

## **B. Forecasts of Aviation Activity**

Forecasting is a key element in the terminal area planning process. The forecasts are essential for analyzing existing airport and terminal area facilities and identifying future needs and requirements of the facilities. While a forecasting effort was completed for the *2009 Airport Master Plan Update*, it was based on 2007 operations and enplanement levels and a number of important changes in air service have since transpired at the Airport including changes in air carriers and changes in the commercial aircraft fleet mix. Consequently, this forecast chapter seeks to build upon and revise the 2009 forecasts for the Airport.

Forecasting, by its very nature, is not exact, but it does establish some general parameters for development and provides a defined rationale for various development activities as demands increase. The amount and kind of aviation activity occurring at an airport are dependent upon many factors, but are usually reflective of the services available to aircraft operators, the local/regional demand for commercial passenger services, the meteorological conditions under which the airport operates (daily and seasonally), the businesses located on the airport or within the community the airport serves, and the general economic conditions prevalent within the surrounding area.

**Aviation activity forecasting generally commences by utilizing the present time as an initial point, supplemented with historical trends obtained from previous years' activity and recorded information. This data has evolved from a comprehensive examination of historical airport records provided by airport staff, *Colorado Airport System Plan, 2005*, FAA Form 5010-1 data, *FAA Terminal Area Forecasts*, and the *FAA Aerospace Forecasts Fiscal Years 2010-2030*. These documents were assembled in different years, making the base year data quite variable, and emphasizing the need for establishing a well-defined and well-documented set of historical information from which to project future aviation activity trends.**

Prior to an examination of current and future activity levels at the Airport, there are several conditions and assumptions that should be noted, which form the basis or foundation for the development of the forecasts contained herein. These statements cover a wide variety of physical, operational, and socioeconomic considerations and, although not necessarily in order of importance or priority, include:

- **Weather Conditions.** Existing weather data (i.e., visibility, ceiling, and wind conditions) for Grand Junction Regional Airport were available for analysis from the National Oceanic and Atmospheric Administration (NOAA). With the exception of very few days annually, the Airport is not adversely affected by poor weather conditions. Visual Flight Rules (VFR) meteorological conditions are experienced approximately 94.8% of the time annually; therefore, aircraft can operate at the Airport on a regular basis throughout the year, with limited interruption due to weather.
- **Airport/Community Location, Proximity, and Role.** Grand Junction Regional Airport is uniquely situated geographically in west-central Colorado. The airport service area for passenger and air cargo includes much of western Colorado and eastern Utah. A significant amount of the deplaned air cargo at the Airport is loaded on trucks for delivery to destinations outside of Grand Junction.
- **Regional Socioeconomic Conditions.** The existing socioeconomic condition of a particular region has historically impacted aviation activity within that area. The two primary socioeconomic indicators, which are often analyzed in the forecasts of aviation activity, are population and employment statistics.

According to the latest population data prepared by the U.S. Census Bureau, the estimated Mesa County population in 2010 totaled 150,539 residents. This County has increased at approximately 2.8% annually since 2000. The year 2030 population projection for the Grand Junction Metropolitan Statistical Area (MSA) is expected to reach a total of 216,637, reflecting an average annual growth rate of 2.2%. This compares to a projected statewide average annual growth rate of approximately 1.9% for the same period.

The Grand Junction Economic Partnership has reported that Mesa County's workforce has grown 45% over the past 10 years. According to the Colorado

State Demography Office, employment for Mesa County in 2010 was 79,336. Employment for Mesa County through the year 2030 is projected to increase to 120,877. This equates to an average annual growth rate of 2.6% for the years 2010 through 2030.

- **Additional Growth Indicators.** According to the Grand Junction Area Chamber of Commerce, the Grand Junction Gross Domestic Product (GDP) grew 80% during the last decade, ranking the local economy as the 14<sup>th</sup> fastest growing in the U.S. The median home price in Grand Junction has significantly increased in recent years. According to the U.S. Census Bureau, the 2000 median value of owner-occupied housing units was approximately \$121,500 and increased to an average of \$215,000 based on data collected over a five year time period by the Census Bureau (2005-2009).
- **Community Support.** Grand Junction Regional Airport benefits from the support of the surrounding city and county governments, as well as local industry and residents. The Airport is recognized as a vital asset to both the City of Grand Junction and Mesa County, which contributes to the stability and the future of the area's economy. The overall position of the area is one of continued growth and development, with special focus on the impetus that the Airport provides to maintain and attract additional economic and aviation-related development to the region. As evidence of this level of community support, the Grand Junction City Council recently passed a sales tax exemption for the aviation industry. The exemption applies to aircraft components installed by companies residing in Grand Junction.

Additionally, many of the surrounding county communities and much of the west-central Colorado region benefit from the close proximity of a regional commercial service aviation facility and, in turn, provide an economic base that can attract additional based aircraft, as well as industrial/business development to the Airport. This impact is realized by a study, *The 2008 Colorado Airports Economic Impact Study*, completed by the Colorado Aeronautics Division, for all Colorado airports. According to the 2008 Study, Grand Junction Regional Airport generated over \$623 Million in economic activity, over \$189 Million in total payroll, and 6,125 jobs in 2007.

- **Facilities Potential.** Grand Junction Regional Airport currently serves a vital commercial passenger service role to the economy of west-central Colorado.

From a runway length standpoint (10,501 and 5,501 feet), it is one of only a few airports within the regional service area that can accommodate the operation of air carrier jet aircraft. In addition, the Airport can accommodate the operation of large business jet aircraft that may be restricted from operating at the region's other general aviation airports.

- **Negative or Neutral Factors.** As a general comment, the Airport has very few negative factors and is in an enviable position, due to its many positive features and conditions. However, there are some broad factors that can have a negative or neutralizing impact on the Airport, and the aviation industry, and these are considered in the planning process.

From a national perspective, one negative factor is the current state of the national economy including high oil prices, contributing to higher air fares. The economic condition of many of the hub-and-spoke "legacy" airlines is also of concern. This is being offset to a great degree by the positive economic conditions being experienced by the low-cost carriers.

The overall condition of the general aviation industry in the United States has been a negative factor for several years. In the past few years general aviation operations have been in a steep decline nationally and the same trend is reflected in general aviation operations at the Grand Junction Regional Airport where GA operations in 2010 are down over 50 percent since 2000.

### Historical Airport Activity Summary

A tabulation of Grand Junction Regional Airport's historical aviation activity since 2000 is presented in the following table entitled *HISTORICAL AVIATION ACTIVITY, 2000-2010*. This table presents a summary of historic aviation activity at the Airport, which includes both local and itinerant operations, total operations and total enplanements.

Table B1

**HISTORICAL AVIATION ACTIVITY, 2000-2010**

Year	Enplanements	Itinerant Air Taxi/Air Carrier Ops	Itinerant GA Ops	Itinerant Military Ops	Total Itinerant Ops	Local GA Ops	Local Military Ops	Total Local Ops	Total Ops
2000	136,611	24,445	44,946	3,080	72,471	30,487	3,688	34,175	106,649
2001	120,057	21,116	40,857	2,803	64,776	35,032	4,008	39,040	103,816
2002	125,441	21,381	43,910	2,004	67,295	34,484	3,121	37,605	104,899
2003	127,584	21,219	38,495	1,683	61,397	31,503	2,952	34,455	95,852
2004	144,027	22,997	36,981	1,775	61,753	28,128	3,049	31,177	92,930
2005	159,715	23,698	33,692	2,455	59,846	23,066	4,000	27,066	86,911
2006	160,307	21,886	31,701	2,113	55,700	20,165	2,402	22,568	78,267
2007	170,836	22,150	30,012	2,122	57,284	21,760	3,702	25,462	82,745
2008	214,632	21,955	30,922	2,289	55,166	17,808	2,917	20,725	75,891
2009	231,616	20,992	24,452	2,090	47,533	12,794	2,135	14,929	62,462
2010 <sup>1</sup>	218,519	18,677	24,366	2,432	45,475	12,478	2,382	14,860	60,335

Source: Grand Junction Regional Airport Authority.

<sup>1</sup> 2010 data is actually November 2009 through October 2010.

As can be seen in the previous table, the number of total annual aircraft operations (an operation is defined as either a takeoff or a landing) at Grand Junction Regional Airport has significantly decreased over the last ten years while the number of annual enplanements has significantly increased over the last ten years.

- Passenger Enplanements.** Enplanements have steadily increased; peaking and trending slightly downward in 2010 as a result of Frontier Airlines/Lynx Aviation ceasing service from GJT to Denver. However, new service from United/Continental to Houston is expected in early 2011 and the potential for additional air service will likely result in the upward trend of the past ten years continuing at the Grand Junction Regional Airport.
- Air Carrier/Air Taxi/Commuter Aircraft Operations.** The Airport Traffic Control Tower (ATCT) located on the field records aircraft operations during its operating hours. Nighttime aircraft operations when the tower is closed (10:00 p.m. to 6:00 a.m.) are

estimated to be approximately 10% of daytime operations totals. Additionally, the majority of commercial service operations are conducted by commuter/air taxi carriers with a small number of large air carrier operations. Air taxi/commuter operations are defined as those conducted by aircraft with less than 60 seats, while air carrier operations are those conducted by aircraft with more than 60 seats.

- **General Aviation and Military Operations.** The data available for Grand Junction Regional Airport illustrates a declining trend in general aviation activity during the past decade. As economic conditions in the region change in the future, fluctuations in the number of general aviation operations at the Airport will likely continue.
- **Military Operations.** Historically, military aircraft have utilized Grand Junction Regional Airport for training and/or refueling purposes. Military operations during 2010 were approximately 4,814 and are expected to remain roughly the same throughout the planning period.

### Passenger Enplanement Forecast

Passenger Enplanements were forecast in the *2009 Airport Master Plan Update*. However, a number of significant changes have taken place since that last forecasting effort including changes in air service and a transition from a commercial aircraft fleet dominated by turbo-prop type aircraft to a commercial aircraft fleet dominated by regional jet type aircraft. Consequently, a number of new enplanement scenarios are considered in the following sections in an effort to present a reasonable forecast of commercial passenger enplanements. This enplanement forecast will be utilized throughout the Terminal Area Plan study.

Accurately predicting passenger enplanements at a regional commercial service airport is challenging for a number of reasons. Primarily because decisions by air carriers to either initiate service to a new destination or cease service to an existing destination can have a significant effect on air carrier operations and enplanement levels. As an example, Frontier/Lynx Aviation recently ceased service from GJT to Denver. Because the airline was operating approximately five round trips per day using 74 seat aircraft, this one change resulted in a dramatic decrease in the number of seats available to Denver. Another example is the anticipated initiation of service by United/Continental Airlines to Houston which is expected to begin in May of 2011. Also, American Airlines/American Eagle has recently increased the frequency of service to Dallas and Allegiant Air has increased the frequency of service to Las Vegas and added service to Los Angeles. The May 2010 Passenger Demand Analysis<sup>1</sup> completed for the Airport states that there is the potential for additional air service opportunities over the short-term planning period

<sup>1</sup> Grand Junction Regional Airport Passenger Demand Analysis, Mead & Hunt, May 26, 2010.

including increased service to Dallas, increased/new service to other western cities served by Allegiant Air, potential new service to Chicago and potential new service to Minneapolis.

Two historical trends and three forecast scenarios have been developed for the purposes of this forecasting effort. The enplanement forecast scenarios are as follows:

- **Scenario One.** This scenario projects enplanements to increase at an average annual growth rate of 2.2% which is equal to the projected population growth rate of Mesa County through 2030.
- **Scenario Two.** This scenario projects enplanements to increase at an average annual growth rate of 2.3% which is equal to the projected growth rate of all air carriers included in the *FAA Aerospace Forecast Fiscal Years 2010-2030*.
- **Scenario Three (Selected).** This scenario projects enplanements to increase at an average annual growth rate of 3.0% which is equal to the projected growth rate for regional carriers included in the *FAA Aerospace Forecast Fiscal Years 2010-2030*.

Scenario Three is the selected growth scenario for this Terminal Area Plan for a number of reasons. Mostly notably because, according to the Passenger Demand Analysis, there is still latent demand for air service in the Grand Junction market and the Airport has initiated an aggressive marketing plan to capitalize on this latent demand. Also, as stated previously, the potential exists for increased service to Dallas, increased/new service to other western cities served by Allegiant Air, potential new service to Chicago and potential new service to Minneapolis. Consequently, Scenario Three, with an average annual growth rate of 3.0 percent is considered the most reasonable growth scenario. It is also important to note that selected growth rate of 3.0 percent is only slightly higher than the selected growth rate from the *2009 Airport Master Plan Update* of 2.6 percent.

The passenger enplanement scenarios are compared in the following table entitled *PASSENGER ENPLANEMENTS FORECAST, 2010-2030*. The *2009 Airport Master Plan Update* enplanement forecast and the December 2010 FAA TAF are also presented for reference. Finally, the forecast scenarios are presented graphically in the figure entitled *SELECTED PASSENGER ENPLANEMENT FORECAST, 2010-2030*. The figure also presents the December 2010 FAA TAF consistency limits. Enplanement forecasts are considered consistent with the TAF if they differ by less than 10 percent in the 5-year forecast period, and 15 percent in the 10-year forecast period.



Table B2

**PASSENGER ENPLANEMENTS FORECAST, 2010-2030**

Year	Dec. 2010 FAA TAF	Trend Projection <sup>2</sup>	Trend Projection <sup>3</sup>	Scenario One (2.2%)	Scenario Two (2.3%)	Scenario Three (3.0%) <sup>4</sup>	2009 Airport Master Plan
2010	216,866	218,519 <sup>1</sup>	218,519 <sup>1</sup>	218,519 <sup>1</sup>	218,519 <sup>1</sup>	218,519 <sup>1</sup>	240,084
2011	224,137	206,214	238,795	233,305	223,545	255,075	246,326
2012	231,652	212,138	251,799	228,195	228,686	231,827	252,731
2013	239,419	218,061	264,803	233,192	233,946	238,782	259,302
2014	247,446	223,984	277,806	238,299	239,327	245,945	266,044
2015	255,743	229,907	290,810	243,518	244,832	253,323	272,961
2020	301,593	259,524	355,830	271,377	274,312	293,671	310,339
2025	355,668	289,140	420,849	302,423	307,343	340,445	352,837
2030	419,439	318,756	485,869	337,021	344,351	394,670	--

Source: BARNARD DUNKELBERG & COMPANY.

<sup>1</sup> Actual. November 2009 through October 2010.

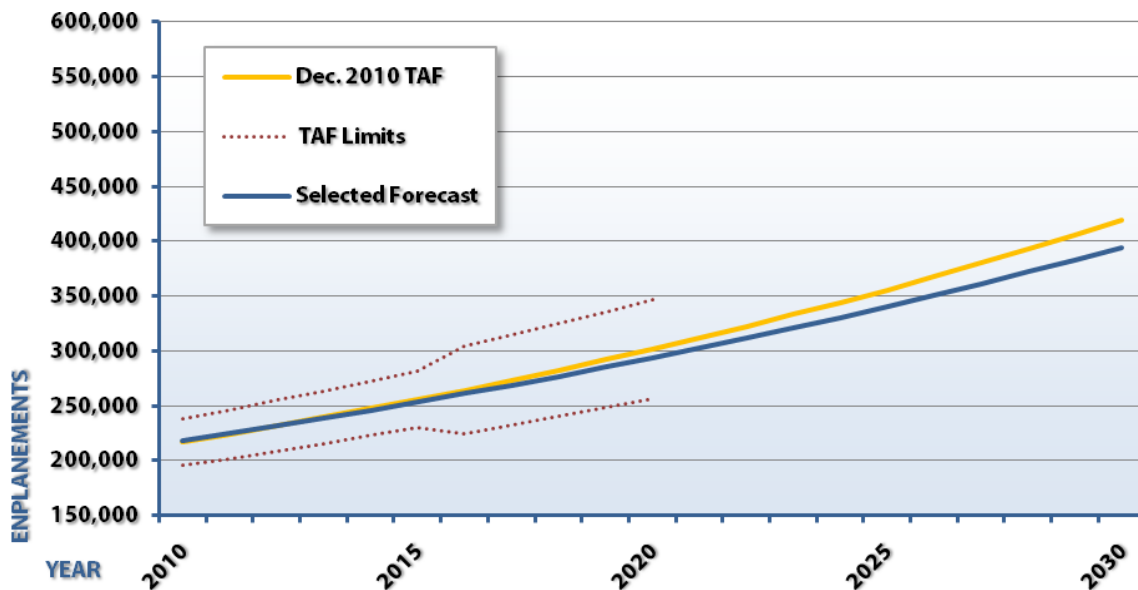
<sup>2</sup> Trend based on actual enplanements from 1995 to 2010.

<sup>3</sup> Trend based on actual enplanements from 2001 to 2010.

<sup>4</sup> Selected Enplanement Forecast

Figure B1

**SELECTED PASSENGER ENPLANEMENTS FORECAST, 2010-2030**





Source: BARNARD DUNKELBERG & COMPANY.

### Use of Various Forecasts Including Planning Activity Levels

The previous table outlines a range of possible forecast scenarios in addition to the December 2010 FAA TAF for the Grand Junction Regional Airport. There is a significant spread in the range of these forecast scenarios with long range (2030) enplanements estimated between 318,000 and 420,000. When such a wide range of scenarios is possible, it is considered prudent for terminal planning to be based on a set of Planning Activity Levels which represent reasonable increments of development. The timing of these phases (and resulting need for improvements) will ultimately be determined as actual growth occurs at the Airport. The Planning Activity Levels or PALs that will be used for the purposes of this study are further described in the following chapter entitled *Terminal Area Facility Requirements*.

### Commercial Service Operations Forecast

Commercial service aircraft operations at Grand Junction Regional Airport are currently represented by a combination of turbo-prop, regional jet and narrow-body jet aircraft that are operated by five airlines. The following tables entitled *2010 COMMERCIAL SERVICE CARRIERS* and *2011 ANTICIPATED COMMERCIAL SERVICE CARRIERS* provide the 2010 list of air carriers that provided service at the Airport and the 2011 list of air carriers anticipated to provide service at the Airport. As stated previously, in recent years the commercial air carrier fleet mix at the Airport has trended away from turbo-prop aircraft with a corresponding increase in regional jet type aircraft. Frontier Airlines has also ceased service to Denver as has Mesa Airlines (United Express). Currently only SkyWest (United Express) provides service to Denver.

Table B3

#### 2010 COMMERCIAL SERVICE CARRIERS

Airline	Aircraft Type	Seating Capacity	City/ Destination	Stage Length (NM)
SkyWest (United Express)	CRJ-200 & 700	50 to 66 seats	Denver, CO	184 NM
SkyWest (Delta Connection)	CRJ-200ER	50 seats	Salt Lake City, UT	188 NM
Mesa Airlines (US Airways)	Dash 8-100, CRJ-200	37 to 50 seats	Phoenix, AZ	381 NM
Allegiant Air	MD-80	150 seats	Las Vegas, NV, Los Angeles, CA	364 NM, 568 NM
American Eagle (American Airlines)	Embraer-140, Embraer-145	44 to 50 seats	Dallas, TX	184 NM

Source: Airline Flight Schedules.

Table B4

**2011 ANTICIPATED COMMERCIAL SERVICE CARRIERS**

Airline	Aircraft Type	Seating Capacity	City/ Destination	Stage Length(NM)
SkyWest (United Express)	CRJ-200 & 700	50 to 66 seats	Denver, CO	184 NM
SkyWest (Delta Connection)	CRJ-200ER	50 seats	Salt Lake City, UT	188 NM
Mesa Airlines (US Airways)	Dash 8-100, CRJ-200	37 to 50 seats	Phoenix, AZ	381 NM
Allegiant Air	MD-80	150 seats	Las Vegas, NV, Los Angeles, CA	364 NM, 568 NM
American Eagle (American Airlines)	Embraer-140, Embraer-145	44 to 50 seats	Dallas, TX	670 NM
Continental Express (United/Continental Airlines)	Embraer-145	50 seats	Houston, TX	850 NM

Source: Airline Flight Schedules.

The establishment of projected passenger enplanements, in addition to identifying fleet mix, is required to properly project commercial service aircraft operations. The Boarding Load Factor (BLF) of the airlines serving an airport 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 2010-2030*, average load factors of approximately 79.7 percent were achieved by the air carrier industry in 2009 and are expected to increase to 82.4 by 2030. The BLF for the Grand Junction Regional Airport in 2010 is estimated at approximately 78 percent and is expected to increase only slightly during the 20-year planning period.

The following table entitled *COMMERCIAL SERVICE OPERATIONS FORECAST, 2010-2030* 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 including the additional operations by all types of regional jet aircraft and the reduction in operations by turbo-prop type aircraft. 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. While no changes are anticipated in the commercial airline fleet mix, it is likely that the 60 to 90 seat regional jets will be more frequently utilized to serve the Airport in accordance with the aircraft capacity forecasts included in the *FAA Aerospace Forecasts Fiscal Years*

2010-2030. Thus, the number of seats per departure at the Airport is expected to increase slightly.

Also shown in the following table are the non-scheduled Air Taxi operations which are forecast to increase at an average annual growth rate of 1.6 percent which is equal to the *FAA Aerospace Forecasts Fiscal Years 2010-2030* projected growth rate of national air taxi operations at towered airports.

Table B5

**COMMERCIAL OPERATIONS FORECAST, 2010-2030**

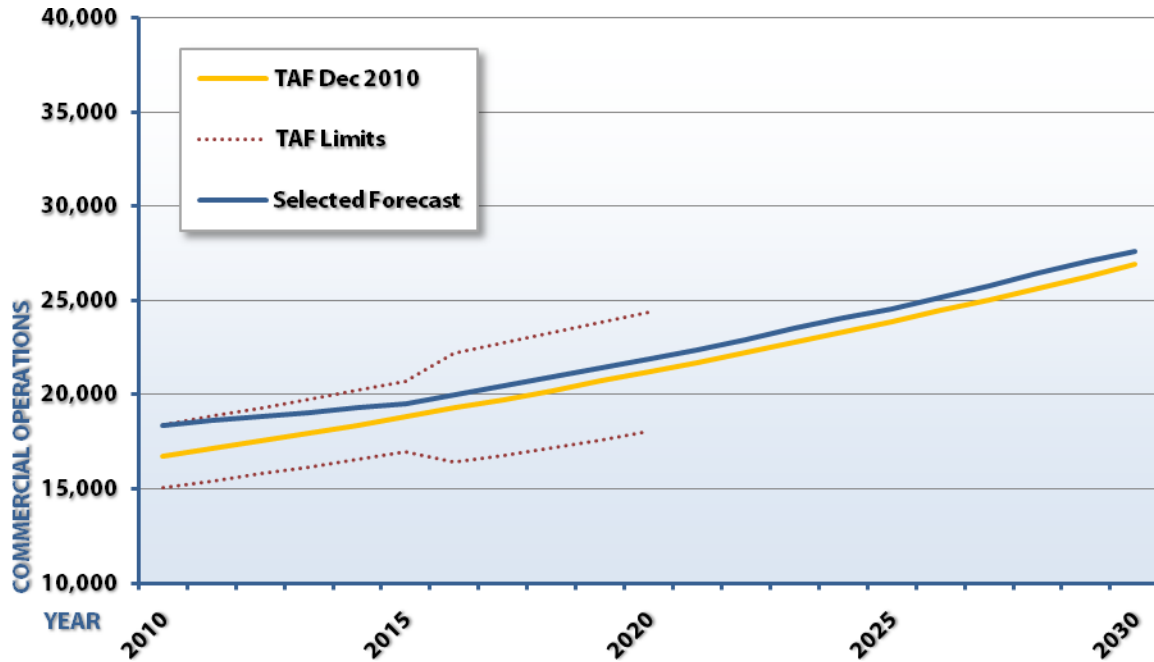
	Seats	2010	2015	2020	2025	2030
<b>Air Carrier/Commuter</b>						
<b>Operations</b>		<b>11,100<sup>1</sup></b>	<b>11,640</b>	<b>13,329</b>	<b>15,321</b>	<b>17,618</b>
Narrow Body Jets	150	492 <sup>1</sup>	700	833	983	1,160
Regional Jets	50-66	6,808 <sup>1</sup>	9,600	11,424	13,480	15,772
Turbo Props	37	3,800 <sup>1</sup>	1,340	1,072	858	686
<b>Air Carrier/Commuter Boarding Load Factor Calculations</b>						
Average Seats Per Departure		39.37	43.53	44.06	44.44	44.80
Enplanements		218,519 <sup>2</sup>	253,323	293,671	340,445	394,670
Boarding Load Factor (BLF)		77.8%	78.6%	78.6%	78.6%	78.6%
<b>Non-Scheduled Air Taxi</b>						
<b>Operations</b>		<b>7,277</b>	<b>7,878</b>	<b>8,529</b>	<b>9,233</b>	<b>9,996</b>
<b>Total Commercial Operations</b>		<b>18,377</b>	<b>19,518</b>	<b>21,858</b>	<b>24,554</b>	<b>27,614</b>

Source: BARNARD DUNKELBERG & COMPANY.

<sup>1</sup> Estimated based on U.S. Department of Transportation, Bureau of Transportation Statistics for the 1<sup>st</sup> half of 2010. This figure does not include non-scheduled Air Taxi Operations.

<sup>2</sup> Actual. November 2009 through October 2010.

Figure B2  
**SELECTED COMMERCIAL OPERATIONS FORECAST, 2010-2030**



Source: BARNARD DUNKELBERG & COMPANY.

### General Aviation and Military Operations Forecast

General aviation and military operations are not as critical to this Terminal Area Plan study as these aircraft types do not typically utilize the airside area within the terminal area plan boundary presented in the previous chapter. However; it is necessary to update the base year level of operations and the forecast operations for these groups in order for the total level of forecast operations at the Airport, presented at the end of this chapter, to be accurate and within the December 2010 FAA TAF consistency limits.

General aviation operations at the Grand Junction Regional Airport have steadily declined since reaching a peak of 78,394 in 2002. The Airport has seen a recent increase in business jet activity primarily related to the services provided by the FBO which specializes in business aircraft maintenance, modifications, and refurbishment. However, aircraft operations by local business aircraft and personal aircraft are down significantly.

Several annual growth rates were considered for the purposes of forecasting general aviation operational activity for the 20-year planning period. Given that the Airport has historically seen general aviation operations levels in the 60,000 to 70,000 range, it is possible that an increase from the current level of approximately 37,000 general aviation operations could occur. However, any increase in general aviation activity is likely to be gradual and it is not anticipated that operations will return to historical levels within the 20-year planning period. Consequently, a scenario that mirrors the December 2010 FAA TAF is considered appropriate. Similar to the December 2010 FAA TAF, GA operations are forecast to continue to decrease in 2011 (by approximately 8 percent) then increase at an average rate of 1.1 percent annually from 33,896 in 2011 to 41,728 by 2030. This rate is equal to the *FAA Aerospace Forecasts for Fiscal Years 2010-2030* for general aviation operations at towered airports nationwide. In other words, in this scenario, the Airport would continue to maintain its national market share of general aviation operations at towered airports. This growth rate is also slightly lower than the selected growth rate from the *2009 Airport Master Plan Update* of 1.3 percent. As a percentage of total annual aircraft operations, the number of military operations at the Airport has historically been relatively low. No factors have been identified that would significantly increase the number of military operations in the future; therefore, the number of military aircraft operations is projected to remain at 2010 levels of 4,814 operations throughout the planning period.

### Peak Period Forecast

An additional element of assessing airport usage, and determining various requirements necessitated by capacity and demand considerations, is the determination of peak period activities. Historical operational data for Grand Junction Regional Airport was utilized to determine peaking characteristics. Peak months have historically been during the summer with aircraft operations in some years exceeding 8,000 for the months of July and August. The peak period operation projections are depicted in the following table, entitled *PEAK PERIOD AIRCRAFT OPERATIONS, 2010-2030*.

Also, as mentioned previously, airport terminal facilities are sized to accommodate the peak hour passenger volumes of a design day. Forecast peak hour air carrier passengers will be presented in the passenger terminal section of the following chapter entitled *Facility Requirements*.

Table B6

**PEAK PERIOD AIRCRAFT OPERATIONS, 2010-2030**

Year	Annual	Peak Month <sup>1</sup>	Average Day of Peak Month <sup>1</sup>	Peak Hour/ Average Day Ratio <sup>1</sup>	Average Peak Hour <sup>1</sup>
2010	60,335	6,034	195	10%	19
2015	59,745	5,975	193	11%	21
2020	64,076	6,408	207	12%	25
2025	68,875	6,888	222	13%	29
2030	74,156	7,416	239	14%	33

Source: BARNARD DUNKELBERG & COMPANY.

<sup>1</sup> Peak month and Peak Hour counts based on FAA AC 150/5070-6B Airport Master Plans and FAA AC 150/5060-5 Airport Capacity and Delay.

### Operations Forecast By Aircraft Type

As indicated in the following table entitled *SUMMARY OF OPERATIONS BY AIRCRAFT TYPE, 2010-2030*, total annual operations are anticipated to increase by 22.9 percent (1.1 percent per year) through the planning period. Overall, operations are expected to increase from the current level of 60,335 to approximately 74,156 by the end of the planning period. It is projected that general aviation aircraft operations will continue to represent the majority percentage of airport activity through the planning period.

On an overall percentage basis, commercial service operations at the Airport are dominated by regional jet aircraft (approximately 61 percent). This trend is expected to continue with regional jet aircraft operations accounting for approximately 90 percent of total commercial service operations by the end of the planning period. Currently, operations conducted by single engine aircraft represent approximately 60 percent of the general aviation activity, while approximately 5 percent are multi-engine piston operations, 8 percent are turbo prop operations, 25 percent are business jet operations, and 2 percent are helicopter operations. It is estimated that through the planning period, the distribution percentage of operations for single engine piston aircraft will decrease slightly, while the distribution percentage of business jet aircraft will increase.

Table B7

**SUMMARY OF OPERATIONS BY AIRCRAFT TYPE, 2010-2030**

<b>Operations By Type</b>	<b>2010<sup>1</sup></b>	<b>2015</b>	<b>2020</b>	<b>2025</b>	<b>2030</b>
<i>Commercial Service</i>	11,100	11,640	13,329	15,321	17,618
Narrow-body	492	700	833	983	1,160
Regional Jet	6,808	9,600	11,424	13,480	15,772
Turbo Prop	3,800	1,340	1,072	858	686
<i>Air Taxi</i>	7,577	7,878	8,529	9,233	9,996
<i>General Aviation</i>	36,844	35,413	37,404	39,507	41,728
Single Engine Piston	22,106	20,717	21,320	21,926	22,533
Multi-Engine Piston	1,842	1,771	1,870	1,975	2,086
Turbo Prop	2,948	2,833	2,992	3,161	3,338
Business Jet	9,211	9,207	10,099	11,062	12,101
Helicopter	737	885	1,122	1,383	1,669
<i>Military</i>	4,814	4,814	4,814	4,814	4,814
<b>Total Operations</b>	<b>60,335</b>	<b>59,754</b>	<b>64,076</b>	<b>68,875</b>	<b>74,156</b>

Source: BARNARD DUNKELBERG & COMPANY.

<sup>1</sup> Actual. November 2009 through October 2010.

## Summary

The following table summarizes the forecasts that have been presented in this chapter and compares the forecasts to the December 2010 FAA TAF. This information will be utilized in the next chapter to document and analyze terminal area facility requirements. The forecasts of aviation activity are an important component that will be utilized to develop future plans for the Airport and formulate decisions related to airport terminal area development.



Table B8

**COMPARISON OF FORECASTS AND TAF FORECASTS 2010-2025 (FAA FORMAT)**

	Airport Forecast	Dec. 2010 TAF	AF/TAF % Difference
<b>Passenger Enplanements</b>			
Base Year (2010)	218,519 <sup>1</sup>	218,519	0.0%
2015	253,323	255,743	-0.9%
2020	293,671	301,593	-2.6%
2025	340,445	355,668	-4.3%
<b>Commercial Operations</b>			
Base Year (2010)	18,377 <sup>1</sup>	18,377	0.0%
2015	19,518	18,836	3.6%
2010	21,858	21,209	3.1%
2025	24,554	23,878	2.8%
<b>Total Operations</b>			
Base Year (2010)	60,335 <sup>1</sup>	60,335	0.0%
2015	59,745	55,292	8.1%
2020	64,076	59,633	7.5%
2025	68,875	65,399	5.3%

**Source:** BARNARD DUNKELBERG & COMPANY.

<sup>1</sup> Actual. November 2009 through October 2010.