo carrying capability. At RTS, these operations were estimated based on weight of aircraft and include small airtanker aircraft and mission specific aircraft operations. Baseline data indicates few operations were likely for passenger conveyance via charter and or fractional-ownership. After reviewing several socioeconomic indicators, PCI was selected as the preferred forecasting variable. Air taxi demand is closely correlated with business aviation usage, making PCI an appropriate proxy for this segment.

The PCI-based forecast reflects steady growth in air taxi operations from 1,617 operations in 2025 to 2,134 operations in 2045, consistent with regional economic projections.

Itinerant General Aviation Operations

Itinerant GA operations represent general aviation traffic coming to or leaving the immediate pattern at RTS. Similar to air taxi activity, itinerant GA operations are influenced by regional economic conditions and discretionary flying activity. PCI was again selected as the preferred forecasting variable, as it

provides a reasonable indicator of aircraft ownership levels, business travel, and recreational flying demand.

Under the PCI-based forecast, itinerant GA operations are projected to increase from 14,301 operations in 2025 to 18,876 operations in 2045, reflecting sustained but moderate growth consistent with regional economic trends.

Military Operations

Itinerant military operations are associated with training and mission-related activity connected to the Nevada Air National Guard and other federal agencies. As with local military operations, activity levels are influenced by national defense priorities and mission requirements that are not directly tied to local socioeconomic factors. In the absence of documented changes in mission scope, itinerant military operations are held constant at 1,813 annual operations throughout the planning period.

Table 2-16 Total Operations Forecast

FFY	Itinerant				Local		Total Historical Operations
	Air Carrier	Air Taxi & Commuter	GA	Military	GA	Military	
2025	436	1,617	14,301	1,813	35,918	417	54,502
2030	1,000	1,733	15,329	1,813	38,499	417	58,791
2035	1,000	1,858	16,430	1,813	41,265	417	62,783
2045	1,000	2,134	18,876	1,813	47,409	417	71,649
CAGR		**1.4%**	**1.4%**	**0.0%**	**1.4%**	**0.0%**	**1.4%**

Source: Ardurra, 2026

Discussion with tenants and airport staff indicated that up to 15 percent of total operations may be conducted by aircraft that are not equipped with ADS-B and are therefore not captured in total operations through Virtower. To account for these operations, a comparison is provided in Table 2-17. As detailed, actual annual operations at RTS in 2025 may be roughly 62,000, with the expectation that operational levels could be more than 80,000 by the end of the planning period.

Table 2-17 Aircraft Operations Comparison

Year	Master Plan Operations	15 Percent Modifier	Potential Total
2025	54,502	8,175	62,677
2030	58,791	8,819	67,609
2035	62,783	9,417	72,200
2045	71,649	10,747	82,396

Source: Ardurra, 2026

Unmanned Aircraft Systems Operations Forecast

Unmanned aircraft systems (UAS) operations are an established component of aviation activity at Reno-Stead Airport and represent a distinct element of the airport's operational profile. The Airport functions as a key operating location within the FAA-designated Nevada UAS Test Site and supports a range of UAS research, testing, training, and operational activities under existing FAA authorizations. This role differentiates RTS from many general aviation airports where UAS activity remains limited or informal.

As documented in the Airport Inventory, UAS users at RTS include public-sector agencies, research institutions, and private operators engaged in flight testing, training, and mission-specific operations. These activities vary in scale and duration and may involve aircraft ranging from small, lightweight systems to larger fixed-wing UAS comparable in size and performance to manned general aviation aircraft. UAS operations at RTS are coordinated to ensure compatibility with manned aircraft activity and are conducted within defined operational and airspace parameters.

More recently, an increasing number of UAS operating at RTS have been equipped with ADS-B Out transponders, enabling their activity to be captured by existing transponder-based monitoring systems such as Virtower. As a result, a limited but meaningful record of observed UAS movements is now available. Based on recent Virtower data, UAS equipped with ADS-B average approximately 25 operations per month, or an assumed 300 operations annually.

This figure represents only a subset of total UAS activity at the airport, as many UAS are not equipped with transponders and therefore are not detected by the system. However, this forecast used the ADS-B data to provide context for the demand levels that may be associated with that segment of UAS.

UAS operations do not scale proportionally with conventional runway operations or based aircraft counts. Many UAS missions involve extended flight durations, specialized operating areas, or non-traditional use of airport infrastructure, resulting in relatively small numbers of takeoffs and landings compared with manned general aviation activity. Accordingly, while UAS operations are operationally significant at RTS, they do not materially affect runway capacity in the same manner as traditional aircraft.

The UAS forecast presented in this master plan is based on projections contained in the FAA Aerospace Forecast, including the companion Emerging Aviation Entrants: Unmanned Aircraft Systems and Advanced Air Mobility report. Specifically, projections of the Total Commercial/Non-Model UAS Fleet were used to establish planning-level growth assumptions.

Two forecasts of UAS activity at Reno-Stead Airport were developed, consisting of a base case and a high growth scenario, derived from FAA-published projections of commercial UAS fleet growth contained in the FAA Aerospace Forecast.

The Base Case reflects continuation of currently observed UAS activity at Reno-Stead Airport using growth assumptions consistent with the FAA's base case projection for the Total Commercial/Non-Model UAS fleet contained in the FAA Aerospace Forecast. The FAA's baseline growth assumption for that fleet was a compound annual growth rate of 4.08 percent. To project future activity at RTS under the Base Case, that same growth rate was applied.

A High Growth scenario was also developed using growth assumptions consistent with the FAA's High Case projection for the Total Commercial/Non-Model UAS fleet contained in the FAA Aerospace Forecast. Under this scenario, a compound annual growth rate of 4.59 percent was applied. Both forecasts are displayed below in Table 2-18

Table 2-18 Unmanned Aircraft Systems Forecast Annual Operations

Year	Base Case	High Growth
2025	300	300
2030	366	375
2035	348	470
2045	668	736
CAGR	**4.08%**	**4.59%**

Source: FAA Aerospace Forecast, 2025; Ardurra, 2026

Air Cargo Potential

A high-level review of air cargo potential at Reno-Stead Airport was conducted as part of this forecast effort. The Airport does not currently support scheduled commercial cargo service, and no dedicated cargo operators are based at the airport.

Air cargo activity in the Reno region is concentrated at Reno–Tahoe International Airport, which serves as the primary hub for integrated express carriers and scheduled cargo operations. That airport's role as the region's commercial service airport, combined with established logistics infrastructure and carrier presence, greatly limits the likelihood of any scheduled cargo service shifting to RTS.

However, RTS offers certain physical attributes that could be attractive to specialized cargo activity. Future cargo operations would likely be logistics-specific and driven by individual private-sector users, rather than by network cargo carriers. If such activity were to materialize, the resulting aircraft operations would be expected to be limited in scale relative to overall airport activity and would not materially influence total operational demand.

Accordingly, no commercial air cargo activity has been included in the aviation demand forecast. However, this master plan will consider airport land use, access, and infrastructure to accommodate potential future cargo or logistics-related users should market conditions or private-sector interest evolve over the planning horizon.

Forecast Comparison Tables

In accordance with current FAA forecast guidance for non-towered airports, the RTS Master Plan forecast was compared to projections derived from the 2025 FAA Aerospace Forecast. FAA guidance indicates that forecasts through 10 years should not differ from Aerospace Forecast–based growth projections by more than 10 percent at year five (5) and 15 percent at year 10, when calculated from the base year. Table 2-19 summarizes the forecast activity levels and based aircraft over the planning period.

Table 2-19 Master Plan Forecast Summary

	Base Year	Forecast Years			Compound Annual Growth Rate		
	2025	2030	2035	2045	2030	2035	2045
Operations							
Itinerant							
Air Carrier	436	1,000	1,000	1,000	-	-	-
Air Taxi and Commuter	1,617	1,733	1,858	2,134	1.40%	1.40%	1.40%
General Aviation	14,301	15,329	16,430	18,876	1.4%	1.4%	1.4%
Military	1,813	1,813	1,813	1,813	0.0%	0.0%	0.0%
Local							
General Aviation	35,918	38,499	41,265	47,409	1.4%	1.4%	1.4%
Military	417	417	417	417	-	-	-
Total Operations	**54,502**	**58,791**	**62,783**	**71,649**	**1.5%**	**1.4%**	**1.4%**
Based Aircraft							
Single-Engine	196	201	206	217	0.50%	0.50%	0.5%
Multi-Engine	6	6	6	7	0.77%	0.78%	0.8%
Jet	11	13	14	19	2.70%	2.70%	2.7%
Helicopter	5	6	7	9	2.70%	2.70%	2.7%
Total Based Aircraft	**218**	**225**	**233**	**251**	**0.7%**	**0.7%**	**0.7%**

Source: FAA Aerospace Forecast, 2025; Ardurra, 2026

Table 2-20 compares this forecast to the Aerospace Forecast projections for both based aircraft and total operations. For based aircraft, this forecast differs by three (3) percent at year five (5) (2030) and five (5) percent at year ten (10) (2035). For total operations, the difference is four (4) percent at year five (5) and nine (9) percent at year ten (10).

In all cases, this forecast remains within FAA acceptable deviation thresholds. The forecast is therefore considered reasonable, consistent with national aviation trends, and suitable for planning purposes.

Table 2-20 Master Plan – FAA Aerospace Forecast Comparison

	Year	Master Plan Forecast	2025 Aerospace Forecast	% Difference
Based Aircraft				
Base yr.	2025	218	218	0%
Base yr. + 5 yrs.	2030	225	220	3%
Base yr. + 10 yrs.	2035	233	221	5%
Base yr. + 20 yrs.	2045	251	226	11%
Operations				
Base yr.	2025	54,502	54,502	0%
Base yr. + 5 yrs.	2030	58,227	55,878	4%
Base yr. + 10 yrs.	2035	62,219	57,293	9%
Base yr. + 20 yrs.	2045	71,649	60,246	18%

Source: FAA Aerospace Forecast, 2025; Ardurra, 2026

Critical Aircraft

The FAA requires identification of the existing and future critical aircraft for each runway at an airport. The critical aircraft is defined as the most demanding aircraft or grouping of aircraft with similar operational and design characteristics that makes regular use of a runway. Regular use is defined as at least 500 total annual operations per FAA Advisory Circular (AC) 150/5000-17, Critical Aircraft and Regular Use Determination, and excludes touch-and-go operations.

In practice, the critical aircraft is not always a single aircraft type but may represent a family or grouping of aircraft with comparable performance and dimensional characteristics. This grouping approach ensures that airport design standards reflect the operational demands of aircraft that regularly use the airport without being overly influenced by infrequent or one-time operations.

Three (3) primary parameters are used to classify the critical aircraft:

- **Aircraft Approach Category (AAC) –** Depicted by a letter (A through E), this classification is based on aircraft landing speed and relates to runway design standards such as visibility minimums and separation requirements.
- **Airplane Design Group (ADG) –** Depicted by a Roman numeral (I through VI), this classification is based on aircraft wingspan and tail height and governs runway and taxiway separation standards.
- **Taxiway Design Group (TDG) –** Depicted by a numeric and letter designation, this classification relates to the outer-to-outer main gear width and the distance between the cockpit and main landing gear, influencing taxiway geometry and fillet design.

These parameters collectively establish the design standards for runway width, taxiway separation, object-free areas, runway safety areas, and other airport design elements. An accurate determination of

the existing and future critical aircraft ensures that airport facilities are appropriately designed to accommodate regular users while maintaining safety and regulatory compliance.

Airtanker Runway Specific Demand

The most demanding aircraft currently using RTS are C-III-sized large airtanker aircraft used for aerial firefighting activity. The airport regularly accommodates privately owned large airtankers (LATs) under federal contract, including aircraft such as the BAe-146, MD-87, RJ85, B737, and C-130 variants, which fall within aircraft approach category C and airplane design group III (C-III) classification.

Historical operations data demonstrates that aerial firefighting activity at RTS varies significantly from year to year. Annual operations fluctuate based on wildfire severity, seasonal weather conditions, federal funding, and national resource deployment priorities. In high fire years, activity increases substantially, while operations may be limited during milder seasons.

An analysis of airtanker operations was conducted to examine operational levels since 2014 to gauge total operations and operations per runway. The BLM Airtanker Base records gallons of retardant delivered and the number of operations. That information was provided by BLM staff for this assessment. The 2025 summer fire season was captured in the Virtower data. That data was used to confirm alignment between BLM records and to estimate runway utilization for prior years. The results of the analysis are detailed in Table 2-21.

During seasons with more active fires, regular use of each runway is noted, with large fire years far exceeding the regular use threshold.

Table 2-21 Historical Large Airtanker Operations

Year	Total Fire Operations	Runway 8-26 Operations	Runway 14-32 Operations
2014	154	69	85
2015	216	97	119
2016	752	338	414
2017	2,540	1,143	1,397
2018	702	316	386
2019	718	323	395
2020	1,618	728	890
2021	1,602	721	881
2022	57	26	32
2023	51	23	28
2024	1,250	563	688
2025	436	196	240

Source: United States Forest Service (USFS), Ardurra, 2026

Note: Runway utilization based on 2025 data. Years 2014 through 2024 assume that same percentage use.

Fleet Mix Analysis

A fleet mix analysis was conducted to identify the aircraft categories regularly using each runway and to support the determination of the Airport's critical aircraft. While Runway 8-26 and Runway 14-32 experience different overall utilization levels, the composition of aircraft using each runway is generally similar in terms of approach category and design group.

Table 2-22 and Table 2-23 denote the fleet mix identified for Runway 8-26 and Runway 14-32 based on Virtower data obtained in the baseline year.

The most demanding aircraft currently using RTS are C-III-sized large airtanker aircraft. As noted in the Operations Forecast, large airtanker operations, categorized as air carrier operations, are forecast with a flat baseline of 1,000 operations per year. The Virtower data indicated that airtanker activity was divided roughly evenly between the two runways in the baseline year. It is assumed that distribution will remain consistent throughout the planning period.

It is estimated that with extreme weather events expected to become more frequent, air suppression and attack for wildfires will increase operational demand at airports across the U.S., including at RTS. Thus, it is assumed this forecast represents a conservative estimate of airtanker operations throughout the planning period.

In addition to aerial firefighting activity, Reno-Stead Airport also supports recurring training operations, including those conducted by F-5 aircraft based at the airport. These operations are reflected in the fleet mix as D-II activity and represent a small but consistent component of overall aircraft operations. It was noted in conversations with the F-5 operator that increasing the runway length for Runway 14-32 would provide the ability to conduct training operations at RTS instead of at nearby airports. If those operations were conducted at RTS, it is estimated their activity could trend towards regular use. These factors are considered in the Facility Requirements chapter of this master plan.

Table 2-22 Runway 8-26 Fleet Mix Baseline and Forecast

AAC - ADG	Base Year	Forecast Years		
	2025	2030	2035	2045
A-I	36,633	39,137	41,820	47,779
A-II	370	395	422	483
A-III	23	25	26	30
B-I	408	436	466	532
B-II	665	710	759	867
B-III	2	2	2	3
B-IV	53	57	61	69
C-II	16	17	18	21
C-III	152	500	500	500
C-IV	13	14	15	17
D-II	36	38	41	47

Source: Virtower, Ardurra, 2026

Note: C-III firefighting airtanker operations are estimated at roughly 500 per year for each runway in forecast years.

Table 2-23 Runway 14-32 Fleet Mix Baseline and Forecast

AAC - ADG	Base Year	Forecast Years		
	2025	2030	2035	2045
A-I	10,944	11,692	12,494	14,274
A-II	70	75	80	91
A-III	5	5	6	7
B-I	112	120	128	146
B-II	229	245	261	299
B-III	-	-	-	-
B-IV	46	49	53	60
C-II	14	15	16	18
C-III	193	500	500	500
C-IV	3	3	3	4
D-II	267	285	305	348

Source: Virtower, Ardurra, 2026

Note: C-III firefighting airtanker operations are estimated at roughly 500 per year for each runway in forecast years.

Critical Aircraft Determination

The analysis of fleet mix and runway usage determined the existing and future critical aircraft for Runway 8-26 and Runway 14-32 is the McDonnell Douglas MD-87. The MD-87 is a C-III aircraft operating at RTS and representative of the other C-III large airtankers that also operate at RTS. The taxiway design group (TDG) for the MD-87 is TDG 3. As discussed, these aircraft historically have made regular use of both runways and are projected to continue frequent use through the planning period.

An ultimate critical aircraft identified for both runways is the McDonnell Douglas DC-10 and Boeing 767-300 which are C/D-IV, TDG 5 aircraft. The DC-10 is the current staple of the very large airtanker (VLAT) fleet. Through discussions with airport stakeholders and independent research, it was noted the aerial firefighting industry is moving toward larger aircraft as the next development in fleet. This next generation of very large airtankers will be built from retiring widebody commercial and cargo aircraft, such as the B767-300.

Currently, RTS ground facilities are not built to accommodate VLAT aircraft, and few exist in the fleet. However, as the industry builds a larger VLAT fleet, and if regional wildfire suppression with aircraft further increases, accommodating VLAT aircraft at RTS may be desired by operators. Looking ahead, trends within the aerial firefighting industry indicate a gradual shift toward larger, more capable aircraft. While these VLATs are not currently regular users of RTS, they represent a potential future design consideration as fleet composition evolves, and wildfire response demands increase.

Table 2-24 details the existing, future, and ultimate critical aircraft for Runway 14-32 and Runway 8-26.

Table 2-24 Runway 14-32 and Runway 8-26 Critical Aircraft Determination

	Critical Aircraft	AAC-ADG	TDG
Runway 14-32			
Existing/Future Critical Aircraft	McDonnell Douglas MD-87	C-III	3
Ultimate Critical Aircraft	McDonnell Douglas DC-10 / Boeing 767-300	C/D-IV	5
Runway 8-26			
Existing/Future Critical Aircraft	McDonnell Douglas MD-87	C-III	3
Ultimate Critical Aircraft	McDonnell Douglas DC-10 / Boeing 767-300	C/D-IV	5

Source: Ardurra, 2026

Master Plan Forecast Conclusion

The aviation activity forecast for Reno–Stead Airport indicates steady, moderate growth through the 2025–2045 planning horizon, reinforcing the Airport's role as a core general aviation reliever and a strategically important center for specialized aviation activity in northern Nevada.

General aviation activity, particularly local flight training and recreational flying, continues to account for the majority of operations and is expected to drive most of the forecast growth. Local general aviation

operations are projected to grow in line with regional per capita income trends, while itinerant general aviation and air taxi operations increase modestly as business travel and discretionary flying activity are expected to expand. Military operations, both local and itinerant, are held constant throughout the forecast due to their reliance on mission requirements rather than local economic conditions. Air carrier operations, primarily consisting of large aerial firefighting aircraft, are also forecast at a stable representative level to reflect their highly seasonal and variable nature. Overall, the operations forecast reflects moderate, sustainable growth while recognizing the unique mix of high volume training activity and mission critical specialized operations that define aviation demand at Reno–Stead Airport.

A key finding of the forecast is the continuing influence of specialized aircraft, particularly large aerial firefighting airtankers. Although these aircraft account for a small share of total annual operations, they represent the most demanding regular users of the runway system and therefore drive critical aircraft determinations and airfield design standards. Based on historical activity and forecast use, the existing and future critical aircraft for both Runway 8–26 and Runway 14–32 is the McDonnell Douglas MD 87, a C III category aircraft representative of the large airtanker fleet operating from RTS. During active wildfire seasons, these aircraft routinely exceed FAA thresholds for regular use on both runways, establishing them as the controlling design aircraft for runway length, pavement strength, separation standards, and associated safety areas.

The forecast also acknowledges long term trends within the aerial firefighting industry that may influence future planning considerations. Nationally, wildfire suppression strategies are increasingly reliant on larger, more capable Very Large Airtankers (VLATs), such as the DC 10, derived from retired widebody commercial aircraft. While these aircraft are not currently regular users of Reno–Stead Airport and existing infrastructure is not designed to fully accommodate them, their anticipated expansion within privately owned firefighting fleets suggest they warrant consideration in long range planning.

The following chapters incorporate the findings of this forecast and include an assessment of how RTS can best accommodate projected operations, based aircraft, and critical aircraft.