3. Aviation Activity Forecasts

This section presents forecasts of aviation activity for the Airport through 2029. Forecasts were developed for enplaned passengers, air carrier and regional/commuter airline aircraft operations, air cargo weight and all-cargo aircraft operations, air taxi and general aviation operations, based aircraft, and the projected aircraft fleet mix using the Airport. The forecasts were prepared and approved by the FAA in 2010, using 2009 data to represent the base year.[1] The aviation activity forecasts are based on assumptions about aviation activity at the Airport and other factors that may affect future aviation activity at the Airport, including:

- National aviation industry trends
- Airport management's policy goals and objectives
- Historical activity and trends in air service at the Airport, including comparisons of historical U.S. market shares
- Local socioeconomic and demographic trends, compared with State and national trends

The forecasts presented herein are not constrained by any assumptions about the availability, or lack of availability, of existing and future Airport facilities, such as aircraft gates. In addition, it was assumed that the types of general aviation, military, and air taxi operations currently conducted at the Airport will continue over the planning period. Business/corporate aviation is expected to continue dominating general aviation and air taxi activity.

Airport activity forecasts are typically shown as linear growth trends. However, actual activity levels may vary from the forecast as a result of unforeseen events, such as the recent global economic downturn that has affected enplaned passenger, aircraft operations, and cargo totals at the Airport. These unforeseen events will drive actual activity levels below or above the forecasts. The planning horizon represents a long-term forecast that includes consideration of unforeseen events that could occur throughout the planning period.

Forecasting is not an exact science, but it does provide reasonable and general levels of future aviation activity and a defined rationale for various facility improvements at the Airport as demand increases. Because forecast numbers of enplaned passengers and aircraft operations are often used as the basis for effective planning and related decision-making, the forecasts presented in this section provide the basis for proposed Airport development over the 20-year planning period (2010-2029).

[1] Year-to-date data through August 2010 were also used, where applicable, for forecasting purposes.

3.1 Forecast Highlights and Summary

The Airport is a vital component of the transportation network of south central Idaho. The Airport provides for commercial airline service to approximately 180,000 residents of the primary Airport Service Area, as described in Section 2. The demand for passenger airline service at the Airport is forecast to increase. Air cargo and general aviation activity is also forecast to increase as the local population grows and the economic base prospers. Below are key highlights of the aviation activity forecasts presented in this section.

- The number of enplaned passengers at TWF decreased an average of 2.9 percent per year between 1999 and 2009, from 34,010 to 25,337.
- Air carrier service was initiated at the Airport in June 2010 with twice weekly flights by Allegiant Air.[2] Air carrier enplaned passengers are forecast to number approximately 23,000 in 2029, with regional/commuter enplaned passengers forecast to number approximately 41,800 in 2029. In total, approximately 64,800 enplaned passengers are forecast for the Airport in 2029.
- The total weight of air cargo (enplaned and deplaned) handled at the Airport is forecast to increase an average of 2.4 percent per year, from approximately 2.0 million pounds in 2009 to approximately 3.2 million pounds in 2029.
- General aviation aircraft operations are forecast to increase an average of 2.8 percent per year between 2009 and 2029, partially as a result of the initiation of helicopter training operations in 2010.

3.2 Historical Aviation Activity

3.2.1 ENPLANED PASSENGERS

Enplaned passengers, defined as airline passengers on a departing flight from a specific airport, are a principal measure of aviation activity. The FAA classifies TWF as a nonhub airport based on its percentage of nationwide enplaned passengers (less than 0.05 percent of the nation's enplaned passengers).

Between 1999 and 2009, the number of enplaned passengers at the Airport decreased an average of 2.9 percent per year. In 2009, 25,337 passengers were enplaned at TWF compared with 34,010 passengers enplaned in 1999.

Table 3-1 presents the numbers of enplaned passengers at the Airport from 1999 through 2009.

[2] Subsequent to approval of the aviation activity forecasts, Allegiant Air discontinued service at the Airport in January 2012. For purposes of long-term planning, it was assumed in developing the baseline forecasts included herein that air carrier operations at the Airport would increase through the forecast period and would provide a reasonable level of demand from which to plan for future Airport facilities. A low growth enplaned passenger forecast scenario was developed to forecast enplaned passenger numbers at the Airport without service by Allegiant Air (see Section 3.3.4).

Table 3-1 Historical Enplaned Passengers

YEAR	ENPLANED PASSENGERS	ANNUAL PERCENT CHANGE
1999	34,010	-
2000	34,409	1.2%
2001	32,833	-4.6%
2002	31,794	-3.2%
2003	30,352	-4.5%
2004	34,966	15.2%
2005	35,644	1.9%
2006	30,973	-13.1%
2007	32,141	3.8%
2008	29,082	-9.5%
2009	25,337	-12.9%
Compounded Annual Growth Rate		
1999 – 2009	-2.9%	

SOURCE: City of Twin Falls, Airport Department, October 2010.
PREPARED BY: Ricondo & Associates, Inc., November 2010.

The number of passengers enplaned at the Airport was relatively stable between 1999 and 2005, although the number has fluctuated from year to year. In some years, the number decreased as a result of particular local, regional, or national events. Events that have influenced numbers of enplaned passengers at the Airport include the following:

- Between 2000 and 2001, enplaned passengers decreased 4.6 percent, from 34,409 to 32,833, as a result of the September 2001 terrorist attacks and the downturn in the U.S. economy.
- Between 2001 and 2003, the number of enplaned passengers at TWF decreased steadily, attributed primarily to a slowing U.S. economy. The number of enplaned passengers decreased from 32,833 in 2001 to 30,352 in 2003 at an average of 3.9 percent per year.
- In 2004, TWF enplaned passengers increased 15.2 percent to 34,966, attributed to SkyWest Airlines' increased service compared with the previous year.
- From 2006 through 2009, SkyWest Airlines reduced service between TWF and Salt Lake City (from five daily flights to four daily flights). As a result, the number of enplaned passengers at the Airport decreased from 30,973 in 2006 to 25,337 in 2009, representing an average decrease of 6.5 percent per year.

3.2.2 AIRCRAFT OPERATIONS

Table 3-2 shows historical aircraft operations at the Airport from 2004 through 2009.

Table 3-2 Historical Aircraft Operations

	AIR CARRIER [1/]		REGIONAL/COMMUTER		ALL-CARGO		AIR TAXI		GENERAL AVIATION		MILITARY		TOTAL
YEAR	OPS	SHARE	OPS	SHARE	OPS	SHARE	OPS	SHARE	OPS	SHARE	OPS	SHARE	OPS
2004	22	0.1%	4,688	12.5%	2,092	5.6%	4,298	11.4%	25,162	67.0%	1,298	3.5%	37,560
2005	20	0.1%	5,220	13.1%	1,890	4.7%	4,261	10.7%	25,465	63.7%	3,107	7.8%	39,963
2006	14	0.0%	4,720	12.7%	2,910	7.8%	3,792	10.2%	22,911	61.7%	2,759	7.4%	37,106
2007	18	0.0%	4,400	12.1%	2,762	7.6%	4,273	11.8%	22,649	62.5%	2,123	5.9%	36,225
2008	22	0.1%	3,686	10.8%	2,532	7.4%	3,524	10.3%	22,110	64.7%	2,318	6.8%	34,192
2009	16	0.0%	3,204	9.6%	2,432	7.3%	3,684	11.0%	22,179	66.4%	1,909	5.7%	33,424
CAGR													
2004 – 2009	-6.2%		-7.3%		3.1%		-3.0%		-2.5%		8.0%		-2.3%

Notes: OPS = operations; CAGR = compounded annual growth rate; shares may not total 100 percent due to rounding.

1/ No scheduled air carrier aircraft operations occurred at TWF during the period. Reported historical air carrier operations are a result of diverted or charter flights of air carrier aircraft.

SOURCES: U.S. Department of Transportation T-100, Federal Aviation Administration Air Traffic Activity Data System (ATADS) and FAA Enhanced Traffic Management System Counts (ETMSC), October 2010.
PREPARED BY: Ricondo & Associates, Inc., November 2010.

Historically, general aviation aircraft have accounted for the majority of aircraft operations at the Airport, accounting for 61.7 percent to 67.0 percent of total Airport operations between 2004 and 2009. During those years, total operations at TWF decreased an average of 2.3 percent per year. Over the same period, general aviation operations decreased an average of 2.5 percent per year. Regional/commuter airline aircraft operations decreased an average of 7.3 percent per year from 2004 through 2009. As mentioned previously, this reduction was primarily a result of the reduction in service by SkyWest Airlines.

3.3 Enplaned Passenger Forecasts

This section presents enplaned passenger forecasts for the Airport through the planning period. Separate forecasts were developed for air carrier and regional/commuter enplaned passengers. Air carrier enplaned passengers refer to originating passengers on scheduled commercial airline aircraft with seating capacity of more than 60 seats. Regional/commuter enplaned passengers refer to originating passengers on aircraft with 60 or fewer seats that transport regional passengers on scheduled commercial airline flights. The factors and assumptions underlying the enplaned passenger forecasts are discussed in the following subsections.

3.3.1 AIR CARRIER ENPLANED PASSENGER FORECASTS

Several common methodologies and techniques are used to forecast aviation activity at a specific airport. The most common methodologies include regression analysis, trend analysis, and market share analysis. However, these methodologies are primarily based on the application of historical trends and relationships as a basis for forecasting future activity.

Historically, the Airport has not had scheduled air carrier service. Demand for air carrier service at the Airport was identified through market research conducted by Allegiant Air, which provided twice weekly flights from TWF to Las Vegas between June 2010 and January 2012. Because no historical air carrier enplaned passenger data are available (prior to June 2010) upon which to forecast future activity, the methodology used to forecast numbers of air carrier enplaned passengers at TWF was based on airline schedules, available seats, and load factors. Using this methodology, enplaned passengers in a given year can be derived as follows:

Enplaned Passengers = *Annual Aircraft Departures* x *Available Seats per Departure* x *Load Factor*

Factors and assumptions used to derive these variables are discussed below:

- **Annual aircraft departures** – According to published Official Airline Guides, Inc. (OAG) schedules, 54 air carrier (Allegiant Air) aircraft departures were scheduled from June through December 2010. Although Allegiant Air has since suspended operations, the high load factors experienced by the airline proved that demand for air carrier service exists at TWF. Therefore, beginning in 2011 and annually thereafter, it was assumed that air carrier departures will continue on a twice weekly schedule until 2020, when a third weekly flight would be added.
- **Available seats per departure** – Allegiant Air initiated service at the Airport in June 2010 using 150-seat MD-80 aircraft and planned to increase the capacity of their aircraft to 166 seats beginning in

2012. It was assumed that this air carrier seating capacity would be maintained throughout the planning period.

- **Load factor** – Load factor is the percentage of ticketed passengers on a commercial airline flight divided by the number of available seats. Based on data for June through August 2010, the load factor for air carrier flights was approximately 80.2 percent, a percentage that was assumed to be maintained through 2010. Assuming a constant flight schedule, local/regional economic drivers and forecast industry trends suggest that load factors should gradually increase over time.

  For 2011, the air carrier load factor was assumed to increase to 81.0 percent, with average increases of approximately 1.0 percent per year thereafter. Under this assumption, the load factor would increase to approximately 90.0 percent by 2020. With a load factor around 90 percent, it was assumed that a third weekly air carrier flight would be initiated in 2020 to accommodate the increasing demand. When a third weekly flight is added, it was assumed that demand would support an average load factor of 80.0 percent in 2020, which would continue to increase at a rate averaging approximately 1.0 percent per year.

Table 3-3 presents the air carrier enplaned passenger forecasts for the Airport trough the planning period. As shown, air carrier enplaned passengers are forecast to increase 22.2 percent from 2010 to 2014. This growth accounts for the increase from essentially a half year of air carrier service in 2010 to a full year of air carrier service beginning in 2011, as well as the expected increase in air carrier aircraft seating capacity in 2012.

Table 3-3 Air Carrier Enplaned Passenger Forecasts

YEAR	DEPARTURES	AVERAGE SEATS PER DEPARTURE	LOAD FACTOR	ENPLANED PASSENGERS
Forecast				
2014	104	166.0	84.0%	14,500
2019	104	166.0	89.0%	15,400
2024	156	166.0	84.0%	21,800
2029	156	166.0	89.0%	23,000
Compounded Annual Growth Rate				
2010 – 2014				22.2%
2014 – 2019				1.2%
2019 – 2024				7.2%
2024 – 2029				1.1%
2010 – 2029				6.9%
2011 – 2029				3.4%

Notes: Air carrier service at TWF was initiated in June 2010.

SOURCES: Official Airline Guides, Inc. and Ricondo & Associates, Inc., October 2010, based on Airport records for June 2010 through August 2010.
PREPARED BY: Ricondo & Associates, Inc., November 2010.

Between 2019 and 2024, air carrier enplaned passengers are forecast to increase an average of 7.2 percent per year, from approximately 15,400 in 2019 to 21,800 in 2024, primarily as a result of the addition of a third weekly air carrier aircraft flight beginning in 2020. By the end of the planning period, air carrier enplaned passengers are forecast to number approximately 23,000.

Table 3-4 presents a comparison of the air carrier enplaned passenger forecasts for the Airport with the FAA 2009 TAF of air carrier enplaned passengers for the State of Idaho and the United States as a whole. The FAA forecasts reflect the anticipated traffic growth in the nation and individual states during the next 20 years.

Table 3-4 Air Carrier Enplaned Passenger Forecast Comparison

YEAR	TWF	STATE OF IDAHO	UNITED STATES
Forecast			
2014	14,500	894,016	609,009,357
2019	15,400	1,061,275	699,368,873
2024	21,800	1,260,280	800,427,152
2029	23,000	1,497,076	916,360,109
Compounded Annual Growth Rate			
2010 – 2014	22.2%	3.5%	3.3%
2014 – 2019	1.2%	3.5%	2.8%
2019 – 2024	7.2%	3.5%	2.7%
2024 – 2029	1.1%	3.5%	2.7%
2010 – 2029	6.9%	3.5%	2.9%
2011 – 2029	3.4%	3.5%	2.8%

SOURCES: Federal Aviation Administration, *Terminal Area Forecast, Fiscals Years 2009-2030* (U.S. and Idaho air carrier enplaned passengers); Ricondo &Associates, Inc., October 2010 (TWF air carrier enplaned passengers, based on Airport records for June 2010 through August 2010).
PREPARED BY: Ricondo & Associates, Inc., November 2010.

The number of air carrier enplaned passengers at the Airport from 2011 (the first full year of air carrier service) through 2029 is forecast to increase an average of 3.4 percent per year. This growth is higher than forecast growth for air carrier enplaned passengers in the United States as a whole during the same period (averaging 2.8 percent per year), but slightly lower than the forecast growth for air carrier enplaned passengers in the State of Idaho during the same period (averaging 3.5 percent per year).

3.3.2 REGIONAL/COMMUTER ENPLANED PASSENGER FORECAST

All historical enplaned passengers at the Airport were enplaned by regional/commuter airlines trough 2009. An established record of historical data allows the use of more common techniques for forecasting regional/commuter enplaned passengers at the Airport. The methodologies considered in developing the forecasts include regression analysis, trend analysis, and market share analysis.

3.3.2.1 Socioeconomic Regression and Linear Trend Analysis

Regression analysis was used to compare relationships between various socioeconomic variables for the Airport Service Area and aviation activity. A mathematical regression model was developed to correlate past relationships of these variables to the Airport's regional/commuter enplaned passengers. This model was then used to forecast the future relationship using the independent projections of the economic/demographic variables. The independent socioeconomic variables used in the regression analysis included population, personal income per capita, and employment. Historical and projected socioeconomic data used in this analysis were presented in Section 2 and are summarized in **Table 3-5** below.

Table 3-5 Socioeconomic Regression Variables

	SOCIOECONOMIC DATA FOR THE AIRPORT SERVICE AREA[1/]		
YEAR	POPULATION	PERSONAL INCOME PER CAPITA [2/]	EMPLOYMENT
Historical			
2000	162,609	$24,665	102,444
2004	167,262	$30,087	105,540
2009	179,994	$34,095	112,912
Forecast			
2014	189,417	$40,211	120,307
2019	199,196	$49,653	126,977
2024	209,161	$62,393	134,058
2029	219,232	$79,213	141,573

Notes:

1/ The Airport Service Areaincludes the counties of Blaine, Camas, Cassia, Gooding, Jerome, Lincoln, Minidoka, and Twin Falls.

2/ Personal income per capita is in current dollars.

SOURCES: U.S. Department of Commerce, Bureau of the Census (historical population); Woods & Poole Economics, Inc., October 2010 (historical and projected personal income per capita and employment).

PREPARED BY: Ricondo & Associates, Inc., November 2010.

A linear trend analysis was undertaken in addition to the socioeconomic regression analyses. The linear trend analysis was used to examine the historical growth in enplaned passengers and then to produce a linear formula that best described the Airport's historical activity by a straight line. The resulting straight line represents the "best fit," whereby an equal number of historical data observations are both above and below the trend line. This line is then extended outward to provide a forecast of enplaned passengers.

The results of the regression analyses are presented in **Table 3-6** and described as follows:

- **Population regression** – Airport Service Area population is projected to increase an average of 1.0 percent per year between 2009 and 2029. Using population as the basis for the regression analysis,

the number of regional/commuter enplaned passengers is forecast to decrease from 25,337 in 2009 to 12,897 in 2029, representing an average decrease of 3.3 percent per year.

- **Personal income percapitaregression** – Personal income per capita is projected to increase an average of 4.3 percent per year between 2009 and 2029. Using per capita income as the basis for the regression analysis, the number of regional/commuter enplaned passengers is forecast to decrease from 25,337 in 2009 to 10,417 in 2029, representing an average decrease of 4.3 percent per year.
- **Employment regression** – Airport Service Area employment is projected to increase an average of 1.1 percent per year between 2009 and 2029. Using employment as the basis for the regression analysis, the number of regional/commuter enplaned passengers is forecast to decrease from 25,337 in 2009 to 21,474 in 2029, representing an average decrease of 0.8 percent per year.
- **Linear trend analysis** – Linear trend analysis results in the number of regional/commuter enplaned passengers decreasing from 25,337 in 2009 to 15,851 in 2029, representing an average decrease of 2.3 percent per year.

Table 3-6 Summary of Regression and Trend Analyses

	REGIONAL/COMMUTER ENPLANED PASSENGERS				
		FORECAST PASSENGERS BASED ON REGRESSION VARIABLES			
YEAR	HISTORICAL ENPLANED PASSENGERS	POPULATION	PERSONAL INCOME PER CAPITA	EMPLOYMENT	FORECAST BASED ON LINEAR TREND
Historical					
1999	34,010				
2009	25,337				
Forecast					
2014		24,129	27,589	28,193	25,493
2019		20,445	23,432	26,086	22,279
2029		12,897	10,417	21,474	15,851
R-Square		0.50	0.34	0.39	0.44
Compounded Annual Growth Rate					
2009 - 2029		-3.3%	-4.3%	-0.8%	-2.3%

SOURCE: Ricondo & Associates, Inc., October 2010, based on information obtained from the City of Twin Falls, Airport Department; the U.S. Department of Commerce, Bureau of the Census; and Woods & Poole Economics, Inc.

PREPARED BY: Ricondo & Associates, Inc., November 2010.

The correlation coefficient (R-Square) is a statistical measure showing the relationship between changes in the values of the independent variables to changes in the values of the dependent variable. A perfect correlation of 1.0 would mean that each change in the value of the independent variable would translate into a change of equal magnitude in the dependent variable. In the case of an R-Square value of 1.0, movement in the

independent variable is an excellent predictor of movement in the dependent variable. In statistical analysis, the closer the R-Square value is to 1.0, the higher the confidence that changes in the independent variables would produce predicted changes in the dependent variable.

Overall, the regression methodology resulted in very low correlations between the independent socioeconomic variables and the dependent variable, the number of regional/commuter enplaned passengers. This is a common result for small airports served by only one or two airlines because of the pronounced effect of even small variations in passenger demand or airline seat supply on numbers of enplaned passengers. The population regression model resulted in the highest correlation, with an R-Square value of 0.50. The lowest correlation in the regression model was personal income per capita, with an R-Square value of 0.34. As a result of the historical decline in the number of regional/commuter enplaned passengers, the regression results show that the socioeconomic variables of the Airport Service Area may not have a significant effect on numbers of regional/commuter enplaned passengers.

3.3.2.2 Market Share Analysis

As the regression analyses resulted in low correlations, a market share analysis was used to examine the Airport's historical shares of total U.S. enplaned passengers to determine the historical relationship between the Airport's passenger traffic and total U.S. passenger traffic, and to derive forecasts of regional/commuter enplaned passengers through the planning period. The U.S. forecast provides a basis for understanding how airline traffic in general is anticipated to increase in the future. The U.S. forecast is based on factors such as the nation's economic health, aviation industry trends, jet fuel prices, and trends in passenger yields.

The total U.S. regional/commuter enplaned passenger forecast contained in the FAA TAF was used as the basis for the market share analysis. In the absence of significant local influences, activity at an airport would be expected to increase at a rate comparable to the national rate.

Table 3-7 presents historical and forecast numbers of regional/commuter enplaned passengers at the Airport and in the United States, as well as associated market shares. As shown, the Airport's share of U.S. regional/commuter enplaned passengers decreased from 0.048 percent in 1999 to 0.017 percent in 2009.

Based on published historical enplaned passenger data through August 2010 and published OAG schedules through the first quarter of 2011, the Airport's share of total U.S. regional/commuter enplaned passengers is forecast to remain at 0.017 percent in 2010 and to decrease to 0.016 percent in 2011. For forecasting purposes, it was assumed that the Airport's share of total U.S. regional/commuter enplaned passengers would be 0.016 percent throughout the remainder of the planning period.

The number of regional/commuter enplaned passengers at the Airport is forecast to increase an average of 2.5 percent per year, from 25,337 in 2009 to 41,800 in 2029. Between 2009 and 2014, the forecast growth rate for regional/commuter enplaned passengers is lower than the corresponding growth forecast by the FAA for the United States, reflecting the assumption that regional/commuter passenger demand at the Airport will experience a period of adjustment during the first two years of air carrier service. Growth in numbers of regional/commuter enplaned passengers at the Airport is forecast to generally be in line with the FAA's forecast for U.S. regional/commuter enplaned passengers throughout the remainder of the planning period.

Table 3-7 Historical and Forecast Regional/Commuter Enplaned Passengers

	REGIONAL/COMMUTER ENPLANED PASSENGERS				
YEAR	TWF	UNITED STATES[1/]	TWF SHARE OF U.S. ENPLANED PASSENGERS	TWF CHANGE	U.S. CHANGE
Historical					
1999	34,010	70,759,080	0.048%	-	-
2000	34,409	75,336,202	0.046%	1.2%	6.5%
2001	32,833	80,328,254	0.041%	-4.6%	6.6%
2002	31,794	86,923,406	0.037%	-3.2%	8.2%
2003	30,352	105,623,966	0.029%	-4.5%	21.5%
2004	34,966	126,269,471	0.028%	15.2%	19.5%
2005	35,644	147,096,219	0.024%	1.9%	16.5%
2006	30,973	151,842,609	0.020%	-13.1%	3.2%
2007	32,141	154,621,228	0.021%	3.8%	1.8%
2008	29,082	155,698,035	0.019%	-9.5%	0.7%
2009	25,337	149,761,471	0.017%	-12.9%	-3.8%
Forecast					
2014	27,700	172,842,344	0.016%		
2019	31,800	199,694,970	0.016%		
2024	36,500	230,347,412	0.016%		
2029	41,800	266,281,459	0.016%		
Compounded Annual Growth Rate					
1999 – 2009	-2.9%	7.8%			
2009 – 2014	1.8%	2.9%			
2014 – 2019	2.8%	2.9%			
2019 – 2024	2.8%	2.9%			
2024 – 2029	2.7%	2.9%			
2009 – 2029	2.5%	2.9%			

Note:

1/ In Federal Aviation Administration, *Terminal Area Forecast, Fiscal Years 2009-2030*, 2009 is a forecast year. U.S. regional/commuter enplaned passengers for 2009 (from the TAF) are shown in this table as historical for presentation purposes.

SOURCES: City of Twin Falls, Airport Department (historical TWF enplaned passengers); Federal Aviation Administration, *Terminal Area Forecast, Fiscal Years 2009-2030* (U.S. enplaned passengers); Ricondo & Associates, Inc., October 2010 (TWF enplaned passenger forecasts).

PREPARED BY: Ricondo & Associates, Inc., November 2010.

The regional/commuter enplaned passenger forecast for the Airport was also compared with the FAA's corresponding forecast for the State of Idaho. Between 2009 and 2029, the FAA forecasts that the numbers of

regional/commuter enplaned passengers at Idaho airports will increase an average of 3.3 percent per year, higher than the 2.5 percent per year forecast growth for the Airport over the same period. This growth differential seems reasonable given the forecast growth in numbers of regional/commuter enplaned passengers at other Idaho airports; particularly Boise Airport.

3.3.3 ENPLANED PASSENGER FORECAST SUMMARY AND COMPARISON TO TAF

In accordance with the methodologies and assumptions described in previous sections, **Table 3-8** presents the combined baseline enplaned passenger forecasts for purposes of the Master Plan Update.

The total number of enplaned passengers is forecast to increase an average of 10.7 percent per year from 25,337 in 2009 to approximately 42,200 in 2014, primarily as a result of the initiation of twice weekly air carrier service in June 2010. Overall, average demand growth of 2.3 percent per year is forecast from 2014 to 2019. The addition of a third weekly air carrier flight in 2020 is forecast to contribute to an increase in total enplaned passengers from approximately 47,200 in 2019 to approximately 58,300 in 2024, representing an average increase of 4.3 percent per year. By the end of the planning period, enplaned passengers are forecast to number approximately 64,800, representing an average increase of 4.8 percent per year from 2009 through 2029. A compounded annual growth rate of 3.0 percent is forecast from 2011 (the first full year of air carrier service) through 2029.

Historically, regional/commuter enplaned passengers represented 100.0 percent of total enplaned passengers at the Airport. Over the planning period, regional/commuter enplaned passengers are forecast to continue to represent the largest share of enplaned passengers at TWF. The regional/commuter enplaned passenger share of the total is forecast to decrease from 100.0 percent in 2009 to 64.5 percent in 2029.

Table 3-9 presents a comparison of Master Plan Update forecasts of enplaned passengers and the FAA TAF. In this Master Plan Update, the total number of enplaned passengers is forecast to increase an average of 4.8 percent per year over the 20-year planning period. This growth rate is higher than that forecast in the FAA TAF, which forecasts an average increase in enplaned passengers of 2.7 percent per year over the same period. After full-year air carrier service in 2011, the resulting average growth rate of 3.0 percent per year from 2011 to 2029 is more comparable to the FAA TAF growth of 2.7 percent.

Over the planning period, the higher forecast compounded annual growth rate for total enplaned passengers is primarily a result of new air carrier service, which is not forecast in the FAA TAF. Excluding air carrier enplaned passengers, the forecast compounded annual growth rate of 2.5 percent for regional/commuter enplaned passengers over the planning period is slightly lower than the FAA TAF.

Table 3-8 Historical and Baseline Forecast Total Enplaned Passengers

	AIR CARRIER		REGIONAL/COMMUTER		
YEAR	ENPLANED PASSENGERS	% OF TOTAL ENPLANED PASSENGERS	ENPLANED PASSENGERS	% OF TOTAL ENPLANED PASSENGERS	TOTAL ENPLANED PASSENGERS
Historical					
1999	-	-	34,010	100.0%	34,010
2000	-	-	34,409	100.0%	34,409
2001	-	-	32,833	100.0%	32,833
2002	-	-	31,794	100.0%	31,794
2003	-	-	30,352	100.0%	30,352
2004	-	-	34,966	100.0%	34,966
2005	-	-	35,644	100.0%	35,644
2006	-	-	30,973	100.0%	30,973
2007	-	-	32,141	100.0%	32,141
2008	-	-	29,082	100.0%	29,082
2009	-	-	25,337	100.0%	25,337
Forecast					
2014	14,500	34.4%	27,700	65.6%	42,200
2019	15,400	32.6%	31,800	67.4%	47,200
2024	21,800	37.4%	36,500	62.6%	58,300
2029	23,000	35.5%	41,800	64.5%	64,800
Compounded Annual Growth Rate					
1999 – 2009	-		-2.9%		-2.9%
2009 – 2014	-		1.8%		10.7%
2014 – 2019	1.2%		2.8%		2.3%
2019 – 2024	7.2%		2.8%		4.3%
2024 – 2029	1.1%		2.7%		2.1%
2009 – 2029	-		2.5%		4.8%
2010 – 2029	6.9%		2.7%		3.8%
2011 – 2029[1/]	3.4%		2.8%		3.0%

Note:

1/ 2011 represents the first full year of air carrier airline service.

SOURCE: Ricondo & Associates, Inc., October 2010, based on information obtained from the City of Twin Falls, Airport Department; Official Airline Guides, Inc.; and Federal Aviation Administration, *Terminal Area Forecast, Fiscal Years 2009-2030*.

PREPARED BY: Ricondo & Associates, Inc., November 2010.

Table 3-9 Enplaned Passenger Forecasts and Comparison to FAA TAF

	MASTER PLAN UPDATE FORECAST				
YEAR	AIR CARRIER	REGIONAL/ COMMUTER	TOTAL	FAA TAF[1/]	COMPARISON OF MASTER PLAN UPDATE FORECAST TO FAA TAF
Historical					
2009	-	25,337	25,337	27,013	-6.2%
Forecast					
2014	14,500	27,700	42,200	30,929	36.4%
2019	15,400	31,800	47,200	35,417	33.3%
2024	21,800	36,500	58,300	40,556	43.8%
2029	23,000	41,800	64,800	46,442	39.5%
Compounded Annual Growth Rate					
2009 – 2014	-	1.8%	10.7%	2.7%	
2014 – 2019	1.2%	2.8%	2.3%	2.7%	
2019 – 2024	7.2%	2.8%	4.3%	2.7%	
2024 – 2029	1.1%	2.7%	2.1%	2.7%	
2009 – 2029	-	2.5%	4.8%	2.7%	
2011 – 2029[2/]	3.4%	2.8%	3.0%	2.7%	

Note:

1/ In Federal Aviation Administration, *Terminal Area Forecast, Fiscal Years 2009-2030* (TAF), 2009 is a forecast year. U.S. regional/commuter enplaned passengers for 2009 (from the TAF) are shown in this table as historical for presentation purposes.

2/ 2011 represents the first full year of air carrier airline service.

SOURCE: Ricondo & Associates, Inc., October 2010, based on information obtained from the City of Twin Falls, Airport Department; Official Airline Guides, Inc.; and Federal Aviation Administration, *Terminal Area Forecast, Fiscal Years 2009-2030*.

PREPARED BY: Ricondo & Associates, Inc., November 2010.

3.3.4 ALTERNATIVE ENPLANED PASSENGER FORECAST SCENARIOS

In addition to the baseline enplaned passenger forecasts, alternative enplaned passenger forecast scenarios were developed to account for potential changes in air service patterns that could emerge during the planning period. The resulting high and low growth forecast scenarios are shown in **Table 3-10**.

The following points highlight the key assumptions used to forecast total enplaned passengers under the high growth scenario for the Airport:

- As the air carrier airline generates additional traffic (through lower fares, advertising, and establishing a market presence), load factors for the airline are forecast to increase, prompting one additional weekly flight every 5 years beginning in 2013.

- As a result of increased demand, the number of regional/commuter enplaned passengers will increase throughout the planning period, resulting in service expansion.

Table 3-10 Enplaned Passenger Forecasts – High and Low Growth Scenarios

	HIGH GROWTH SCENARIO			LOW GROWTH SCENARIO		
YEAR	AIR CARRIER	REGIONAL/ COMMUTER	TOTAL	AIR CARRIER	REGIONAL/ COMMUTER	TOTAL
Historical						
2004	-	34,966	34,966	-	34,966	34,966
2005	-	35,644	35,644	-	35,644	35,644
2006	-	30,973	30,973	-	30,973	30,973
2007	-	32,141	32,141	-	32,141	32,141
2008	-	29,082	29,082	-	29,082	29,082
2009	-	25,337	25,337	-	25,337	25,337
Forecast						
2014	21,100	28,700	49,800	-	27,900	27,900
2019	29,300	35,100	64,400	-	32,300	32,300
2024	37,300	42,900	80,200	-	37,400	37,400
2029	45,800	52,600	98,400	-	43,400	43,400
Compounded Annual Growth Rate						
2004 – 2009	-	-6.2%	-6.2%	-	-6.2%	-6.2%
2009 – 2014	-	2.5%	14.5%	-	1.9%	1.9%
2014 – 2019	6.8%	4.1%	5.3%	-	3.0%	3.0%
2019 – 2024	4.9%	4.1%	4.5%		3.0%	3.0%
2019 – 2029	4.2%	4.1%	4.3%	-	3.0%	3.0%
2009 – 2029	-	3.7%	7.0%	-	2.7%	2.7%

SOURCES: Ricondo & Associates, Inc., October 2010, based on information obtained from the City of Twin Falls, Airport Department; Official Airline Guides, Inc.; and Federal Aviation Administration, *Terminal Area Forecast, Fiscal Years 2009-2030*.

PREPARED BY: Ricondo & Associates, Inc., November 2010.

Under the high growth scenario, air carrier enplaned passengers are forecast to number approximately 45,800 by 2029. Between 2009 and 2029, regional/commuter enplaned passengers are forecast to number approximately 52,600, representing an average increase of 3.7 percent per year. Total enplaned passengers are forecast to increase from 25,337 in 2009 to approximately 98,400 in 2029. This increase represents a compound annual growth rate of 7.0 percent.

Under the low growth scenario, air carrier operations would terminate in mid-2012, 2 years after the initiation of service. The number of regional/commuter enplaned passengers is forecast to increase from 25,337 in 2009 to approximately 43,400 in 2029, representing an average increase of 2.7 percent per year.

A comparison of the baseline, high growth, and low growth Master Plan Update enplaned passenger forecast scenarios and the FAA TAF forecasts for U.S. airports is illustrated on **Exhibit 3-1**.

3.4 Air Cargo Forecasts

All air cargo at the Airport is currently carried by the all-cargo airlines, including Ameriflight (operating as FedEx, UPS, and DHL), Corporate Air (operating as FedEx), and Western Air Express. **Table 3-11** presents the Airport's historical and forecast enplaned and deplaned cargo weight.

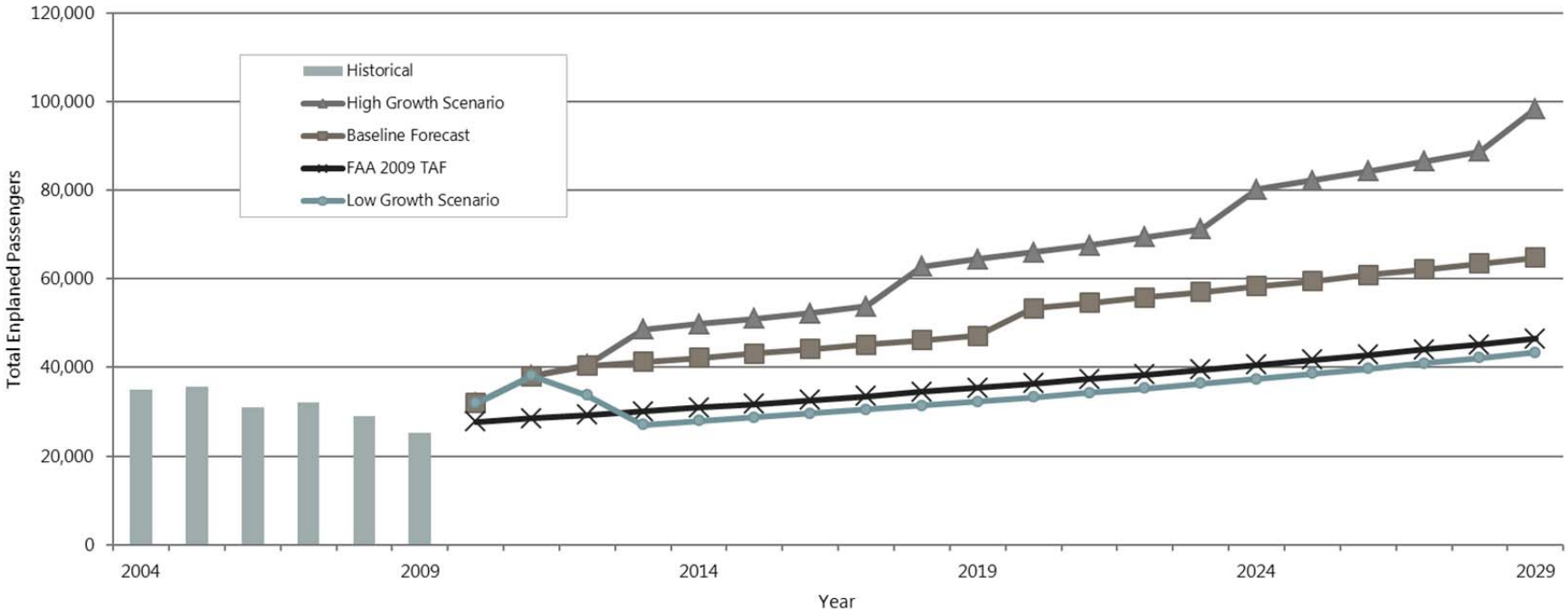
Economic activity is the primary driver of air cargo growth and historical air cargo trends at the Airport have generally followed global and national trends. Total (enplaned and deplaned) air cargo at the Airport decreased an average of 5.3 percent per year from 1999 to 2009. Over the same period, the North American air cargo market (United States and Canada) decreased an average of 2.5 percent per year.[3] Air cargo weight at the Airport decreased steadily following the events of September 11, 2001, and the associated recession before recovering in 2006 and 2007. In 2008 and 2009, the global and North American economies experienced the most severe downturn since the Great Depression and, during that 2-year period, the U.S. domestic air cargo market declined a total of 20.5 percent.[4] Historical cargo weight at the Airport correspondingly decreased approximately 20 percent during the 2-year period. Recent trends indicate growth in air cargo weight at the Airport. Between 2004 and 2009, total air cargo at TWF increased from approximately 1.8 million pounds to approximately 2.0 million pounds, representing an average increase of 2.2 percent per year. In addition, based on data for the first 9 months of 2010, total air cargo at the Airport is forecast to increase more than 4.0 percent in 2010, reflecting the recovery forecast in the global and national economy.

Rapid fluctuations in the U.S. economy as well as significant world events make forecasting air cargo difficult. To derive a reasonable forecast of air cargo weight at the Airport, two industry forecasts were reviewed. The Boeing Co.'s *World Air Cargo Forecast 2010-2011* forecast an increase in the North American air cargo market, averaging 3.0 percent per year from 2009 to 2029. According to the *FAA Aerospace Forecast, Fiscal Years 2010-2030*, U.S. all-cargo aircraft activity is forecast to increase an average of 2.4 percent per year over the same period.

[3] The Boeing Company, *World Air Cargo Forecast 2010-2011*.

[4] *Ibid*.

Exhibit 3-1 Historical and Forecast Enplaned Passengers – Comparisonand Scenarios



Note: Forecast enplaned passengers for 2010 are based on 8 months of actual data.

SOURCES: City of Twin Falls, Airport Department (historical), Federal Aviation Administration, *Terminal Area Forecast, Fiscal Years 2009-2030*, Ricondo & Associates, Inc., October 2010 (forecast).
PREPARED BY: Ricondo & Associates, Inc., November 2010.

Table 3-11 Historical and Forecast Air Cargo Weight

YEAR	ENPLANED CARGO (POUNDS)	DEPLANED CARGO (POUNDS)	TOTAL CARGO (POUNDS)	GROWTH RATE (TOTAL CARGO WEIGHT)
Historical				
1999	1,265,940	2,161,984	3,427,924	-
2000	1,250,849	2,209,656	3,460,505	1.0%
2001	979,841	1,701,504	2,681,345	-22.5%
2002	953,984	1,777,894	2,731,878	1.9%
2003	735,319	1,616,300	2,351,619	-13.9%
2004	535,873	1,241,474	1,777,347	-24.4%
2005	326,081	879,699	1,205,780	-32.2%
2006	619,192	1,742,825	2,362,017	95.9%
2007	683,604	1,757,825	2,441,429	3.4%
2008	608,973	1,448,999	2,057,972	-15.7%
2009	597,703	1,380,454	1,978,157	-3.9%
Forecast				
2014	732,600	1,559,200	2,291,800	
2019	806,600	1,774,700	2,581,300	
2024	880,600	1,990,200	2,870,800	
2029	954,600	2,206,200	3,160,800	
Compounded Annual Growth Rate				
1999 – 2009	-7.2%	-4.4%	-5.3%	
2004 – 2009	2.2%	2.1%	2.2%	
2009 – 2014	4.2%	2.5%	3.0%	
2014 – 2019	1.9%	2.6%	2.4%	
2019 – 2024	1.8%	2.3%	2.1%	
2024 – 2029	1.6%	2.1%	1.9%	
2009 – 2029	2.4%	2.4%	2.4%	

SOURCES: City of Twin Falls, Airport Department (historical); Ricondo & Associates, Inc., October 2010 (forecast).
PREPARED BY: Ricondo & Associates, Inc., November 2010.

For purposes of forecasting air cargo weight for the Airport, an average growth rate of 2.4 percent per year was assumed for 2009 through 2029, consistent with the *FAA Aerospace Forecast* for all-cargo activity. The FAA forecast is based on assumptions specific to the cargo industry, including (1) security restrictions on air cargo transportation will remain in place, (2) the modal shift from air to ground transportation has occurred, and (3) long-term cargo activity will be tied to economic growth. Total air cargo weight for the Airport is

forecast to increase from approximately 2.0 million pounds in 2009 to approximately 3.2 million pounds in 2029.

3.5 Aircraft Operations Forecasts and Fleet Mix Projections

This section presents forecasts of aircraft operations for air carrier and regional/commuter passenger airlines, all-cargo, air taxi, general aviation, and military activity at the Airport, along with the projected fleet mix for each category. The based aircraft fleet mix is also discussed.

3.5.1 AIR CARRIER AIRCRAFT OPERATIONS AND FLEET MIX

The forecasts of air carrier aircraft operations at the Airport were developed using the air carrier enplaned passenger forecasts presented in Section 3.3.1, which include forecasts of aircraft departures. Total air carrier aircraft departures were forecast based on published OAG schedules, assuming that twice weekly flights will continue until 2020 when a third weekly flight would be added to accommodate increasing load factors (as previously described). **Table 3-12** presents the forecasts of operations by the air carrier airlines serving the Airport. As shown, air carrier aircraft operations are forecast to increase to approximately 312 in 2029 at an average of 5.7 percent per year from 2010, or at an average of 2.3 percent per year from 2011, the first full year of air carrier service at TWF.

Table 3-12 Air Carrier Aircraft Operations Forecast

YEAR	AIRCRAFT DEPARTURES	AIRCRAFT OPERATIONS
Historical		
2004 – 2009	-	-
Forecast		
2014	104	208
2019	104	208
2024	156	312
2029	156	312
Compounded Annual Growth Rate		
2010 – 2014		17.8%
2014 – 2019		0.0%
2019 – 2024		8.4%
2024 – 2029		0.0%
2010 – 2029		5.7%

SOURCES: Official Airline Guides, Inc. and Ricondo & Associates, Inc., October 2010.
PREPARED BY: Ricondo & Associates, Inc., November 2010.

The fleet mix projections for air carrier aircraft at the Airport are presented in **Table 3-13**. Air carrier service was initiated at the Airport in June 2010 using MD-80 aircraft. Overall, the air carrier aircraft fleet mix is not projected to change over the planning period. As shown in Table 3-13, air carrier operations were conducted by a mix of aircraft in 2009. These operations are primarily attributable to unscheduled operations (diversions, etc.) and are not forecast over the planning period.

Table 3-13 Forecast Air Carrier Aircraft Operations by Projected Fleet Mix

	ANNUAL AIRCRAFT OPERATIONS				
AIRCRAFT [1/]	ACTUAL 2009 [2/]	2014	2019	2024	2029
B-737-800	2	-	-	-	-
CRJ 700	1	-	-	-	-
CRJ 900	3	-	-	-	-
MD-80	2	104	104	156	156
Total	8	104	104	156	156

Notes:

1/ Denotes actual aircraft or physical equivalent.

2/ No scheduled air carrier service was provided at TWF in 2009. Departures and associated aircraft types reported for 2009 reflect unscheduled operations, such as diversions.

SOURCES: U.S. Department of Transportation T-100 database, Federal Aviation Administration Air Traffic Activity Data System (ATADS), and FAA Enhanced Traffic Management System Counts (ETMSC) (historical); Ricondo & Associates, Inc., October 2010 (forecast).

PREPARED BY: Ricondo & Associates, Inc., October 2010.

3.5.2 REGIONAL/COMMUTER AIRCRAFT OPERATIONS AND FLEET MIX

Historical and forecast regional/commuter aircraft operations are presented in **Table 3-14**. Between 2004 and 2009, regional/commuter aircraft operations decreased an average of 7.3 percent per year, as a result of a number of factors described earlier in Section 3.3. Over this period, the 30-seat EMB-120 Brasilia turboprop aircraft was used for all scheduled regional/commuter airline service at the Airport.

As shown in Table 3-14, the number of average seats per departure between 2004 and 2009 was generally higher than 30, primarily because of diverted aircraft with greater seating capacity.[5] Historical load factors for the Airport's regional/commuter airline aircraft operations have generally increased, ranging from a low of 42.3 percent in 2006 to a high of 52.4 percent in 2009.

The methodology used to develop forecasts of regional/commuter aircraft operations was based on determining how many annual departures would be needed to accommodate forecast regional/commuter enplaned passengers while maintaining a reasonable load factor throughout the planning period.

[5] In 2009, 99.1 percent of regional/commuter aircraft operations were conducted using aircraft with 30 seats (EMB-120) compared with 0.9 percent of operations (unscheduled/diversions) conducted using regional/commuter aircraft with 50 seats.

Table 3-14 Historical and Forecast Regional/Commuter Aircraft Operations

YEAR	ENPLANED PASSENGERS	AVERAGE SEATS	LOAD FACTOR	AIRCRAFT DEPARTURES	AIRCRAFT OPERATIONS	OPERATIONS GROWTH RATE
Historical						
2004	34,966	33.5	44.5%	2,344	4,688	-
2005	35,644	31.2	43.7%	2,610	5,220	11.3%
2006	30,973	31.1	42.3%	2,360	4,720	-9.6%
2007	32,141	30.1	48.5%	2,200	4,400	-6.8%
2008	29,082	30.3	52.1%	1,843	3,686	-16.2%
2009	25,337	30.2	52.4%	1,602	3,204	-13.1%
Forecast						
2014	27,700	30.0	63.2%	1,460	2,920	
2019	31,800	30.0	72.6%	1,460	2,920	
2024	36,500	35.0	71.4%	1,460	2,920	
2029	41,800	35.0	81.8%	1,460	2,920	
Compounded Annual Growth Rate						
2004 – 2009	-6.2%				-7.3%	
2009 – 2014	1.8%				-1.8%	
2014 – 2019	2.8%				0.0%	
2019 – 2024	2.8%				0.0%	
2024 – 2029	2.7%				0.0%	
2009 – 2029	2.5%				-0.5%	

Note: Historical enplaned passengers as obtained from Airport records do not include passengers associated with diverted flights. However, historical aircraft departures do include such flights. Therefore, the historical load factors presented in this table are lower than what would be reported if enplaned passengers included diverted flights or if reported aircraft departures did not include diverted flights.

SOURCES: City of Twin Falls, Airport Department (historical); Ricondo & Associates, Inc., October 2010 (forecast).
PREPARED BY: Ricondo & Associates, Inc., November 2010.

Based on operations data through August 2010 and published OAG schedules, approximately 2,920 regional/commuter aircraft operations are forecast for 2010.[6] For forecasting purposes, it was assumed that regional/commuter aircraft operations would be constant at 2,920 per year through the planning period. Under this assumption, an analysis was conducted to determine whether the resulting annual load factor would be reasonable through the planning period. In this case, for each year of the planning period, the load factor was calculated by dividing forecast numbers of enplaned passengers by the product of annual aircraft

[6] As of October 2010, the regional/commuter flight schedule was four flights per day (1,460 departures or 2,920 operations per year).

departures (1,460) and average seats per departure. The resulting load factors are forecast to increase from 52.4 percent in 2010 to 72.6 percent in 2019.

It was also assumed that capacity would increase when demand results in load factors of 75 percent or higher on a 30-seat aircraft (forecast to occur in 2020). Capacity increases can be provided in one of two ways: (1) adding seats to existing flights or (2) adding additional flights. For this Master Plan Update forecast, it was assumed that, beginning in 2020, one of the four daily departures would be operated using a 50-seat aircraft, such as a regional jet, resulting in an average of 35 seats per departure through the remainder of the planning period. The added seating capacity would lower the overall load factor in 2020 to approximately 64 percent. Load factors would continue to increase throughout the remainder of the planning period, reaching approximately 82 percent in 2029. Load factors above 85 percent are not viewed as sustainable over the long term, meaning that capacity increases may be necessary beyond the planning period.

In summary, as a result of the current and future flight schedules and forecast load factors, regional/commuter aircraft operations are forecast to remain unchanged throughout the planning period at approximately 2,920 per year.

The aircraft fleet mix projected for regional/commuter aircraft is presented in **Table 3-15**. This table integrates the previously described assumptions of growth in average numbers of seats per departure for regional/commuter airline aircraft. As previously mentioned, load factors are forecast to increase over the planning period, resulting in a need for more seat capacity. Therefore, a shift to larger aircraft for some regional/commuter airline aircraft operations is expected to begin in 2020 and continue throughout the remainder of the planning period.

Table 3-15 Forecast Regional/Commuter Aircraft Operations by Projected Fleet Mix

	ANNUAL AIRCRAFT OPERATIONS				
AIRCRAFT 1/	**ACTUAL 2009 2/**	**2014**	**2019**	**2024**	**2029**
CRJ	14	-	-	365	365
EMB-120	1,588	1,460	1,460	1,095	1,095
Total	**1,602**	**1,460**	**1,460**	**1,460**	**1,460**

Notes:

1/ Denotes actual aircraft or physical equivalent.

2/ Regional jet departures reported for 2009 reflect unscheduled operations, such as diverted flights.

SOURCES: U.S. Department of Transportation T-100 database, Federal Aviation Administration Air Traffic Activity Data System (ATADS), and FAA Enhanced Traffic Management System Counts (ETMSC) (historical); Ricondo & Associates, Inc., October 2010 (forecast).

PREPARED BY: Ricondo & Associates, Inc., October 2010.

3.5.3 ALL-CARGO AIRCRAFT OPERATIONS

Historical and forecast all-cargo aircraft operations are presented in **Table 3-16**. Between 2004 and 2009, all-cargo aircraft operations increased from 2,092 to 2,432, an average increase of 3.1 percent per year.

Table 3-16 Historical and Forecast All-Cargo Aircraft Operations

YEAR	ENPLANED CARGO (POUNDS)	ALL-CARGO AIRCRAFT DEPARTURES	AVERAGE CARGO WEIGHT PER DEPARTURE(POUNDS)	ALL CARGO AIRCRAFT OPERATIONS	OPERATIONS GROWTH RATE
Historical					
2004	535,873	1,046	512.3	2,092	-
2005	326,081	945	345.1	1,890	-9.7%
2006	619,192	1,455	425.6	2,910	54.0%
2007	683,604	1,381	495.0	2,762	-5.1%
2008	608,973	1,266	481.0	2,532	-8.3%
2009	597,703	1,216	491.5	2,432	-3.9%
Forecast					
2014	732,600	1,240	590.8	2,480	
2019	806,600	1,240	650.5	2,480	
2024	880,600	1,240	710.2	2,480	
2029	954,600	1,240	769.8	2,480	
Compounded Annual Growth Rate					
2004 – 2009	2.2%		-0.8%	3.1%	
2009 – 2014	4.2%		3.7%	0.4%	
2014 – 2019	1.9%		1.9%	0.0%	
2019 – 2024	1.8%		1.8%	0.0%	
2024 – 2029	1.6%		1.6%	0.0%	
2009 – 2029	2.4%		2.3%	0.1%	

SOURCES: City of Twin Falls, Airport Department (historical); Ricondo & Associates, Inc., October 2010 (forecast, based on actual data through August 2010).
PREPARED BY: Ricondo & Associates, Inc., November 2010.

All-cargo aircraft operations are forecast to increase to 2,480 operations in 2010 based on actual data through August 2010. Based on the forecast of enplaned cargo discussed in Section 3.4 and the type of aircraft operated by the all-cargo airlines at the Airport,[7] it is forecast that enplaned cargo will not exceed the current capacity available at the Airport over the planning period. Therefore, for purposes of the Master Plan Update forecasts, all-cargo aircraft operations are forecast to remain constant at 2,480 operations per year throughout the planning period.

[7] Aircraft types and associated cargo capacities of the aircraft operated by the all-cargo carriers at the Airport are as follows: Beech 99 (3,500 pounds); Cessna Caravan (3,500 pounds); Swearingen Merlin (5,500 pounds).

3.5.4 AIR TAXI OPERATIONS

Air taxi operations are associated with nonscheduled (for-hire) charter services or other commercial operations (i.e., aerial photography, traffic advisory services, sightseeing, etc.). Obtaining a historical count of air taxi operations from which to develop forecasts is difficult, as ATCT controllers are often unable to decipher a for-hire air taxi operation from other types of operations, such as general aviation. For forecasting purposes, a historical count of air taxi operations at the Airport was calculated as total aircraft operations at TWF, as obtained from the FAA Air Traffic Activity Data System (ATADS), less scheduled passenger aircraft operations (air carrier and regional/commuter), all-cargo aircraft operations, general aviation aircraft operations, and military aircraft operations. This separation was necessary because the FAA combines nonscheduled air taxi operations with scheduled regional/commuter operations in the TAF and ATADS.

From 2009 to 2029, air taxi operations are forecast to increase an average of 1.0 percent per year; slightly below the 1.4 percent annual growth forecast in the *FAA Aerospace Forecast*. **Table 3-17** presents historical and forecast air taxi operations atthe Airport.

Table 3-17 Historical and Forecast Air Taxi Operations

YEAR	AIR TAXI OPERATIONS
Historical	
2004	4,298
2005	4,261
2006	3,792
2007	4,273
2008	3,524
2009	3,684
Forecast	
2014	3,770
2019	4,000
2024	4,240
2029	4,510
Compounded Annual Growth Rate	
2004 – 2009	-3.0%
2009 – 2029	1.0%

SOURCES: City of Twin Falls, Airport Department; U.S. Department of Transportation T-100 database; Federal Aviation Administration Air Traffic Activity Data System (ATADS) and FAA Enhanced Traffic Management System Counts (ETMSC) (historical); Ricondo & Associates, Inc., October 2010 (forecast).

PREPARED BY: Ricondo & Associates, Inc., November 2010.

3.5.5 GENERAL AVIATION OPERATIONS AND FLEET MIX

General aviation aircraft account for the largest percentage of civil aircraft in the United States. General aviation also accounts for the majority of certified pilots in the United States. General aviation activities include the training of new pilots, sightseeing, aerial photography, law enforcement, and medical flights, as well as business, corporate, and personal travel via noncommercial aircraft.

Historical and forecast general aviation operations at the Airport are presented in **Table 3-18**. As shown, total general aviation operations decreased from 25,162 in 2004 to 22,179 in 2009, representing an average decrease of 2.5 percent per year. During the same period, the Airport's share of total U.S. general aviation operations varied between 0.028 percent and 0.031 percent.

Airport and national general aviation aircraft operations as presented in the FAA TAF, along with January through August 2010 FAA ATADS data, were used as the basis for forecasting general aviation aircraft operations at the Airport. Despite the current downturn in the U.S. economy, the FAA TAF forecasts total general aviation aircraft operations across the United States to increase an average of 0.8 percent per year between 2010 and 2029. Across all airports with an ATCT, the FAA TAF forecasts that general aviation operations will increase an average of 1.3 percent per year between 2010 and 2029.

As shown in Table 3-18, general aviation operations at the Airport are forecast to increase from 22,179 in 2009 to 34,620 in 2029, representing an average increase of 2.3 percent per year. This growth includes a significant increase in general aviation operations in 2010, when a helicopter training operator initiated helicopter flight instruction at the Airport. From 2010 to 2029, total general aviation operations at the Airport are forecast to increase an average of 1.1 percent per year, slightly higher than the 0.8 percent growth forecast for the nation and slightly lower than the 1.3 percent growth forecast for airports with an ATCT.

General aviation operations are typically divided into two subcategories: local and itinerant. Local operations are defined by the FAA as aircraft operating in the traffic pattern or within sight of the ATCT, or aircraft known to be departing or arriving from flight in the local practice areas, or aircraft executing practice instrument approaches at an airport. Local operations are often associated with training activity and flight instruction, including touch-and-go training operations. Itinerant operations are defined as all operations other than local operations.

Local general aviation operations at the Airport decreased from 2004 through 2007 followed by an increase in general aviation operations in 2008 and 2009. Itinerant general aviation operations increased from 2004 through 2007, followed by decreases in 2008 and 2009. Between 2004 and 2009, the majority of general aviation activity at the Airport consisted of itinerant operations, which represented 56.4 percent of all general aviation aircraft operations in 2009. However, with the initiation of helicopter training operations in 2010, local operations are forecast to account for approximately 54 percent of total general aviation operations in 2014. Consistent with the FAA TAF, growth in numbers of itinerant operations is forecast to outpace that of local operations over the planning period and, by 2029, the shares of local and itinerant general aviation operations at the Airport are forecast to be approximately equal.

Table 3-18 Historical and Forecast General Aviation Operations

	JOSLIN FIELD, MAGIC VALLEY REGIONAL AIRPORT						UNITED STATES		
YEAR	LOCAL[1/]	SHARE	ITNT	SHARE	TOTAL	GROWTH RATE	TOTAL [2/]	GROWTH RATE	TWF SHARE OF U.S.
Historical									
2004	9,630	38.3%	15,532	61.7%	25,162	--	83,084,771	--	0.030%
2005	8,734	34.3%	16,731	65.7%	25,465	1.2%	81,557,336	-1.8%	0.031%
2006	6,470	28.2%	16,441	71.8%	22,911	-10.0%	80,572,844	-1.2%	0.028%
2007	6,177	27.3%	16,472	72.7%	22,649	-1.1%	80,747,523	0.2%	0.028%
2008	7,707	34.9%	14,403	65.1%	22,110	-2.4%	78,225,420	-3.1%	0.028%
2009	9,670	43.6%	12,509	56.4%	22,179	0.3%	74,556,117	-4.7%	0.030%
Forecast									
2014	15,860	53.9%	13,580	46.1%	29,440	1.1%	76,499,902	0.7%	0.038%
2019	16,230	52.3%	14,810	47.7%	31,040	1.1%	79,360,047	0.7%	0.039%
2024	16,600	50.7%	16,160	49.3%	32,760	1.1%	82,441,959	0.8%	0.040%
2029	16,990	49.1%	17,630	50.9%	34,620	1.1%	85,790,952	0.8%	0.040%
CAGR									
2004 – 2009	0.1%		-4.2%		-2.5%		-2.1%		
2009 – 2014	10.4%		1.7%		5.8%		0.5%		
2014 – 2019	0.5%		1.7%		1.1%		0.7%		
2019 – 2029	0.5%		1.8%		1.1%		0.8%		
2009 – 2029	2.8%		1.7%		2.3%		0.7%		
2010 – 2029	0.5%		1.8%		1.1%		0.8%		

Notes: ITNT = itinerant operations; CAGR = compounded annual growth rate.

1/ Helicopter flight training operations began in 2010.

2/ In Federal Aviation Administration, *Terminal Area Forecast, Fiscal Years 2009-2030* (TAF), 2009 is a forecast year. U.S. general aviation operations for 2009 (from the TAF) are shown in this table as historical for presentation purposes.

SOURCES: Federal Aviation Administration Air Traffic Activity Data System (ATADS) (historical TWF operations); FAA, *Terminal Area Forecast, Fiscals Years 2009-2030* (U.S. operations); Ricondo & Associates, Inc., November 2010 (forecast TWF operations).

PREPARED BY: Ricondo & Associates, Inc., November 2010.

General aviation pilots operate a broad range of aircraft types. Sources used to derive a historical general aviation fleet mix and project a future general aviation fleet mix for the Airport included discussions with Airport and ATCT personnel, FBO fueling records, the *FAA Aerospace Forecast*, and 2010 data from the FAA Enhanced Traffic Management System Counts (ETMSC) database.

As summarized in **Table 3-19,** single-engine aircraft operations are forecast to increase an average of 0.7 percent per year from 2009 to 2029, while multi-engine aircraft operations are forecast to increase an average of 0.6 percent per year over the same period. Jet/turboprop aircraft operations are forecast to

increase an average of 1.6 percent per year over the planning period. Helicopter/other aircraft are forecast to account for the most significant increase over the planning period, averaging 31.4 percent per year. As previously described, this significant increase is the result of the initiation of helicopter training operations at TWF in 2010. From 2010 to 2029, helicopter/other aircraft operations are forecast to remain relatively stable.

The shares of single-engine and multi-engine piston aircraft operating at the Airport will likely continue to decrease while the share of corporate/business jet activity will continue to increase. Several factors support the assumption that some relative growth in the higher-end segment (i.e., business and corporate aviation) of the industry is likely to occur. These factors include both industrywide developments and local considerations, as follows:

- The number of fixed-wing turbojet aircraft in the U.S. general aviation aircraft fleet is forecast to continue growing rapidly, from 11,418 aircraft in 2009 to 25,979 aircraft in 2029 (an average increase of 4.2 percent per year).[8] This growth can be attributed, in part, to the anticipated market demand for microjets, often referred to as very light jets (VLJs). VLJs are relatively inexpensive one- or two-engine turbojet aircraft weighing 10,000 pounds or less that are certificated for single-pilot operation.
- Underlying the growth in the fixed-wing turbojet aircraft fleet is the increasing popularity of fractional, corporate, and on-demand charter flights, which are becoming practical alternatives to commercial flights because of corporate safety/security concerns and greater passenger processing times at many commercial service airports.
- On a local level, it is anticipated that weather conditions during the winter ski season will continue to draw scheduled and diverted corporate flights to the Airport with passengers destined for the Sun Valley, Idaho, a resort area.

The FAA forecasts growth in the number of aircraft in the U.S. general aviation fleet used for personal/sport flying (i.e., fixed wing, single-engine piston; experimental; and sport aircraft) to be much less robust. The number of aircraft used for personal/sport flying is expected to increase an average of 0.6 percent per year, from 175,490 aircraft in 2009 to 201,300 aircraft in 2030. This slow forecast growth can be attributed, in part, to an insignificant increase in the number of active private pilots during the planning period, from 211,619 in 2009 to 219,500 in 2030 (a compounded annual growth rate of 0.2 percent). In 2000, active private pilots numbered 251,561, approximately 40,000 more than in 2009. In contrast, the number of active commercial airline pilots is forecast to increase from 125,738 in 2009 to 133,100 in 2030 (a compounded annual growth rate of 0.5 percent). Expected increases in insurance, fuel, and maintenance costs are also expected to limit growth in this sector.[9]

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[8] Federal Aviation Administration, *Aerospace Forecasts,Fiscal Years 2010-2030*.

[9] *Ibid*.

Table 3-19 Historical and Forecast General Aviation Operations by Projected Fleet Mix

YEAR	TOTAL GA OPERATIONS	SINGLE-ENGINE	SINGLE-ENGINE SHARE	MULTI-ENGINE	MULTI-ENGINE SHARE	JET/ TURBOPROP	JET/ TURBOPROP SHARE	HELICOPTER/ OTHER	HELICOPTER/ OTHER SHARE
Historical									
2004	25,162	3,973	15.8%	4,846	19.3%	16,319	64.9%	23	0.1%
2005	25,465	3,015	11.8%	3,942	15.5%	18,496	72.6%	11	0.0%
2006	22,911	2,509	11.0%	3,578	15.6%	16,803	73.3%	21	0.1%
2007	22,649	2,792	12.3%	3,001	13.3%	16,812	74.2%	45	0.2%
2008	22,110	3,053	13.8%	2,746	12.4%	16,294	73.7%	17	0.1%
2009	22,179	3,267	14.7%	3,105	14.0%	15,783	71.2%	25	0.1%
Forecast									
2014	29,440	3,380	11.5%	3,210	10.9%	16,980	57.7%	5,880	20.0%
2019	31,040	3,490	11.2%	3,300	10.6%	18,360	59.2%	5,890	19.0%
2024	32,760	3,600	11.0%	3,390	10.3%	19,870	60.7%	5,900	18.0%
2029	34,620	3,720	10.7%	3,490	10.1%	21,520	62.2%	5,900	17.0%
Compounded Annual Growth Rate									
2004 – 2009	-2.5%	-3.8%		-8.5%		-0.7%		1.7%	
2009 – 2014	5.8%	0.7%		0.7%		1.5%		198.0%	
2014 – 2019	1.1%	0.6%		0.6%		1.6%		0.0%	
2019 – 2029	1.1%	0.6%		0.6%		1.6%		0.0%	
2009 – 2029	2.3%	0.7%		0.6%		1.6%		31.4%	

Note: Shares may not total 100 percent due to rounding.

SOURCES: Federal Aviation Administration Air Traffic Activity Data System (ATADS), FAA Enhanced Traffic Management System Counts (ETMSC) (historical); Ricondo & Associates, Inc., November 2010 (forecast).
PREPARED BY: Ricondo & Associates, Inc., November 2010.

3.5.6 BASED AIRCRAFT AND FLEET MIX

Table 3-20 presents historical and forecast based aircraft at the Airport. Typically, the number of based aircraft at an airport is dependent on the local demand for aircraft storage facilities, the amenities provided at the airport, and the capacity of other airports in the vicinity with comparable facilities. As shown in the table, the number of based aircraft at the Airport has historically fluctuated a small amount, increasing from 104 in 2004 to 108 in 2009.

Table 3-20 Historical and Forecast Based Aircraft

YEAR	FAA TERMINAL AREA FORECAST [1/]	MASTER PLAN UPDATE FORECAST[2/]	TOTAL U.S. ACTIVE GENERAL AVIATION AIRCRAFT	TWF SHARE OF U.S. BASED AIRCRAFT
Historical				
2004	104	104	219,319	0.047%
2005	104	93	224,350	0.041%
2006	105	105	221,939	0.047%
2007	105	105	231,606	0.045%
2008	108	108	228,668	0.047%
2009	108	108	229,149	0.047%
Forecast				
2014	108	110	237,577	0.047%
2019	108	114	247,206	0.047%
2024	108	122	259,812	0.047%
2029	108	128	275,210	0.047%
Compounded Annual Growth Rate				
2004 – 2009		0.8%		
2009 – 2014		0.4%		
2014 – 2019		0.7%		
2019 – 2024		1.4%		
2024 – 2029		1.1%		
2009 – 2029		0.9%		

Note:

1/ In Federal Aviation Administration, *Terminal Area Forecast, Fiscal Years 2009-2030* (TAF), 2009 is a forecast year. U.S. active general aviation based aircraft for 2009 (from the TAF) are shown in this table as historical for presentation purposes.

2/ Historical based aircraft obtained from the City of Twin Falls, Airport Department.

SOURCES: City of Twin Falls, Airport Department and Federal Aviation Administration, *Terminal Area Forecast, Fiscals Years 2009-2030* (historical TWF based aircraft); *FAA Aerospace Forecast, Fiscal Years 2010-2030* (U.S. active general aviation aircraft); Ricondo & Associates, Inc., November 2010 (TWF based aircraft forecast).

PREPARED BY: Ricondo & Associates, Inc., November 2010.

The FAA TAF forecasts based aircraft at the Airport to remain constant at 108 through the planning period. For purposes of this Master Plan Update, an alternative projection of based aircraft was developed. The methodology used to project based aircraft was to examine the percentage of U.S. active general aviation aircraft based at the Airport. Airport records show 107 based aircraft in 2010; with that information and using information from the *FAA Aerospace Forecast*, based aircraft at the Airport in 2010 represented approximately 0.047% of active general aviation aircraft in the United States. This share is representative of the Airport's average based aircraft share of U.S. active general aviation aircraft in most years from 2004 through 2009 and was used to forecast based aircraft at the Airport throughout the planning period. As shown in Table 3-20, the number of based aircraft at the Airport is forecast to increase from 108 in 2009 to 128 in 2029, representing an average increase of 0.9 percent per year.

Table 3-21 shows the based aircraft fleet mix at the Airport by aircraft type. In 2009, single-engine aircraft accounted for 83.3 percent of the Airport's based aircraft; multi-engine aircraft (including piston and turboprop aircraft) accounted for 9.3 percent; jet aircraft accounted for 1.9 percent; and helicopters/other aircraft types accounted for 5.6 percent. The Airport's based aircraft fleet mix was projected by examining historical trends, as well as national data for based general aviation aircraft.

As shown in Table 3-21, based single-engine aircraft are projected to increase an average of 0.7 percent per year between 2009 and 2029, while based multi-engine aircraft are projected to increase 1.7 percent per year over the same period. Based jet aircraft at TWF are projected to increase from two in 2009 to three in 2029 at an average increase of 2.0 percent per year. Based helicopters are projected to increase from six in 2009 to seven in 2029 at an average increase of 0.8 percent per year.

3.5.7 MILITARY AIRCRAFT OPERATIONS

The Airport is not a significant base for military operations. The number of military aircraft operations fluctuated between 2004 and 2009, reaching a peak of 3,107 operations in 2005 and decreasing to 1,909 operations in 2009. Assessing future military activity is difficult, because this sector relies heavily on each year's budget and the status of events on a regional or worldwide basis, such as military conflicts that may occur. Therefore, both the FAA TAF and *FAA Aerospace Forecast* were reviewed in preparing the military aircraft operations forecasts. Forecasts of military operations for the nation in the FAA TAF and the *FAA Aerospace Forecast* remain constant over the planning period.

Based on 8 months of 2010 FAA ATADS data, it is forecast that military operations at the Airport will decrease from 1,909 operations in 2009 to 1,660 operations in 2010. From 2010 through 2029, military operations are held constant, which is comparable to the approach used in the FAA TAF and *FAA Aerospace Forecast*. **Table 3-22** summarizes the military aircraft operations forecasts based on available FAA ATADS data. As shown, the shares of local operations (approximately 62.0 percent) and itinerant operations (approximately 38.0 percent) are held constant throughout the planning period.

Table 3-21 Historical and Projected Based Aircraft Fleet Mix

YEAR	SINGLE-ENGINE	SHARE	MULTI-ENGINE	MULTI-ENGINE SHARE	JET	JET SHARE	HELICOPTER/ OTHER	HELICOPTER/ OTHER SHARE	TOTAL BASED AIRCRAFT
Historical									
2004	92	88.5%	10	9.6%	0	0.0%	2	1.9%	104
2005	80	86.0%	7	7.5%	2	2.2%	4	4.3%	93
2006	90	85.7%	10	9.5%	1	1.0%	4	3.8%	105
2007	90	85.7%	10	9.5%	1	1.0%	4	3.8%	105
2008	90	83.3%	10	9.3%	2	1.9%	6	5.6%	108
2009	90	83.3%	10	9.3%	2	1.9%	6	5.6%	108
Projected									
2014	92	83.3%	10	9.3%	2	1.9%	6	5.6%	110
2019	96	83.6%	10	9.1%	2	1.8%	6	5.5%	114
2024	100	82.5%	12	9.9%	3	2.2%	7	5.4%	122
2029	104	81.4%	14	10.6%	3	2.7%	7	5.3%	128
Compounded Annual Growth Rate									
2004 - 2009	-0.4%		0.0%		-		24.6%		0.8%
2009 - 2014	0.4%		0.0%		0.0%		0.0%		0.4%
2014 - 2019	0.9%		0.0%		0.0%		0.0%		0.7%
2019 – 2029	0.8%		3.4%		4.1%		1.6%		1.2%
2009 - 2029	0.7%		1.7%		2.0%		0.8%		0.9%

Note: Shares may not total 100 percent due to rounding.

SOURCES: Federal Aviation Administration Air Traffic Activity Data System (ATADS) and Enhanced Traffic Management System Counts (ETMSC) (historical); Ricondo & Associates, Inc., November 2010 (forecast).
PREPARED BY: Ricondo & Associates, Inc., November 2010.

Table 3-22 Historical and Forecast Military Aircraft Operations

YEAR	LOCAL OPERATIONS	SHARE	ITINERANT OPERATIONS	SHARE	TOTAL
Historical					
2004	670	51.6%	628	48.4%	1,298
2005	1,830	58.9%	1,277	41.1%	3,107
2006	1,650	59.8%	1,109	40.2%	2,759
2007	1,240	58.4%	883	41.6%	2,123
2008	1,329	57.3%	989	42.7%	2,318
2009	1,238	64.9%	671	35.1%	1,909
Forecast					
2014	1,030	62.0%	630	38.0%	1,660
2019	1,030	62.0%	630	38.0%	1,660
2024	1,030	62.0%	630	38.0%	1,660
2029	1,030	62.0%	630	38.0%	1,660
Compounded Annual Growth Rate					
2004 – 2009	13.1%		1.3%		8.0%
2009 – 2014	-3.6%		-1.3%		-2.8%
2014 – 2019	0.0%		0.0%		0.0%
2019 – 2024	0.0%		0.0%		0.0%
2024 – 2029	0.0%		0.0%		0.0%
2009 – 2029	-0.9%		-0.3%		-0.7%

SOURCES: Federal Aviation Administration Air Traffic Activity Data System (ATADS) (historical); Ricondo & Associates, Inc., October 2010 (forecast).
PREPARED BY: Ricondo & Associates, Inc., November 2010.

3.5.8 AIRCRAFT OPERATIONS FORECAST SUMMARY AND COMPARISON TO TAF

Table 3-23 summarizes the Master Plan Update forecast of total aircraft operations with the FAA TAF forecast of total aircraft operations. As shown, air carrier and regional/commuter aircraft operations are forecast to remain approximately stable through the planning period. Total aircraft operations at the Airport are forecast to increase from 33,424 in 2009 to 46,500 in 2029, representing anaverage increase of 1.7 percent per year. As shown, the most significant growth is forecast to be in the general aviation/air taxi operations category. As previously described, this growth can be attributed to the helicopter training operations that began at the Airport in 2010, which are not included in the FAA TAF. In consideration of these operations, the compounded annual growth rate for total Airport operations from 2010 to 2029 is forecast at 0.9 percent, the same as in the FAA TAF.

Table 3-23 Aircraft Operations Forecasts and Comparison to FAA TAF

	MASTER PLAN UPDATE OPERATIONS FORECAST						
YEAR	AIR CARRIER AND REGIONAL/ COMMUTER	ALL CARGO	GENERAL AVIATION AND AIR TAXI	MILITARY	TOTAL	FAA TAF[1/]	COMPARISON OF MASTER PLAN UPDATE FORECAST TO FAA TAF
Historical							
2009	3,220	2,432	25,863	1,909	33,424	31,743	5.3%
Forecast							
2014	3,128	2,480	33,210	1,660	40,478	33,149	22.1%
2019	3,128	2,480	35,040	1,660	42,308	34,590	22.3%
2024	3,232	2,480	37,000	1,660	44,372	36,115	22.9%
2029	3,232	2,480	39,130	1,660	46,502	37,721	23.3%
Compounded Annual Growth Rate							
2009 - 2014	-0.6%	0.4%	5.1%	-2.8%	3.9%	0.9%	
2014 - 2019	0.0%	0.0%	1.1%	0.0%	0.9%	0.9%	
2019 - 2024	0.7%	0.0%	1.1%	0.0%	1.0%	0.9%	
2024 - 2029	0.3%	0.0%	1.1%	0.0%	0.9%	0.9%	
2009 - 2029	0.0%	0.1%	2.1%	-0.7%	1.7%	0.9%	
2010 - 2029	0.3%	0.0%	1.1%	0.0%	0.9%	0.9%	

Note:

1/ In Federal Aviation Administration, *Terminal Area Forecast, Fiscal Years 2009-2030* (TAF), 2009 is a forecast year. FAA TAF aircraft operations for 2009 are shown in this table as historical for presentation purposes.

SOURCES: U.S. Department of Transportation T-100 database, Federal Aviation Administration Air Traffic Activity Data System (ATADS) and Enhanced Traffic Management System Counts (ETMSC) (historical); FAA *Terminal Area Forecast*, *Fiscal Years 2009-2030* and Ricondo & Associates, Inc., November 2010 (forecast).

PREPARED BY: Ricondo & Associates, Inc., November 2010.

3.6 Enplaned Passengers and Aircraft Operations Peaking Activity

The forecasts presented throughout Section 3 were developed as annual activity levels, which may not adequately describe the requirements for individual Airport facilities. Annual metrics provide average demand levels over the course of an entire year, although most airports experience peak periods during which demand far surpasses those averages. Therefore, master plan forecasts must include peak period activity levels for facilities planning purposes.

Peak operational activity, such as peak month and peak month, average day operations are typically used in airport facilities planning to determine the facilities needed to accommodate forecast demand and for sizing of facilities. To that end, a number of different peaking analyses can be conducted. For example, annual

aircraft operations should be considered in evaluating airfield facilities and infrastructure while only those operations associated with commercial passenger airlines need to be considered in passenger terminal facilities planning. Peaking analyses also need to include enplaned passenger forecasts to adequately plan, size, and design passenger terminal facilities. Commercial service airports experience peaks in both passenger airline aircraft operations and enplaned passengers. Therefore, each of these peaking elements must be evaluated separately because peaks in airline aircraft operations define the demand for airside facilities (gates, ramp, remote parking areas), while peak numbers of enplaned passengers directly affect terminal and landside facilities planning, such as roads and parking facilities.

3.6.1 PEAK MONTH ENPLANED PASSENGERS

Historical monthly enplaned passenger data for 2004 through 2009 were reviewed to identify the peak month for passenger activity at the Airport. As shown in **Table 3-24**, over this period, the peak month varied year to year. Because no individual month consistently represented the peak month, the peak month percentages of annual enplaned passengers in each historical year were averaged to determine an appropriate peaking factor. After excluding the January 2008 dataset (based on conversations with Airport staff indicating that the data point was an anomaly), an average of 9.6 percent was calculated based on the remaining 4 years of data. This share was assumed to be constant for determining future peak month activity at the Airport. Therefore, for planning purposes, the peak month enplaned passengers for any given year may be calculated as 9.6 percent of total annual enplaned passengers in that year. **Table 3-25** summarizes the peaking profiles for enplaned passengers at the Airport.

Table 3-24 Historical Peak Month Enplaned Passengers

YEAR	ANNUAL ENPLANED PASSENGERS	PEAK MONTH	ENPLANED PASSENGERS IN THE PEAK MONTH	PEAK MONTH PERCENTAGE OF ANNUALENPLANED PASSENGERS
2005	35,644	November	3,132	8.8%
2006	30,973	March	2,979	9.6%
2007	32,141	May	3,468	10.8%
2008	29,082	January	4,088	14.1%
2009	25,337	August	2,295	9.1%

SOURCE: City of Twin Falls, Airport Department, October 2010.
PREPARED BY: Ricondo & Associates, Inc., November 2010.

3.6.2 PEAK MONTH AIRCRAFT OPERATIONS

The FAA's ATADS data for 2004 through 2009 were used as the basis for determining existing and future peaking profiles for aircraft operations. As inferred from **Table 3-26**, the peak month for total aircraft operations is August. Averaging the three August data points for peak month percentages of annual operations yields a factor of 11.8 percent. This factor was applied to total annual operations in a given forecast year to determine a peak month number of operations.

Table 3-25 Peaking Profile – Enplaned Passengers

	ENPLANED PASSENGERS				
PEAKING PROFILE	**ACTUAL 2009**	**2014**	**2019**	**2024**	**2029**
Annual					
Air carrier	--	14,500	15,400	21,800	23,000
Regional/commuter	25,337	27,700	31,800	36,500	41,800
Total	**25,337**	**42,200**	**47,200**	**58,300**	**64,800**
Peak Month					
Air carrier	--	1,390	1,470	2,080	2,200
Regional/commuter	2,295	2,650	3,040	3,500	4,000
Total	**2,295**	**4,040**	**4,510**	**5,580**	**6,200**
Peak Month, Average Day					
Air carrier	--	154	163	160	169
Regional/commuter	77	88	101	117	133
Total	**77**	**243**	**264**	**277**	**303**

SOURCES: City of Twin Falls, Airport Department and Ricondo & Associates, Inc., November 2010.
PREPARED BY: Ricondo & Associates, Inc., November 2010.

Table 3-26 Historical Peak Month Operations

YEAR	ANNUAL OPERATIONS	PEAK MONTH	OPERATIONS IN THE PEAK MONTH	PEAK MONTH PERCENTAGE OF ANNUALOPERATIONS
2005	39,963	July	4,396	11.0%
2006	37,106	August	4,747	12.8%
2007	36,225	July	4,529	12.5%
2008	34,192	August	4,092	12.0%
2009	33,424	August	3,584	10.7%

SOURCE: Federal Aviation Administration Air Traffic Activity Data System (ATADS), October 2010.
PREPARED BY: Ricondo & Associates, Inc., November 2010.

Peak month average day data for regional/commuter, general aviation, all-cargo, and military aircraft operations were derived by dividing the peak month operations by 31 days. Air carrier operations were based on the forecast operation of twice weekly service through 2019, with the addition of a third weekly operation starting in 2020, as discussed earlier. **Table 3-27** summarizes the peaking profile for aircraft operations at the Airport.

Table 3-27 Peaking Profile – Aircraft Operations

	AIRCRAFT OPERATIONS				
PEAKING PROFILE	**ACTUAL 2009**	**2014**	**2019**	**2024**	**2029**
Annual					
Air carrier and regional/commuter	3,220	3,130	3,130	3,230	3,230
All-cargo	2,432	2,480	2,480	2,480	2,480
General aviation/air taxi	25,863	33,210	35,040	37,000	39,130
Military	1,909	1,660	1,660	1,660	1,660
Total	**33,424**	**40,480**	**42,310**	**44,370**	**46,500**
Peak Month					
Air carrier and regional/commuter	248	369	369	381	381
All-cargo	214	293	293	293	293
General aviation/air taxi	2,863	3,918	4,134	4,365	4,616
Military	259	196	196	196	196
Total	**3,584**	**4,776**	**4,992**	**5,235**	**5,486**
Peak Month Average Day					
Air carrier and regional/commuter	8	10	10	12	12
All-cargo	7	9	9	9	9
General aviation/air taxi	92	126	133	141	149
Military	8	6	6	6	6
Total	**115**	**152**	**158**	**168**	**176**

Note: Columns may not sum to totals due to rounding.

SOURCE: Federal Aviation Administration Air Traffic Activity Data System (ATADS), October 2010.
PREPARED BY: Ricondo & Associates, Inc., November 2010.