Chapter 3
Aviation Forecasts

This Chapter features aviation activity forecasts for the Asheville Regional Airport (Airport) over a next 20-year planning horizon. Aviation demand forecasts are an important step in the master planning process. Ultimately, they will form the basis for future demand-driven improvements at the Airport, provide data used to estimate future off-airport impacts such as noise and traffic, and are incorporated by reference into other studies and policy decisions. This Chapter, which presents aviation activity forecasts through 2030, is organized as follows:

The Federal Aviation Administration (FAA) projects future aviation activity through its Terminal Area Forecasts (TAF) which is utilized to compare projections that were prepared for this Master Plan. Forecasts that are developed for airport master plans and/or federal grants must be approved by the FAA. It is the FAA's policy, listed in Advisory Circular (AC) 150/5070-6B, *Airport Master Plans*, that FAA approval of forecasts at small-hub airports be consistent with the TAF. Master plan forecasts for operations, based aircraft and enplanements are considered to be consistent with the TAF if they meet the following criteria:

a) Forecasts differ by less than ten percent in the five-year forecast and 15 percent in the ten- or 20-year period, or
b) Forecasts do not affect the timing or scale of an airport project

This Chapter examines data that pertains to aviation activities and describes the projections of aviation demand. It should be noted that projections of aviation demand are based on data through the year 2010, as this was the most recent calendar year for which a full 12 months of historical data was available at the time these forecasts were developed.

3.1 Forecasting Approach

Several forecasting methods have been applied in the development of the aviation demand projections presented in this Chapter. These forecasts incorporate local and national industry trends in assessing current and future demand. Socioeconomic factors such as local population, income, and employment have also been analyzed for the effect they may have had on historical and may have on future levels of activity. The comparison of the relationships among these various indicators provided the initial step in the development of realistic forecasts for future aviation demand. Methodologies used to develop forecasts described in this section include:

- Time-series methodologies
- Market share methodologies
- Socioeconomic methodologies

3.1.a Time-Series Methodologies

Historical trend lines and linear extrapolation are widely used methods of forecasting. These techniques utilize time-series types of data and are most useful for a pattern of demand that demonstrates a historical relationship with time. Trend line analyses used in this Chapter are linearly extrapolated, establishing a trend line using the least squares method to known historical data. Growth rate analyses used in this Chapter examined the historical compounded annual growth rates (CAGR) and extrapolated future data values by assuming a similar CAGR for the future.

3.1.b Market Share Methodology

Market share, ratio, or top-down methodologies compare local levels of activity with a larger entity. Such methodologies imply that the proportion of activity that can be assigned to the local level is a regular and predictable quantity. This method has been used extensively in the aviation industry to develop forecasts at the local level. Historical data is most commonly used to determine the share of total national traffic activity that will be captured by a particular region or airport. The FAA develops national forecasts annually in its FAA Aerospace Forecasts document; the latest edition of which is the FAA Aerospace Forecasts Fiscal Year (FY) 2011-2031.

3.1.c Socioeconomic Methodologies

Though trend line extrapolation and market share analyses may provide mathematical and formulaic justification for demand projections, there are many factors beyond historical levels of activity that may identify trends in aviation and its impact on local aviation demand. Socioeconomic or correlation analyses examine the direct relationship between two or more sets of historical data. Local conditions examined in this Chapter include population and the total retail sales for the 11 counties that make up the Airport's primary service area (Buncombe, Madison, Haywood, Transylvania, Henderson, Polk, Rutherford, McDowell, Yancey, Jackson, and Mitchell). Historical and forecasted socio-economic statistics for this service area were obtained from the economic forecasting firm Woods & Poole Economics, Inc. Based upon the observed and projected correlation between historical aviation activity and the socioeconomic data sets, future aviation activity projections were developed.

3.2 Enplaned Passengers

Enplanements are defined as the activity of passengers boarding commercial service aircraft that depart an airport and include both revenue and non-revenue passengers on scheduled commercial service aircraft or unscheduled charter aircraft. Passenger enplanement data is provided to Airport management by commercial passenger service carriers, who maintain counts on the number of people that are transported to and from an airport. This section examines the passenger enplanement data and describes future passenger projections.

3.2.a Enplanement History

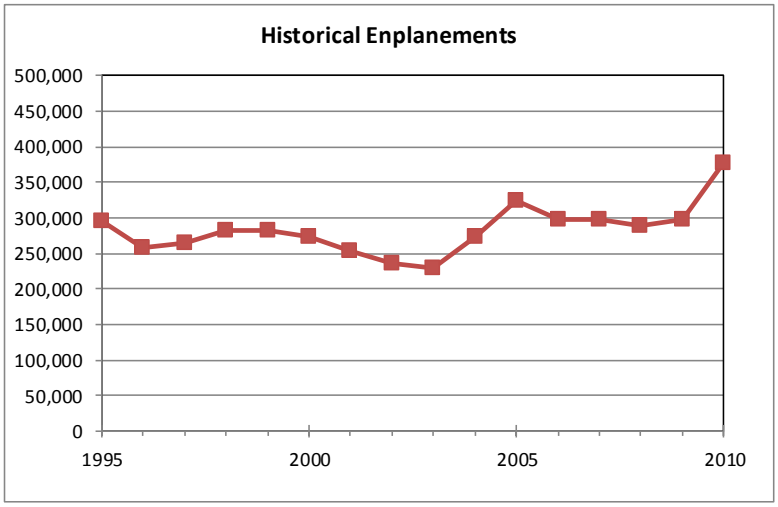
Between 1995 and 2010, passenger enplanements at the Asheville Regional Airport fluctuated between a low of 230,178 in 2003 and a high of 378,087 in 2010. From 1995 through 2010, enplanements have increased from 294,780 to 378,087 respectively, at a CAGR of 1.67 percent. **Table 3-1** presents the historical enplanements at the Airport since 1995.

3.2.b Federal Aviation Administration Forecast

The FAA records passenger enplanements for all commercial service airports and releases an updated version of the TAF every year. It should be noted that annual TAF data is based on the federal fiscal year rather than the calendar year, so historical figures differ slightly from the Airport's records. The FAA's historical records and projections of passenger enplanements are shown in **Table 3-2**.

Table 3-1: Historical Enplanements

Year	Historical Enplanements
Historical:	
1995	294,780
1996	257,215
1997	263,767
1998	283,146
1999	283,209
2000	274,281
2001	253,250
2002	236,019
2003	230,178
2004	273,691
2005	323,353
2006	297,792
2007	298,667
2008	289,215
2009	298,865
2010	378,087
CAGR (1995-2010)	*1.67%*



Notes: CAGR = Compounded Annual Growth Rate
Sources: Historical Enplanements - Airport Records

Table 3-2: Enplanement Forecast – FAA Terminal Area Forecast (TAF)

Year	FAA TAF Enplanements
Historical:	
1995	294,788
1996	257,215
1997	252,543
1998	279,611
1999	285,335
2000	277,158
2001	268,779
2002	240,088
2003	218,312
2004	252,246
2005	312,125
2006	294,065
2007	290,153
2008	276,762
2009	296,053
2010	349,880
Projected:	
2015	394,721
2020	432,090
2025	473,084
2030	518,051
CAGR (2010-2030)	*1.59%*

Source: FAA Terminal Area Forecast

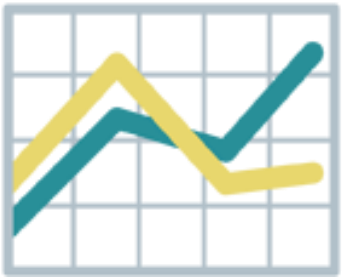
As illustrated, the FAA projects strong, steady growth in passenger enplanements at the Asheville Regional Airport through 2030. The TAF predicts 394,721 passenger enplanements in 2015, 432,090 in 2020, 473,084 in 2025, and 518,051 in 2030, at a CAGR of 1.59 percent.

3.2.c Enplanement Forecasts

Six methodologies were evaluated to develop projections for passenger enplanements. These methodologies are described in the following sections and include trend line and growth rate methodologies. The results of these two forecasting methodologies are presented in **Table 3-3**.

Trend Line Methodology – The trend line methodology is based on the assumption that future trends will continue to mimic those of the selected time period and that factors that affect those trends will continue to influence demand levels in a similar fashion. The establishment of a linear trend line using historical data through the least squares method typically serves as a baseline projection to which other methodologies are compared.

Airport records for passenger enplanements from 1995 to 2010 were reviewed as a part of this methodology. Applying the least squares method, the trend line methodology projects passenger enplanements will decrease to 331,514 in 2015 before increasing to 350,731 in 2020, 369,949 in 2025, and 389,167 in 2030.



Growth Rate Methodology – The growth rate methodology examines the percent change in activity between two points in time, and assumes that future activity will change at this rate throughout the forecasting period. Between 1995 and 2010, there was a 1.67 percent annual increase in passenger activity. Applying this CAGR, passenger enplanements are forecasted to grow to 410,793 in 2015, 446,328 in 2020, 484,937 in 2025, and 526,886 in 2030.

Table 3-3: Enplanement Forecasts – Trend Line & Growth Rate Methodologies

	Trend Line	Growth Rate	
Year	Enplanements	Enplanements	Percent Change
Historical:			
1995	294,780	294,780	
1996	257,215	257,215	-12.74%
1997	263,767	263,767	2.55%
1998	283,146	283,146	7.35%
1999	283,209	283,209	0.02%
2000	274,281	274,281	-3.15%
2001	253,250	253,250	-7.67%
2002	236,019	236,019	-6.80%
2003	230,178	230,178	-2.47%
2004	273,691	273,691	18.90%
2005	323,353	323,353	18.15%
2006	297,792	297,792	-7.90%
2007	298,667	298,667	0.29%
2008	289,215	289,215	-3.16%
2009	298,865	298,865	3.34%
2010	378,087	378,087	26.51%
		CAGR (1995-2010)	*1.67%*
Projected:			
2015	331,514	410,793	*1.67%*
2020	350,731	446,328	*1.67%*
2025	369,949	484,937	*1.67%*
2030	389,167	526,886	*1.67%*
0.00%	*0.14%*	*1.67%*	

Sources: Historical Enplanements - Airport Records
Projections - Mead & Hunt

Market Share Methodology – Market share methodology compares activity levels at an airport to a larger geographical region as a whole over a given length of time. For the purposes of this Master Plan, two market share methodology forecasts have been developed that compare activity at the Asheville Regional Airport with total U.S. domestic enplanements. Domestic U.S. and Asheville Regional Airport enplanement data dating back to 1995 was examined. The results of these projection methodologies are presented in **Table 3-4**.

Market Share Methodology (1) – The first market share methodology applies the Airport's market share in 2010 of 0.0595 percent to projections of total U.S. domestic enplanement projections described in the FAA Aerospace Forecasts FY 2011-2031. The first market share methodology projects 447,900 passenger enplanements in 2015, 515,597 in 2020, 574,919 in 2025 and 629,547 in 2030. This represents a compound annual growth rate of 2.58 percent, matching the FAA's projected growth rate in domestic U.S. enplanements.

Market Share Methodology (2) – Between 1995 and 2010, the Asheville Regional Airport's market share of total U.S. domestic passenger enplanements ranged from a minimum of 0.392 percent in 2003 to a

maximum of 0.595 percent in 2010, averaging to 0.0452 percent over the 15-year period. The second market share methodology applies the average U.S. market share that the Airport experienced during the 1995-2010 timeframe to total U.S. domestic passenger enplanement projections. The second market share methodology projects 340,458 passenger enplanements in 2015, 391,915 in 2020, 437,008 in 2025 and 478,531 in 2030.

Table 3-4: Enplanement Forecasts – Market Share Methodologies

	Market Share Methodology 1			Market Share Methodology 2		
Year	AVL Enplanements	Total U.S. Domestic Enplanements (mil)	AVL Market Share	AVL Enplanements	Total U.S. Domestic Enplanements (mil)	AVL Market Share
Historical:						
1995	294,780	531.1	0.0555%	294,780	531.1	0.0555%
1996	257,215	558.1	0.0461%	257,215	558.1	0.0461%
1997	263,767	578.3	0.0456%	263,767	578.3	0.0456%
1998	283,146	589.3	0.0480%	283,146	589.3	0.0480%
1999	283,209	610.9	0.0464%	283,209	610.9	0.0464%
2000	274,281	641.2	0.0428%	274,281	641.2	0.0428%
2001	253,250	625.8	0.0405%	253,250	625.8	0.0405%
2002	236,019	575.1	0.0410%	236,019	575.1	0.0410%
2003	230,178	587.8	0.0392%	230,178	587.8	0.0392%
2004	273,691	628.5	0.0435%	273,691	628.5	0.0435%
2005	323,353	669.5	0.0483%	323,353	669.5	0.0483%
2006	297,792	668.4	0.0446%	297,792	668.4	0.0446%
2007	298,667	690.1	0.0433%	298,667	690.1	0.0433%
2008	289,215	680.7	0.0425%	289,215	680.7	0.0425%
2009	298,865	630.8	0.0474%	298,865	630.8	0.0474%
2010	378,087	635.3	0.0595%	378,087	635.3	0.0595%
					Average (1995-2010)	*0.0452%*
Projected:						
2015	447,900	752.5	0.0595%	340,458	752.5	0.0452%
2020	515,597	866.3	0.0595%	391,915	866.3	0.0452%
2025	574,919	966.0	0.0595%	437,008	966.0	0.0452%
2030	629,547	1,057.7	0.0595%	478,531	1,057.7	0.0452%
CAGR	*2.58%*	*2.58%*		*1.18%*	*2.58%*	

Sources: Historical Enplanements - Airport Records
Total US Domestic Enplanements - FAA Aerospace Forecasts FY 2011-2031
Projections - Mead & Hunt

Socioeconomic Methodology – Socioeconomic, or correlation, methodologies examine the direct relationship between two or more sets of historical data. To conduct forecasts using this method, local conditions were examined including population and total retail sales for the eleven counties that comprise the Airport's primary service area. Historical and forecasted socioeconomic statistics were obtained from the economic forecasting firm of Woods & Poole Economics, Inc. Based upon the observed and projected correlation between historical aviation activity and the socioeconomic data sets, future aviation activity projections were developed. The results of these methodologies are presented in **Table 3-5**.

Socioeconomic Methodology – Population Variable – Local population can be a strong indicator for the demand of commercial aviation, particularly at small hub and non-hub airports. The socioeconomic population variable methodology compares historical population figures to passenger enplanements. Between 1995 and 2010, the population of the region increased from 545,658 to 651,332. In 2010, the number of annual enplanements per capita was 0.580. This figure was applied to population projections

by Woods and Poole Economics, Inc. to forecast 400,761 passenger enplanements in 2015, 424,120 in 2020, 447,873 in 2025, and 471,784 in 2030.

Socioeconomic Methodology – Retail Sales Variable – Because local economic conditions can impact levels of passenger activity, another socioeconomic factor that was examined was total retail sales. Between 1995 and 2010, total retail sales in the Airport's primary service area increased from $5,785,000 to $7,565,000. It should be noted that these sales figures are presented in constant 2004 dollars, used to measure the "real" change in earnings and income when inflation is taken into account. Enplanements per $1 million in retail sales were 49.982 in 2010. Applying this figure to the total retail sales projections by Woods and Poole Economics, Inc., forecasts illustrate that 420,270 passengers will be enplaned in 2015, 466,738 in 2020, 517,937 in 2025, and 574,362 in 2030.

Table 3-5: Enplanement Forecasts – Socioeconomic Methodologies

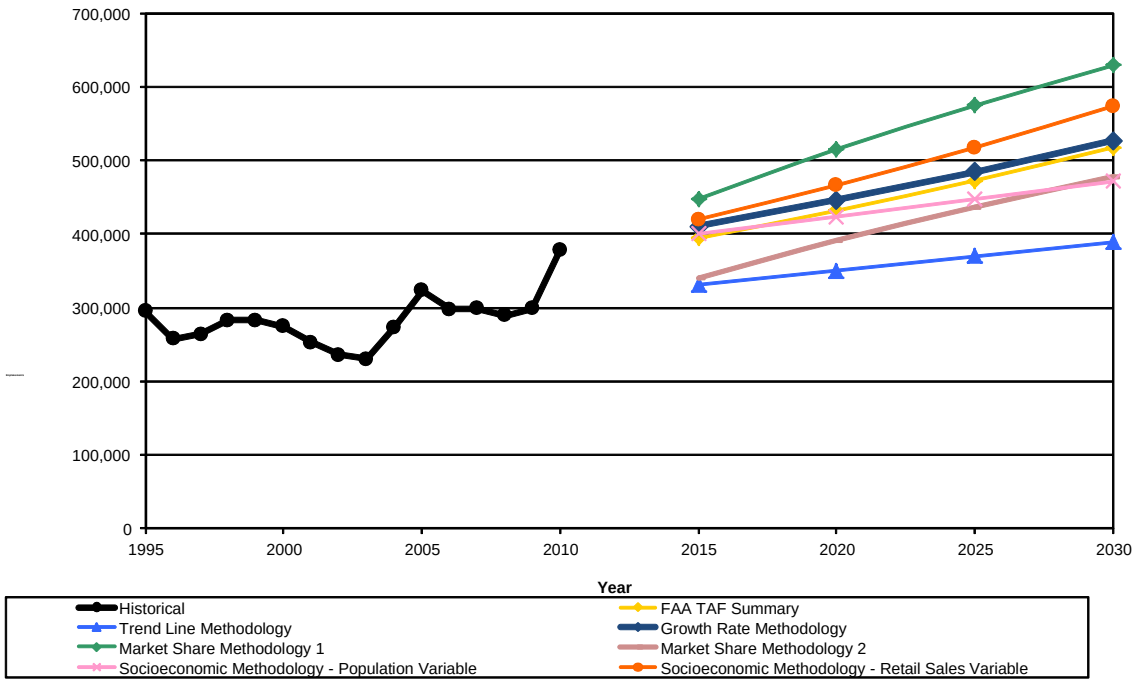
	Socioeconomic Methodology -			Socioeconomic Methodology -		
Year	Enplanements	Regional Population	Enplanements Per Capita	Enplanements	Total Retail Sales (In millions, $2004)	Enplanements per $1mil Sales
Historical:						
1995	294,780	545,658	0.540	294,780	$5,785	50.953
1996	257,215	NA		257,215	NA	
1997	263,767	NA		263,767	NA	
1998	283,146	NA		283,146	NA	
1999	283,209	NA		283,209	NA	
2000	274,281	590,254	0.465	274,281	$7,185	38.175
2001	253,250	594,799	0.426	253,250	$7,165	35.348
2002	236,019	599,088	0.394	236,019	$7,167	32.932
2003	230,178	603,960	0.381	230,178	$7,326	31.421
2004	273,691	609,266	0.449	273,691	$7,587	36.074
2005	323,353	614,343	0.526	323,353	$7,805	41.431
2006	297,792	621,714	0.479	297,792	$7,989	37.273
2007	298,667	629,306	0.475	298,667	$8,065	37.032
2008	289,215	635,990	0.455	289,215	$7,775	37.196
2009	298,865	643,638	0.464	298,865	$7,201	41.500
2010	378,087	651,332	0.580	378,087	$7,565	49.982
		Average (2000-2010)	*0.463*		*Average (2000-2010)*	*38.033*
Projected:						
2015	400,761	690,392	0.580	420,270	$8,409	49.982
2020	424,120	730,633	0.580	466,738	$9,338	49.982
2025	447,873	771,552	0.580	517,937	$10,363	49.982
2030	471,784	812,745	0.580	574,362	$11,491	49.982
CAGR	*1.11%*	*1.11%*		*2.11%*	*2.11%*	

Sources: Historical Enplanements - Airport Records
Historical & Projected Population & Retail Sales - Woods & Poole Economics, Inc.
Projections - Mead & Hunt

Enplanement Forecasts Comparison and Summary – A comparison of projected enplanements using the methodologies described in this section is presented in **Table 3-6**. All of the methodologies project that there will be an increase in passenger demand over the next 30 years. The growth rate methodology lies near the middle of the statistical average of the various forecast methodologies employed and has therefore been selected as the preferred enplanement forecast for the purposes of long-range planning at the Asheville Regional Airport.

Table 3-6: Enplanement Forecasts Summary

Year	Historical	FAA TAF Summary	Trend Line Methodology	Preferred Growth Rate Methodology	Market Share Methodology 1	Market Share Methodology 2	Socioeconomic Methodology - Population Variable	Socioeconomic Methodology - Retail Sales Variable
Historical:								
1995	294,780							
1996	257,215							
1997	263,767							
1998	283,146							
1999	283,209							
2000	274,281							
2001	253,250							
2002	236,019							
2003	230,178							
2004	273,691							
2005	323,353							
2006	297,792							
2007	298,667							
2008	289,215							
2009	298,865							
2010	378,087							
CAGR (1995-2010)	*1.67%*							
Projected:								
2015		394,721	331,514	410,793	447,900	340,458	400,761	420,270
2020		432,090	350,731	446,328	515,597	391,915	424,120	466,738
2025		473,084	369,949	484,937	574,919	437,008	447,873	517,937
2030		518,051	389,167	526,886	629,547	478,531	471,784	574,362
CAGR (2010-2030)		*1.59%*	*0.14%*	*1.67%*	*2.58%*	*1.18%*	*1.11%*	*2.11%*



Sources: Historical Enplanements - Airport Records
Projections - Mead & Hunt, Inc., except FAA TAF Summary which are from the FAA Terminal Area Forecast

3.3 Based Aircraft

The FAA defines a based aircraft at an airport, as an aircraft that is "operational & air worthy" and which is typically based at the airport for a majority of the year. Communities such as Asheville that have a large number of seasonal residents, also have a large number of seasonally-based aircraft. Discussions with the Fixed Base Operator (FBO) at Asheville Regional Airport indicate that the Airport has a year-round based aircraft population of approximately 140 to 145 aircraft, and during the summer its based aircraft population increases to approximately 170 aircraft. The current FAA 5010 Airport Master Record notes an inspection date of July 2011, and notes the following based aircraft: 115 single engine aircraft, 37 multi-engine, 16 jet, and 6 helicopters, for a total of 174 based aircraft. This total from the 5010 form confirms the FBO's description of the airport's current seasonal based aircraft total.

For airport master planning purposes it is the airport's seasonal based aircraft population that has the largest impact on facility and space needs, therefore it is this seasonal total that will be projected and primarily used in this document. The year-round based aircraft total (145 of the 174 total based aircraft) represents approximately 83 percent of the seasonal based aircraft total and will also be noted for reference.

There are several factors that affect the number of based aircraft at an airport. Recently, increasing costs to own and operate aircraft has been a primary factor that has contributed to a slight decline in the overall U.S. general aviation fleet since 2007. The Asheville Regional Airport, however, has experienced an increase in the number of aircraft based at the Airport during this same time period. Several methodologies were evaluated to develop based aircraft projections. The FAA TAF and time series methodologies that include trend line analysis and growth rate analysis are presented in **Table 3-7**.

Table 3-7: Based Aircraft Forecasts – TAF, Trend Line, & Growth Rate Methodologies

	FAA TAF Summary	Trend Line	Growth Rate	
Year	Based Aircraft	Based Aircraft	Based Aircraft	Growth Rate
Historical:				
1995	120	120	120	
1996	128	128	128	6.67%
1997	119	119	119	-7.03%
1998	119	119	119	0.00%
1999	107	107	107	-10.08%
2000	107	107	107	0.00%
2001	107	107	107	0.00%
2002	128	128	128	19.63%
2003	130	130	130	1.56%
2004	128	128	128	-1.54%
2005	128	128	128	0.00%
2006	139	139	139	8.59%
2007	130	130	130	-6.47%
2008	141	141	141	8.46%
2009	160	160	160	13.48%
2010	124	174	174	8.75%
			CAGR (1995-2010)	*2.51%*
Projected:				
2015	135	165	197	*2.51%*
2020	149	180	223	*2.51%*
2025	163	194	252	*2.51%*
2030	178	208	286	*2.51%*
CAGR (2010-2030)	*1.82%*	*0.91%*	*2.51%*	

Sources: Historical Based Aircraft -1995-2009 FAA Terminal Area Forecast; 2010 FAA 5010 Form
Projected Based Aircraft - Mead & Hunt, Inc., except FAA TAF Summary which are from the FAA TAF

It should be noted that the FAA TAF projection was recently revised by the FAA and significantly reduced the number of based aircraft at the airport in 2010 from 160 down to 124. Conversations with the FAA Airport's District Office indicate that the decrease in the FAA's based aircraft data is likely due to the efforts the FAA is undertaking nationwide to try to improve the integrity of its based aircraft counts. The FAA is assigning each aircraft to a particular airport, where it spends the majority of the year; however this method of counting ends up excluding the seasonally based aircraft at AVL. This is primarily the reason for the disparity in the comparison of the FAA TAF based aircraft forecasts to the master plan based aircraft forecasts.

The market share methodology compares local based aircraft at the Airport to the total number of general aviation aircraft in the U.S. as reported by the FAA. As illustrated in **Table 3-8**, the Airport's market share has increased since 1995, and in 2010 the number of based aircraft represented 0.07762 percent of total active general aviation aircraft in the United States. Applying a projected CAGR of 0.88 percent as forecasted for the growth of based aircraft in the U.S., the number of aircraft at the Airport is forecasted to grow from 174 in 2010 to 207 in 2030.

Table 3-8: Based Aircraft Forecast – Market Share Methodology

	Market Share Methodology		
Year	**Based Aircraft**	**Total U.S. Active Aircraft**	**Market Share**
Historical:			
1995	120	188,089	0.06380%
1996	128	191,129	0.06697%
1997	119	192,414	0.06185%
1998	119	204,710	0.05813%
1999	107	219,464	0.04876%
2000	107	217,533	0.04919%
2001	107	211,446	0.05060%
2002	128	211,244	0.06059%
2003	130	209,606	0.06202%
2004	128	219,319	0.05836%
2005	128	224,350	0.05705%
2006	139	221,939	0.06263%
2007	130	231,606	0.05613%
2008	141	228,668	0.06166%
2009	160	223,920	0.07145%
2010	174	224,172	0.07762%
		Average (1995-2010)	*0.06043%*
Projected:			
2015	178	229,140	0.07762%
2020	185	237,795	0.07762%
2025	194	250,560	0.07762%
2030	207	267,055	0.07762%
CAGR (2010-2030)	*0.88%*	*0.88%*	

Sources: Historical Based Aircraft -1995-2009 FAA Terminal Area Forecast; 2010 FAA 5010 Form
Total U.S. Active Aircraft (GA & Air Taxi) - FAA Aerospace Forecasts FY2011-2031
Projected Based Aircraft - Mead & Hunt, Inc.

Socioeconomic (or correlation) forecasting methodologies examine the direct relationship between two or more sets of historical data. Data examined in developing based aircraft forecasts using this methodology included both population and total retail sales. Total retail sales were used as an indicator of economic activity occurring within the community with the assumption being that changes in economic activity will impact the number of based aircraft. Historical and projected socioeconomic statistics for the Airport's general aviation service area were obtained from Woods & Poole Economics, Inc. databases. For this analysis we have used a general aviation service area of Buncombe County and its eight surrounding counties. This general aviation service area is similar to the eleven counties that comprise the Airport's primary service area (see Section 3.1.c), except that Jackson and Mitchell Counties were excluded as they are farthest away and both have a public use airport within them or closer to them than the Asheville Regional Airport. Based upon the observed and projected correlation between historical aviation activity and socioeconomic data, based aircraft forecasts were developed. The forecasts that were prepared utilizing these methodologies are presented in **Table 3-9**.

As illustrated in the table, based aircraft at the Airport are projected to increase from 174 aircraft in 2010 to 217 aircraft in 2030 using the population variable socioeconomic methodology. Utilizing the same methodology, but applying a multiplier of 0.02482 per $1 million of sales for each based aircraft to the projected level of retail sales for the service area, based aircraft at the Airport are projected to increase from 174 aircraft in 2010 to 265 aircraft in 2030.

Table 3-9: Based Aircraft Forecasts – Socioeconomic Methodologies

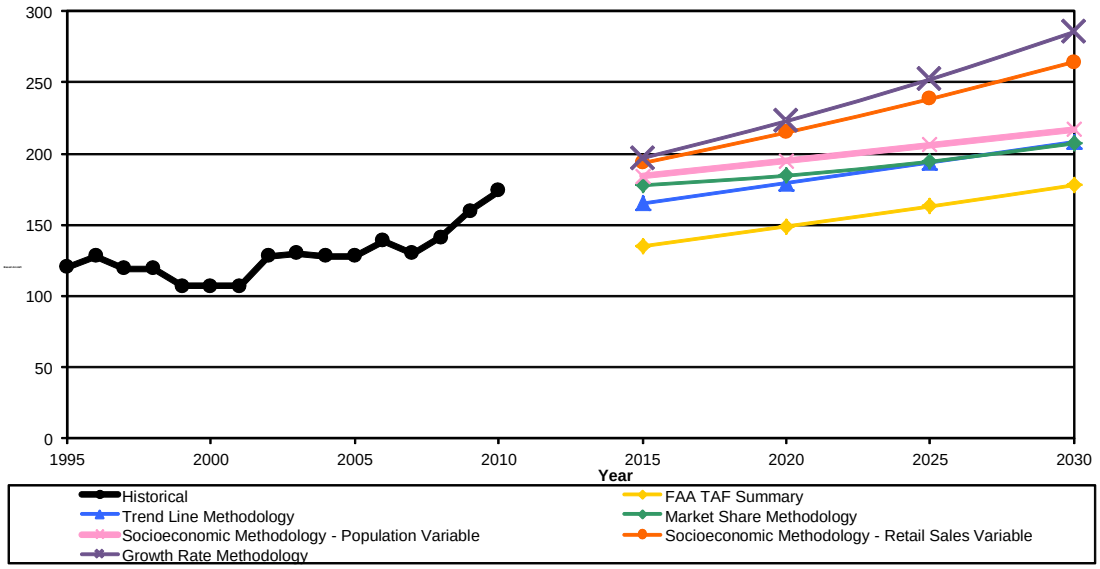
	Socioeconomic Methodology - Population Variable			Socioeconomic Methodology - Retail Sales Variable		
Year	Based Aircraft	GA Service Area Population	Based Aircraft Per Capita	Based Aircraft	GA Service Area Retail Sales (mil, $2004)	Based Aircraft Per $1mil Sales
Historical:						
1995	120	500,435	0.00024	120	$5,428	0.02211
1996	128	NA		128	NA	
1997	119	NA		119	NA	
1998	119	NA		119	NA	
1999	107	NA		107	NA	
2000	107	541,254	0.00020	107	$6,677	0.01602
2001	107	545,326	0.00020	107	$6,644	0.01610
2002	128	549,183	0.00023	128	$6,632	0.01930
2003	130	553,291	0.00023	130	$6,776	0.01919
2004	128	557,940	0.00023	128	$7,016	0.01824
2005	128	562,902	0.00023	128	$7,222	0.01772
2006	139	569,778	0.00024	139	$7,396	0.01879
2007	130	577,264	0.00023	130	$7,473	0.01740
2008	141	583,467	0.00024	141	$7,206	0.01957
2009	160	590,459	0.00027	160	$6,674	0.02397
2010	174	597,493	0.00029	174	$7,011	0.02482
Projected:						
2015	184	633,206	0.00029	193	$7,795	0.02482
2020	195	670,002	0.00029	215	$8,658	0.02482
2025	206	707,420	0.00029	238	$9,610	0.02482
2030	217	745,090	0.00029	265	$10,658	0.02482
CAGR (2010-2030)	*1.11%*	*1.11%*		*2.12%*	*2.12%*	

Sources: Historical Based Aircraft -1995-2009 FAA Terminal Area Forecast; 2010 FAA 5010 Form
Historical & Projected Population & Per Capita Income - Woods & Poole Economics, Inc.
Projected Based Aircraft - Mead & Hunt, Inc.

A comparison of projected based aircraft at the Airport using the methodologies described in this section is presented in **Table 3-10**. Each methodology employed projects an increase in based aircraft over the next 20 years. For the purposes of this Master Plan study, the socioeconomic methodology based upon the correlation between based aircraft and population, lies near the middle of the various methodologies and serves as the preferred projection of based aircraft for the next 20 years. This methodology projects based aircraft to increase from 174 in 2010 to 217 in 2030, a compound annual growth rate of 1.11 percent.

Table 3-10: Based Aircraft Forecasts Summary

Year	Historical	FAA TAF Summary	Trend Line Methodology	Growth Rate Methodology	Market Share Methodology	*Preferred* Socioeconomic Methodology - Population Variable	Socioeconomic Methodology - Retail Sales Variable
Historical:							
1995	120						
1996	128						
1997	119						
1998	119						
1999	107						
2000	107						
2001	107						
2002	128						
2003	130						
2004	128						
2005	128						
2006	139						
2007	130						
2008	141						
2009	160						
2010	174						
CAGR (1995-2010)	*2.51%*						
Projected:							
2015		135	165	197	178	184	193
2020		149	180	223	185	195	215
2025		163	194	252	194	206	238
2030		178	208	286	207	217	265
CAGR (2010-2030)		*0.11%*	*0.91%*	*2.51%*	*0.88%*	*1.11%*	*2.12%*



Sources: Historical Based Aircraft -1995-2009 FAA Terminal Area Forecast; 2010 FAA 5010 Form
Projections - Mead & Hunt, Inc., except FAA TAF Summary which are from the FAA Terminal Area Forecast

The socioeconomic methodology serves as the preferred projection of based aircraft and projects based aircraft to increase from 174 in 2010 to 217 in 2030. This total represents the seasonally based aircraft during the summer months, as noted previously the year-round based aircraft population is approximately 83 percent of the seasonal based aircraft total. Therefore the year-round based aircraft projection is 153 in 2015, 162 in 2020, 171 in 2025, and 180 in 2030, and the seasonal based aircraft projection for summer months is 184 in 2015, 195 in 2020, 206 in 2025, and 217 in 2030.

3.4 Based Aircraft Fleet Mix

Historical based aircraft by type and projected fleet mix at the Asheville Regional Airport is presented in **Table 3-11**. In 2010, 66 percent of the local fleet was comprised of single engine aircraft, 21 percent multi-engine aircraft, 9 percent jet aircraft, and 3 percent helicopters. The FAA Aerospace Forecast FY 2011-2031 projects that turboprop and jet aircraft will see a higher growth rate than other types of aircraft through 2030. This trend is also anticipated to occur locally as the number of multi-engine and jet aircraft based at the Airport are expected to increase at a higher growth rate than other aircraft types.

Table 3-11: Based Aircraft Fleet Mix Forecast

	Single Engine		Multi-Engine		Jet		Helicopter		Other		
Year	#	%	#	%	#	%	#	%	#	%	Total
Historical:											
1995	89	74%	26	22%	3	3%	2	2%	0	0%	120
1996	99	77%	24	19%	3	2%	2	2%	0	0%	128
1997	96	81%	19	16%	3	3%	1	1%	0	0%	119
1998	96	81%	19	16%	3	3%	1	1%	0	0%	119
1999	82	77%	17	16%	5	5%	3	3%	0	0%	107
2000	82	77%	17	16%	5	5%	3	3%	0	0%	107
2001	82	77%	17	16%	5	5%	3	3%	0	0%	107
2002	93	73%	23	18%	9	7%	3	2%	0	0%	128
2003	95	73%	23	18%	9	7%	3	2%	0	0%	130
2004	93	73%	23	18%	9	7%	3	2%	0	0%	128
2005	93	73%	23	18%	9	7%	3	2%	0	0%	128
2006	105	76%	18	13%	12	9%	4	3%	0	0%	139
2007	74	57%	40	31%	8	6%	8	6%	0	0%	130
2008	87	62%	27	19%	18	13%	9	6%	0	0%	141
2009	130	81%	10	6%	17	11%	3	2%	0	0%	160
2010	115	66%	37	21%	16	9%	6	3%	0	0%	174
Projected:											
2015	122	66%	39	21%	20	11%	4	2%	0	0%	184
2020	129	66%	41	21%	21	11%	4	2%	0	0%	195
2025	134	65%	43	21%	25	12%	4	2%	0	0%	206
2030	139	64%	48	22%	26	12%	4	2%	0	0%	217
CAGR (2010-2030)	*0.95%*		*1.28%*		*2.46%*		*0.00%*		*0.00%*		*1.11%*

Notes: Numbers may not add due to rounding
Sources: Historical Based Aircraft -1995-2009 FAA Terminal Area Forecast; 2010 FAA 5010 Form
Projections - Mead & Hunt, Inc.

3.5 Commercial Aircraft Operations

Commercial aircraft operations are either scheduled or unscheduled flights typically operated by a certificated air carrier, or are conducted by a charter or air taxi operator. This section summarizes the forecasts that were prepared for commercial aircraft operations.

3.5.a Scheduled Commercial Passenger Operations Forecasts

National trends in aviation demand have been volatile in recent years. The terrorist attacks that occurred on September 11, 2001 had a significant impact on collective national travel behavior and the economic recession that began in 2008 has also impacted travel behavior and the commercial airlines economics. As a result, fewer passengers were enplaned at many airports throughout the U.S. With recent increases in aircraft operating costs, airlines have been forced to maximize fleet efficiency in order to remain profitable.

In many markets, air carriers are reducing or retiring older turboprops and less fuel efficient small regional jet aircraft (typically 50 seats and smaller), and if the market can profitably sustain it, replacing them with larger regional jets (typically 70 to 90 seats) and narrow-body jets that have more seats and lower operational costs per passenger. In many markets, the use of larger aircraft is reducing the frequency of particular routes. Due to increasing fuel and operational costs, air carriers must maintain higher passenger load factors to remain profitable. **Table 3-12** presents the historical and projected seats per departure and load factor at the Asheville Regional Airport and for the U.S. regional mainline carrier fleets.

Table 3-12: Scheduled Commercial Average Seats/Departure and Load Factor

	Average Seats/Dep			Load Factor % (Domestic)		
Year	AVL	US Regional Carrier Fleet	US Mainline Carrier Fleet	AVL	US Regional Carrier Fleet	US Mainline Carrier Fleet
Historical:						
2007	48.7	49.9	150.6	75.4%	75.5%	80.4%
2008	49.7	52.9	150.3	71.6%	73.7%	80.2%
2009	50.4	55.2	151.2	80.5%	74.3%	81.4%
2010	52.4	56.2	151.9	77.6%	76.2%	82.7%
CAGR (2007-2010)	*2.47%*	*4.04%*	*0.29%*	*0.97%*	*0.31%*	*0.94%*
Projected:						
2015	56.5	58.3	152.3	78.0%	76.8%	84.2%
2020	59.0	60.6	152.7	78.0%	77.0%	84.9%
2025	63.5	63.0	153.0	78.0%	77.2%	85.3%
2030	66.5	65.5	153.4	78.0%	77.3%	85.5%
CAGR (2010-2030)	*1.20%*	*0.77%*	*0.05%*	*0.02%*	*0.07%*	*0.17%*

Sources: Hist Average Seat Data - Airline Schedules, Diio Mio
Hist Load Factor Calculated from Historial Passengers, Historcial Departures, and Historical Avg Seats/Dep
Hist and Projected US Carrier Fleet Avg/Seats & Load Factor - FAA Aerospace Forecasts FY2011-2031
Projections - Mead & Hunt, Inc.

At the Asheville Regional Airport, the average number of seats per departure and aircraft load factor is projected to increase, similar to the FAA's projected increases in these metrics within U.S. regional and mainline carrier fleets. At the Airport, the average number of seats per departure is anticipated to increase from 52.4 in 2010, to 56.5 in 2015, 59.0 in 2020, 63.5 in 2025, and 66.5 in 2030. Passenger load factor is also anticipated to increase throughout the projection period, from 77.6percent in 2010 to 78.0 percent through the forecast period.

In calculating future scheduled commercial operations, the average number of seats per departure at the Airport is multiplied by the passenger load factor. Projected passenger enplanements are then divided by

this figure to obtain scheduled commercial passenger departures. It is assumed that the number of annual commercial departures and arrivals will be the same; departures are multiplied by two to calculate projected scheduled commercial operations (**Table 3-13**). Through the next 20 years, 18,643scheduled commercial operations are projected in 2015, 19,397 in 2020, 19,582in 2025, and 20,316 in 2030, resulting in a CAGR of 0.45 percent.

Table 3-13: Scheduled Commercial Operations Forecasts

Year	Enplanements	Scheduled Passenger Dep	Average Seats/Dep	Load Factor	Scheduled Passenger Ops
Historical:					
2007	298,667	8,129	48.7	75.4%	16,258
2008	289,215	8,121	49.7	71.6%	16,242
2009	298,865	7,366	50.4	80.5%	14,732
2010	378,087	9,293	52.4	77.6%	18,586
2011	NA	9,368	53.7		18,736
Projected:					
2015	410,793	9,321	56.5	78.0%	18,643
2020	446,328	9,699	59.0	78.0%	19,397
2025	484,937	9,791	63.5	78.0%	19,582
2030	526,886	10,158	66.5	78.0%	20,316
CAGR (2010-2030)	*1.67%*	*0.45%*			*0.45%*

Note: 2011 data is estimated
Sources: Hist Enplanements - Airport Records
Hist Scheduled Air Carrier Dep's and Avg Seat Data - Airline Schedules, Diio Mi (Oct 2011)
Projections - Mead & Hunt, Inc.

3.5.b Air Carrier Fleet Mix

The FAA Aerospace Forecasts FY 2011-2031 notes the following regarding the U.S. commercial aircraft fleet:

- The number of commercial aircraft in the U.S. is forecast to grow from 7,096 in 2010 to 10,523 in 2031, an average annual growth rate of 1.9 percent.
- The mainline carrier fleet is projected to shrink initially in 2011 as carriers remove older, less fuel efficient narrow-body aircraft, and then increase through 2031. The narrow-body fleet is anticipated to grow by approximately 69 aircraft annually, particularly as carriers take deliveries of Embraer 190s, and the coming single aisle replacements from Airbus and Boeing (A320-NEO, B737-MAX). The wide-body fleet is anticipated to grow by 34 aircraft per year, particularly as the Boeing 787 and Airbus A350's enter the fleet.

- The regional carrier passenger fleet is forecast to increase by 39 aircraft per year as increases in larger regional jets offset reductions in 50 seat and smaller regional jets. All growth in regional jets over the forecast period is projected to occur in the larger 70- and 90-seat aircraft. The

turboprop/piston fleet is expected to shrink from 806 units in 2010 to 620 in 2031, reflecting a decline in the make-up of the regional carrier passenger fleet from 31.3 percent turboprop/piston in 2010 to only 18.3 percent in 2010.

Bombardier Commercial Aircraft prepares market forecasts regarding the world commercial aircraft market. The Bombardier Commercial Market Forecast 2011-2030, projects a significant decline in the less than 60 seat fleet and strong growth in the 60 to 99 seat fleet along with strong growth in the 100 to 149 seat aircraft fleets (see **Table 3-14** below).

Table 3-14: World Fleet Growth Forecast – 2010 to 2030

Segment	Fleet 2010	Deliveries	Retirement	Fleet 2030
20- to 59-seat	3,600	300	2,500	1,400
60- to 99-seat	2,200	5,800	1,200	6,800
100- to 149-seat	5,200	7,000	3,000	9,200
Total Aircraft	11,000	13,100	6,700	17,400

Source: Bombardier Commercial Market Forecast 2011-2030

As previously mentioned, in many US markets, air carriers are reducing or retiring older and less fuel efficient aircraft, particularly 50 seat and smaller regional jets, and replacing them with larger regional (70 to 90 seats) and narrow-bodied jets that have more seats and lower operational costs per passenger. This trend is evident at the Asheville Regional Airport as the average number of seats per commercial departure has increased from 48.7 in 2007 to 53.7 in 2011.

Table 3-15 presents the historical and projected fleet of scheduled commercial airline operators at the Airport. Commercial aircraft equipped with 40 or fewer seats have proportionally seen annual operations decline from 22.5 percent in 2007 to 1.4 percent in 2011. Operations increased for aircraft equipped with 40-60 seats from 66.7 percent in 2007 to 95.7 percent in 2009. A decline experienced during the following two years lowered the percentage of operations by this group to 88.3 percent in 2011. It is anticipated that smaller passenger aircraft use at the Airport will continue to decline throughout the forecast period as 37- to 50-seat turboprops are retired and 50-seat regional jets are replaced by more efficient larger regional jet aircraft and narrow-body aircraft with up to 150-seats. Additionally service by low-cost carriers, utilizing narrow-body aircraft, a few times per week to leisure destinations is anticipated to continue through the projection period.

Table 3-15: Scheduled Commercial Operations Fleet Mix Forecast

Seat Range	Typical Aircraft	Historical Departures 2007	2008	2009	2010	2011	Projected 2015	2020	2025	2030
Less than 40	Saab340, 328Jet, ERJ135	1,826	1,184	224	117	131	0	0	0	0
	Beech1900, EMB120, DHC-8	*22.5%*	*14.6%*	*3.0%*	*1.3%*	*1.4%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
40-60	CRJ200, ERJ140, ERJ145,	5,419	6,195	7,051	8,522	8,271	7,942	7,497	6,472	6,054
	DHC-8-300	*66.7%*	*76.3%*	*95.7%*	*91.7%*	*88.3%*	*85.2%*	*77.3%*	*66.1%*	*59.6%*
61-99	AvroRJ, CRJ700, CRJ900,	884	742	3	398	627	811	1,513	2,360	2,915
	EMB170, EMB175	*10.9%*	*9.1%*	*0.0%*	*4.3%*	*6.7%*	*8.7%*	*15.6%*	*24.1%*	*28.7%*
100-130	B717, DC9, EMB190,	0	0	88	248	272	466	533	656	772
	EMB195, A319	*0.0%*	*0.0%*	*1.2%*	*2.7%*	*2.9%*	*5.0%*	*5.5%*	*6.7%*	*7.6%*
131-150	A320, MD81/82/83/87/88,	0	0	0	8	67	103	155	206	284
	B737-4, B737-5	*0.0%*	*0.0%*	*0.0%*	*0.1%*	*0.7%*	*1.1%*	*1.6%*	*2.1%*	*2.8%*
151 or more	MD90, B737-8, B737-9, B757	0	0	0	0	0	0	0	98	152
		0.0%	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*1.0%*	*1.5%*
Total Scheduled Passenger Aircraft Departures		8,129	8,121	7,366	9,293	9,368	9,321	9,699	9,791	10,158
Average Seats Per Departure		48.7	49.7	50.4	52.4	53.7	56.5	59.0	63.5	66.5
Total Scheduled Seats		396,076	403,650	371,344	487,153	503,240	526,658	572,216	621,714	675,495

Sources: Historical Scheduled Departures and Average Seat Data - Airline Schedules, Diio Mi
Projections - Mead & Hunt, Inc.

3.5.c Unscheduled Commercial Passenger Operations Forecasts

Unscheduled commercial flights are typically categorized as charters or air taxis. **Table 3-16** summarizes the number of scheduled commercial operations in comparison to the number of operations conducted by commercial air carrier aircraft over 60 seats and air taxi aircraft 60 seats and under reported by the Airport's Airport Traffic Control Tower (ATCT). The difference between the two totals is the number of unscheduled commercial operations.

Table 3-16: Air Carrier and Air Taxi Operations Forecasts

Year	Total: Air Carrier	Commuter / Air Taxi	Total Commercial	Scheduled Operations: Scheduled Commercial Departures	Scheduled Commercial Operations	*Percent Scheduled*	Unscheduled / Others[1]: Operations	*Percent Unscheduled*
Historical:	***Historical ATCT Records***							
2007	1,807	19,255	21,062	8,129	16,258	*77.2%*	4,804	*22.8%*
2008	1,327	19,049	20,376	8,121	16,242	*79.7%*	4,134	*20.3%*
2009	363	17,234	17,597	7,366	14,732	*83.7%*	2,865	*16.3%*
2010	1,160	19,605	20,765	9,293	18,586	*89.5%*	2,179	*10.5%*
			FAA Projected Growth Rate in Total Active General Aviation and Air Taxi Fleet[2]				*0.9%*	
Projected:								
2015	1,380	19,542	20,922	9,321	18,643	*89.1%*	2,279	*10.9%*
2020	2,202	19,579	21,780	9,699	19,397	*89.1%*	2,383	*10.9%*
2025	3,319	18,755	22,074	9,791	19,582	*88.7%*	2,492	*11.3%*
2030	4,124	18,798	22,922	10,158	20,316	*88.6%*	2,607	*11.4%*
CAGR (2010-2030)	*6.55%*	*-0.21%*	*0.50%*	*0.45%*	*0.45%*		*0.90%*	

[1]Others is the difference between the tower reported Commercial Ops and the Scheduled Ops reported by Diio Mi. Others represents the Air Taxi/Fractional ownership aircraft

[2]FAA Aerospace Forecasts 2011-2031

Sources: Historical ATCT Records - FAA Air Traffic Activity Data System (ATADS)
Historical Scheduled Commercial Operations: Airline Schedules obtained from Diio Mi
Projections - Mead & Hunt, Inc.

The overall proportion of unscheduled operations at the Asheville Regional Airport has declined from 22.8 percent in 2007 to 10.5 percent in 2010. The demand for unscheduled flights can hinge on several

factors and can be difficult to forecast. Between 2007 and 2010, the number of annual unscheduled operations declined from 4,804 to 2,179. According to the FAA Aerospace Forecasts FY 2010-2030, the projected annual growth rate of the national general aviation and air taxi fleet is expected to be 0.9 percent. It is assumed that unscheduled operations at the Asheville Regional Airport will reflect this national trend; therefore, applying this projected CAGR to the level of operations conducted in 2010, an increase to 2,607 operations annually can be anticipated by 2030.

3.6 General Aviation Operations

General aviation operations are those aircraft operations that are not categorized as commercial or military. Since reaching a peak in 1998 of 66,187 operations, general aviation operations at the Airport have declined to a 15-year low of 41,752 operations in 2010 despite higher numbers of general aviation aircraft based at the Airport. Overall, aircraft operations across the nation have significantly decreased, with the greatest loss of activity experienced in recreational flying due to higher fuel and operating costs. Several methodologies were evaluated to project future general aviation operations at the Airport. The FAA TAF, trend line analysis, and growth rate methodology projections of general aviation operations at the Airport are presented in **Table 3-17**.

Table 3-17: GA Operations Forecasts – TAF, Trend Line, & Growth Rate Methodologies

		FAA TAF Summary	Trend Line	Growth Rate	
Year	Historical	Total GA Ops	Total GA Ops	Total GA Ops	Growth Rate
Historical:					
1995	51,777	53,255	51,777	51,777	
1996	49,180	47,529	49,180	49,180	-5.02%
1997	58,366	57,217	58,366	58,366	18.68%
1998	66,187	63,657	66,187	66,187	13.40%
1999	64,573	66,962	64,573	64,573	-2.44%
2000	56,557	56,780	56,557	56,557	-12.41%
2001	53,744	54,049	53,744	53,744	-4.97%
2002	50,762	54,080	50,762	50,762	-5.55%
2003	45,766	44,418	45,766	45,766	-9.84%
2004	44,203	45,455	44,203	44,203	-3.42%
2005	44,663	44,771	44,663	44,663	1.04%
2006	49,194	47,506	49,194	49,194	10.14%
2007	56,841	55,277	56,841	56,841	15.54%
2008	52,912	55,812	52,912	52,912	-6.91%
2009	45,125	44,835	45,125	45,125	-14.72%
2010	41,752	43,546	41,752	41,752	-7.47%
CAGR (1995-2010)	*-1.42%*			*CAGR (1995-2010)*	*-1.42%*
Projected:					
2015		44,789	41,903	38,862	*-1.42%*
2020		45,830	37,874	36,172	*-1.42%*
2025		46,900	33,845	33,668	*-1.42%*
2030		47,996	29,816	31,338	*-1.42%*
	CAGR (2010-2030)	*0.49%*	*-1.67%*	*-1.42%*	

Sources: Historical Operations - Air Traffic Activity Data System (ATADS)
Projections - Mead & Hunt, Inc., except FAA TAF Summary which are from the FAA Terminal Area Forecast

Table 3-18 presents the general aviation operations forecasts that were prepared using the operations per based aircraft and the market share methodologies. Though the number of based aircraft at the Airport between 1995 and 2010 has increased, the number of general aviation operations during the same time period has decreased. In 2010, the number of general aviation operations per based aircraft was 240. Assuming this level of operations per based aircraft remains constant throughout the forecasting period, general aviation operations will increase from 41,752 in 2010 to 52,066 in 2030.

Between 1995 and 2010, Asheville Regional Airport's market share of total U.S. general aviation operations has ranged from a low 0.1264 percent in 2004 to a high of 0.1740 percent in 1998. Using the FAA's forecasts of total U.S. general aviation operations, and assuming the 2010 market share of 0.1571 percent remains constant throughout the forecasting period, the market share methodology projects general aviation operations will increase from 41,752 in 2010 to 55,097 in 2030.

Table 3-18: GA Operations Forecasts – Operations per Based Aircraft & Market Share

	Operations Per Based Aircraft Methodology			Market Share Methodology		
Year	Based Aircraft	Operations per Based Aircraft	Total Operations	Total Operations	Total U.S. GA Operations	Market Share
Historical:						
1995	120	431	51,777	51,777	35,926,600	0.1441%
1996	128	384	49,180	49,180	35,298,300	0.1393%
1997	119	490	58,366	58,366	36,833,300	0.1585%
1998	119	556	66,187	66,187	38,046,600	0.1740%
1999	107	603	64,573	64,573	39,999,600	0.1614%
2000	107	529	56,557	56,557	39,878,500	0.1418%
2001	107	502	53,744	53,744	37,626,472	0.1428%
2002	128	397	50,762	50,762	37,652,701	0.1348%
2003	130	352	45,766	45,766	35,524,020	0.1288%
2004	128	345	44,203	44,203	34,967,730	0.1264%
2005	128	349	44,663	44,663	34,146,832	0.1308%
2006	139	354	49,194	49,194	33,072,516	0.1487%
2007	130	437	56,841	56,841	33,131,959	0.1716%
2008	141	375	52,912	52,912	31,573,810	0.1676%
2009	160	282	45,125	45,125	27,999,595	0.1612%
2010	174	240	41,752	41,752	26,571,397	0.1571%
	Avg (2000-2010)	*378*			*Average (1995-2010)*	*0.1493%*
Projected:						
2015	184	240	44,248	45,306	28,833,363	0.1571%
2020	195	240	46,819	48,285	30,728,860	0.1571%
2025	206	240	49,434	51,547	32,804,953	0.1571%
2030	217	240	52,066	55,097	35,064,533	0.1571%
	1.11%		*1.11%*	*1.40%*	*1.40%*	

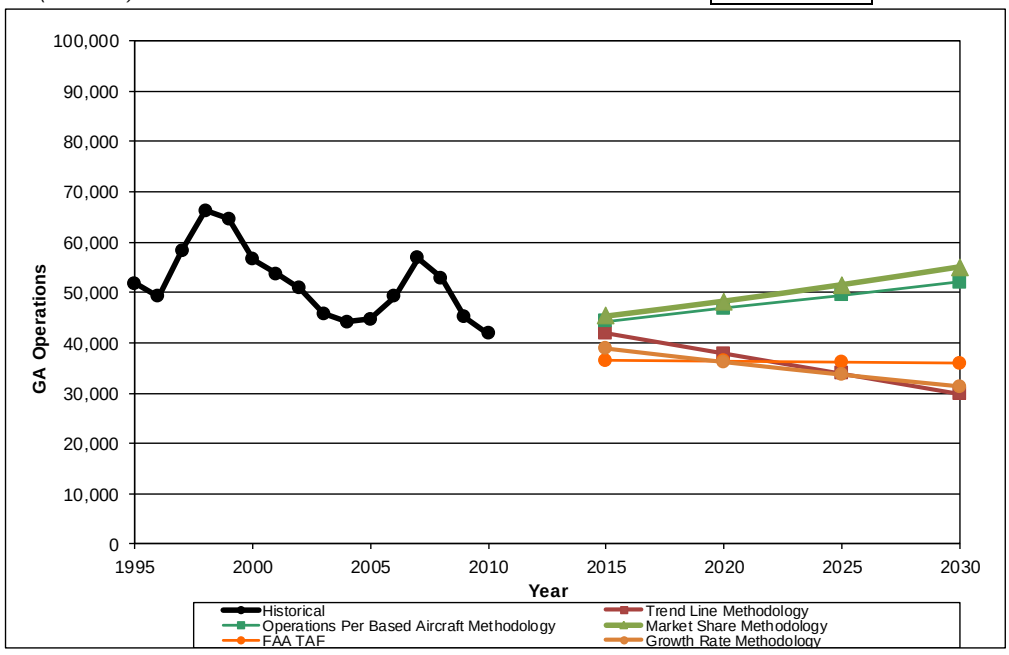
Sources: Historical Operations - Air Traffic Activity Data System (ATADS)
Total U.S. GA Operations - FAA Aerospace Forecasts FY 2011-2031
Projections - Mead & Hunt, Inc.,

General aviation activity can be affected by many variables including the costs to own and operate an aircraft, available hangar space for lease, and the status of local, state, national and world economies. A comparison of projected general aviation operations using the methodologies described in this section is presented in **Table 3-19**.

The number of general aviation aircraft operations conducted at both the Asheville Regional Airport and throughout the U.S. has declined in recent years; however, long term growth is projected by the FAA through 2030. It is anticipated that the Airport's market share of total general aviation operations conducted in the U.S. will remain relatively consistent with the 1.4 percent CAGR projected by the market share methodology; therefore, this is the preferred forecasting approach.

Table 3-19: GA Operations Forecasts Summary

Year	Historical	Trend Line Methodology	Growth Rate Methodology	Operations Per Based Aircraft Methodology	Market Share Methodology	FAA TAF
Historical:						
1995	51,777					
1996	49,180					
1997	58,366					
1998	66,187					
1999	64,573					
2000	56,557					
2001	53,744					
2002	50,762					
2003	45,766					
2004	44,203					
2005	44,663					
2006	49,194					
2007	56,841					
2008	52,912					
2009	45,125					
2010	41,752					
CAGR (1995-2010)	*-1.42%*					
Projected:						
2015		41,903	38,862	44,248	45,306	36,524
2020		37,874	36,172	46,819	48,285	36,339
2025		33,845	33,668	49,434	51,547	36,157
2030		29,816	31,338	52,066	55,097	35,977
CAGR (2010-2030)		*-1.67%*	*-1.42%*	*1.11%*	*1.40%*	*-0.74%*



Notes: CAGR = Compounded annual growth rate.

Sources: Historical Operations - Air Traffic Activity Data System (ATADS)
Projections - Mead & Hunt, Inc., except FAA TAF Summary which are from the FAA Terminal Area Forecast

As a part of the projections developed for general aviation operations, a breakdown of the operations that can be anticipated by local and itinerant aircraft movements was also prepared. As defined by the FAA Air Traffic Activity Data System, local operations are those operations performed by aircraft that remain in the local traffic pattern, execute simulated instrument approaches or low passes at an airport, and operate to or from an airport and have a designated practice area within a 20−mile radius of the tower. Itinerant operations are operations performed by an aircraft, either IFR, SVFR (special VFR), or VFR that lands at an airport arriving from outside the airport area or departs an airport and leaves the airport area.

Historically, itinerant general aviation operations have comprised the majority of total general aviation operations conducted at the Asheville Regional Airport. Between 1995 and 2010, itinerant general aviation operations have averaged approximately 66 percent of the total general aviation operations, while in 2010 the percentage exceeded the historical average at 69 percent. It is anticipated that the split in local/itinerant operations experienced in 2010 will remain constant throughout the forecasting period. A summary of the projected local and itinerant general aviation operations is presented in **Table 3-20**.

Table 3-20: Local/Itinerant General Aviation Operations Forecast

	Total GA	Itinerant GA		Local GA	
Year	Operations	Operations	Percent	Operations	Percent
Historical:					
1995	51,777	35,583	69%	16,194	31%
1996	49,180	33,142	67%	16,038	33%
1997	58,366	36,397	62%	21,969	38%
1998	66,187	40,214	61%	25,973	39%
1999	64,573	40,887	63%	23,686	37%
2000	56,557	37,081	66%	19,476	34%
2001	53,744	36,392	68%	17,352	32%
2002	50,762	33,880	67%	16,882	33%
2003	45,766	30,753	67%	15,013	33%
2004	44,203	30,065	68%	14,138	32%
2005	44,663	31,482	70%	13,181	30%
2006	49,194	34,650	70%	14,544	30%
2007	56,841	38,711	68%	18,130	32%
2008	52,912	33,096	63%	19,816	37%
2009	45,125	28,175	62%	16,950	38%
2010	41,752	28,843	69%	12,909	31%
		Avg (1995-2010)	*66%*	*Avg (1995-2010)*	*34%*
Projected:					
2015	45,306	31,298	69%	14,008	31%
2020	48,285	33,356	69%	14,929	31%
2025	51,547	35,609	69%	15,937	31%
2030	55,097	38,062	69%	17,035	31%
CAGR (2010-2030)	*1.40%*	*1.40%*		*1.40%*	

Notes: CAGR = Compounded Annual Growth Rate.
Sources: Historical Operations - Air Traffic Activity Data System (ATADS)
Projections - Mead & Hunt, Inc.

3.7 Military Operations

Historically, military operations have comprised less than six percent of the total aircraft operations at the Asheville Regional Airport. Between 2000 and 2010, the number of annual military operations averaged 4,028. Military operations are driven more by national security policy decisions than by economic factors, therefore it is logical to project military operations will remain consistent with their 2000-2010 historical average. **Table 3-21** presents the military operations projections.

Table 3-21: Military Operations Forecast

	Itinerant		Local		
Year	**Operations**	**%**	**Operations**	**%**	**Total**
Historical:					
2000	3,119	51%	2,955	49%	6,074
2001	2,471	51%	2,332	49%	4,803
2002	1,904	61%	1,202	39%	3,106
2003	1,788	60%	1,201	40%	2,989
2004	2,147	53%	1,909	47%	4,056
2005	2,244	67%	1,124	33%	3,368
2006	2,361	58%	1,685	42%	4,046
2007	2,383	63%	1,388	37%	3,771
2008	2,389	67%	1,163	33%	3,552
2009	2,459	66%	1,256	34%	3,715
2010	3,271	68%	1,552	32%	4,823
Avg (2000-2010)	*2,412*	*61%*	*1,615*	*39%*	*4,028*
Projected:					
2015	2,440	61%	1,588	39%	4,028
2020	2,440	61%	1,588	39%	4,028
2025	2,440	61%	1,588	39%	4,028
2030	2,440	61%	1,588	39%	4,028
				CAGR 2010-2030	*-0.90%*

Sources: Historical Military Operations - FAA Air Traffic Activity Data System (ATADS)
Projections - Mead & Hunt, Inc.

Table 3-22 presents the fleet mix break down by physical aircraft class and representative equipment types (in declining prevalence) for the projected years. The current military fleet mix was obtained from the FAA's Enhanced Traffic Management System Counts (ETMSC), which utilizes IFR flight plan data and radar traffic records to estimate operational counts. As noted above, military operations are driven more by national security policy decisions than by economic factors, therefore it is assumed that the projected military operational fleet mix will remain consistent with its 2010 composition.

Table 3-22: Military Operations Fleet Mix

Physical Class	Equipment Type	Current Military Fleet Mix: 2010 IFR Departures	Current Military Fleet Mix: Percent of Military Activity	Projected Annual Operations (2012-2030)
Jet	HAWK - BAe Systems Hawk	36	4.9%	198
Jet	C560 - Cessna Citation V/Ultra/Encore	26	3.5%	143
Jet	BE40 - Raytheon/Beech Beechjet 400/T-1	15	2.0%	82
Jet	GLF5 - Gulfstream V/G500	13	1.8%	71
Jet	C17 - Boeing Globemaster 3	9	1.2%	49
Jet	GLF3 - Gulfstream III/G300	8	1.1%	44
Jet	*20 Others (All 1.0% or less of activity; Types include Falcon 20, T38, E6, GIV, F18, F16, B757, others)*	73	9.9%	401
	Subtotal Jets	180	24.5%	988
Turbine	P3 - Lockheed P-3C Orion	128	17.4%	702
Turbine	TEX2 - Raytheon Texan 2	104	14.2%	571
Turbine	BE20 - Beech 200 Super King	61	8.3%	335
Turbine	C130 - Lockheed 130 Hercules	34	4.6%	187
Turbine	*11 Others (All 2.4% or less of activity; Types include Pilatus PC-12, T34, Merlin, C-130, King Air 350, others)*	51	6.9%	280
	Subtotal Turbine	378	51.5%	2,074
Piston	C172 - Cessna Skyhawk 172/Cutlass	38	5.2%	209
Piston	C182 - Cessna Skylane 182	34	4.6%	187
Piston	T6 - North American T-6 Texan	8	1.1%	44
Piston	T34 - Beech T 34	6	0.8%	33
Piston	*6 Others (All 0.4% or less of activity; Types include Cessna 206, Beech 58, others)*	8	1.1%	44
	Subtotal Pistons	94	12.8%	516
Copter	TEX2 - Raytheon Texan 2	21	2.9%	115
Copter	H60 - Sikorsky SH-60 Seahawk	16	2.2%	88
Copter	B06 - Agusta AB-206 LongRanger	10	1.4%	55
Copter	*21 Others (All 0.3% or less of activity)*	35	4.8%	192
	Subtotal Copters	82	11.2%	450
	Grand Total	734	100.0%	4,028

Source: 2010 IFR Military Departures – FAA Enhanced Traffic Management System Counts (ETMSC)
Mead & Hunt, Inc.

3.8 Instrument Operations

Instrument operations are those conducted by properly equipped aircraft that can utilize radio and global positioning system (GPS) signals emitted by navigational equipment for a pilot to conduct a landing with limited visual cues. Most instrument operations are conducted by commercial aircraft, general aviation aircraft filing instrument flight plans, and essentially all aircraft operations conducted in IFR weather. In 2010, 58 percent of all aircraft operations conducted at the Asheville Regional Airport were instrument operations (**Table 3-23**). Assuming this percentage remains constant throughout the forecasting period, instrument operations are projected to increase from 38,969 in 2010 to 47,480 in 2030.

Table 3-23: Instrument Operations Forecast

Year	Total Operations	Instrument Operations		Visual Operations	
		Operations	Percent	Operations	Percent
Historical:					
2000	80,351	37,761	47%	42,590	53%
2001	75,380	36,921	49%	38,459	51%
2002	72,821	38,604	53%	34,217	47%
2003	68,285	38,994	57%	29,291	43%
2004	71,224	41,057	58%	30,167	42%
2005	70,532	43,064	61%	27,468	39%
2006	74,373	43,667	59%	30,706	41%
2007	81,674	44,970	55%	36,704	45%
2008	76,840	40,736	53%	36,104	47%
2009	66,437	35,056	53%	31,381	47%
2010	67,340	38,969	58%	28,371	42%
		Average (2000-2009)	*55%*	*Average (2000-2009)*	*45%*
Projected:					
2015	70,255	40,656	58%	29,599	42%
2020	74,093	42,877	58%	31,216	42%
2025	77,648	44,934	58%	32,714	42%
2030	82,047	47,480	58%	34,567	42%
CAGR (2009-2030)	*0.99%*	*0.99%*		*0.99%*	

Notes: CAGR = Compounded Annual Growth Rate.
Sources: Historical Operations - FAA Air Traffic Activity Data System (ATADS)
Projections - Mead & Hunt, Inc.

3.9 Enplaned/Deplaned Cargo

Air cargo is carried by both scheduled passenger carriers and dedicated air cargo operators. Cargo is typically categorized as either mail, express or freight.

3.9.a Cargo Scenario 1

The total amount of cargo enplaned annually at the Asheville Regional Airport has decreased significantly since 2003, falling from 569,886 pounds in 2003 to a low of 127,943 pounds in 2010 (**Table 3-24**). This is due to significant reductions in the amount of cargo being carried by the scheduled passenger carriers and reductions in chartered cargo/freight carriers. The Airport's market share compared to total U.S. revenue ton miles in 2010 was 0.001 percent. Cargo Scenario 1 assumes that the Airport's current market share of the domestic air cargo market will remain through the forecasting period. Analyzing U.S. air cargo projections obtained from the FAA Aerospace Forecast FY 2011-2031, a CAGR of 2.79 percent is projected through 2030. Applying this CAGR, total air cargo enplaned and deplaned at the Airport is projected to increase from 127,943 pounds in 2010 to 221,680 pounds in 2030. This projection serves as the baseline air cargo projection for the Airport.

Table 3-24: Air Cargo Scenario 1 (Baseline)

Year	AVL Enplaned Cargo				AVL Deplaned Cargo				Total AVL Cargo	Total U.S. Air Cargo (mil-rev ton mi)	AVL Market Share
	Mail	Express	Freight	Total	Mail	Express	Freight	Total			
Historical:											
2003	17,079	93,720	67,818	178,617	21,037	90,274	279,958	391,269	569,886	14,698.7	0.00388%
2004	0	17,580	98,835	116,415	5,413	31,266	294,739	331,418	447,833	16,340.9	0.00274%
2005	0	1,975	116,872	118,847	1,246	2,556	237,212	241,014	359,861	16,089.6	0.00224%
2006	0	499	99,617	100,116	338	2,139	260,324	262,801	362,917	15,710.5	0.00231%
2007	0	4,119	78,687	82,806	1,675	6,495	158,779	166,949	249,755	15,818.0	0.00158%
2008	35	5,068	24,267	29,370	0	5,173	112,343	117,516	146,886	14,410.5	0.00102%
2009	1	11,817	32,194	44,012	0	14,956	74,800	89,756	133,768	11,900.0	0.00112%
2010	0	16,613	30,779	47,392	0	11,970	68,581	80,551	127,943	12,848.0	0.00100%
% of Total	*0.0%*	*13.0%*	*24.1%*	*37.0%*	*0.0%*	*9.4%*	*53.6%*	*63.0%*			
Projected:											
2015	0	20,548	38,070	58,618	0	14,805	84,826	99,632	158,250	15,891.4	0.00100%
2020	0	23,124	42,842	65,966	0	16,661	95,460	112,121	178,087	17,883.5	0.00100%
2025	0	25,898	47,982	73,880	0	18,660	106,912	125,572	199,453	20,029.0	0.00100%
2030	0	28,784	53,329	82,114	0	20,740	118,827	139,567	221,680	22,261.1	0.00100%
% of Total	*0.0%*	*13.0%*	*24.1%*	*37.0%*	*0.0%*	*9.4%*	*53.6%*	*63.0%*			
CAGR	*0.00%*	*2.79%*	*2.79%*	*2.79%*	*0.00%*	*2.79%*	*2.79%*	*2.79%*	*2.79%*	*2.79%*	

Notes: CAGR = Compounded annual growth rate.
Sources: Historical Airport Cargo Data - Airport Management
Total U.S. Air Cargo (Revenue Ton Miles) - FAA Aerospace Forecasts FY2011-2031

3.9.b Cargo Scenario 2

The Airport has received past inquiries from air cargo companies regarding the availability of space at the airport to accommodate air cargo operations and activities. Given that the utilization of the Airport by a dedicated air cargo company would significantly alter the amount of cargo enplaned and deplaned at the Airport, Cargo Scenario 2 has been developed. This scenario anticipates use of the Airport by an overnight air cargo hauler such as FedEx or UPS. This type of overnight cargo operation would likely initially include service by a narrow-body aircraft such as a B727 or B757, five to seven days a week. Annual enplaned cargo for this type of operation at a regional airport would typically total eight million pounds and deplaned cargo 12 million pounds. Scenario 2 assumes a growth rate of 2.79 percent annual growth in these figures, identical to the FAA-projected growth rate in U.S. air cargo. This cargo activity would be in addition to the Scenario 1 activity. **Table 3-25** presents the additional and total air cargo activity anticipated under Air Cargo Scenario 2.

Table 3-25: Air Cargo Scenario 2 (High Growth)

	Scenario 1 Air Cargo (lbs)			+	Scenario 2 New Cargo Carrier (lbs)			=	Scenario 2
Year	Enplaned	Deplaned	Total		Enplaned	Deplaned	Total		Grand Total
Historical:									
2010	47,392.0	80,551	127,943		-	-	-		127,943
Projected:									
2015	58,618.0	99,632	158,250		8,000,000	12,000,000	20,000,000		20,158,250
2020	65,966.1	112,121	178,087		9,180,035	13,770,052	22,950,086		23,128,174
2025	73,880.2	125,572	199,453		10,534,129	15,801,194	26,335,323		26,534,776
2030	82,113.7	139,567	221,680		12,087,959	18,131,938	30,219,897		30,441,578
CAGR	*2.79%*	*2.79%*	*2.79%*		*2.79%*	*2.79%*	*2.79%*		*2.79%*

Notes: CAGR = Compounded annual growth rate.
Sources: Historical Airport Cargo Data - Airport Management
Mead & Hunt

3.10 Peak Passenger Activity and Operations

Airside and landside infrastructure planning is often based on peak periods of passenger and aircraft activity. In an effort to measure how well existing facilities can accommodate high levels of demand, this section presents the monthly, daily and hourly peak activity levels for passengers and aircraft operations that can be anticipated at the Airport for the next 20 years.

3.10.a Peak Month Passenger Activity Forecasts

Monthly passenger enplanement data obtained from the Airport illustrates that between 2007 and 2010, the average percentage of passenger enplanements that occurred in the peak month accounted for 10.3 percent of the total annual enplanements (**Table 3-26**). It is assumed that the peak monthly enplanements will continue to account for 10.3 percent of the total enplaned passengers at the Airport throughout the forecasting period. Applying this methodology, peak month enplanements are anticipated to increase from 39,629 in 2010 to 54,259 in 2030.

Table 3-26: Peak Month Passenger Activity Forecasts

Historical Monthly Enplanements

Month	2007		2008		2009		2010	
Jan	17,751	6.1%	17,912	6.4%	19,049	6.5%	18,248	4.9%
Feb	16,066	5.6%	17,161	6.1%	17,194	5.9%	18,197	4.9%
Mar	20,891	7.2%	20,128	7.2%	21,488	7.4%	25,622	6.9%
Apr	22,256	7.7%	20,190	7.2%	23,782	8.2%	29,441	8.0%
May	26,555	9.2%	23,730	8.5%	24,796	8.5%	34,178	9.2%
Jun	28,806	10.0%	26,324	9.4%	28,356	9.7%	37,472	10.1%
Jul	28,945	10.0%	26,587	9.5%	29,198	10.0%	39,629	10.7%
Aug	28,642	9.9%	26,550	9.5%	27,810	9.6%	38,173	10.3%
Sep	25,289	8.7%	24,236	8.7%	25,244	8.7%	33,555	9.1%
Oct	28,170	9.7%	29,182	10.4%	27,766	9.5%	38,276	10.4%
Nov	24,048	8.3%	24,418	8.7%	23,917	8.2%	30,470	8.2%
Dec	21,999	7.6%	23,061	8.3%	22,599	7.8%	26,315	7.1%
Total	289,418	Jul	279,479	Oct	291,199	Jul	369,576	Jul
Peak Month	28,945	10.0%	29,182	10.4%	29,198	10.0%	39,629	10.7%

Average Percent of Enplanements in Peak Month = ***10.3%***

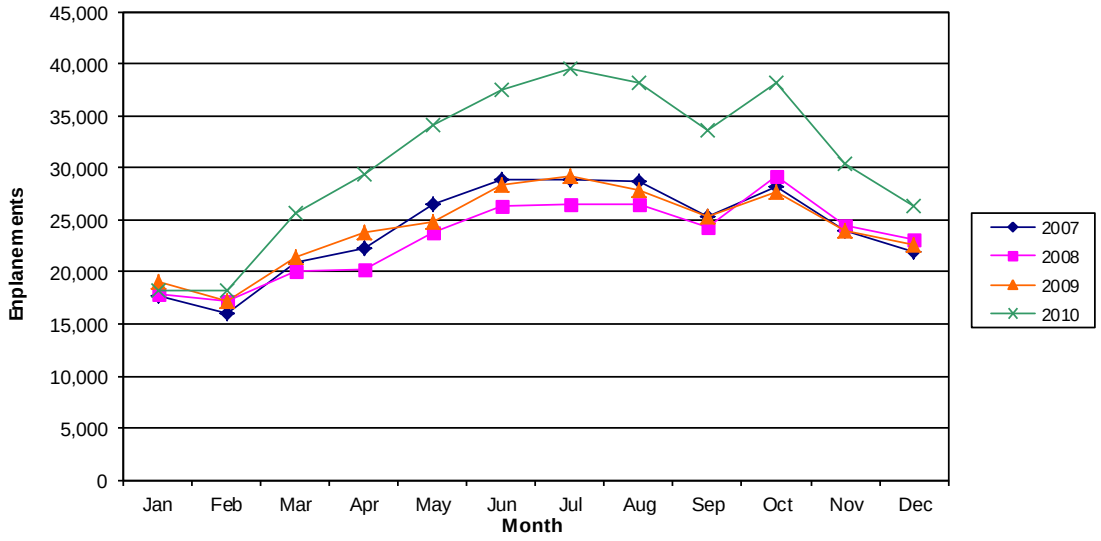
Scheduled Peak Passenger Month Departing Seats and Peak Month Load Factor

2007		2008		2009		2010	
37,146	77.9%	38,852	75.1%	32,671	89.4%	45,920	86.3%

Average Peak Month Load Factor = ***82.2%***

Projected Peak Month Enplanements

	Projected Annual Enpl	Peak Month %	Peak Month Enplanements
2015	410,793	10.3%	42,304
2020	446,328	10.3%	45,963
2025	484,937	10.3%	49,939
2030	526,886	10.3%	54,259



Source: Airport Management Records
Airline Schedules from Diio Mi
Mead & Hunt, Inc.

3.10.b Peak Month Average Day Passenger Activity Forecasts

It should be noted that airport infrastructure planning is based on the probable demand for facilities that may occur over a period of time. If planning is contingent with the busiest periods of activity, it can lead to

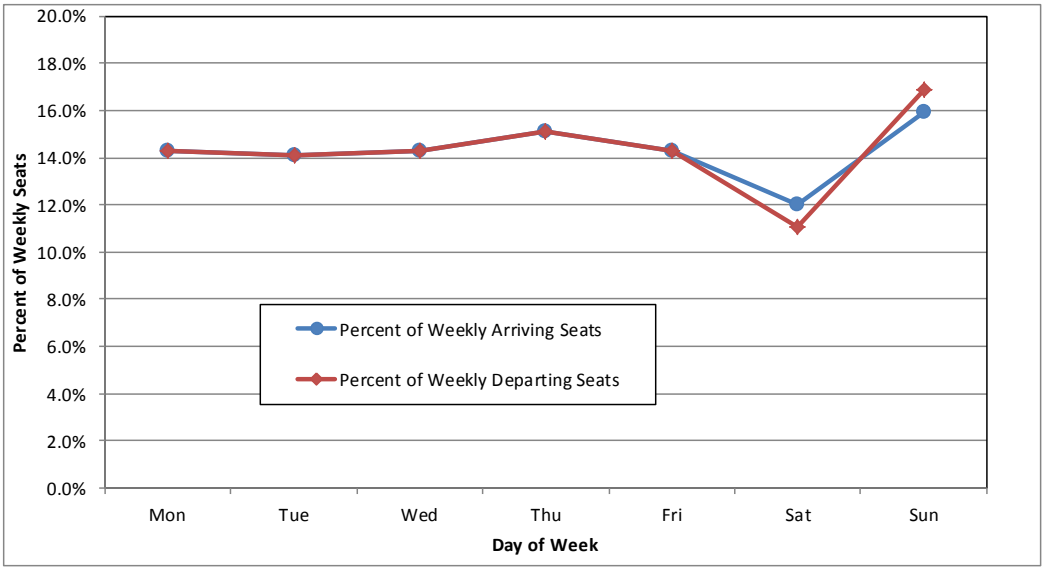
overestimation, overspending, and inefficiencies. Daily peak activity figures are based on a regularly occurring activity level day during the peak month. A review of airline activity schedules for the month of July 2011 indicates that activity regularly peaks on Sundays. On average, Sunday typically has 34 departures and 33 arrivals and accounts for approximately 16.9 percent and 15.9 percent of weekly departing and arriving seats, respectively (**Table 3-27**). Considering the average peak month is 31 days long (4.4 weeks), the average number of weekly passengers in the peak month is calculated by dividing the number of total monthly passengers with the average number of weeks in the peak month. This figure is then divided by the percent of weekly activity that occurs on a typical Sunday to determine the average daily number of total passengers that are enplaned and deplaned in the peak month.

Table 3-27: Peak Month Average Day Passenger Activity Forecasts

	Departures			Arrivals		
Day of the Week	Departures	Departing Seats	Percentage of Weekly Dep Seats	Arrivals	Arriving Seats	Percentage of Weekly Arr Seats
Mon	31	1,711	14.3%	31	1,711	14.3%
Tue	31	1,691	14.1%	31	1,691	14.1%
Wed	31	1,711	14.3%	31	1,711	14.3%
Thu	32	1,813	15.1%	32	1,813	15.1%
Fri	31	1,711	14.3%	31	1,711	14.3%
Sat	25	1,324	11.0%	26	1,441	12.0%
Sun	34	2,027	16.9%	33	1,910	15.9%
Total	215	11,988		215	11,988	

Average Day Passengers (Sunday)

	Peak Month	Weeks in	Avg Week	Percent of Weekly Activity on a Typical Sunday		Average Day Passengers		
Year	Enpl/Depl	Peak Month	Enpl/Depl	Enplaning	Deplaning	Enpl	Depl	Total Pass.
2010	39,629	4.4	9,007	16.9%	15.9%	1,523	1,435	2,958
2015	42,304	4.4	9,614	16.9%	15.9%	1,626	1,532	3,158
2020	45,963	4.4	10,379	16.9%	15.9%	1,755	1,654	3,409
2025	49,939	4.4	11,277	16.9%	15.9%	1,907	1,797	3,703
2030	54,259	4.4	12,252	16.9%	15.9%	2,072	1,952	4,024



Source: Airline Schedules from Diio Mi, July 2011 Schedule

3.10.c Peak Hourly Passenger Activity Forecasts

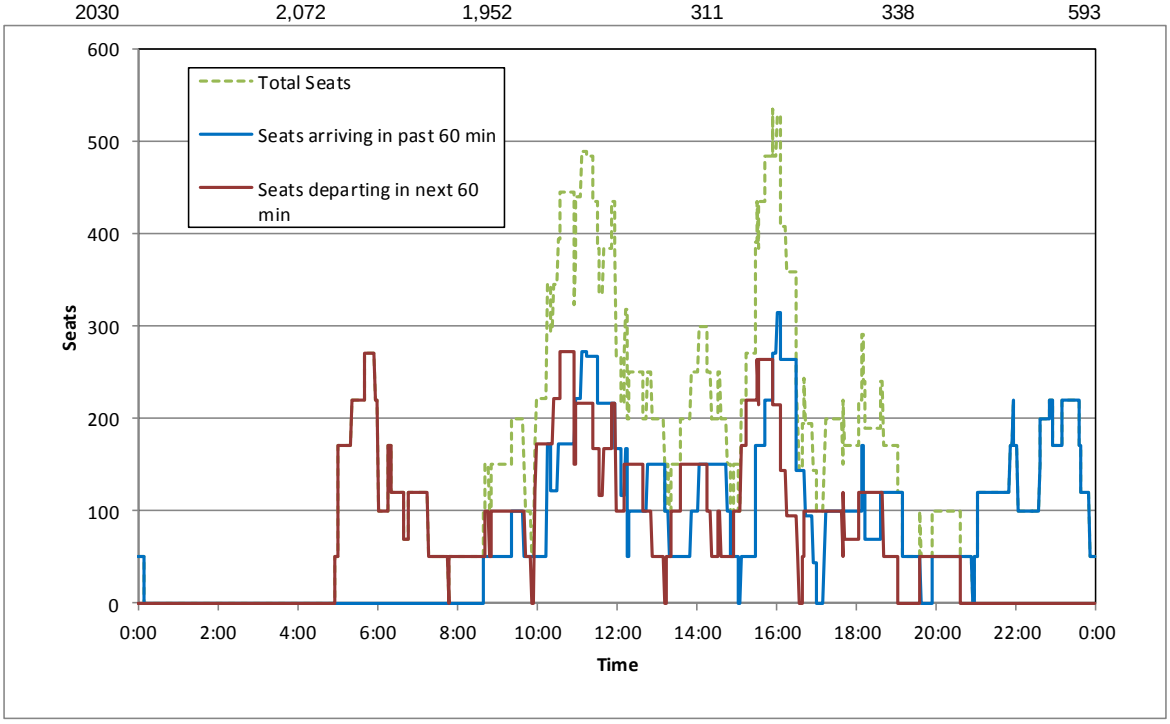
The number of hourly arriving and departing seats during a typical day in the peak month is shown in **Table 3-28**. Peak hour departing seats occur between 10:34 a.m. and 11:33 a.m. while peak hour arriving seats occur between 3:01 p.m. and 4:00 p.m. The peak total arriving and departing seats occurs between 3:34 p.m. and 4:33 p.m.

Table 3-28: Peak Hour Passenger Activity Forecasts

Time of Day	Number of Seats	Total Daily Seats	Percent of Day in Peak Hour (PH)
Peak Hour Departing Seats (Enplanements)			
10:34 to 11:33	272	1,813	15.0%
Peak Hour Arriving Seats (Deplanements)			
15:01 to 16:00	314	1,813	17.3%
Peak Total Passengers			
15:34 to 16:33	534	3,626	14.7%

Projected Peak Hour

	Peak Month Average Day Passengers		Peak Hour Passengers		
			Enplanements	Deplanements	Total Pass.
Year	Enplanements	Deplanements	*15.0%*	*17.3%*	*14.7%*
2010	1,523	1,435	228	249	436
2015	1,626	1,532	244	265	465
2020	1,755	1,654	263	286	502
2025	1,907	1,797	286	311	545
2030	2,072	1,952	311	338	593



Source: Airline Schedules from Diio Mi, Wed, July 2011 Schedule
Mead & Hunt, Inc.

3.10.d Passenger Activity Peaking Characteristics Summary

A summary of the peak month, peak month average day, and peak hour passenger forecasts presented in this section is illustrated in **Table 3-29**.

Table 3-29: Passenger Activity Peaking Characteristics Summary

Year	Peak Factor	Enplanements	Deplanements	Total Passengers
2010	**Actual**			
	Annual	369,576	369,576	739,152
	Peak Month	39,629	39,629	79,258
	Peak Month Average Day (PMAD)	1,523	1,435	2,958
	Peak Hour - PMAD	228	249	436
2015	**Projected**			
	Annual	410,793	410,793	821,586
	Peak Month	42,304	42,304	84,608
	Peak Month Average Day (PMAD)	1,626	1,532	3,158
	Peak Hour - PMAD	244	265	465
2020	**Projected**			
	Annual	446,328	446,328	892,656
	Peak Month	45,963	45,963	91,926
	Peak Month Average Day (PMAD)	1,755	1,654	3,409
	Peak Hour - PMAD	263	286	502
2025	**Projected**			
	Annual	484,937	484,937	969,874
	Peak Month	49,939	49,939	99,878
	Peak Month Average Day (PMAD)	1,907	1,797	3,703
	Peak Hour - PMAD	286	311	545
2030	**Projected**			
	Annual	526,886	526,886	1,053,772
	Peak Month	54,259	54,259	108,518
	Peak Month Average Day (PMAD)	2,072	1,952	4,024
	Peak Hour - PMAD	311	338	593

Source: Airline Schedules, Diio Mi
Airport Management Records
Mead & Hunt, Inc.

3.10.e Peak Operations Forecasts

To forecast peak month operations, the average percent of operations accounted for in the peak month is multiplied by the projected number of annual operations, and then divided by the number of days in the peak month. Assuming this percentage remains constant throughout the forecasting period, the peak number of operations in a month is anticipated to increase from 6,929 in 2010 to 8,467 in 2030.

The FAA Air Traffic Activity Data System (ATADS) notes that the average number of aircraft operations in the peak hour for each day in July 2010 was 13.8 percent of the total daily operations. Assuming this percentage remains constant throughout the forecasting period, the number of peak hour operations in the peak month is anticipated to increase from 31 in 2010 to 38 in 2030 (**Table 3-30**).

Table 3-30: Peak Month, Average Day, and Peak Hour Operations Projections

		Monthly Operations					
		2005	**2006**	**2007**	**2008**	**2009**	**2010**
Historical:	Jan	4,467	4,447	4,924	5,559	4,455	4,331
	Feb	4,450	4,556	4,698	4,732	3,998	4,033
	Mar	5,610	5,898	6,088	6,002	4,959	5,183
	Apr	6,288	5,816	5,884	5,843	5,251	5,698
	May	6,553	6,094	7,572	7,780	5,444	6,213
	Jun	6,950	6,968	8,037	7,647	6,324	6,365
	Jul	6,234	7,374	8,339	8,066	6,816	6,929
	Aug	6,143	7,656	8,757	7,317	6,518	6,529
	Sep	6,668	6,799	7,125	6,910	5,509	5,992
	Oct	6,780	7,411	7,662	7,261	6,728	6,603
	Nov	5,502	5,836	6,952	5,251	5,852	5,236
	Dec	4,887	5,518	5,636	4,472	4,583	4,228
	Total	70,532	74,373	81,674	76,840	66,437	67,340
	Peak Month	Jun	Aug	Aug	Jul	Jul	Jul
	Peak Month	6,950	7,656	8,757	8,066	6,816	6,929
	Percent of Annual	9.85%	10.29%	10.72%	10.50%	10.26%	10.29%
	PMAD Operations	232	247	282	260	220	224
						PMAD Peak Hour Operations[1]	31
					Average Percent of Annual Operations in Peak Month (2005-2010)		10.32%

Projected:	**Annual Ops**	**Peak Mnth %**	**PM Ops**	**PMAD Ops**	**Peak Hr[1] %**	**PH Ops**
2015	70,255	10.32%	7,250	234	13.80%	32
2020	74,093	10.32%	7,646	247	13.80%	34
2025	77,648	10.32%	8,013	258	13.80%	36
2030	82,047	10.32%	8,467	273	13.80%	38
CAGR (2010-2030)	*0.95%*		*0.96%*	*0.96%*		*0.96%*

Notes: CAGR = Compounded Annual Growth Rate.
PM = Peak Month; PMAD = Peak Month Avg Day
[1]Peak Hour percentage for each day in Jul 2010 averaged 13.80%

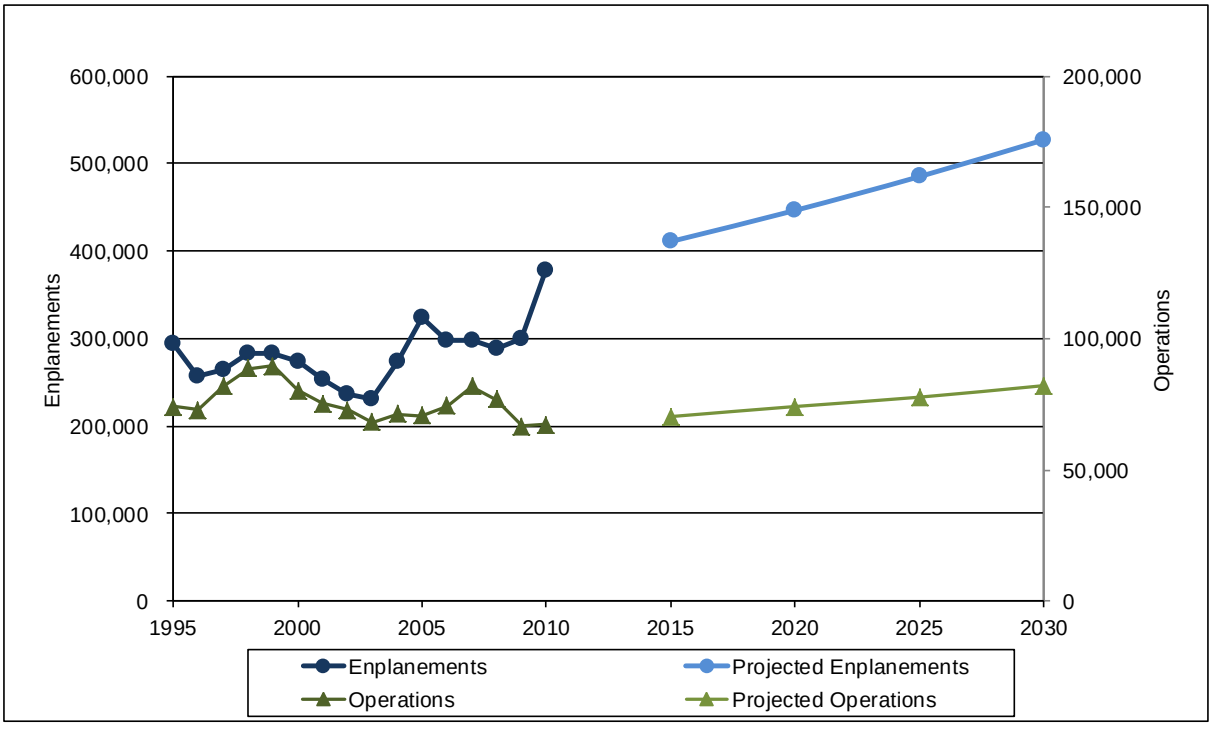
Sources: Historical Montly & Daily Operations - FAA Air Traffic Activity Data System (ATADS)
Historical Hourly Operations - FAA Enhanced Traffic Management System Counts (ETMSC)
Projections - Mead & Hunt, Inc.

3.11 Forecast Summary and FAA TAF Comparison

Passenger and aircraft activity at the Asheville Regional Airport has fluctuated in recent history. This is not uncommon in comparison to many U.S. airports as economic uncertainty and increased travel costs have impacted travel behavior. Despite increases in fuel cost, airline bankruptcies, system-wide route restructuring and aircraft fleet overhauls, the forecasts developed for this Master Plan Update suggest passenger enplanements, based aircraft and total aircraft operations will grow at the Airport over the next 20 years. A summary of these projections is presented in **Table 3-31**. A summary of these forecasts is also presented in specific FAA-required tabular formats in **Table 3-32** and **Table 3-33**.

Table 3-31: Summary of Annual Activity Forecasts

Year	Enplanements	Operations				Total Freight	Based Aircraft
		Commercial Air Carrier	General Aviation	Military	Total		
Historical							
1995	294,780	18,326	51,777	4,051	74,154	-	120
1996	257,215	17,746	49,180	5,908	72,834	-	128
1997	263,767	16,841	58,366	6,648	81,855	-	119
1998	283,146	17,032	66,187	5,262	88,481	-	119
1999	283,209	18,766	64,573	6,074	89,413	-	107
2000	274,281	17,720	56,557	6,074	80,351	-	107
2001	253,250	16,833	53,744	4,803	75,380	-	107
2002	236,019	18,953	50,762	3,106	72,821	-	128
2003	230,178	19,530	45,766	2,989	68,285	569,886	130
2004	273,691	22,965	44,203	4,056	71,224	447,833	128
2005	323,353	22,501	44,663	3,368	70,532	359,861	128
2006	297,792	21,133	49,194	4,046	74,373	362,917	139
2007	298,667	21,062	56,841	3,771	81,674	249,755	130
2008	289,215	20,376	52,912	3,552	76,840	146,886	141
2009	298,865	17,597	45,125	3,715	66,437	133,768	160
2010	378,087	20,765	41,752	4,823	67,340	127,943	174
Projected							
2015	410,793	20,922	45,306	4,028	70,255	158,250	184
2020	446,328	21,780	48,285	4,028	74,093	178,087	195
2025	484,937	22,074	51,547	4,028	77,648	199,453	206
2030	526,886	22,922	55,097	4,028	82,047	221,680	217
CAGR (2010-2030)	*1.67%*	*0.50%*	*1.40%*	*-0.90%*	*0.99%*	*2.79%*	*1.11%*



Note: Total Freight in pounds

Source: Historical Enplanements - Airport Records
Historical Operations - FAA Air Traffic Activity Data System (ATADS)
Historical Freight - Airport Records
Historical Based Aircraft Data - FAA Terminal Area Forecast Records
Projections - Mead & Hunt, Inc.

Table 3-32: FAA Template for Summary of Forecasts and Growth Rates

A. Forecast Levels and Growth Rates

	Specify base year: 2010					Average CAGR			
	2010	**2015**	**2020**	**2025**	**2030**				
	Base Yr. Level	**Base Yr. + 5yr.**	**Base Yr. + 10yrs.**	**Base Yr. + 15yrs.**	**Base Yr. + 20yrs.**	**Base Yr. + 5yr.**	**Base Yr. + 10yrs.**	**Base Yr. + 15yrs.**	**Base Yr. + 20yrs.**
Passenger Enplanements									
TOTAL Air Carrier & Commuter	378,087	410,793	446,328	484,937	526,886	1.7%	1.7%	1.7%	1.7%
Operations									
Itinerant									
Air carrier	1,160	1,380	2,202	3,319	4,124	3.5%	6.6%	7.3%	6.5%
Commuter/air taxi	19,605	19,542	19,579	18,755	18,798	-0.1%	0.0%	-0.3%	-0.2%
Total Commercial Operations	20,765	20,922	21,780	22,074	22,922	0.2%	0.5%	0.4%	0.5%
General aviation	28,843	31,298	33,356	35,609	38,062	1.6%	1.5%	1.4%	1.4%
Military	3,271	2,440	2,440	2,440	2,440	-5.7%	-2.9%	-1.9%	-1.5%
Local									
General aviation	12,909	14,008	14,929	15,937	17,035	1.6%	1.5%	1.4%	1.4%
Military	1,552	1,588	1,588	1,588	1,588	0.5%	0.2%	0.2%	0.1%
TOTAL OPERATIONS	67,340	70,255	74,093	77,648	82,047	0.9%	1.0%	1.0%	1.0%
Instrument Operations	38,969	40,656	42,877	44,934	47,480	0.9%	1.0%	1.0%	1.0%
Peak Hour Operations	31	32	34	36	38	0.9%	1.0%	1.0%	1.0%
Cargo/mail (enplaned+deplaned)									
Scenario 1	127,943	158,250	178,087	199,453	221,680	4.3%	3.4%	3.0%	2.8%
Scenario 2	127,943	20,158,250	23,128,174	26,534,776	30,441,578	175.1%	68.2%	42.7%	31.5%
Based Aircraft (Seasonally)									
Single Engine (Nonjet)	115	122	129	134	139	1.1%	1.1%	1.0%	0.9%
Multi Engine (Nonjet)	37	39	41	43	48	0.9%	1.0%	1.0%	1.3%
Jet Engine	16	20	21	25	26	4.9%	3.0%	2.9%	2.5%
Helicopter	6	4	4	4	4	-9.3%	-4.2%	-2.5%	-1.6%
Other	0	0	0	0	0	NA	NA	NA	NA
TOTAL	174	184	195	206	217	1.2%	1.2%	1.1%	1.1%
Based Aircraft (Year-Round)									
TOTAL	145	153	162	171	180	1.1%	1.1%	1.1%	1.1%

B. Operational Factors

	Base Yr. Level	**Base Yr. + 5yr.**	**Base Yr. + 10yrs.**	**Base Yr. + 15yrs.**	**Base Yr. + 20yrs.**
Average aircraft size (seats)					
Air carrier & Commuter	52.4	56.5	59.0	63.5	66.5
Average enplaning load factor					
Air carrier & Commuter	77.6%	78.0%	78.0%	78.0%	78.0%
GA operations per based aircraft	240	246	247	250	254

CAGR = Compound Annual Growth Rate

Table 3-33: FAA Template for Summary of Forecasts Compared to FAA TAF

	Year	Airport Forecast	TAF	AF/TAF (% Difference)
Passenger Enplanements				
Base Yr. Level	2010	378,087	349,880	8.1%
Base Yr. + 5yr.	2015	410,793	394,721	4.1%
Base Yr. + 10yrs.	2020	446,328	432,090	3.3%
Base Yr. + 15yrs.	2025	484,937	473,084	2.5%
Base Yr. + 20yrs.	2030	526,886	518,051	1.7%
Commercial Operations				
Base Yr. Level	2010	20,765	18,102	14.7%
Base Yr. + 5yr.	2015	20,922	21,986	-4.8%
Base Yr. + 10yrs.	2020	21,780	22,985	-5.2%
Base Yr. + 15yrs.	2025	22,074	24,061	-8.3%
Base Yr. + 20yrs.	2030	22,922	25,180	-9.0%
Total Operations				
Base Yr. Level	2010	67,340	66,258	1.6%
Base Yr. + 5yr.	2015	70,255	62,707	12.0%
Base Yr. + 10yrs.	2020	74,093	63,521	16.6%
Base Yr. + 15yrs.	2025	77,648	64,415	20.5%
Base Yr. + 20yrs.	2030	82,047	65,354	25.5%

Notes: TAF data is on a U.S. Government fiscal year basis (October through September)
Airport Forecast is on a calendar year basis.