Auburn

California

Auburn Municipal Airport

Master Plan

2024

AVIATION FORECASTS

May 2025

Contents

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CHAPTER 2

AVIATION FORECASTS

2.1 CHAPTER OVERVIEW

Chapter 2 – Aviation Forecasts provides a 20-year projection of aviation activity at the Auburn Municipal Airport (AUN or "the Airport"). Forecasts consist of future activity level estimates that help guide decision makers in planning airport development and improvement. The forecasts are used to determine facility demand requirements and the timing of demand-driven improvement projects. **Table 2-1** is a summary of the forecasts described in this chapter.

Table 2-1: AUN Forecast Summary

Fiscal Year	Historical	Base Year	Forecast				CAGR	
							2014-2023	2024-2043
	2014	2023	2028	2033	2038	2043		
Enplanements	**0**	**0**	**0**	**0**	**0**	**0**	**N/A**	**N/A**
Operations	**68,770**	**75,077**	**78,264**	**79,949**	**80,623**	**81,316**	**1.0%**	**0.4%**
Air Carrier	0	0	0	0	0	0	N/A	N/A
Commuter/Air Taxi	1,100	1,100	1,100	1,100	1,100	1,100	N/A	N/A
Itinerant GA	32,320	37,012	39,081	39,410	39,747	40,093	1.4%	0.3%
Itinerant Military	0	0	0	0	0	0	N/A	N/A
Local GA	35,350	36,965	38,083	39,439	39,776	40,123	0.4%	0.3%
Local Military	0	0	0	0	0	0	N/A	N/A
Based Aircraft	**N/A**	**237**	**248**	**263**	**280**	**296**	**N/A**	**1.1%**
CAGR: Compound Annual Growth Rate GA: General Aviation Other = Light sport aircraft, gliders, experimental aircraft, ultralights								

Source: Mead & Hunt Preferred Forecasts, 2024

Each category is evaluated using multiple forecasting methods and is compared to the 2023 FAA Terminal Area Forecast (TAF), published in January 2024. Data from the previous ten years (2014-2023) is used as the basis of historical trend analysis. This ten-year period includes periods of economic growth and contraction. This historical period enables the forecasts to account for a wide range of economic conditions and insight into economic effects on aviation activity at AUN.

2.2 CHAPTER ORGANIZATION

This chapter is organized into the following sections:

- Community Profile
- Historical Aviation Activity
- Aviation Activity Forecasts
- General Aviation Forecasts
- Critical Aircraft
- Peak Period Analysis
- Forecast Comparison to the FAA TAF

2.3 COMMUNITY PROFILE

The aviation activity forecast considers the impact of socioeconomics and the aviation market, both regionally and nationally. Socioeconomic data was collected for the Placer metropolitan statistical area (MSA) and the state of California from the data provider Woods & Poole. The Placer MSA is defined by the U.S. Office of Management and Budget, which encompasses the cities of Auburn, Colfax, Lincoln, Roseville, Rocklin, and Loomis. **Figure 2-1** shows the city's boundaries within the MSA, as well as the surrounding area.

Placer's MSA has been increasing in population and in employment from 2014 to 2023 with an average annual growth rate of 1.4 percent and 2.2 percent prospectively (see **Table 2-2** and **Table 2-3**). Economically, the MSA of Placer County has remained constant and continued to gradually grow during the 2019 pandemic and has since surpassed pre-pandemic employment and gross regional product (GRP) levels.

2.3.1 Population

Woods & Poole Economics releases annual estimates and forecasts of economic and demographic data for specific states, counties, and municipalities. The data includes annual historical economic and demographic information from 1970 (some variables begin in 1990) and annual projections to 2060 for population data by race, sex, and single year of age, employment by industry, earnings of employees by industry, GDP, personal income by source, households by income bracket and retail sales by type of business.

Table 2-2 shows the historical population data and forecast for the MSA of Placer County. As shown, the Placer County's forecasted growth rate the period 2023 to 2043 is slightly higher than the State of California's forecasted growth rate.

Figure 2-1: Area Surrounding AUN, Including the MSA of Placer

Source: Mead & Hunt, Inc. 2024

2.3.2   Employment

Placer County employment is forecasted to grow at an average annual rate of 1.4 percent and the State of California is forecasted to grow at 1.2 percent for the period 2023 to 2043. As of February 2024, the industry leaders in employment within Auburn California identified by the City of Auburn, California in alphabetical order include:

- ▸ Air International Thermal Systems
- ▸ Century Commercial Service
- ▸ Chapa-De Indian Health
- ▸ Crooked Lane Brewing Company
- ▸ Flyers Energy, LLC.
- ▸ Gardner Denver
- ▸ Lyon Real Estate

- ▸ Miltenyi Biotec
- ▸ Mother Lode Holding Company (MLHC)
- ▸ Placer County Water Agency (PCWA)
- ▸ Placer County Office of Education (PCOE)
- ▸ Pride Industries
- ▸ Sutter Health Corporation

Table 2-3 shows the historical and projected employment for the County for the next 20 years. **Table 2-4** and **Table 2-5** show the top industries by employment and sales from 2024 to 2043 as reported by Woods & Poole. The tables show which sectors of the industry contribute the most to the MSA of Placer's employment. Retail Trade and Health Care and Social Assistance in the Placer MSA are the two largest sector employers from 2014 to 2023. Notably, Health Care and Social Assistance and Retail Trade are forecasted to remain the top employers from 2024 to 2043.

Table 2-2: Placer MSA Population

	Historical		Projected				CAGR			
Year	2014	2023	2028	2033	2038	2043	2014 - 2023	2023 – 2033	2023 - 2038	2023 - 2043
Placer County MSA	370,357	424,958	457,409	490,862	524,943	559,906	1.5%	1.5%	1.4%	1.4%
State of California (in thousands)	38,639	39,801	39,801	42,498	43,738	44,917	0.3%	0.7%	0.7%	0.6%

Source: Woods & Poole accessed December 2023.
Note: State of California metrics are measured in thousands.

Table 2-3: Placer MSA Employment

	Historical		Projected				CAGR			
Year	2014	2023	2028	2033	2038	2043	2014 - 2023	2023 – 2033	2023 - 2038	2023 - 2043
Placer County MSA	210,388	261,476	281,580	301,765	322,314	343,417	2.4%	1.4%	1.4%	1.4%
State of California (in thousands)	21,997	25,650	27,463	29,231	30,967	32,677	1.5%	1.3%	1.4%	1.2%

Source: Woods & Poole accessed December 2023.
Note: State of California metrics are measured in thousands.

Table 2-4: Placer MSA's Top 5 Industries by Employment (2014-2043)

Rank	2014 (historical)		2023 (actual)		2043 (forecast)	
	Industry	Jobs	Industry	Jobs	Industry	Jobs
1	Retail Trade	28,173	Health Care & Social Assistance	35,956	Health Care & Social Assistance	75,316
2	Health Care & Social Assistance	24,885	Retail Trade	28,684	Retail Trade	31,978
3	Accommodation & Food Service	17,673	Construction	23,075	Construction	25,952
4	Professional & Tech. Services	15,968	Accommodation & Food Service	21,047	Professional & Tech. Services	25,926
5	Construction	15,830	Professional & Tech. Services	20,165	Real Estate, Rental, & Lease	23,116

Source: Woods & Poole accessed December 2023.

Table 2-5: Placer MSA's Top 5 Industries by Sales (2014-2043)

Rank	2014 (historical)		2023 (actual)		2043 (forecast)	
	Industry	Sales (millions)	Industry	Sales (millions)	Industry	Sales (millions)
1	Motor Vehicles & Parts	3,075	Motor Vehicles & Parts	4,258	Motor Vehicles & Parts	6,009
2	Food & Beverage Stores	1,499	Food & Beverage Stores	1,872	Eating & Drinking Places	3,390
3	General Merchandise Stores	1,201	Eating & Drinking Places	1,619	Food & Beverage Stores	2,786
4	Eating & Drinking Places	991	General Merchandise Stores	1,546	General Merchandise Stores	2,395
5	Gasoline Stations	739	Gasoline Stations	906	Gasoline Stations	1,350

Source: Woods & Poole accessed December 2023.

2.3.3   Gross Regional Product

The Gross Regional Product (GRP) is the value of goods and services produced in a region and serves as an index for the health of the overall economy. GRP grows as industries increase production of higher value goods. Placer MSA's GRP has grown 3.0 percent in the historical period 2014 to 2023. The GRP for the forecast period 2024 to 2043 is projected to grow at 2.5 percent. According to Placer County's government website, Placer County routinely ranks as one of the healthiest and best counties for quality of life, which could be an indication as to why GRP continues to grow. **Table 2-6** shows Placer County's Total MSA GRP from 2014 to 2043.

Table 2-6: Placer MSA's Gross Regional Product

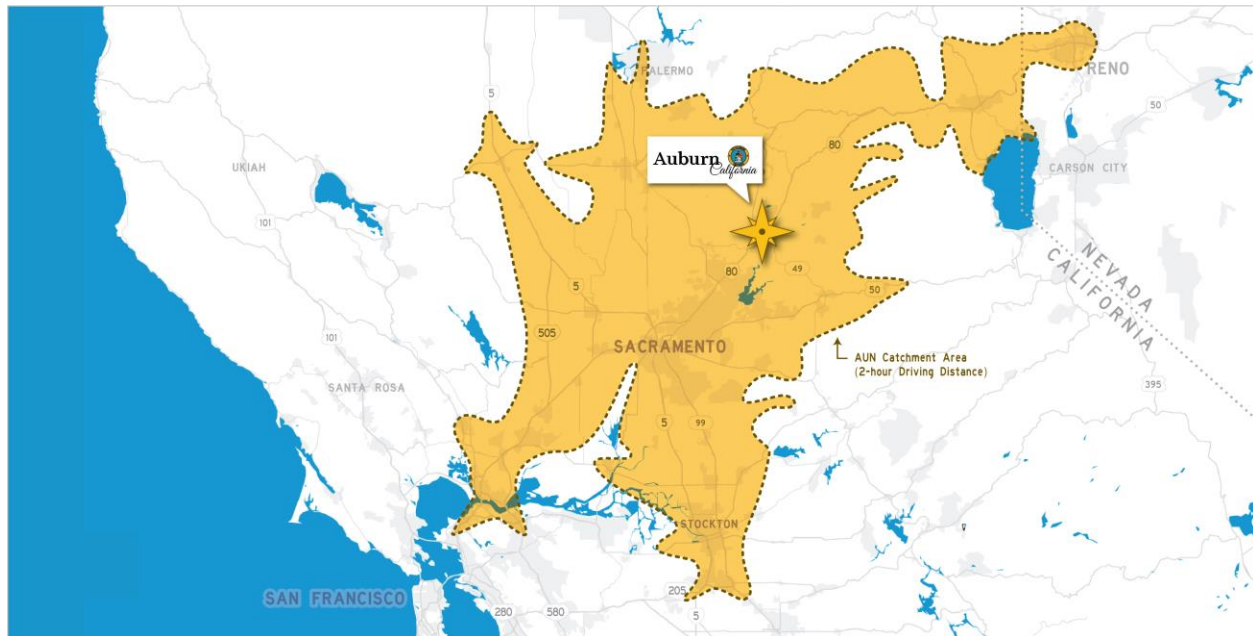| Year	Total GRP	Percent Change
Historical		
2014	24,273	N/A
2023	32,469	33.8%
Projected		
2028	36,935	13.8%
2033	41,836	13.8%
2038	47,239	12.9%
2043	53,200	12.6%
CAGR 2014 - 2023	**3.0%**	**N/A**
CAGR 2024 - 2043	**2.5%**	**N/A**
Total GRP in millions of U.S. dollars CAGR = compound average growth rate		

Source: Woods & Poole accessed December 2023.

2.3.4   Regional Airports

The NPIAS classifies AUN's role as a regional general aviation airport. Other regional airports are considered in the development of forecasts for AUN because they affect the share of regional demand that may be captured at any one airport. Communities with many airports experience demand spread across facilities, whereas communities with few airports may see demand concentrated. The airport catchment area is the area from which the airport draws passengers and users.

Figure 2-2 shows the AUN catchment area for general aviation users. The needs of general aviation users vary greatly, and aircraft owners tend to store their aircraft at the airport closest to their home or business, provided it has their desired facilities and amenities. The primary market of an airport reflects the availability of facilities and services that meet the needs of a specific market. For example, piston aircraft owners typically have fewer requirements compared to business jet owners. Business jets typically require longer runways to operate at full payload and need navigational aids (NAVAIDs) and instrument flight procedures to operate regardless of weather conditions. In contrast, piston aircraft can operate on shorter runways, generally do not operate during low visibility conditions, and do not need Jet-A fuel.

Figure 2-2: AUN General Aviation Catchment Area

Source: Mead & Hunt, Inc. 2024; Traveltime.com.

2.4 HISTORICAL AVIATION ACTIVITY

This historical aviation activity overview provides context for airport activity trends and describes the changes that have occurred. The profile is the baseline for forecasts and includes information regarding historical air cargo, general aviation, and military aviation activity.

2.4.1 Air Cargo Activity

Historically from 2014 to 2023 there has been no cargo activity at AUN.

2.4.2 General Aviation Activity

General aviation encompasses flight activities that do not include passenger operations, cargo operations, and military operations; general aviation activities include, but are not limited to, emergency response, law enforcement, flight training, recreational flying, private and corporate air transportation, and flight testing.

Itinerant General Aviation Operations

Itinerant operations originate and terminate at different airports. In 2023, itinerant operations comprised about fifty percent of total general aviation operations at AUN. Itinerant general aviation operations at AUN have been increasing at approximately 1.5 percent annually from 2014 to 2023.

Relative to national trends as reported in the *FAA Aerospace Forecast,* last updated in May 2023, itinerant general aviation operations at AUN contradict national trends; itinerant general aviation operations increased at a CAGR pf 1.5 percent, whereas national itinerant general aviation operations decreased at a CAGR of roughly 3.0 percent for the period 2014 to 2023.

Table 2-7 compares 2014 to 2023 itinerant general aviation operations at AUN with the State of California data provided by the 2023 FAA TAF, published in March 2023. As shown, while the state's general aviation operations have decreased by 0.5 percent and AUN has grown steadily over the historical period.

Table 2-7: Itinerant General Aviation Operations

Fiscal Year	AUN TAF	AUN TAF Percent Change	State of California TAF	State of California Percent Change
2014	32,320	N/A	3,985,168	N/A
2015	32,320	0.0%	3,969,779	-0.4%
2016	33,935	5.0%	3,903,577	-1.7%
2017	37,012	9.1%	3,814,534	-2.3%
2018	37,012	0.0%	3,892,414	2.0%
2019	37,012	0.0%	3,889,353	-0.1%
2020	37,012	0.0%	3,601,672	-7.4%
2021	37,012	0.0%	3,744,904	4.0%
2022	37,012	0.0%	3,767,988	0.6%
2023	37,012	0.0%	3,813,104	1.2%
CAGR 2014 - 2023	1.5%	N/A	-0.5%	N/A

Source: 2023 FAA TAF, accessed January 2024

Local General Aviation Operations

Local general aviation operations are those that originate and terminate at the same airport. These operations are generally performed by pilots practicing takeoffs and landings and aircraft being flown for flight testing after a repair. Tenants at AUN consist of recreational, business, and government aeronautical users. Flight school operators are a significant user of the airport. Local general aviation operations are often related to the amount of flight training occurring at an airport. **Table 2-8** compares 2014 to 2023 local general aviation operations at AUN with the local operations at the State of California's airports, collectively. California's general aviation operations have been steadily increasing at an average annual growth rate of 1.3 percent since 2014; in addition, AUN local operations have increased at an average annual growth rate of 0.5 percent.

Table 2-8: Local General Aviation Operations

Fiscal Year	AUN TAF	AUN TAF Percent Change	State of California	State of California Percent Change
2014	35,350	N/A	3,955,365	N/A
2015	35,350	0.0%	3,908,007	-1.2%
2016	36,965	4.6%	3,882,966	-0.6%
2017	36,965	0.0%	3,946,173	1.6%
2018	36,965	0.0%	4,026,362	2.0%
2019	36,965	0.0%	4,140,145	2.8%
2020	36,965	0.0%	4,005,606	-3.2%
2021	36,965	0.0%	4,340,756	8.4%
2022	36,965	0.0%	4,316,817	-0.6%
2023	36,965	0.0%	4,426,347	2.5%
CAGR 2014 - 2023	0.5%	N/A	1.3%	N/A

Source: 2023 FAA TAF, accessed January 2024

Based Aircraft

Based aircraft are those stored at AUN. The FAA classifies based aircraft by the propulsion system, engine configuration, and weight. Historical data for AUN based aircraft are from the TAF but are not accurate based on conversations with the Airport and Form 5010. **Table 2-9** shows the based aircraft at AUN from 2014 to 2023 by aircraft category. In 2023, the TAF shows that single-engine piston aircraft comprise 91.2 percent of the based aircraft at AUN, while experimental aircraft comprised 0.9 percent.

According to the TAF the total number of based aircraft at AUN has decreased from 2014 to 2023 with a decreasing annual growth rate of negative 6.6 percent. Experimental aircraft are classified in the "other" category in the forecasts.

Table 2-9: TAF Historical Records - Based Aircraft

Fiscal Year	SEP	Jet	MEP	Helicopter	Other	Total	Total Percent Change
2014	190	0	14	5	2	211	N/A
2015	186	0	14	5	0	205	-2.8%
2016	184	0	14	5	2	205	0.0%
2017	156	0	11	4	2	173	-15.6%
2018	131	0	9	3	2	145	-16.2%
2019	114	0	7	2	2	125	-13.8%
2020	104	0	7	2	1	114	-8.8%
2021	104	0	7	2	1	114	0.0%
2022	104	0	7	2	1	114	0.0%
2023	104	0	7	2	1	114	0.0%
CAGR 2014 - 2023	**-6.5%**	**N/A**	**-7.4%**	**-9.7%**	**-7.4%**	**-6.6%**	**N/A**
AUN 2023 Actual Records	**207**	**3**	**17**	**9**	**1**	**237**	**N/A**

SEP = single-engine piston
MEP = multi-engine piston
CAGR = compound annual growth rate

Source: 2023 TAF records for AUN on based aircraft.

Military Aircraft

There are no military tenants at AUN. As a result, the historical itinerant military operations and historical local itinerant military operations are reported by the 2023 FAA TAF as zero year-over-year for the period 2014 to 2023.

2.5   AVIATION ACTIVITY FORECASTS

This section discusses the methods and assumptions involved with the generation of the forecasts for each segment of the market. A preferred method is selected for each forecast and is then compared with the FAA TAF. The forecasts inform the parameters around which demand-driven facility requirements at AUN are determined.

2.5.1   Passenger Airline Forecasts

Commercial operations and enplanements at AUN are non-existent; therefore, a passenger airline forecast, and an enplanement forecast was not prepared for the 2024 AUN Master Plan.

2.5.2   Air Cargo Activity Forecast

Air cargo tonnage and the resulting operations have historically been flat at the Airport, air cargo forecasts were not prepared for the forecast period 2024 to 2043.

2.5.3 General Aviation Activity Forecasts

Itinerant General Aviation Operations

The three forecasting methods used to project itinerant general aviation operations include the following:

▶ **State (California) Market Share:** The (California) Market Share method compares the percentage market share of itinerant GA operations at AUN with itinerant general aviation operations within the state of California. The California itinerant general aviation operations data is sourced from the 2023 FAA TAF. Over the period from 2013 to 2023, the market share of AUN over the State of California as whole for this segment of the market has ranged between a low of 0.8 percent in 2013 and a high of 1.0 percent in 2023. From 2018 to 2023, the average market share was 1.0 percent. Given the stability of the market share over the period, the average share of 1.0 percent was applied to the TAF projection for the state of California to generate the forecast which projects as growth rate of 0.3 percent for the forecast period 2023 to 2043.

▶ **Aerospace Forecast (ASF):** The ASF method uses the 20-year growth rate (2024-2043) CAGRs presented in the 2023 FAA Aerospace Forecast. This method relies upon trends observed nationally and does not consider local general aviation trends. Using the ASF, an increase of 0.7 percent CAGR was identified for the period from 2024 to 2043.

▶ **State (California) Growth Rate:** The State (California) Growth Rate method uses TAF's growth rate of 0.4 percent for itinerant general aviation operations and applies it to the number of itinerant general aviation operations conducted in 2023 at AUN. The growth rate of 0.4 percent is extrapolated over the forecast period 2024 to 2043 with the professional judgement that itinerant general aviation trends at AUN align with itinerant general aviation trends throughout the State of California.

Table 2-10 and **Figure 2-3** present the forecasts of itinerant GA operations at AUN using the three methods compared to the 2023 TAF.
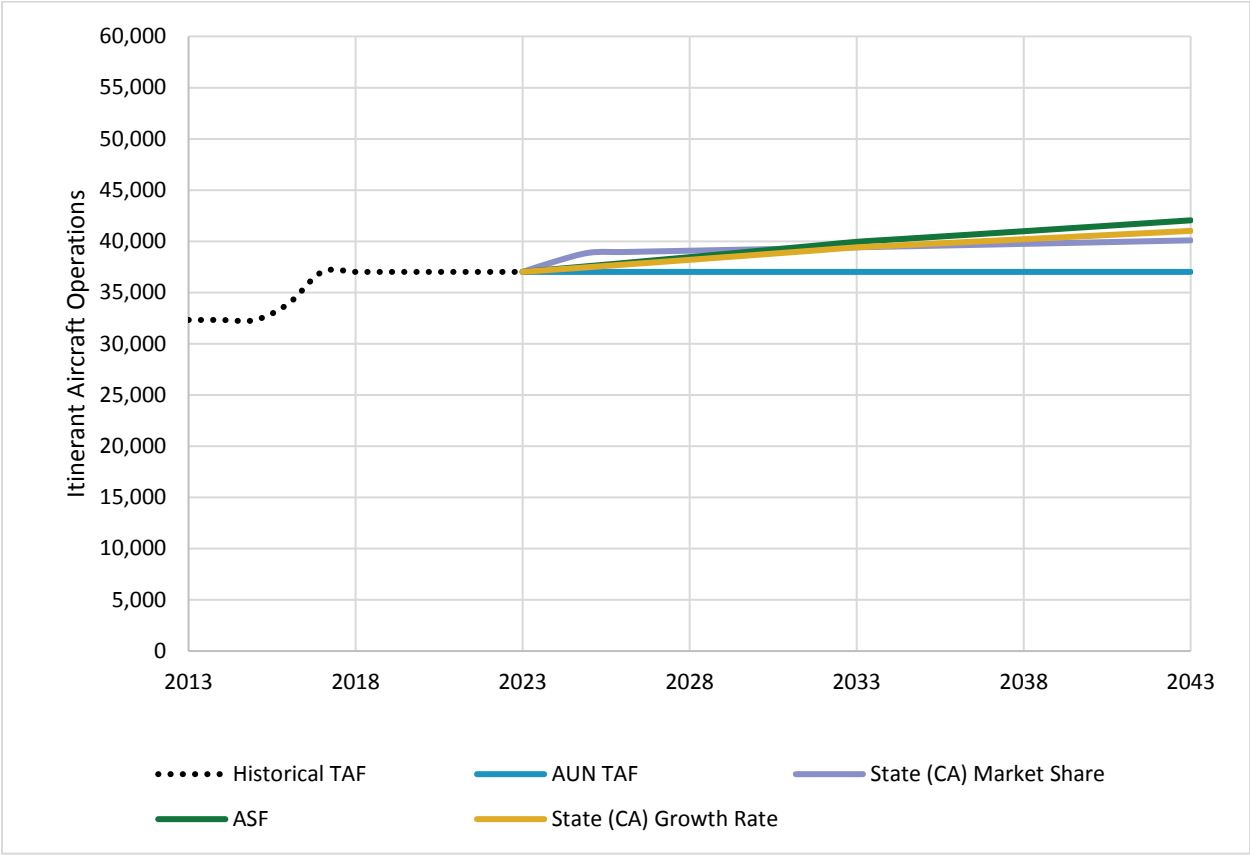
The State (California) Market Share was carried over as the preferred analysis as it most accurately represents itinerant general aviation trends at AUN. State and local AUN socioeconomic factors such as employment and population reinforce these growth trends.

Table 2-10: Itinerant General Aviation Operations Forecasts by Methodology 2024-2043

Fiscal Year	State (California) Market Share	ASF	State (California) Growth Rate	AUN TAF
Historical				
2023	37,012	37,012	37,012	37,012
Forecast				
2024	38,055	37,296	37,245	37,012
2033	39,410	39,949	39,409	37,012
2043	40,093	42,048	41,016	37,012
2024 - 2043 CAGR	**0.3%**	**0.6%**	**0.5%**	**0.0%**
CAGR: compound annual growth rate.				

Source: Historical based on the 2023 TAF; Forecast numbers from Mead & Hunt, 2024.

Figure 2-3: Comparison of Itinerant General Aviation Operations Forecast Results by Methodology

Source: Historical based on the 2023 TAF; Forecast numbers from Mead & Hunt, 2024.

Local General Aviation Operations

The three forecasting methods used to project local general aviation operations include the following:

- **Local Operations (Ops.) Derived from Itinerant:** Local operations were derived from the preferred forecast of itinerant general aviation operations. The share of itinerant operations over time has remained relatively consistent at approximately fifty percent of the total general aviation operations; accordingly, that share was held constant and applied to the itinerant preferred forecast to generate the local operations segment of activity. This method projects a CAGR of 0.3 percent.

- **Aerospace Forecast (ASF):** The ASF method uses the 20-year growth rate (2024-2043) CAGRs presented in the 2023 FAA Aerospace Forecast. This method relies upon trends observed nationally and does not consider local general aviation trends. Using the ASF, an increase of 0.7 percent CAGR was identified for the period from 2024 to 2043.

- **State (California) Market Share:** The (California) Market Share method compares the percentage market share of local GA operations at AUN with local general aviation operations within the state of California. The California local general aviation operations data is sourced from the 2023 FAA TAF. Over the period from 2013 to 2023, the market share of AUN over the State of California as whole for this segment of the market has ranged between a low of 0.9 percent in 2013 and a high of 1.0 percent in 2023. From 2013 to 2023, the average market share was 1.0 percent. Given the stability of the market share over the period, the average share of 1.0 percent was applied to the TAF projection for the state of California to generate the forecast which projects as growth rate of 0.3 percent for the forecast period 2023 to 2043.

Table 2-11 and **Figure 2-4** present the forecasts of local GA operations at AUN using the three methods compared to the 2023 TAF.
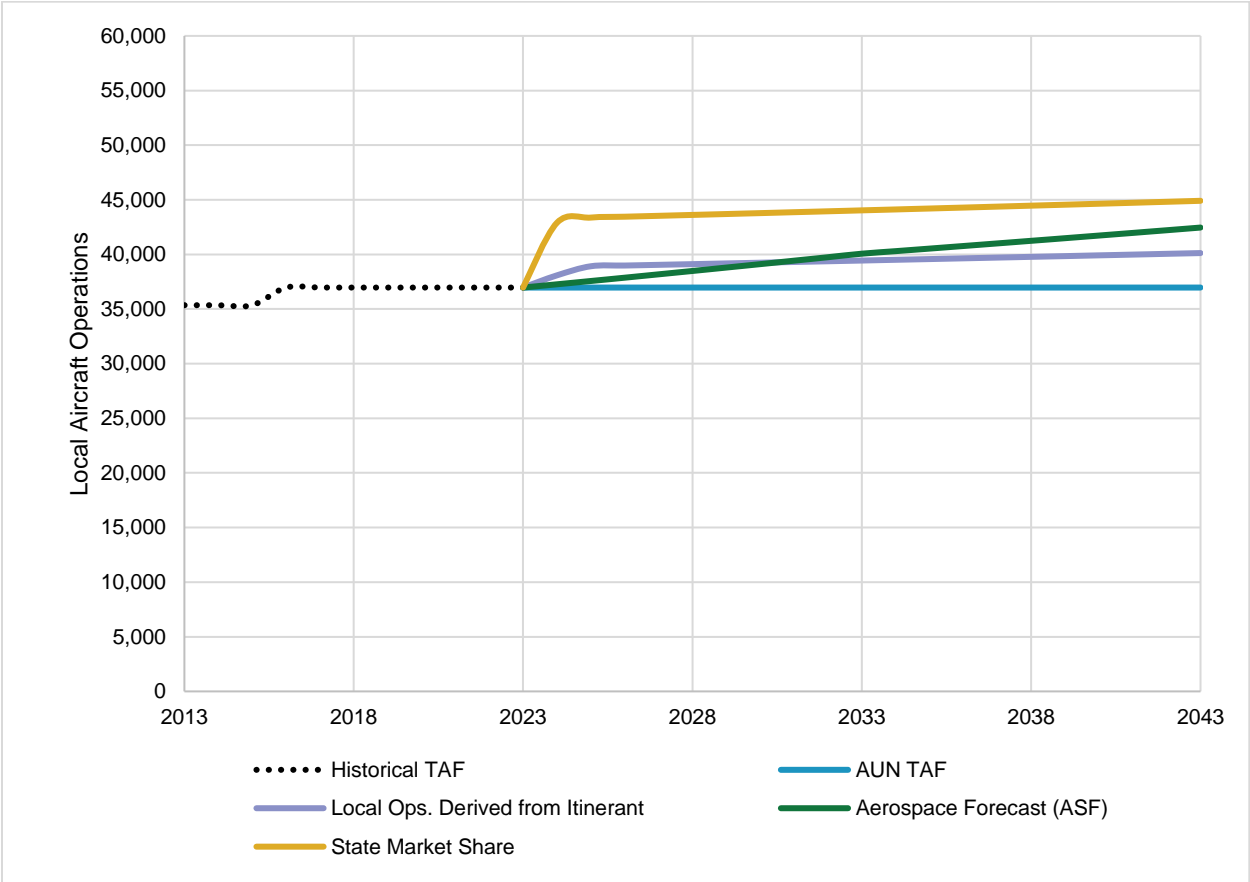
The Local Operations Derived from Itinerant was carried over as the preferred analysis because the method accounts for the recent sustained growth in local general aviation operations experienced at AUN while not forecasting that local operations grow more rapidly than itinerant general aviation operations for the entire duration of the forecast period, since there is roughly a fifty-fifty percentage split between itinerant and local operations according to the TAF.

Table 2-11: Local General Aviation Operations Forecasts by Methodology 2024-2043

Fiscal Year	Local Ops. Derived from Itinerant	ASF	State (California) Market Share	AUN TAF
Historical				
2023	36,965	36,965	36,965	36,965
Forecast				
2024	38,083	37,264	42,894	36,965
2033	39,439	40,065	44,031	36,965
2043	40,123	42,458	44,906	36,965
2024 - 2043 CAGR	**0.3%**	**0.7%**	**0.2%**	**0.0%**
CAGR: compound annual growth rate.				

Source: Historical based on the 2023 TAF; Forecast numbers from Mead & Hunt, 2024.

Figure 2-4: Comparison of Local General Aviation Operations Forecast Results by Methodology

Source: Historical based on the 2023 TAF; Forecast numbers from Mead & Hunt, 2024.
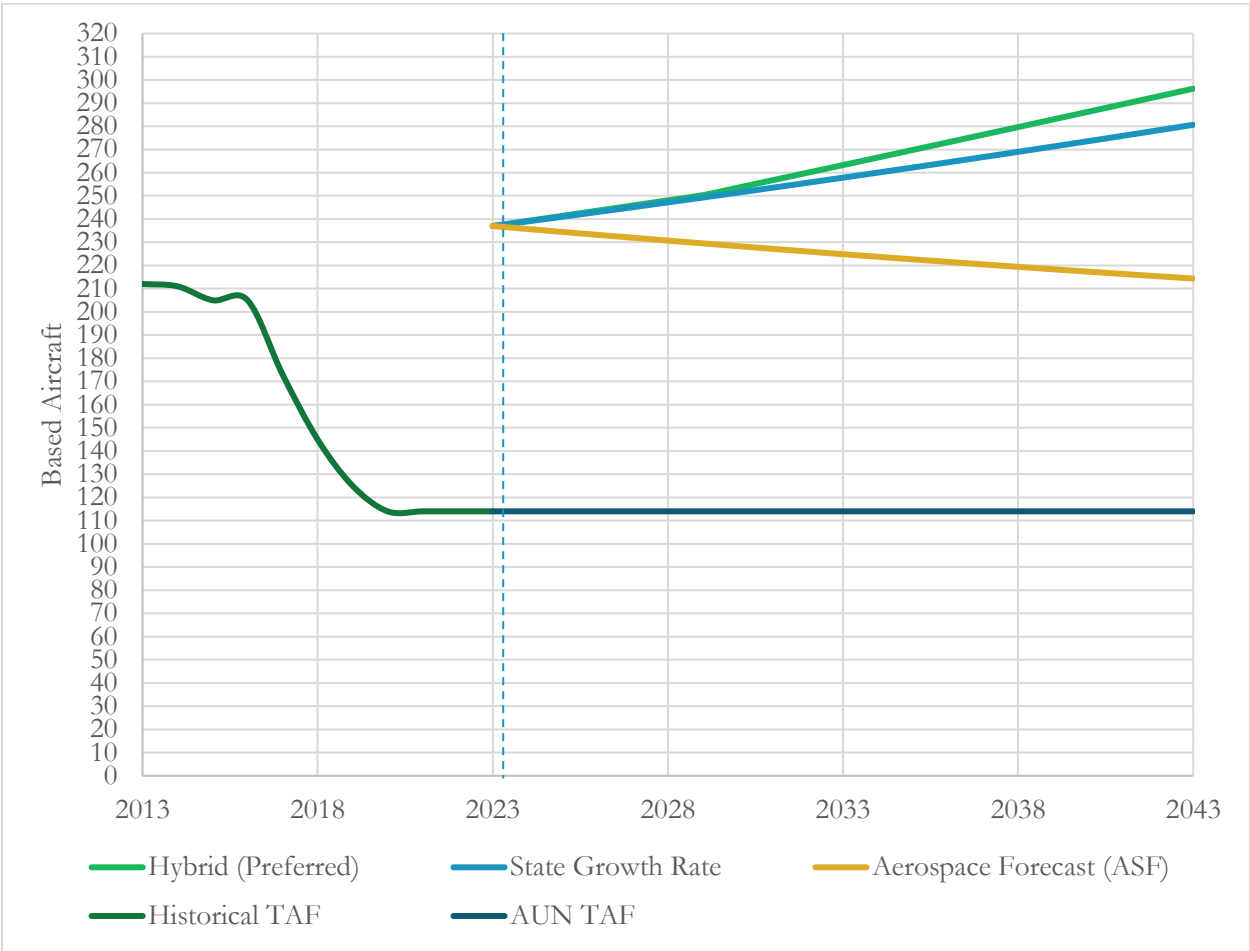
Based Aircraft Forecast

The number of based aircraft reported by the TAF at AUN during the 2014 to 2023 timeframe has remained inconsistent with FAA Form 5010 and BasedAircraft.com. The TAF reports 211 total aircraft in 2014 and drops to a total of 114 aircraft in 2023; whereas in 2023, the FAA Form 5010 reports a total of 237 based aircraft (including experimental and gliders). AUN notes that in BasedAircraft.com that there are 260 based aircraft, however other airports in the area have claimed some of these aircraft. In addition, the TAF projects a flat CAGR rate of 0.0 percent for the forecast period 2023 to 2043, which does not align with the anticipated growth of based aircraft at AUN based on discussions with the Airport and tenants on the airfield.

Due to the inconsistencies between the TAF, Form 5010, and BasedAircraft.com the number of based aircraft reported by the TAF was not used to project the future growth of based aircraft at AUN for the forecast period 2024 to 2043. Instead, the number of based aircraft was sourced from Form 5010, which is shown **Figure 2-5**. AUN based aircraft are forecasted using the following three methods:

▶ **Aerospace Forecast (ASF):** The ASF method uses the growth rates for each category of aircraft from the 2023 FAA Aerospace Forecast and applies them to the number of based aircraft reported in the 2023 Form 5010. This method relies upon trends observed nationally and does not consider local general aviation trends. This method projects an overall decline at 0.5 percent from 2024 to 2043, with the overall total based aircraft declining from 237 in 2023 to 214 in 2043. This decline is due largely to the fact that single-engine piston aircraft are forecasted to decline on a national basis.

▶ **State (California) Growth Rate:** The State (California) Growth Rate method uses TAF's growth rate of 0.8 percent for based aircraft and applies it to the number of based aircraft at AUN in 2023. The growth rate of 0.8 percent is extrapolated over the forecast period 2024 to 2043 with the assumption that based aircraft trends at AUN align with based aircraft trends throughout the State of California due to conversations with the Airport and airfield tenants.

▶ **Hybrid Methodology:** The Hybrid method applies local insight to the forecast obtained from conversations with the Airport and airfield tenants. Based on internal conversations there is the anticipation of a growth in single-engine pistons (SEP) and a slight decline in multi-engine pistons (MEP). This method forecasts a CAGR for SEP at 1.2 percent, jets at 2.7 percent, helicopters at 1.5 percent, and experimental aircraft at 3.1 percent for the forecast period 2024 to 2.43. MEP are forecasted to negatively decline with a CAGR of 0.2 percent.

Figure 2-5 and **Table 2-12** present the based aircraft forecasts at AUN using the three methods compared to the 2023 TAF. It is important to note that in **Figure 2-5** that the blue dotted line represents the base year of the forecast (2023) to show the difference of based aircraft reported inaccurately by the FAA TAF in comparison to the accurate number of based aircraft reported in Form 5010 and on BasedAircraft.com.

Figure 2-5: Comparison of Based Aircraft Forecast Results by Methodology

2
Source: Historical based on the Form 5010; Forecast numbers from Mead & Hunt, 2024.

Table 2-12: Based Aircraft Forecasts by Methodology 2024-2043

Fiscal Year	ASF	State (CA) Growth Rate	Hybrid Methodology	AUN TAF
Historical				
2023	237	237	237	114
Forecast				
2024	237	239	239	114
2033	225	258	263	114
2043	214	281	296	114
2024 - 2043 CAGR	**-0.5%**	**0.8%**	**1.1%**	**0.0%**
CAGR: Compound Annual Growth Rate.				

Source: Historical based on the Form 5010; Forecast numbers from Mead & Hunt, 2024.

The Hybrid Methodology was carried over as the preferred analysis as it was believed that single engine pistons (SEP) would grow over the forecast period 2024 to 2043 based on conversations with the Airport and tenants. It is believed that SEP will continue to slowly grow over the forecast period 2024 to 2043 at a CAGR of 1.1 percent, which contradicts the declining CAGR of negative 0.5 provided by the ASF.

Military Activity

Military activity is based on the decision and mission of the United States Department of Defense rather than socioeconomic drivers; therefore, for planning purposes, military operations are projected to remain flat throughout the forecast period.

2.6   CRITICAL AIRCRAFT

The critical aircraft is defined by the Airport Reference Code (ARC), which consists of the Aircraft Approach Category (AAC) and the Airport Design Group (ADG). These categories are defined by the aircraft dimensions and approach speed. FAA Advisory Circular 150/5300-13B states that the critical aircraft is the most demanding aircraft type or grouping of aircraft with similar physical and operational characteristics, which make regular use of an airport. Regular use is 500 annual operations, excluding touch-and-go operations.

2.6.1   Existing Critical Aircraft

Table 2-13 Error! Reference source not found. presents the 2023 operation counts at AUN by aircraft type sourced from fiscal year 2023 FlightAware data and supplemented by data gathered directly from aircraft operators, tenants, and airport management. As shown, the B-I (small) aircraft are the most demanding (using the grouping method) Runway Design Code (RDC) with an estimate of 796 operations in 2023. Representative aircraft in this category consist of the Beechcraft Baron (BE58) and the Cesena 421 Golden Eagle (C421). Therefore, the B-I (small) aircraft will be used in the following chapters when applying design criteria for airport maintenance, repair and development alternatives.

In addition, there is the potential for a few of the experimental aircraft to be replaced by AAM aircraft, with no change to the ARC of a B-I (small) classification. The demand for electric, hydrogen, and/or hybrid aircraft within the next 20 years is unknown as no AAM aircraft have been certified by the FAA, and those aircraft are yet to be mass manufactured.

Table 2-13: AUN 2023 Operations by ARC

Airport Reference Code	Total
A-I	22,704
A-II	202
Subtotal A	**22,704**
B-I	796
B-II	38
Subtotal B	**834**
Helicopter	**3,825**
Total	**27,363**

Source: FlightAware and AUN Tenants, 2023

2.7 ATTACHMENT A: FORECAST SUMMARIES

Table 2-14: AUN TAF Forecast Summary

Fiscal Year	Historical	Base Year	Forecast				CAGR
	2014	2023	2028	2033	2038	2043	2023-2043
Enplanements	**18**	**0**	**0**	**0**	**0**	**0**	**N/A**
Operations	**68,780**	**75,077**	**75,077**	**75,077**	**75,077**	**75,077**	**N/A**
Air carrier	0	0	0	0	0	0	N/A
Commuter/air taxi	1,110	1,100	1,100	1,100	1,100	1,100	N/A
Itinerant GA	32,320	37,012	37,012	37,012	37,012	37,012	N/A
Itinerant military	0	0	0	0	0	0	N/A
Local GA	35,350	36,965	36,965	36,965	36,965	36,965	N/A
Local military	0	0	0	0	0	0	N/A
Based Aircraft	**211**	**114**	**114**	**114**	**114**	**114**	**N/A**
SEP	190	104	104	104	104	104	N/A
Jet	0	0	0	0	0	0	N/A
MEP[3]	14	7	7	7	7	7	N/A
Helicopter	5	2	2	2	2	2	N/A
Other	2	1	1	1	1	1	N/A
SEP = Single-engine piston MEP = multi-engine piston CAGR = compound annual growth rate							

Source: Historical based on the TAF; Forecast numbers from 2023 TAF.

Figure 2-6: AUN Forecast Comparison to the TAF

AIRPORT NAME:		Auburn Municipal Airport		
	Year	**Airport Forecast**	**TAF**	**AF/TAF (% Difference)**
Passenger Enplanements				
Base yr.	2023	0	0	N/A
Base yr. + 5yrs.	2028	0	0	N/A
Base yr. + 10yrs.	2033	0	0	N/A
Base yr. + 15yrs.	2038	0	0	N/A
Commercial Operations				
Base yr.	2023	1,100	1,100	N/A
Base yr. + 5yrs.	2028	1,100	1,100	N/A
Base yr. + 10yrs.	2033	1,100	1,100	N/A
Base yr. + 15yrs.	2038	1,100	1,100	N/A
Total Operations				
Base yr.	2023	75,077	75,077	0.0%
Base yr. + 5yrs.	2028	78,264	75,077	4.2%
Base yr. + 10yrs.	2033	79,949	75,077	6.5%
Base yr. + 15yrs.	2038	80,623	75,077	7.4%

NOTES: TAF data is on a U.S. Government fiscal year basis (October through September).
AF/TAF (% Difference) column has embedded formulas.

Source: Mead & Hunt, 2023 and 2023 FAA TAF

Figure 2-7: AUN Planning Forecast Summary

Template for Summarizing and Documenting Airport Planning Forecasts

A. Forecast Levels and Growth Rates

AIRPORT NAME: Auburn Municipal Airport   Specify base year: 0

	Base Yr. Level	Base Yr. + 1yr.	Base Yr. + 5yrs.	Base Yr. + 10yrs.	Base Yr. + 15yrs.	Base yr. to +1	Base yr. to +5	Base yr. to +10	Base yr. to +15
Passenger Enplanements									
Air Carrier	0	0	0	0	0	N/A	N/A	N/A	N/A
Commuter	0	0	0	0	0	N/A	N/A	N/A	N/A
TOTAL	0	0	0	0	0	N/A	N/A	N/A	N/A
Operations									
Itinerant									
Air carrier	0	0	0	0	0	N/A	N/A	N/A	N/A
Commuter/air taxi	1,110	1,110	1,110	1,110	1,110	0.0%	0.0%	0.0%	0.0%
Total Commercial Operations	1,110	1,110	1,110	1,110	1,110	0.0%	0.0%	0.0%	0.0%
General aviation	37,012	38,055	39,081	39,410	39,747	2.8%	1.1%	0.6%	0.5%
Military	0	0	0	0	0	N/A	N/A	N/A	N/A
Local									
General aviation	36,965	38,083	39,110	39,439	39,776	3.0%	1.1%	0.6%	0.5%
Military	0	0	0	0	0	N/A	N/A	N/A	N/A
TOTAL OPERATIONS	75,087	77,248	79,301	79,959	80,633	2.9%	1.1%	0.6%	0.5%
Based Aircraft									
Single Engine (Nonjet)	207	209	217	231	246	1.0%	0.9%	1.1%	1.2%
Multi Engine (Nonjet)	17	17	17	17	16	-0.2%	-0.2%	-0.2%	-0.2%
Jet Engine	3	3	3	4	4	2.7%	2.7%	2.7%	2.7%
Helicopter	9	9	10	10	11	1.5%	1.5%	1.5%	1.5%
Other	1	1	1	1	2	0.0%	0.0%	0.0%	0.0%
TOTAL	237	239	248	263	280	0.9%	0.9%	1.1%	1.1%

Source: Mead & Hunt, 2023 and 2023 FAA TAF