



Auburn-Lewiston Airport

FORECASTS OF
AVIATION DEMAND
CHAPTER 3

3. FORECASTS OF AVIATION DEMAND

Forecasts of aviation demand are a key element in airport planning. Demand forecasts, based on the service area and airport characteristics, provide a basis for determining the type, size, and timing of aviation facility development and are a platform upon which this Master Plan Update is based. Consequently, these forecasts influence all proceeding analyses performed during the planning process. Further analyses of how the forecast determines what facilities and services are needed at the Airport is presented in **Chapter 4, Facility Requirements**.

Forecasting future activity involves both quantitative and qualitative considerations. The forecasting approach in this analysis identifies several methodologies to project future aviation demand, applies those methodologies to each forecast area of interest, and identifies a preferred forecast of activity growth at Auburn-Lewiston Municipal Airport (LEW or the Airport).

General aviation (GA) activity is determined by several factors including, but not limited to, the size and per person income of the local population, corresponding business activity, the cost of flying/storing aircraft, services available at a particular airport, and the number of based aircraft. This chapter provides forecasts of aviation demand for the 20-year planning period from 2024 to 2043 using a baseline year of 2023 for both operations and based aircraft. The projections of aviation activity provide a basis for insight into the type, size, and timing of aviation facility development in the future. Eligibility for federal funding of future facility projects will continue to be designed and justified by current activity.

This chapter is organized into the following sections:

- Forecast Methodologies
- Based Aircraft
- Operations
- Summary and Comparison to FAA Terminal Area Forecast
- Critical Aircraft

3.1. Forecast Methodologies

The following forecast methodologies were considered for the LEW forecast:

- Regression Analysis
- Local Economic Conditions
- Trend Analysis
- Market Share Analysis
- National Growth Rate
- Operations per Based Aircraft
- Local Factors

3.1.1. Regression Analysis

Since historical data has been mostly flatlined, regression analyses cannot determine a correlation if one does exist. This type of forecasting is not appropriate for LEW and was not used.

3.1.2. Local Economic Conditions

Growing populations with strong employment and personal income conditions typically result in growth to the surrounding area. As such, airports are beneficiaries of good economic conditions. Compound annual growth rates (CAGRs) for population, employment, and personal income for Maine, Androscoggin County, and Cumberland County can be seen in **Table 3-1**. While LEW is in Androscoggin County, users also originate from Cumberland County and have an impact on the use of the Airport. Therefore, Cumberland County was included in the analysis.

Table 3-1: Surrounding Economic Conditions CAGR

	Maine Population	Maine Employment	Maine Personal Income	Androscoggin Population	Androscoggin Employment	Androscoggin Personal Income	Cumberland Population	Cumberland Employment	Cumberland Personal Income
2018-23	0.6%	0.6%	2.5%	0.6%	0.6%	2.5%	0.7%	1.1%	3.2%
2023-40	0.2%	0.8%	1.7%	0.2%	0.7%	1.8%	0.4%	1.2%	2.1%

Source: Woods and Poole Interactive Map, 2024.

As shown, each category for Maine, Androscoggin County, and Cumberland County shows growth. As these local economic conditions cannot be reliably correlated to growth at the Airport, this methodology was not used.

3.1.3. Trend Analysis

CAGRs for historical aircraft operations, as recorded in the Federal Aviation Administration (FAA) traffic flow management system count (TFMSC) and terminal area forecast (TAF), at the Airport are shown in **Table 3-2**.

Table 3-2: LEW Operations CAGR

	5-Year Trend	10-Year Trend	20-Year Trend
FAA TFMSC	-10.8%	-4.6%	-5.0%
FAA TAF	-1.3%	-0.6%	-0.9%

Sources: FAA TFMSC, 2024 and FAA TAF, 2024.

Both the TFMSC and TAF have limitations in their ability to accurately represent aviation activity at untowered GA airports. The TFMSC only reflects those flights that file instrument itinerant flight plans and do not cancel those filed plans prior to landing. The TAF is also an inherently inaccurate historical representation of aviation activity.

Trend analysis is not consistent with anticipated growth at the Airport and does not protect for future growth at the Airport. For this reason, trend analysis was not used to forecast aviation demand at LEW.

3.1.4. Market Share Analysis

As stated in **Chapter 1, Inventory**, there are four GA airports with paved runways within a 60-minute drivetime of LEW. A market share analysis includes calculating what percentage of operations and based aircraft are captured by LEW of the total operations and based aircraft amongst those four airports. LEW represents between 42 and 55.4 percent of market share operations and between 33.5 and 53.1 percent of based aircraft in the past ten years. However, since the TAF is inherently inaccurate at untowered GA airports, historical data for these airports is unreliable. Therefore, a market share analysis is not an accurate representation of operations or based aircraft at LEW.

3.1.5. National Growth Rate

The FAA Aerospace Forecasts fiscal year (FY) 2023-2043 provide national growth projections for the aviation industry including for GA aircraft and airport operations as shown in **Table 3-3**.

Table 3-3: FAA Aerospace Forecasts FY 2023-2043 CAGRs

Operations at FAA and Contract Towers									
FY	Air Carrier	Air Taxi/Commuter	GA Itinerant	GA Local	GA Total	Military Itinerant	Military Local	Military Total	Total
2023-33	3.0%	0.6%	0.8%	0.8%	0.8%	0.0%	0.0%	0.0%	1.4%
2023-43	2.4%	0.8%	0.5%	0.6%	0.5%	0.0%	0.0%	0.0%	1.2%

Active General Aviation and Air Taxi Aircraft (Based Aircraft)								
FY	Single Engine Piston	Multi-Engine Piston	Total Piston	Turbo-prop	Turbo Jet	Rotorcraft Total	Other	Total GA Fleet
2023-33	-0.8%	-0.4%	-0.8%	0.4%	3.0%	1.5%	0.6%	0.1%
2023-43	-0.7%	-0.2%	-0.7%	0.8%	2.7%	1.5%	0.4%	0.2%

Source: FAA Aerospace Forecast FY 2023-2043.

These numbers informed the based aircraft forecast used. As of 2024, the Airport is designing and planning to complete the building of an eight to ten-unit t-hangar in 2025. For prudent planning purposes, ten units will be used within this forecast. With a 12 aircraft waitlist for individual unit hangar space and a new active flight school, the Airport is expecting growth for single and multi-engine aircraft. The 20-year FAA Aerospace Forecasts growth rates for turbo jet and rotorcraft were used for LEW.

3.1.6. Operations per Based Aircraft

Operations per based aircraft (OPBA) determines a representative level of aircraft operations for each based aircraft.

During the recently completed Maine Statewide Aviation System Plan (SASP), airports in the State were grouped based on activity levels. LEW, along with two other Maine airports, was designated a regional GA airport. The average OPBA between these three airports was 419 while the estimated average low was 276. Based on these calculations, two operations forecasts were developed using

these OPBA ratios using the low and average OPBA from the Maine SASP of regional airport results. This is in line with the Airport Cooperative Research Program (ACRP) report 129, widely accepted OPBA ratios (250 OPBA for rural GA airports, 350 OPBA for busier GA airports).

At LEW, there were approximately 202 total OPBA in 2023. However, it is anticipated that the OPBA at LEW will be higher with the addition of a new flight school and new aircraft maintenance business. Therefore, the Maine SASP OPBA forecasts were deemed reasonable and fall in line with the changes happening at LEW.

3.1.7. Local Factors

Local factors can provide great insight and play an important role in the forecasting of both operations and based aircraft. With each airport presenting their own set of unique circumstances, growth can be impacted by factors not otherwise captured in a typical model. Local factors, such as private development plans, are good indicators for forecast consideration. LEW has experienced growth from businesses relocating to the Airport from other neighboring facilities (most recently the closure of Twitchell's brought float plane maintenance and fuel sales). This has resulted in a growth in based aircraft and higher demands on the facility. There are also plans to complete the construction of a t-hangar in 2025.

In late 2023/early 2024, two businesses relocated to LEW: Sunbird Aviation Maintenance providing aircraft maintenance and repair operations relocated from Brunswick Executive Airport and Chickadee Aviation, a flight school, relocated two single engine aircraft to LEW from Portland Jetport. Additionally, some Maine general aviation/reliever airports have experienced that pilots who have completed flight training have decided to purchase an aircraft and are adding to the based aircraft numbers. With a flight school at LEW, there is a possibility of additional based aircraft growth above and beyond these local factors.

3.2. Based Aircraft

Forecasting the number and type of based aircraft is critical to planning future GA facilities, especially for the type and size of hangars and aircraft movement and parking areas.

3.2.1. Historical Based Aircraft

The FAA defines a based aircraft as an aircraft, based at a particular facility, that is operational and airworthy. Based aircraft are major contributors to the economics of an airport as they generate revenue from tie-down, hangar rentals, and fuel sales. The FAA TAF was used for historical counts. In the past ten years, based aircraft have varied from 53 to 113. The 2003-2023 CAGR is 1.4 percent. Historical based aircraft are shown in **Table 3-4**.

Based aircraft owners in Maine tend to want to shelter their aircraft in hangars, especially during the winter months. Aircraft owners approach LEW looking for hangar space on a regular basis. There is a wait list of approximately 12 aircraft at LEW.

Table 3-4: LEW Historical Based Aircraft

Year	Total Based Aircraft
2003	55
2004	63
2005	63
2006	91
2007	91
2008	104
2009	104
2010	112
2011	113
2012	113
2013	71
2014	76
2015	59
2016	67
2017	65
2018	65
2019	62
2020	72 ¹
2021	72 ¹
2022	72 ¹
2023	72 ¹
CAGR	1.4%

Sources: FAA TAF, 2023 and FAA Form 5010, 2024 (1).

3.2.2. Based Aircraft Forecast

The baseline year at the Airport reflects that most aircraft are single engine piston aircraft. The Airport has experienced growth in the past year. For this reason, two based aircraft forecasts were created, a low (recommended) and high growth scenario.

For both the low growth scenario and high growth scenarios, local factors were taken into consideration. These factors include Chickadee Aviation’s plans to add one additional single engine and one multi engine in the next few years. For this reason, manual adjustments for additional Chickadee Aviation aircraft and new t-hangar tenants were added to the fleet from 2025 through 2029. Starting in 2030, the 20-year FAA all GA fleet growth rate of 0.2 percent was applied to single and multi-engine aircraft in the low growth scenario. For jet and rotor aircraft, the FAA 20-year CAGRs of 2.7 and 1.5 percents, respectively, were applied. **Table 3-5** shows the recommended forecast of based aircraft at LEW.

Table 3-5: LEW Based Aircraft Forecast (Low)

Year	Single	Multi	Jet	Rotor	Total
Baseline (2023)	56	10	1	5	72
2028	66	11	1	5	84
2033	69	11	1	6	87
2043	70	11	2	7	90
CAGR	1.1%	0.7%	2.6%	1.4%	1.1%

Sources: FAA Aerospace Forecast (2023-2043), airport administration, and McFarland Johnson analysis, 2024.

As shown in **Table 3-5**, the forecast growth rate for total based aircraft is 1.1 percent over the planning period. This is within the range of reasonableness with consideration given to the Airport’s local economic conditions.

There are also currently four additional box hangars that are pre-permitting with the City of Auburn’s planning board with intentions that one of those hangars will break ground by the end of 2024. It is assumed that each of these hangars would be approximately 6,000 square feet (SF) in size and house ADG II aircraft. For this reason, starting in 2025, manual adjustments were made to both multi-engine and jet engine aircraft. Starting in 2025, one jet aircraft was added to the forecast, followed by alternating between multi-engine and jet engine aircraft additions from 2026 through 2028. Outside of manual adjustments, the high growth scenario utilized the same growth rates as were applied in the low growth scenario. The high growth scenario is shown in **Table 3-6**.

Table 3-6: LEW Based Aircraft Forecast (High)

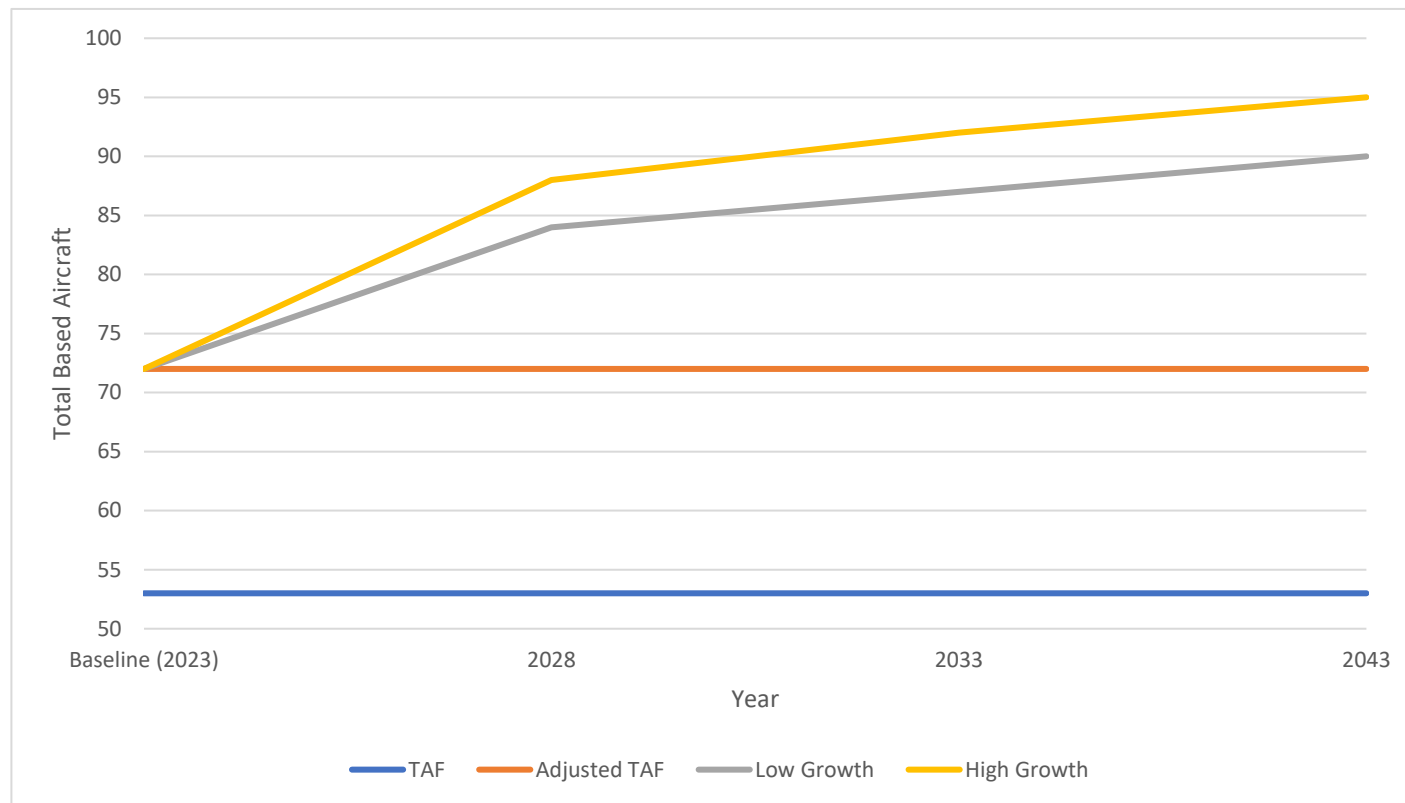
Year	Single	Multi	Jet	Rotor	Total
Baseline (2023)	56	10	1	5	72
2028	66	13	3	5	88
2033	69	13	4	6	92
2043	70	13	5	7	95
CAGR	1.1%	1.5%	8.2%	1.5%	1.4%

Sources: FAA Aerospace Forecast (2023-2043), airport administration, and McFarland Johnson analysis, 2024.

As shown in **Table 3-6**, the overall growth rate is 1.4 percent, which is appropriate for the local economic factors taking place in and around the Airport. However, the jet forecasted growth rate is significantly higher than that of the low growth scenario.

Both growth scenarios, along with the 2023 TAF and an adjusted TAF are depicted in **Figure 3-1**.

As previously stated, the recommended based aircraft forecast is the low growth scenario. However, should growth happen faster than forecast, the high growth scenario can be applied to protect for future additional based aircraft needs.

Figure 3-1: LEW Based Aircraft Forecasts


Sources: FAA TAF, 2023 and McFarland Johnson analysis, 2024.

3.3. Operations

The FAA defines an aircraft operation as a takeoff or a landing. GA operations at untowered airports are inherently hard to record.

3.3.1. Historical Activity

Table 3-7 shows the total historical aircraft operations according to the TAF, TFMSC, and available, as well as interpolated, General Audio Recording Device (GARD) data. The Airport has had approximately 13,000 to over 15,000 annual operations in the past four years according to the GARD. This is also in line with the Maine SASP that estimated TFMSC operations represented approximately 12 percent of LEW annual operations, which results in approximately 14,550 for 2023. Since the 2023 GARD data was incomplete (see note below **Table 3-7**), this master plan uses the 14,550 annual operations as the baseline 2023.

Table 3-7: LEW Historical Aircraft Operations Totals

Year	TAF	TFMSC	GARD ¹
2014	52,750	2,664	19,445
2015	52,750	2,679	19,555
2016	52,750	2,447	17,861
2017	52,750	2,570	18,759
2018	52,750	2,710	19,781
2019	52,750	2,761	20,153
2020	50,000	1,568	11,445
2021	50,000	1,836	15,644
2022	50,000	1,734	10,947
2023	50,000	1,746	12,926
CAGR	-0.6%	-4.6%	-4.4%

¹GARD data was not available for a full year prior to 2021. GARD numbers from 2014-2020 were interpolated based on the 2021-2023 average percentage of TFMSC operations to GARD operations and therefore italicized. Additionally, GARD data did not have full 2021 to 2023 data. The following months were estimated based on averages of other months in other years: 2021: November and December; 2022: July and August; 2023: August, October, November, and December.

Sources: FAA Terminal Area Forecasts, FY 2023; FAA Traffic Flow Management System Count, 2014-2023; Airport management via General Audio Recording Device (GARD), 2021-2023; and McFarland Johnson analysis, 2024.

3.3.2. Operations Forecast

Forecasted operations for the planning period at LEW are shown in **Table 3-8**. Two forecasts were created to represent a low growth and high growth scenario. For both forecasts, OPBA from the Maine SASP were used. In the low growth scenario, the estimated low average OPBA ratio for regional GA airports in Maine was used while for the high growth scenario, the average OPBA ratio for regional GA airports in Maine was used.

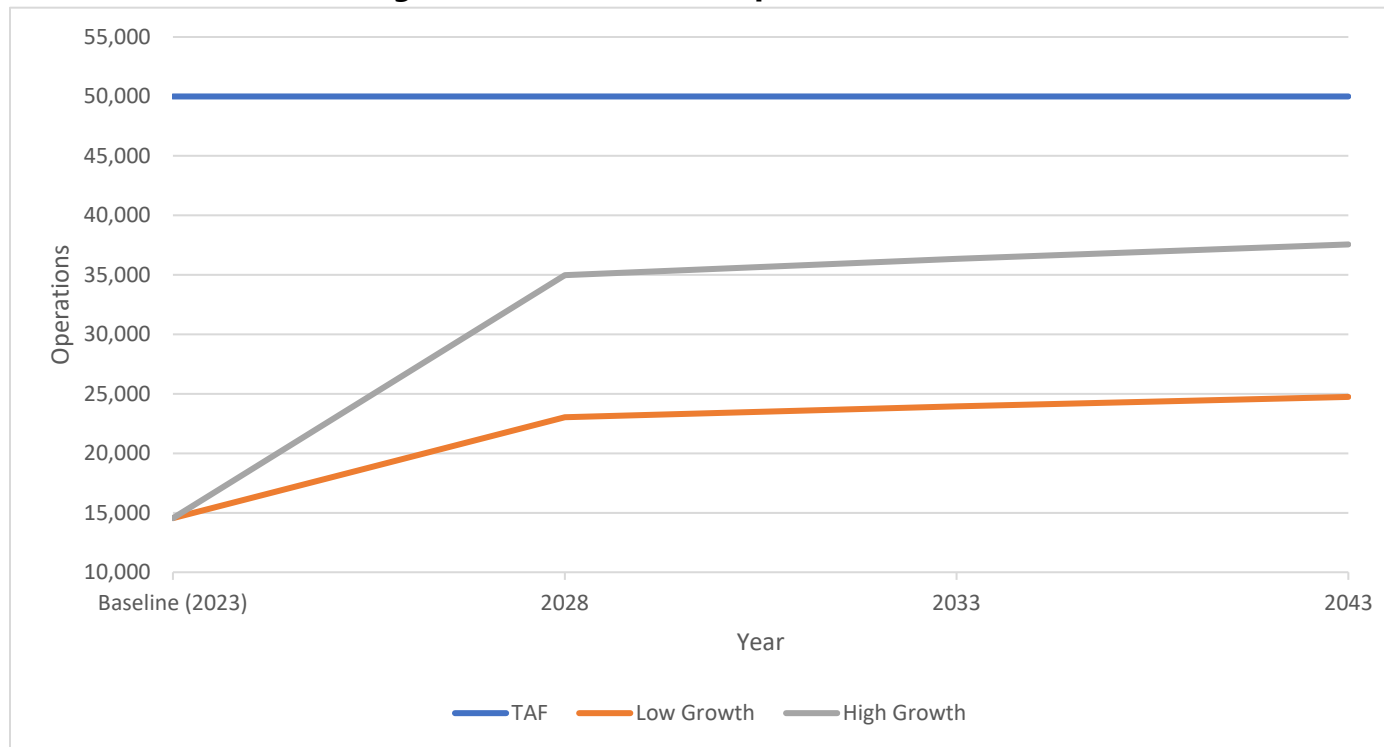
Table 3-8: LEW Operations Forecasts

Year	Total Operations (Low)	Total Operations (High)
Baseline (2023)	14,550 ¹	14,550 ¹
2028	23,046	34,987
2033	23,937	36,339
2043	24,741	37,560
CAGR	2.7%	4.9%

¹Baseline operations used the TFMSC ratio methodology provided in the Maine SASP.

Sources: Maine SASP, 2021 and McFarland Johnson analysis, 2024.

These growth rates are also depicted, alongside the 2024 TAF, in **Figure 3-2**.

Figure 3-2: LEW Annual Operations Forecasts


Sources: FAA TAF and McFarland Johnson analysis, 2024.

As depicted, there is a sharp growth rate during the first five years of the planning period, followed by a slower growth rate from 2030 through the end of the 2043 planning period. The low growth scenario has a CAGR of 2.7 percent through the planning period. However, from 2023 through 2029, there is an 8.4 percent CAGR, which is directly related to the growth in based aircraft, followed by a 0.3 percent growth rate starting in 2030. The high growth scenario has an overall CAGR of 4.9 percent through the planning period. However, from 2023 through 2029, there is a 16.2 percent growth rate, directly related to the growth in based aircraft, followed by a 0.3 percent growth rate starting in 2030.

When accounting for local factors, planning level calculations were made to determine that the preferred forecast was within the range of reasonableness. Based on actual 2024 April and May numbers extrapolated throughout the year, the operations count falls slightly higher than the preferred forecast operations numbers, but lower than the high growth forecast. This growth assumes that peak season growth applies to the rest of the year. Should this growth continue, annual operations would fall approximately a third of the way between the low and high growth scenarios.

Therefore, the low growth scenario was determined to be reasonable and chosen as the preferred forecast for operations. Should growth occur faster than forecast, the high growth scenario could be applied.

3.3.2.1. Instrument Operations

Annual instrument operations are important to an airport when planning for capacity and demand. While most GA operations are visual flight rules (VFR), more complex aircraft tend to file instrument flight rules (IFR) flight plans. Flight plans are filed for both VFR and IFR flights, but only completed itinerant IFR flight plans are counted in the TFMSC if they are kept open through the completion of the flight. Any flight plans canceled in flight are not included in TFMSC counts. The FAA’s TFMSC identified over 1,700 instrument operations in 2023. Using the same CAGR that was utilized for the total operations forecast for the Airport, instrument operations are forecasted to reach over 2,800 operations by 2043.

3.3.2.2. Peaking Characteristics

Annual projections provide a good overview of activity at an airport but fail to reflect the operational characteristics and capacities of the facility. Facility requirements are not driven by annual demand but rather by the capacity shortfalls and delays experienced during times of peak operational activity. Therefore, this Master Plan provides forecasts for the peak month, the average day in the peak month (ADPM) and the peak hour of the ADPM. The values for these metrics were calculated using the methodology in FAA Advisory Circular (AC) 150/5360-13A, *Airport Terminal Planning*, except for the peak month calculation. Airport peaking characteristics were calculated using the following assumptions:

Peak Month – This level of operation is defined as the month with the highest level of activity during a calendar year. To determine the peak month, GARD data, both reported and interpolated, from 2021-2023 was used to identify the peak month. In the case of LEW, the peak month is typically in the summer and is represented by the month of August.

Average Day Peak Month (ADPM) – This level of operation is defined as the average day within the peak month determined by dividing peak month operations by number of days within the peak month (in this case 31). The ADPM is designated as the “design day”.

ADPM Peak Hour – This level of operation is defined as the peak hour within the design day, assuming 12 percent of daily operations in the design hour.

Peaking characteristics for LEW are shown in **Table 3-9**.

Table 3-9: LEW Operations Peaking Characteristics

Year	Peak Month	ADPM	Peak Hour
Baseline (2023)	1,817	59	7
2028	2,947	95	11
2033	2,995	97	12
2043	3,098	100	12

Source: McFarland Johnson analysis, 2024.

3.4. Summary and Comparison to FAA Terminal Area Forecast

The prepared forecast was developed using multiple methodologies. As stated in the preceding sections and shown in **Table 3-10**, the following forecast growth rates were used:

Table 3-10: Recommended Forecast Methodologies

Category	Methodology
Single Engine Based Aircraft	Manual adjustments for t-hangar construction and new flight school followed by FAA Aerospace Forecast (20-year all GA fleet) FY 2023-2043
Multi-Engine Based Aircraft	Manual adjustments for new flight school followed by FAA Aerospace Forecast (20-year all GA fleet) FY 2023-2043
Jet Based Aircraft	FAA Aerospace Forecast (20-year jet) FY 2023-2043
Helicopter Based Aircraft	FAA Aerospace Forecast (20-year rotor) FY 2023-2043
Operations	Maine SASP low and average estimated OPBA

Sources: FAA Aerospace Forecast, FY 2023-2043; Maine SASP, 2021; Airport management, 2024; and McFarland Johnson analysis, 2024.

As shown, different growth rates were more appropriate for different forecasted categories. For the purposes of the FAA, the recommended forecast must be compared to the TAF and, typically, should fall within a justifiable range as prescribed by the FAA. **Table 3-11** compares the forecast to the TAF.

The FAA TAF is a flat line for GA airports and represents a zero-growth scenario. The Master Plan forecast is realistic and consistent with local conditions. The justifiable range, as depicted in FAA AC 150/5070-6B, *Airport Master Plans*, for forecasted growth is within ten percent of the TAF for the five-year forecast and 15 percent for the ten-year forecast.

The Airport’s existing based aircraft already greatly exceeds the based aircraft as listed in the TAF. Therefore, the forecasted based aircraft growth does not fall within the justifiable range. However, with an adjusted TAF of 72 existing based aircraft, the growth rates five and ten years out fall much closer to the appropriate ranges even with a flat lined, zero percent growth. Conversely, the operations forecast falls below the TAF and is a more accurate representation of the actual operations counts at the Airport. For GA and reliever airports, such as LEW, FAA AC 150/5070-7B, *Airport Master Plans*, identifies that “when the 5- and 10-year forecast is less than 100,000 annual operations or 100 based aircraft, the forecast does not need to be reviewed at FAA Headquarters.” The forecast operations do not exceed 100,000 annual operations and the based aircraft do not exceed 100 based aircraft.

Table 3-11: Forecast Comparison to TAF

	Actual	Forecast		
	Baseline (2023)	2028	2033	2043
FAA TAF				
Total Operations	50,000	50,000	50,000	50,000
Based Aircraft	53	53	53	53
Adjusted TAF Based Aircraft	72	72	72	72
Airport Master Plan Forecast				
Total Operations	14,550 ¹	23,046	23,937	24,741
Based Aircraft	72	84	87	90
Percent Difference from TAF				
Total Operations	-70.9%	-53.9%	-52.1%	-50.5%
Based Aircraft	35.8%	57.6%	63.6%	69.1%
Adjusted TAF Based Aircraft	0.0%	16.0%	20.5%	24.5%

¹ Baseline operations were derived using the methodology provided in the Maine Statewide Aviation System Plan. Sources: FAA TAF, 2023; Airport Management, 2023; and McFarland Johnson analysis, 2023.

3.5. Critical Aircraft

The Master Plan used FAA AC 150/5000-17, *Critical Aircraft and Regular Use Determination* to determine the current and future critical aircraft for the Airport that represents the aircraft or group of aircraft with similar characteristics with 500 or more annual operations. The critical aircraft forecast used the five-year historical operations data from the FAA TFMSC. While this source does not capture 100 percent of airport activity, particularly local operations not filing formal flight plans, the database does provide an understanding of airport activity and should be relatively accurate with respect to the more complex aircraft as they are more likely to fly under IFR with a filed flight plan.

Table 3-12 reveals the level of airport activity by aircraft approach category (AAC) and airplane design group (ADG) for calendar year 2023. During this period, an analysis identified a substantial number of AAC B aircraft and ADG II aircraft operations.

Table 3-12: LEW TFMSC 2023

ADG	A	B	C	D	No Data	Total
I	205	818	10	-	-	1,033
II	87	371	128	8	-	594
III	-	2	32	6	-	40
No Data	-	-	-	-	79	79
Total	292	1,191	170	14	79	1,746

Source: LEW TFMSC, 2024.

Based on the data presented in **Table 3-12**, the current critical aircraft for LEW is a B-II aircraft. There were over 600 ADG II and ADG III operations in 2023, surpassing the 500-operation threshold. There are also over 1,300 operations of AAC B and larger operations. The critical aircraft is represented by the Beech Super King Air 200 both as the existing critical aircraft as well as forecasted to remain the critical aircraft through the planning period. While this is the representative B-II aircraft, additional

aircraft, such as the Beech Super King Air 350, Embraer EMB110, and Dassault Falcon 900 frequented the Airport.

By the end of the planning period in 2043, the critical aircraft is expected to remain a B-II aircraft. **Table 3-13** highlights the important features of the existing and future critical aircraft.

Table 3-13: Existing and Future Critical Aircraft

Characteristics	Beech Super King Air 200
Length	43.8'
Wingspan	54.5'
Tail Height	15.0'
MTOW	12,500 lbs
Approach Speed	107 knots
AAC	B
ADG	II
TDG	2A



Sources: Aircraft Characteristics Database, 2023 and <https://www.bjtonline.com/aircraft/beechnair-king-air-b200>.

3.5.1. Runway 4-22 (Primary)

Runway 4-22 is a 5,001-foot-long by 100-foot-wide primary runway. The existing RDC for the runway is a B-II-2400. According to 2022 Automatic Dependent Surveillance – Broadcast (ADS-B) data, Runway 4-22 accounts for approximately 78 percent of total operations. With over 5,000 feet of takeoff and landing distance, the runway is capable of handling larger aircraft. Therefore, it is anticipated to remain a B-II-2400.

3.5.2. Runway 17-35 (Crosswind)

Runway 17-35 is a 2,750-foot-long by 75-foot-wide crosswind runway. The existing RDC for the runway is a B-I(S)-VIS. According to ADS-B data, Runway 17-35 accounts for approximately 22 percent of total operations. Due to its length, the runway is limited by the type of aircraft that can operate on it. Therefore, it is anticipated to remain a B-I(S)-VIS.

3.5.3. Taxiway Design Group (TDG)

Like critical aircraft, the design TDG for the Airport is an aircraft or group of aircraft with similar characteristics that have 500 or more annual operations at the Airport. At LEW, 2023 TFMSC operations show over 400 operations of aircraft that have a TDG-2A or larger (2, 2A, 2B, and 3). However, in 2020 and 2022 showed over 450 operations of TDG-2A or larger and 2021 had over 560 operations of TDG-2A or larger. The historical TDG operations at the Airport are depicted in **Table 3-14**.

Table 3-14: Historic Normalized TDG Operations 2019-2023

TDG	2	2A	2B	3	Total
2019	758	16	10	0	784
2020	438	10	0	8	456
2021	546	18	4	0	568
2022	420	14	18	0	452 ¹
2023	48	330	40	2	420

¹ Elite Airways suspended all flights in July 2022. Most TDG-2A and larger operations are general aviation operations.

Source: FAA TFMSC, 2024.

Therefore, the existing taxiway design standard at the Airport is TDG-1B. Based on the operations growth, it is anticipated that the Airport will exceed 500 annual TDG-2A operations within the planning period, which is consistent with the TDG of the critical aircraft, the Beech Super King Air 200 and other B-II aircraft. Additionally, there are likely TDG-2A or larger operations that the FAA TFMSC database did not capture, since operations that originally file a flight plan, but cancel it prior to landing are not captured.