

## Chapter 2 - Forecasts

**INTRODUCTION.** This chapter summarizes the methodology and results for the aircraft forecasts developed for use in this Part 150 Study. These forecasts include projections for enplanements as well as operations and fleet mix for both commercial service and general aviation aircraft. Specifically, the forecasts provide data for input into the Integrated Noise Model (INM), the model required by the FAA for Part 150 Studies. The INM uses physical and operational characteristics of an airport, aircraft operational data, as well as data on aircraft type, flight track locations, and other information to model aircraft noise. Both existing and future projected noise levels are modeled. The noise modeling methodology and results are discussed in subsequent chapters. The forecasts were approved by the FAA in 2016 ( Appendix B).

### 2.1 Background

Both the Town of Jackson and Teton County experienced rapid population growth during the 1990s and although that growth has slowed, the population continues to increase. As a popular area offering year-round outdoor activities, Jackson Hole tends to cater to a wealthier demographic. As a result, the adjusted median household income of residents of Teton County has risen steadily in recent decades. GTNP has also seen an overall upward trend in growth in number of annual visitors since 2004. The local economy has continued to grow and thrive during recent decades, based on relatively steady growth in national park and ski resort visitation, and resulting growth in local businesses and development. There is no reason to assume any major change in these trends in the future. Thus, these forecasts assume overall continued growth in the local economy, as well as continued expansion of JAC's user base and passenger demand.

The following sections describe the analysis for the aspects of aviation activity examined for this forecast, which included enplanements, aircraft operations, and aircraft fleet mix. The primary trends that were identified and considered for future activity at JAC were:

- Continued steady growth in enplanements over the long term;
- An increase in average commercial service aircraft size, causing corresponding slower rate of growth of number of commercial service operations, but increased aircraft capacity;



- A slowing of growth in overall general aviation activity; and
- The phasing out of commercial turboprop aircraft including the Bombardier Q-400 and Embraer EMB 120 in favor of regional jet aircraft and mainline narrow body aircraft. Locally, this trend has been evident for a number of years and as of Summer 2014, airlines serving JAC are now exclusively operating regional jet and narrow-body aircraft.

## 2.2 Forecast Methodology

The first step in the forecasting process involved summarizing activity forecasts from the 2011 *Operational Enhancement Study*, as well as forecasts published by the Aeronautics Division of the Wyoming Department of Transportation (WYDOT), the FAA *Aerospace Forecast: Fiscal Years 2014-2034*, and the FAA's January 2015 Terminal Area Forecast (TAF) for comparative purposes. Next, a series of forecasting scenarios was generated based on the growth trends identified in these publications with consideration given to local socioeconomic indicators and expected future trends. Finally, a preferred forecast was selected for each type of activity. The preferred forecasts represent those forecasts that demonstrated the most consistency with observable historic and anticipated new and continuing trends for enplanements, operations levels, and fleet mix at JAC.

Forecasts were prepared for the future 5-year (2020) and 10-year (2025) timeframes from the date of expected submission of the noise contours. It is also important to note that the base year for the purposes of the activity forecasts is calendar year 2014 and the base year for the existing contour map to be used in this Study is also calendar year 2014. 2014 was used as the base year because it was the last full year of operations when this Study was initiated and operations are still representative of current conditions. The future 5-year contour (2020) is also still representative of future conditions. The typical planning period for forecasting is a 20-year period, and these forecasts continue through the 20-year timeframe (2034). However, the forecasts for years after 2020 are provided for informational purposes only. The preferred forecasts for the existing, 5-year and 10-year timeframes have been highlighted in yellow in the tables below. Forecasting of any type of future activity is as much an art as a science, particularly in the current era of airline deregulation and changing operating methodologies. Any forecast, therefore, should be revised and updated periodically to reflect new conditions and developments.



### 2.3 Historic Airport Activity

A tabulation of historical aviation activity information since 2004 is presented in **Table 2-1**. This table includes a combination of the best available data sources including Airport Management records and the FAA Air Traffic Activity System (ATADS).

**Table 2-1: Historical Aviation Activity, 2004-2014**

Year	Passenger Enplanements <sup>1</sup>	Commercial Passenger Operations*	GA Operations* <sup>2</sup>	Military Operations*	Total Operations*
2004	215,587	2,824	28,777	192	31,793
2005	250,165	3,779	29,002	291	33,072
2006	277,978	5,511	26,451	272	32,234
2007	283,042	5,223	25,076	306	30,605
2008	311,761	6,925	23,037	257	30,219
2009	290,087	6,889	21,958	155	29,002
2010	294,408	6,594	18,899	114	25,607
2011	285,520	6,242	19,341	193	25,776
2012	277,632	6,049	19,680	349	26,078
2013	294,984	6,596	16,925	388	23,909
<b>2014</b>	<b>313,474</b>	<b>7,156</b>	<b>18,791</b>	<b>170</b>	<b>26,117</b>

*Source:* Mead & Hunt.

\* Historical operations data compiled from FAA ATADS.

1. Passenger enplanement data compiled from Airport Management records.

2. GA Operations includes non-scheduled Air Taxi operations.

Total aircraft operations (an operation is defined as either a takeoff or a landing) at JAC have fluctuated since 2005, when they were at their highest. Passenger enplanements have also fluctuated, but have experienced an overall increase of more than 97,000 enplanements since 2004. Commercial passenger operations have also generally increased. General aviation operations have gradually declined since 2005, while military operations have greatly fluctuated over time.

**Table 2-2** summarizes the percentage of operations for each aircraft type. In recent years, commercial passenger service has been provided by United, American Airlines, Delta, and SkyWest which currently offer service to Atlanta, Chicago, Dallas/Fort Worth, Denver, Dulles, New York, Newark, Los Angeles, Minneapolis, Salt Lake City, Seattle, and San Francisco.



JAC has separate winter and summer airline schedules in order to meet the seasonal travel needs of its user base. Spring and fall are typically slower seasons for Jackson, with summer being the busiest season, followed by winter.

A key trend taking place on a national scale is the replacement of turboprop aircraft with narrow-body and regional jet aircraft. This trend is based on a number of factors including the replacement of aging aircraft, better fuel efficiency of newer aircraft, and airline strategies to reduce the number of flights resulting in fuller airplanes and higher profitability.

Locally, this trend has been evident for a number of years, with turboprops declining over time. In early 2014, there were only a small number of turboprop operations and as of Summer 2014, airlines serving JAC are now exclusively operating regional jet and narrow-body aircraft. This trend is also evident in general aviation activity as fewer smaller aircraft are flying and businesses are operating larger capacity, higher performance aircraft. The following table shows actual 2014 operations by aircraft type at JAC as reported by the Tower (FAA ATADS).

**Table 2-2: Existing Operations by Aircraft Type (2014)**

Aircraft Type	Operations	Percentages
<b>Commercial Service<sup>1</sup></b>	<b>7,156</b>	<b>27.17%</b>
Turboprop	82	1.15%
Regional Jet	3,012	42.09%
Narrow-Body	4,062	56.76%
<b>General Aviation and Military*<sup>1</sup></b>	<b>18,961</b>	<b>72.82%</b>
Single Engine Piston/Turboprop	6,001	31.65%
Multi Engine Piston/Turboprop	3,470	18.30%
Jet	9,414	49.65%
Other (Helicopter, Ultra-Light,	76	0.40%
<b>Total</b>	<b>26,117</b>	<b>100.00%</b>

*Source:* Mead & Hunt.

\* GA Operations includes Air Taxi operations.

1. 2014 Commercial Service operations from operations from FAA ATADS.

Note: In early 2014, there were a small number of turboprop operations prior to them being entirely phased out in the summer.

## 2.4 Aviation Activity Forecasts

The following sections include aviation activity forecasts for passenger enplanements, commercial service aircraft operations, general aviation and military operations, local and itinerant operations, and operations by aircraft type (fleet mix).

### 2.4.1 Passenger Enplanements Forecast

As mentioned above, JAC is served by multiple airlines offering service daily, weekly, and multiple times per week to a number of major U.S. airports. Passenger enplanements have grown at an average annual growth rate of approximately 4.54 percent since 2004. From 2004-2014, enplanement levels were at their highest in 2014 at 313,474. The load factor averaged 79.60 percent for calendar year 2014.

Utilizing growth rates based on both local and national trends, four (4) forecast scenarios were developed. For comparison purposes, forecasts from the FAA's January 2015 TAF, the 2011 *Jackson Hole Operational Enhancement Study*, and the 2009 *Wyoming Statewide Airport Inventory and Implementation Plan* have been included. The passenger enplanement scenarios are included in **Table 2-3**.

- **Scenario 1:** Applies the average annual historical and projected population growth rate for Teton County, which is equal to 1.36 percent. Scenario 1 reflects a steady, progressive, and conservative increase in enplanements.
- **Scenario 2:** This scenario applies a growth rate of 3.25 percent that is representative of historic growth in the Jackson Hole area economy, based upon annual GTNP visitation and ski resort skier days. Scenario 2 reflects what would be a very high possible maximum growth rate for enplanements.
- **Scenario 3:** Uses the High Growth forecast growth rate for passenger enplanements of 2 percent for JAC from the *Wyoming Statewide Airport Inventory and Implementation Plan*.
- **Scenario 4:** This scenario assumes an average annual growth rate of 1.9 percent. This is equal to the forecast for national growth of domestic enplanements from the *FAA Aerospace Forecast: Fiscal Years 2014-2034*, which was developed to predict future demand using a set of assumptions and forecasts that are consistent with the emerging trends and structural changes taking place within the aviation industry. In comparison, the TAF, which is the official FAA forecast of aviation activity used for individual airport projections, assumes a 2.97 percent average annual growth rate for domestic enplanements between 2014-2034.



**Table 2-3: Passenger Enplanements Forecast Scenarios, 2014-2034**

Year	Jan. 2015 TAF 2.97%	2011 Operational Enhancement Study <sup>1</sup>	Historical Trend Line Since 2004 <sup>2</sup>	2009 WYDOT Plan <sup>3</sup>	Scenario One 1.36%	Scenario Two <sup>4</sup> 3.25%	Scenario Three 2.00%	Scenario Four 1.90%
<b>2014</b>	<b>305,186</b>	---	<b>313,474<sup>5</sup></b>	<b>306,079*</b>	<b>313,474<sup>5</sup></b>	<b>313,474<sup>5</sup></b>	<b>313,474<sup>5</sup></b>	<b>313,474<sup>5</sup></b>
2015	313,700	---	317,073	---	317,752	323,667	319,743	319,430
2016	322,451	---	323,030	---	322,089	334,192	326,138	325,499
2017	331,448	---	328,987	337,770	326,485	345,059	332,661	331,684
2018	340,696	365,094	334,944	---	330,941	356,279	339,314	337,986
2019	350,203	---	340,901	---	335,457	367,864	346,101	344,407
<b>2020</b>	<b>359,975</b>	---	<b>346,858</b>	---	<b>340,035</b>	<b>379,826</b>	<b>353,023</b>	<b>350,951</b>
2021	370,019	---	352,815	---	344,676	392,177	360,083	357,619
2022	380,344	---	358,772	372,743	349,380	404,930	367,285	364,414
2023	390,958	404,657	364,729	---	354,149	418,097	374,630	371,338
2024	401,869	---	370,687	---	358,982	431,692	382,123	378,393
<b>2025</b>	<b>413,084</b>	---	<b>376,644</b>	---	<b>363,881</b>	<b>445,729</b>	<b>389,766</b>	<b>385,583</b>
2026	424,613	---	382,601	---	368,847	460,223	397,561	392,909
2027	436,464	---	388,558	411,336	373,881	475,188	405,512	400,374
2028	448,647	450,205	394,515	---	378,984	490,640	413,622	407,981
2029	461,170	---	400,472	---	384,156	506,594	421,895	415,733
2030	474,044	---	406,429	---	389,399	523,067	430,333	423,632
2031	487,277	---	412,386	---	394,714	540,076	438,939	431,681
2032	500,880	---	418,343	---	400,101	557,637	447,718	439,883
2033	514,862	---	424,300	---	405,561	575,770	456,672	448,240
2034	529,238	---	430,257	---	411,096	594,493	465,806	456,757

Source: Mead & Hunt.

\* Data are actually for the year 2012

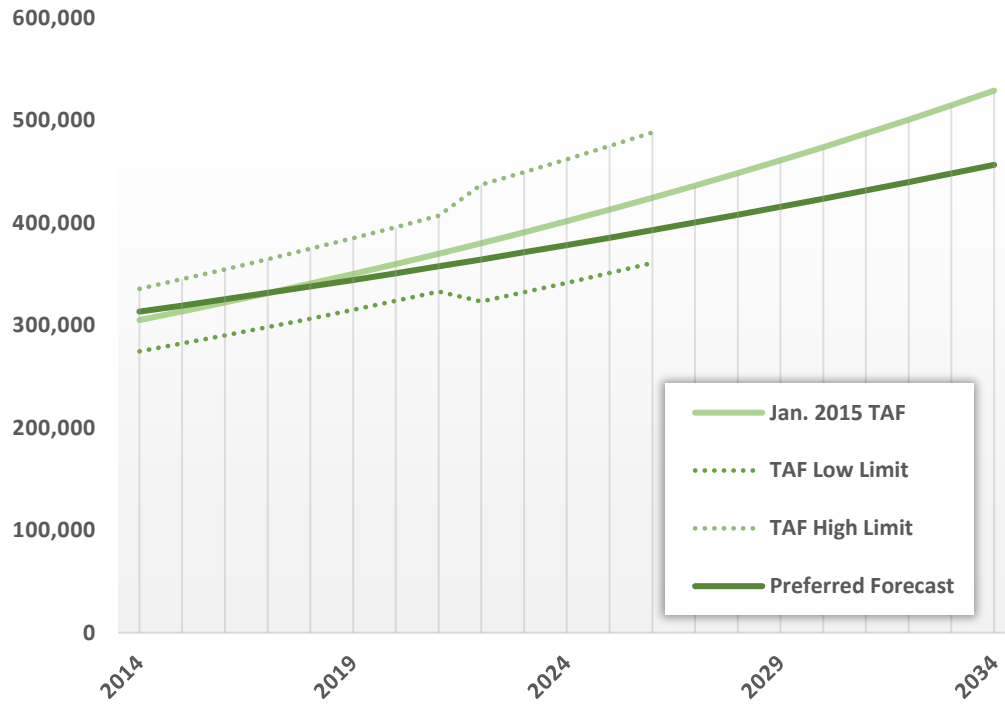
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1. Data obtained from the June 2011 Jackson Hole Airport Operational Enhancement Study.
2. Trend projection utilized data from Airport Management records from years 2004-2014.
3. Data obtained from the 2009 Wyoming Statewide Airport Inventory and Implementation Plan Low Growth Passenger Enplanements Forecast for Jackson Hole Airport.
4. Historical visitation statistics for Grand Teton National Park obtained from National Park Service website; historical visitation statistics for Jackson Hole Mountain Resort obtained from jacksonhole.com; annual growth rate is the average of the average annual growth rates for 2003-2013 for these two indicators.
5. Actual. Airport-reported data for 2014 enplanements.

Scenario 4, based on FAA projected national growth in enplanements, is the preferred enplanements forecast for this Study. Scenario 4 was chosen because it generally reflects local socioeconomic indicators and is very similar to the historical trend at JAC of strong growth in enplanements. Airport staff reviewed the various enplanements forecast scenarios and agrees that the 1.9% growth rate is reasonable.

According to FAA's June 2008 guidance, Review and Approval of Aviation Forecasts, "For all classes of airports, forecasts for total enplanements and total operations are considered consistent with the FAA's TAF if the forecasts are within 10 percent of the TAF figures during the first 5 years and within 15 percent during the first 10 years. If the forecast is not consistent with the TAF, differences must be resolved if the forecast is to be used in FAA decision-making. This may involve revisions to the airport sponsor's submitted forecasts, adjustments to the TAF, or both." The comparison of the preferred forecast for passenger enplanements with the TAF limits is presented in **Figure 2-1**. As indicated in the following figure, the preferred enplanement forecast is within the TAF limits.

**Figure 2-1: Preferred Passenger Enplanements Forecast Compared with TAF Consistency Limits, 2014-2034**



Source: Mead & Hunt.





## 2.4.2 Commercial Passenger Service Operations Forecast

The establishment of projected passenger enplanements, in addition to identifying a current fleet mix, is required to properly project commercial service aircraft operations. The Boarding Load Factor (BLF) of the airlines serving JAC is one method of determining the forecast of commercial service operations. The BLF is the ratio of seats available for passenger boarding on a particular aircraft compared to the number of passengers actually boarding (for example, if an aircraft has fifty seats available and twenty-five passengers board, the BLF is 50 percent). According to recent FAA estimates included in the FAA Aerospace Forecasts Fiscal Years 2014-2034, average national load factors of approximately 83.2 percent were achieved by the air carrier industry in 2014 and are expected to increase to 83.8 by 2034. According to the Bureau of Transportation Statistics, industry load factors were only 78.9 percent 10 years ago, indicating that increasing load factors have been an industry trend for a number of years. The BLF for JAC in 2014 was approximately 79.6 percent and is expected to increase and even slightly exceed the national average by the end of the planning period in accordance with this industry trend.

**Table 2-4** presents the commercial service operational forecasts, as well as enplanements, average seats per departure and the projected BLFs. As can be seen in the table, the average seats per departure figure is anticipated to increase in the first five years due to the change in the commercial aircraft fleet. It is anticipated that the passenger demand can be accommodated with increases in the number of flights by the same airline equipment over the 20-year planning period. Most of the increases in commercial fleet will likely be by narrow body aircraft types (B-737 and A318/319) in accordance with the aircraft capacity forecasts included in the *FAA Aerospace Forecasts Fiscal Years 2014-2034*.

**Table 2-4: Commercial Passenger Service Operations Forecast, 2014-2034**

Year	Enplanements Forecast	Average Number of Seats per Departure	BLF	Departures	Operations <sup>1</sup>
2014	313,474 <sup>2</sup>	110.13	79.6%	3,578	7,156 <sup>3</sup>
2020	350,951	112.48	83.0%	3,760	7,521
2025	385,583	114.34	85.1%	4,008	8,017
2034	456,757	117.57	85.8%	4,528	9,056

*Source:* Mead & Hunt.

BLF – Boarding Load Factor

1. Operations = Departures x 2.

2. Actual. 2014 enplanement data compiled from Airport Management records.

3. Commercial operations data from FAA ATADS.



### 2.4.3 General Aviation Operations Forecast

As with enplanements, several other forecasts and local and national trends were reviewed in developing the general aviation forecasts. Included in **Table 2-5** for comparison purposes are the forecasts from the FAA TAF and the *Operational Enhancement Study*. Three (3) forecast scenarios were developed for general aviation operations.

It is important to note that non-scheduled operations conducted under the category of “Air Taxi” that were not related to scheduled commercial passenger activity have been included in this general aviation operations forecast.

- **Scenario 1:** Applies the average annual historical and projected population growth rate for Teton County, which is equal to 1.36 percent. Scenario 1 reflects a steady, optimistic growth scenario.
- **Scenario 2:** Uses the Low Growth forecast growth rate for aircraft operations of 0.32 percent for JAC from the *Wyoming Statewide Airport Inventory and Implementation Plan*.
- **Scenario 3:** Assumes an average annual growth rate of 0.50 percent. This is equal to the forecast for national growth of the active general aviation fleet from the *FAA Aerospace Forecast: Fiscal Years 2014-2034*, which was developed to predict future demand using a set of assumptions and forecasts that are consistent with the emerging trends and structural changes taking place within the aviation industry. In comparison, the TAF, which is the official FAA forecast of aviation activity used for individual airport projections, assumes a 0.57 percent average annual growth rate for the active general aviation fleet between 2014-2034



**Table 2-5: General Aviation Operations Forecast Scenarios, 2014-2034**

Year	Jan. 2015 TAF 0.57%	2011 Operational Enhancement Study <sup>1</sup>	Scenario One 1.36%	Scenario Two 0.32%	Scenario Three 0.50%
2014	17,705	---	18,791 <sup>2</sup>	18,791 <sup>2</sup>	18,791 <sup>2</sup>
2015	17,799	---	19,047	18,851	18,885
2016	17,894	---	19,307	18,911	18,979
2017	17,990	---	19,571	18,972	19,074
2018	18,087	16,843	19,838	19,033	19,170
2019	18,186	---	20,109	19,094	19,265
<b>2020</b>	<b>18,286</b>	---	<b>20,383</b>	<b>19,155</b>	<b>19,362</b>
2021	18,387	---	20,661	19,216	19,459
2022	18,489	---	20,943	19,277	19,556
2023	18,592	18,008	21,229	19,339	19,654
2024	18,698	---	21,519	19,401	19,752
<b>2025</b>	<b>18,805</b>	---	<b>21,813</b>	<b>19,463</b>	<b>19,851</b>
2026	18,913	---	22,110	19,525	19,950
2027	19,023	---	22,412	19,588	20,050
2028	19,135	19,246	22,718	19,651	20,150
2029	19,248	---	23,028	19,713	20,251
2030	19,362	---	23,342	19,777	20,352
2031	19,479	---	23,661	19,840	20,454
2032	19,597	---	23,984	19,903	20,556
2033	19,718	---	24,311	19,967	20,659
2034	19,840	---	24,643	20,031	20,762

*Source:* Mead & Hunt.

--- Data not available.

1. Data obtained from the June 2011 Jackson Hole Airport Operational Enhancement Study.

2. Actual. FAA ATADS data for 2014 operations.

Scenario 1, based on county population growth, is the preferred general aviation operations forecast. The average annual growth rate of 1.36 percent is considered reasonable for a number of reasons. Given the popularity of the local attractions including GTNP and the local ski resorts, it is reasonable to assume that general aviation related operations at JAC would likely eventually return to historic levels. JAC is also heavily utilized by high performance turboprop and turbojet type aircraft.



According to the *FAA Aerospace Forecasts FY2014-2034*, this is the segment of the general aviation industry that is projected to see the most growth during the next 20 years driven by higher corporate profits and the growth of worldwide Gross Domestic Product (GDP).

For comparison, the turboprop and turbojet fleet are projected by FAA to grow at an average annual rate of 2.6 percent a year with turbojet aircraft hours flown projected to increase at an average annual rate of 4.2 percent through 2034. This is a conservative approach, to allow for responsible planning. The preferred general aviation operations forecast is slightly more optimistic than the FAA TAF and actually exceeds the FAA TAF consistency limits in some outlier year; but total operations at the end of the chapter show that the overall forecasts are within the TAF consistency limits (8.7% for 2025). However, the optimism is warranted since the purpose of these forecasts for use in a Part 150 Study necessitates that caution is used to ensure that noise is not *underestimated*, especially for general aviation operations, which often fly at lower altitudes and tend to use less predictable flight patterns.

#### 2.4.4 Military Operations Forecast

As a percentage of total annual aircraft operations, the number of military operations at JAC has historically fluctuated greatly. Given that the Department of Defense does not publicly share information about projected military operations, an in an effort to not underestimate noise impact, these operations have been projected to remain constant at the previous 2013 level of 388 per year throughout the planning period in order to create a reasonable estimate relative to potential future noise for military activity.

The types of military aircraft at JAC are primarily support aircraft for dignitaries the fly into JAC. This includes C130 aircraft, military versions of corporate jets (i.e., LR35 and GLF4) and military versions of turbo prop aircraft (B200). Occasionally the military version of the B757 has operated at the airport as well. Fighter aircraft landing or performing low approaches are rare.

#### 2.4.5 Operations Forecast by Aircraft Type

Projections of aircraft operations by type will provide an important data breakdown for input into INM. A breakdown of operations by aircraft type is a key component in noise modeling because different types of aircraft not only produce different levels and types of sound, but also tend to use different takeoff and landing procedures and require different runway specifications related to safety at takeoff and landing.



The proportions of aircraft type presented in this forecast are broken down by specific aircraft make and model in later chapters for input into the noise model.

**Table 2-6** depicts the levels of use by aircraft types that currently use and are projected to use JAC. In general, this table reflects a growing percentage of business and commercial jet aircraft, and a decreasing percentage of single and multi-engine piston aircraft. As mentioned previously, there is no projected growth in military operations from the base year level (2014).

**Table 2-6: Summary of Operations Forecast by Aircraft Type, 2014-2034**

Aircraft Type	2014	2020	2025	2034
<b>Commercial Service<sup>1</sup></b>	<b>7,156<sup>2</sup></b>	<b>7,521</b>	<b>8,017</b>	<b>9,056</b>
Turboprop	82 <sup>2</sup>	0	0	0
Regional Jet	3,012 <sup>2</sup>	3,012	3,012	3,012
Narrow-Body	4,062 <sup>2</sup>	4,509	5,005	6,044
<b>General Aviation, Air Taxi and Military<sup>2</sup></b>	<b>18,961<sup>2</sup></b>	<b>20,771</b>	<b>22,201</b>	<b>25,032</b>
Single Engine Piston/Turboprop	6,001	6,159	6,139	5,920
Multi Engine Piston/Turboprop	3,470	3,801	4,063	4,581
Jet	9,414	10,728	11,911	14,430
Other (Helicopter, Ultra-Light, etc.)	76	83	89	100
<b>Total</b>	<b>26,117</b>	<b>28,292</b>	<b>30,219</b>	<b>34,087</b>

*Source:* Mead & Hunt.

1. Commercial Service projected proportions were estimated using 2014 proportions in combination with anticipated trends in future aircraft type.

2. Actual. 2014 operations compiled from FAA ATADS.

### 2.4.6 Local and Itinerant Operations Forecast

Forecasts of operations have also been categorized into local and itinerant operations. Local operations are defined as any operation performed by an aircraft operating in the local traffic pattern or within sight of the tower; aircraft known to be departing or arriving from a local practice area within a 20-miles radius of the airport; or aircraft executing practice instrument approaches at an airport.

Given the fact that there are few flight training operations conducted at JAC, local operations are estimated to account for only 3 percent of all operations. This percentage breakdown is not expected to change over the course of the planning period. Forecasts of local and itinerant operations are shown in **Table 2-7**.

**Table 2-7: Summary of Local and Itinerant Operations Forecast, 2014-2034**

Year	Local	Itinerant	Total
<b>2014<sup>1</sup></b>	<b>656</b>	<b>25,461</b>	<b>26,117</b>
2020 <sup>2</sup>	711	27,581	28,292
2025 <sup>2</sup>	759	29,459	30,219
2034 <sup>2</sup>	856	33,231	34,087

*Source:* Mead & Hunt.

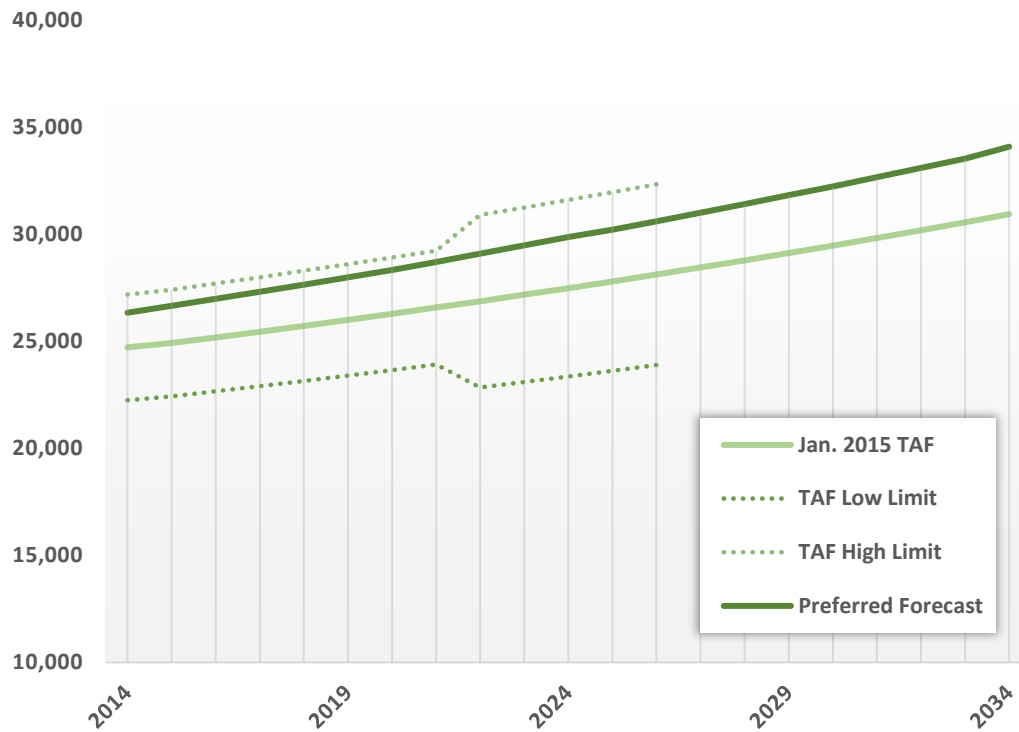
1. 2014 local and itinerant proportions compiled from FAA ATADS.

2. Projected figures are based on 2014 proportions applied to the preferred operations forecasts described in previous sections.

## 2.5 Summary

**Figure 2-2** illustrates the forecasts for total operations, which combines the preferred forecasts for commercial service, general aviation, and military operations for JAC. As shown in the figure, the total operations forecast is within the TAF limits, and thus, consistent with the FAA’s TAF. A comparison of the selected forecasts for enplanements, commercial operations, and total operations is summarized in **Table 2-8**. For purposes of comparing forecasts with the TAF, the 5- and 10-year timeframes that are used refer to the actual number of years after the base year. Thus, the years 2020 and 2025 were compared with the TAF. The forecasts described in this chapter are recommended for use in this Study to represent activity levels for the existing (2014), five-year (2020), and ten-year (2025) timeframes.

**Figure 2-2: Total Operations Forecast Compared with TAF Limits, 2014-2034**



Source: Mead & Hunt.

**Table 2-8: Comparison of Forecasts and TAF Forecasts, 2014-2029 (FAA Format)**

Operations	Airport Forecast	TAF <sup>1</sup>	Airport Forecast/TAF % Difference
<b><i>PASSENGER ENPLANEMENTS</i></b>			
Base Year (2014)	313,474	305,186	2.7%
2020	350,951	359,975	-2.5%
2025	385,583	413,084	-6.7%
2029	415,733	461,170	-9.9%
<b><i>COMMERCIAL</i></b>			
Base Year (2014)	7,156	6,154	4.4%
2020	7,521	7,905	-4.9%
2025	8,017	8,902	-9.9%
2029	8,567	9,791	-12.5%
<b><i>TOTAL OPERATIONS</i></b>			
Base Year (2014)	26,117	24,717	5.7%
2020	28,292	26,286	7.6%
2025	30,219	27,794	8.7%
2029	31,983	29,120	9.8%

*Source:* Mead & Hunt.

1. TAF data are on a U.S. Government fiscal year basis (October through September).