

CHAPTER 3 AVIATION FORECASTS

This chapter presents forecasts of passenger, based aircraft, aircraft operations, and related aviation activity for the Southwest Oregon Regional Airport (the Airport). The objective of this chapter is to identify the long-term trends for the types and levels of aviation activity that trigger the need for airport facility expansion or improvement.

Included in this forecast chapter is a long-term projection of airport activity through the year 2030. The FAA Terminal Area Forecast (TAF) is the aviation industry standard source of future scheduled commercial passenger volumes, aircraft operations, and based aircraft. Subsequently, the TAF will be used as the base forecast. An alternative forecast of higher passenger traffic growth (provided within) will provide a variation for facility planning purposes.

The alternative passenger scenario is valuable to recognize the extreme volatility present in the airline industry, as well as the competitiveness and potential of the Airport's local market. Historical records indicate the Airport has previously served higher volumes of passengers. Therefore, the potential for a greater number of enplanements is recognized. There are always critical concerns of any aviation forecast such as possible airline consolidation, higher fuel prices, new environmental regulations, and shifts in airline service patterns. These could cause continued variations in activity levels; therefore, periodic update of the forecast is recommended.

This chapter is necessary not only for all subsequent analysis in the Master Plan, but also is essential to update the Airport's aviation activity projections based on the most recent changes in regional air service and airline operational policy. Other aviation industry issues will also be considered in this analysis.

This chapter is organized into sections, as follows:

- Regional Base for Aviation Activity
- Historical Passenger Activity
- Factors Influencing Passenger Air Service
- Historical Air Cargo
- Passenger Forecast
- Aircraft Operations Forecast
- Design Aircraft Identification
- Based Aircraft Forecast
- Summary and FAA Comparison of Forecast

It should be noted that the forecast is intended to be used for long-term planning purposes to address overall operational and developmental trends. It will be presented in five-year increments. Individual forecast years are of lesser importance in this type of study. That is, the long-term trend is more indicative than individual years where sharp variations are possible.

3.1 THE REGIONAL BASE FOR AVIATION ACTIVITY

This section identifies the geographic area served by the Airport and that region’s characteristics influencing aviation demand. It is known that air passengers come from outside the region and local residents utilize other airports. However, this regional analysis provides a basis for identifying and understanding the Airport’s service area and its ability to support aviation activity.

3.1.1 Identification of the Air Trade Area and Population

The *Coos Bay, Oregon Primary Census Statistical Area* defines the primary Air Trade Area. This Air Trade Area consists of Coos County, whose major cities are North Bend and Coos Bay. In 2010, the population for Coos County was 63,043. The City of North Bend had 9,985 residents, while the City of Coos Bay had 15,967 residents in 2010 (Woods and Poole Economics, 2011¹).

Highway 101 is the Oregon Coast Highway and provides the main access to the Airport from the Pacific Ocean side of Coos, Curry, and Douglas counties. The Airport is located adjacent to this highway. A map of the primary and secondary Air Trade Areas, as well as major highways, is shown on Figure 3-1.

Figure 3-1
AIR TRADE AREA



Sources: Oregon Department of Transportation and RS&H, 2012.

¹ Woods and Poole Economics is an FAA-recognized source for socioeconomic data to use in developing airport planning forecasts.

3.1.2 Air Trade Area Demographic and Economic Conditions

This section identifies the key demographic characteristics and key sources of employment of the Air Trade Area (Coos County). The Air Trade Area’s population, employment, and per capita income are presented with comparable information for the entire United States and the State of Oregon.

3.1.2.1 Population Growth

Historically, the rate of population growth in Coos County has been less than that of the United States or the State of Oregon. County population is expected to continue to grow at a slower rate than the United States or the State of Oregon, as projected by Woods and Poole Economics. The slow historical local population growth rate results from cutbacks of the regional fishing and lumber industry. It is important to note that the State of Oregon has grown slightly faster than the United States as a whole and is projected to continue to grow at a slightly faster rate. The historical and projected population comparison of the United States, State of Oregon, and Coos County (Air Trade Area) is shown in Table 3-1.

Table 3-1
COMPARISON OF HISTORICAL & PROJECTED POPULATION

Area	Population			Average Annual Growth Rate	
	1970	2010	2030	1970-2010	2010-2030
United States	203,982,313	309,772,212	373,547,887	1.0%	0.9%
Oregon	2,102,966	3,850,659	4,741,074	1.5%	1.0%
Coos County	56,958	63,264	67,906	0.3%	0.4%

Source: Woods and Poole Economics, 2011.

It should also be noted that the 2010 Coos County population of 63,264 total residents is estimated to increase to 67,906 persons by 2030 (Woods and Poole Economics). This is a 7.3 percent total growth of population within the 20-year period.

3.1.2.2 Per Capita Personal Income

Per Capita Personal Income (PCPI) in Oregon and Coos County were less than the United States average in 1970 and 2010, with an average growth rate of 1.7 percent. Projections for 2030 show the State and Coos County will remain slightly below the U.S. average. Note that all these amounts are based on constant year 2005 dollars for comparative purposes, as presented in Table 3-2.

Table 3-2
COMPARISON OF PER CAPITA PERSONAL INCOME PROJECTIONS

Area	Average PCPI (2005 Dollars)			Average Annual Growth Rate	
	1970	2010	2030	1970-2010	2010-2030
United States	\$17,234	\$35,838	\$46,189	1.8%	1.3%
Oregon	\$16,566	\$32,634	\$41,263	1.7%	1.2%
Coos County	\$15,000	\$29,294	\$38,892	1.7%	1.4%

Source: Woods and Poole Economics, 2011.

3.1.2.3 Employment Growth Rate

Between 1970 and 2010, the United States and Oregon saw relatively strong employment growth rates of 1.6 and 2.2 percent respectively. In contrast, Coos County grew at an average 0.8 percent annual growth rate during the 40-year period. According to the Woods & Poole analysis, the rate of employment growth is expected to exceed one percent annually for the United States and Oregon with the Coos County growth rate slightly behind at one percent. This is consistent with the historic trend during 1970-2010. The comparison of historical and projected total employment, and average annual growth rates of area employment are presented in Table 3-3.

Table 3-3
COMPARISON OF HISTORICAL & PROJECTED TOTAL EMPLOYMENT

Area	Total Employment			Average Annual Growth Rate	
	1970	2010	2030	1970-2010	2010-2030
United States	91,277,633	172,097,709	218,592,539	1.6%	1.2%
Oregon	925,936	2,203,706	2,805,734	2.2%	1.2%
Coos County	22,756	31,591	38,433	0.8%	1.0%

Source: Woods and Poole Economics, 2011.

3.1.2.4 Major Employers and Other Economic Indicators

The economy of Coos County and the southwestern Oregon coast was originally based upon logging and fishing. The Port of Coos Bay, for example, was the largest U.S. shipping point for forest products until 2005, when the loading of raw logs was halted. However, lumber and logging remains a major local industry. Today, tourism and other service industries have supplemented the traditional industries. In recent years, tourism has become more important with golfing, sport fishing, casinos, and beach activities. Further, Oregon has attracted more second homes purchases and retirees relocating, largely from California.

The largest employers in Coos County are the Bay Area Hospital (over 1,000 employees), The Mill Casino (over 550 employees), Affiliated Computer Services (over 500 employees), and Bandon Dunes Golf Resort (over 500 employees). Bandon Dunes Golf Resort, which opened in 1999, is located in Bandon, Oregon. Situated on coastal property about 25 miles south of the airport, Bandon Dunes Golf Resort is a self-contained, golf facility with lodging, restaurants, and shops, four golf courses. Bandon Dunes has attracted notable amateur golf tournaments over the years

and continues to add events. A new golf course within the resort is expected to open in 2012 further enhancing the experience and ability to accommodate additional rounds.

According to internal documentation provided to this study by Bandon Dunes Golf Resort, rounds of golf played during 2004 to 2008 increased on average by approximately 5.6 percent annually. This documentation also indicated that spending on resort property increased on average by 14.5 percent annually between 2004 and 2008, of which over one-third of resort spending had a direct impact into the local economy. On a related note, growth in passenger activity at Southwest Oregon Regional Airport sustained an average 5.6 percent annual increase that began in 1990 and continued until the departure of Horizon Air in October 2008. The growth of Bandon Dunes Golf Resort alone is an indicator of continued growth in the Air Trade Area and very likely a key reason for the growth in passenger activity between 1990 and 2008.

3.2 HISTORICAL PASSENGER ACTIVITY

This section identifies the historical passenger enplanement activity at Southwest Oregon Regional Airport. Scheduled commercial service began at OTH in 1982, with Horizon Air providing air service to Portland International Airport utilizing Dash 8 turboprop aircraft. United Airlines, operated by United Express/SkyWest, began scheduled service on a 30-seat Embraer EMB-120 to San Francisco International Airport (SFO) in July, 2008, which provided passengers a choice between the Alaska Airlines network (through Horizon Air), and the Star Alliance network through United. However, air service provided by two air carriers ended abruptly, as Horizon Air discontinued air service at OTH in October 2008. During the same month, United/SkyWest added flights to PDX to continue northbound service from OTH. In June 2009, United/SkyWest started additional northbound service to Seattle-Tacoma International Airport (SEA) until December 2010. Following the *Final Environmental Assessment and Finding of No Significant Impact* study (published May 2011) for the initiation of turbojet service at OTH, the Airport's first jet service was introduced, utilizing a 50-seat Bombardier CRJ-200 to San Francisco International Airport during the summer season (June to September 2011). Further, in January 2012, SeaPort Airlines initiated service to Portland International Airport on a nine-seat Pilatus PC-12 turboprop aircraft.

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It should be noted that 2008 featured several significant events that affected the passenger trends at OTH. United Airlines (SkyWest) initiated service to OTH, giving passengers a choice of airlines and destinations for the first time. Shortly after that, the Coos County Aviation District commissioned the new terminal building. The third event was the discontinuance of service by Horizon Air, which created a significant loss of available seats to the Portland market and connections into the Alaska Airlines system. Thus, while the period leading up to 2008 shows sustained growth in passenger enplanements, the loss of Horizon Air service can be assumed to be a singular event rather than a trend. Thus, the period leading up to 2008 shows rapid growth in passenger enplanements, the loss of Horizon Air service can be assumed to be a singular event rather than a trend.

3.2.1 Annual Enplaned Passenger Activity

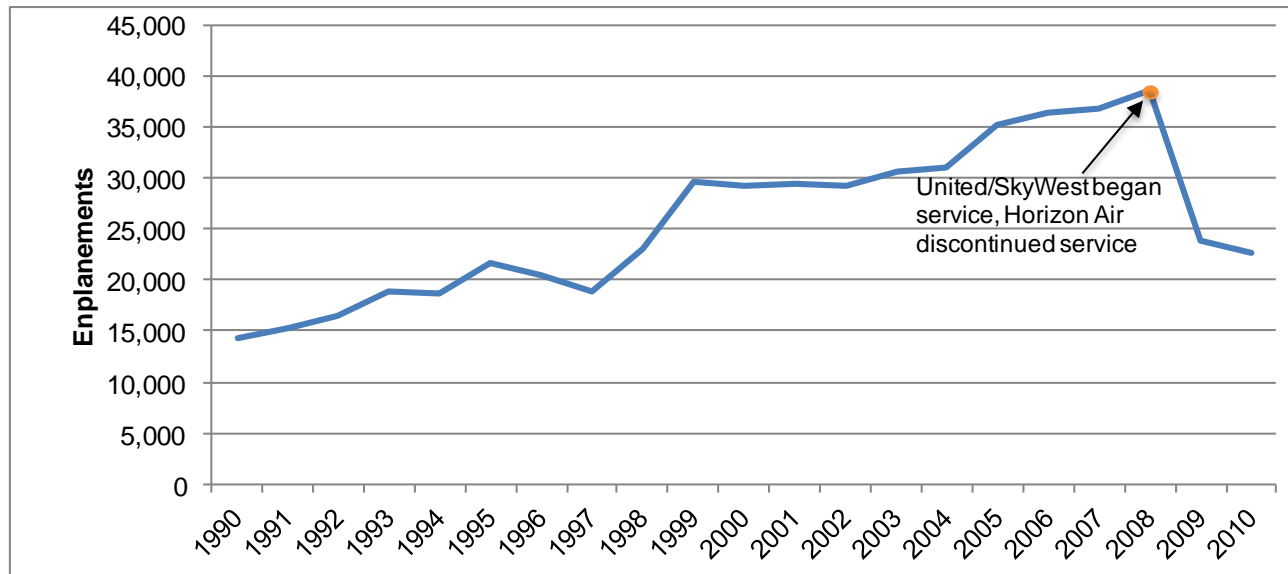
Based on the FAA Terminal Area Forecast (TAF), published January 2012, passenger enplanements during 1990 to 2000 at Southwest Oregon Regional Airport grew from 14,377 to 29,130, which is an average annual growth of 7.3 percent. The total number of enplaned passengers between 1990 and 2010 grew to 22,585 in 2010, an average annual passenger growth rate of 2.3 percent. Looking specifically at the period between 1990 and the end of Horizon Air's

service at OTH, passenger enplanements grew rapidly from 14,377 in 1990 to 38,568 in 2008. The average annual growth rate was 5.6 percent during this 18-year period, presenting a sustained strong increase in annual enplaned passenger volume. After Horizon Air ended service in 2008, enplanements dropped by 38 percent to 23,775 in 2009. Although United/SkyWest maintained northbound (PDX and SEA) and southbound (SFO) markets in 2009 and 2010, passenger enplanements in 2010 slightly decreased to 22,585 total passenger enplanements, which is an overall 41 percent decrease from 2008. Addressing a specific anomaly, however, the historic progressive growth during 1990 to 2008 is an indicator of the market strength and latent demand for northbound service.

The decrease between 2008 and 2010 in air passenger enplanements is most likely due to the departure of Horizon Air, whose last local flight was on October 11, 2008. As a result, passengers heading to Seattle or into the Sky Team Alliance system were forced to drive to an alternate airport or switch carriers, until United/SkyWest added flights to Seattle in June 2009.

Figure 3-2 graphically depicts the historical enplanements at Southwest Oregon Regional Airport between 1990 to 2010, according to the FAA TAF. Figure 3-2 also shows the totals historical enplanements totals and average annual growth rates of the five-year and 10-year intervals of the 20-year period, as well as the 18-year period from 1990 to 2008.

Figure 3-2
HISTORICAL ENPLANEMENTS (FY 1990-2010)



Fiscal Year	Historical Enplanements
1990	14,377
1995	21,733
2000	29,130
2005	35,235
2008	38,568
2010	22,585

Average Annual Growth Rate	
1990-2000	7.3%
1990-2008	5.6%
1990-2010	2.3%
2000-2008	3.6%
2000-2010	-2.5%

Sources: FAA TAF (January 2012), RS&H Analysis, 2012.

3.2.2 Monthly and Other Seasonal Trends

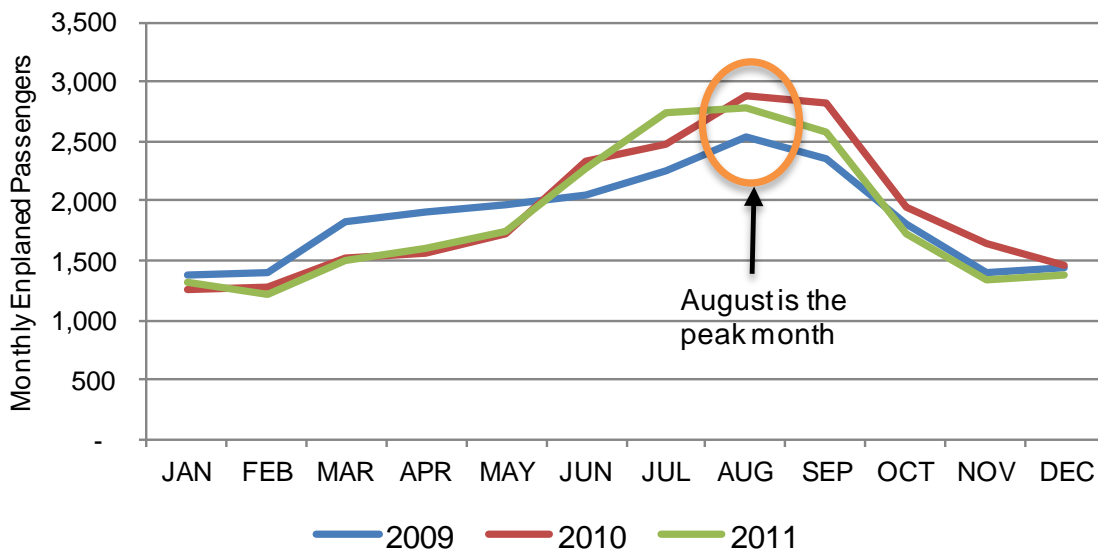
The scheduled air carrier monthly passenger enplanement activity at Southwest Oregon Regional Airport is like most other U.S. airports with a mid-summer peak and relatively less traffic during the other seasons. Based on the most recent three years of historical scheduled airline data for United/SkyWest, obtained from the Bureau of Transportation Statistics (2009-2010) and airport records (2011), the historical monthly trend shows that relatively little change between each year. January and February show fewer enplanements than the other months. Traffic grows steadily thereafter, peaking in August, which is also the peak month for national passenger enplanements,

most likely due to vacation travel. Total United/SkyWest enplanements in August 2009 was 2,539, 2,891 in 2010, and 2,774 in 2011. Although the 2011 summer season introduced jet service with an additional flight to San Francisco on a 50-seat CRJ-200, only two markets were being served (PDX and SFO), as opposed to three markets in 2009 and 2010 (SEA, PDX, and SFO).

However, much of this summer peak activity at OTH could be attributed to the peak season at Bandon Dunes Golf Resort, which also experiences peak activity in the spring and summer and lower activity in the colder, wetter months.

These recent historical trends in passenger air travel from OTH show a gradual decrease between September and October, and a continued decline from October to December. The lowest month for passenger enplanements was January in 2009 and 2010, and February in 2011. Therefore, the Airport may be identified as a “typical” market with stronger summer traffic. It should be noted that August has approximately twice the passengers of the lowest month. The monthly passenger traffic for the past three years appears in Figure 3-3. This exhibit indicates the mid-summer peak of air travel.

Figure 3-3
MONTHLY ENPLANED PASSENGERS



Sources: Bureau of Transportation Statistics, Research and Innovative Technology Administration (RITA) Air Carriers: T-100 Domestic Market for 2009 and 2010 SkyWest enplanement data. Airport records for 2011 SkyWest (revenue) enplanement data.

3.2.3 Airlines Providing Service

United Airlines, operated by SkyWest Airlines, is the Airport’s only current major scheduled passenger airline. SkyWest provides scheduled daily service on a 30-seat Embraer E-120 Brasilia turboprop aircraft to/from Portland International Airport (PDX) and San Francisco International Airport (SFO). United/SkyWest service to PDX is expected to discontinue in mid-February 2012.

SeaPort Airlines started new scheduled air service at Southwest Oregon Regional Airport on January 15, 2012, with three flights per week (two weekday flights, one Sunday flight) to/from Portland. These flights are on nine-seat, turboprop Cessna Caravan aircraft.

Historically, Horizon Air was the principal carrier with flights to Portland and Seattle. As previously discussed, their last flight was October 11, 2008. Other scheduled and charter carriers have served the market in the past.

3.2.4 Flight Schedule

United’s flights serve their western hub in San Francisco, as well as Portland. The February 2012 flight schedule for the Airport is shown in Table 3-4.

Table 3-4
SCHEDULED PASSENGER AIRLINES DEPARTURES, FEBRUARY 2012

Airline	Route	Departure/Arrival	Aircraft
United (SkyWest)	North Bend to San Francisco	8:47 am to 10:43 am	EMB-120
United (SkyWest)	North Bend to San Francisco	1:51 pm to 3:41 pm	EMB-120
United (SkyWest)*	North Bend to Portland	8:20 pm to 9:44 pm	EMB-120
SeaPort Airlines	North Bend to Portland	6:15 am to 7:25 am	PC-12
SeaPort Airlines	North Bend to Portland	5:00 pm to 6:10 pm**	PC-12
SeaPort Airlines	North Bend to Portland	1:30 pm to 2:40 pm	PC-12

Sources: United Airlines, SeaPort Airlines, 2011

*Scheduled route will discontinue (mid) February 2012. ** Sundays only

3.3 SIGNIFICANT FACTORS INFLUENCING PASSENGER AIR SERVICE

This section identifies the most significant factors expected to influence regional air service demand. Competition among airports and airlines results in a situation where regional passengers have multiple choices for travel.

3.3.1 Location and Other Characteristics of Regional Airports

Within the State of Oregon, Southwest Oregon Regional Airport has a smaller number of passengers compared to what the FAA National Plan of Integrated Airports (NPIAS) classifies as “Medium Hub” at Portland and “Small Hub” at Eugene. However, the Airport serves a unique Air Trade Area, for many reasons, which include the Oregon International Port of Coos Bay, which is the largest deep-draft shipping harbor between Puget Sound, Washington and San Francisco, California, located to the north and west of the Airport. Further, the diverse coastal terrain within the Air Trade Area consists of rolling sand dunes, dense coastal forest, and sandy beaches. The characteristics of the terrain provide the ideal setting for unique tourist destinations, such as Bandon Dunes Golf Resort and the Oregon National Dunes Recreation Area. Lastly, Southwest Oregon Regional Airport is located relatively far from other commercial service airports and is the only commercial service airport on the Oregon Coast.

The 2010 FAA classified Primary airports (greater than 10,000 annual enplanements) in Oregon are shown in Table 3-5.

Table 3-5
LARGEST OREGON COMMERCIAL SERVICE PASSENGER AIRPORTS 2010

Airport Name	City	Classification	Enplanements
Portland International	Portland	Medium Hub	6,582,227
Mahlon Sweet Field	Eugene	Small Hub	369,397
Rogue Valley International	Medford	Non-Hub	310,824
Roberts Field	Redmond	Non-Hub	226,400
Southwest Oregon Regional	North Bend	Non-Hub	23,124
Klamath Falls	Klamath Falls	Non-Hub	21,353

Source: FAA, June 2011

The Oregon Department of Aviation’s 2007 Oregon System Plan airports are graphically represented in Figure 3-4 with the “Primary” commercial service facilities shown on bold type.

Figure 3-4
2010 OREGON PRIMARY COMMERCIAL SERVICE AIRPORTS



Sources: FAA NPIAS, Oregon Department of Aviation System Plan, 2007, and RS&H, 2011.

Portland International Airport (PDX) is by far the busiest commercial service airport in Oregon in terms of passenger enplanements. PDX was the 30th largest in the United States based on passenger volume in 2010. It has scheduled passenger service from most of the U.S. carriers including low cost airlines such as Southwest and Frontier. Select international service is also available.

Air passengers choose their airport based on many factors. Location is one of the key factors. Eugene and Medford are reasonably close in distance to the Airport and may attract certain regional passengers. Portland, with its extensive domestic and international air service and choice of carriers, is the largest competitor statewide for air passengers. Key information including the mileage and driving time from regional commercial service airports to the Southwest Oregon Regional Airport is provided in Table 3-6.

Table 3-6
SURROUNDING PASSENGER SERVICE AIRPORTS

Location	Airport Identifier	Direction from OTH	Driving Distance (Miles)	Approx. Driving Time (Hours)
Eugene, OR	EUG	NE	151	2:00
Medford, OR	MFR	SE	173	3:00
Klamath Falls, OR	LMT	SE	247	4:00
Redmond, OR	RDM	NE	238	4:00
Portland, OR	PDX	NE	232	3:30

Sources: www.AirNav.com and Rand McNally, 2011.

All of these airports are separated from Southwest Oregon Regional Airport by the Oregon Coast Range. The roadway system connecting Coos County and these other airports are typically two-lane, winding roads that may deter some travelers from using other airports. Further, highway traffic congestion within the Portland area can hinder access to PDX at peak times.

3.3.2 Airport Efforts to Improve Air Service

Southwest Oregon Regional Airport has made several efforts to improve and increase air service to the Air Trade Area. Recent efforts for major facility improvements include the construction of the new commercial service passenger terminal building (opened in 2008) and the Airport Traffic Control Tower (opened in 2009).

Other significant air service efforts include an environmental assessment for the introduction of turbojet service, and a grant application to the Department of Transportation's Small Community Air Service Development Program to add east-bound air service.

In 2011, SkyWest Airlines proposed to increase capacity to meet current and forecast air travel to serve the needs of existing and forecast passenger air travel within the Oregon coastal and inland areas, as anticipated by the FAA's growth trends for Southwest Oregon Regional Airport. SkyWest proposed to replace current scheduled turboprop service to San Francisco (utilizing a 30-seat Embraer EMB-120) at OTH with turbojet service (utilizing a 50-seat Bombardier CRJ-200), which required the FAA to issue an amendment to the Airport's current Operations Specification². As this was the first scheduled turbojet service at the Airport, an environmental assessment was prepared for compliance with National Environmental Policy Act (NEPA) requirements, FAA Order 1050.1E, Change 1³, Council on Environmental Quality regulations, applicable Executive Orders, and other federal, state, and local laws and regulations. In May 2011, the FAA approved the *Final Environmental Assessment and Finding of No Significant Impact* study for the initiation of turbojet service. Following the FAA's approval for turbojet service, United/SkyWest began a once daily seasonal flight from Southwest Oregon Regional Airport to San Francisco International Airport on a CRJ-200 during June to September 2011.

² The Operations Specifications amendment to determine safety in air commerce is pursuant to 14 CFR 119.51.49 U.S. Code, §40101, Paragraph (a) (12).

³ Federal Aviation administration, Order 1050.1E Change 1, *Environmental Impacts: Policies and Procedures*, March 20, 2006.

3.4 HISTORICAL AIR CARGO

In 2010, the Airport handled an average of 3,600 pounds of air cargo per day. Nearly twice as much cargo was inbound as outbound. The air cargo carriers were principally operators for FedEx and United Parcel Service with very limited amounts by scheduled passenger carrier SkyWest or charter operators.

Southwest Oregon Regional Airport's air cargo volume has been stable over the past five years. Table 3-7 presents the Airport's historical air cargo volume in 2006 to 2010.

Table 3-7
HISTORICAL AIR CARGO VOLUME (In Pounds)

Year	Enplaned	Deplaned
2010	410,939	905,120
2009	341,440	728,082
2008	359,546	745,869
2007	414,632	812,521
2006	376,398	816,589

Source: US DOT, T-100 data, 2011.

3.5 PASSENGER FORECAST

This section presents the enplaned passenger forecast. The passenger enplanement analysis is based upon the FAA TAF and an alternative forecast passenger activity scenario. The TAF is used as the base projection for analysis of future aviation activity at Southwest Oregon Regional Airport. The alternative forecast scenario provides a "what-if" analysis that incorporates the possibility of another air carrier, larger aircraft, or additional routes, as well as combinations of these factors. Both forecast scenarios are used in the Master Plan for comparative purposes representing the most likely alternative aviation activity scenarios for future activity.

3.5.1 FAA Terminal Area Forecast – Base Case

This Master Plan Update utilizes the FAA 2010 Terminal Area Forecast as the principal basis for future facility planning. The FAA prepares the TAF by estimating annual projections of commercial passenger enplanements and aircraft operations traffic for all U.S. airports. The Terminal Area Forecast is calculated based upon each U.S. airport's historical activity and national averages for change in passengers, aircraft operations, and certain other activity measures. The most recent publication of the FAA Terminal Area Forecast was January 2012, which indicates 22,585 passenger enplanements at Southwest Oregon Regional Airport in 2010.

The FAA Terminal Area Forecast projects that the Airport's passenger enplanement activity over the next 10 years will continue to increase at an average annual growth rate of 2.3 percent, from 22,585 in 2010 to 28,405 in 2020. Over the 20-year planning horizon, the TAF projects that passenger enplanements will on average increase 2.6 percent annually by 2030, which is slightly less than the 2.8 percent average annual growth rate for the U.S. aviation system (including international enplanements), as contained in the *FAA Aerospace Forecast, Fiscal Years 2011-2031*, (published March 2011). By 2030, approximately 37,560 passenger enplanements are

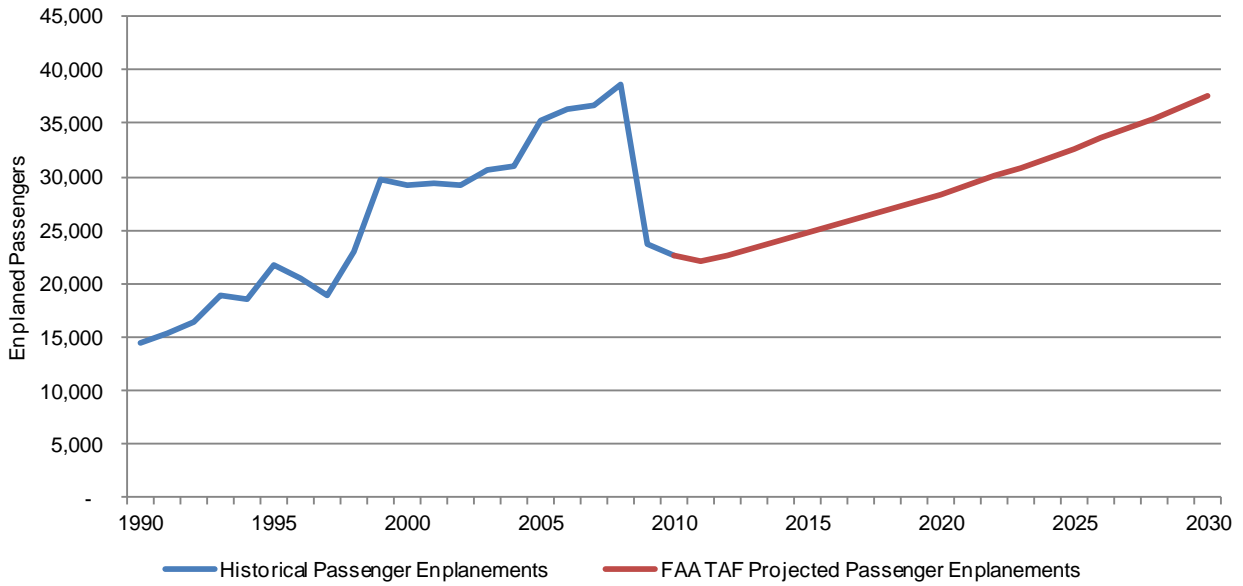
anticipated, which is an increase of nearly 15,000 enplanements from 2010, or an overall 66 percent increase for Southwest Oregon Regional Airport.

Seeking an air service scenario to match the TAF, it is assumed that there remains only one principal air carrier (United Airlines operated by SkyWest) with additional service by a secondary carrier (SeaPort Airlines). No new carriers are necessarily anticipated; rather, the existing carriers may add flights, increase aircraft size, and/or increase the load factor of their aircraft. While other new scheduled carriers are possible under this base case, they are assumed to replace the existing carrier. Therefore, the total number of passengers would increase at the TAF rate regardless of replacement or name change of the carrier.

A growing trend in the industry has been the gradual phase out of turboprop aircraft from major airline fleets. The 2011 *Final Environmental Assessment and Finding of No Significant Impact* for SkyWest Airlines' initiation of turbojet service to increase capacity is an accurate example of the airlines trend in eliminating turboprop service. The *FAA Aerospace Forecast Fiscal Years 2011-2031* anticipates the commercial airline turboprop fleet to decline on average 1.2 percent annually, and will only account for 18.3 percent of the entire regional air carrier passenger fleet by 2031. 50-seat regional jet fleets are expected to increase on average 1.3 percent annually by 2031. Subsequently, the reduction of turboprop flights is a key issue for airport planning.

In summary, the FAA TAF projects that passenger enplanements in 2030 will nearly reach the historical 2008 level (38,568), which represents a gradual recovery over the 20-year period. Although the 20-year growth is steady, passenger enplanements are not anticipated to reach 40,000 by 2030. The FAA 2010 Terminal Area Forecast scenario for Southwest Oregon Regional Airport is presented in Figure 3-5.

Figure 3-5
2010 FAA TERMINAL AREA FORECAST



Fiscal Year	FAA TAF
Historical	
1990	14,377
1995	21,733
2000	29,130
2005	35,235
2010	22,585
Projected	
2015	24,701
2020	28,405
2025	32,661
2030	37,560
Average Annual Growth Rate	
1990-2010	2.28%
2011-2030	2.83%

Source: FAA Terminal Area Forecast (Fiscal Years 2010-2030), January 2012.

3.5.2 Alternative Forecast Scenario – Forecast

For comparison purposes, an additional passenger enplanement forecast scenario was developed to present an alternative case based on defined assumptions for future passenger activity growth. This case assumes an increased number of passengers and a faster growth rate than the TAF. As discussed previously, passenger enplanement trends over the last 20 years show that historical growth indicates that demand for air service exists, and the market continues to recover despite Horizon Air's departure in 2008. The Alternative Forecast Scenario is based on the assumption that a second major air carrier will return to OTH with seasonal jet service in the short-term, and expanding to year-round service in the long-term to an additional hub airport. By introducing a second air carrier with jet service to another hub, it is also assumed that the Airport will be more competitive with other commercial service airports located within reasonable driving distance; thereby, reducing the amount of potential enplanement leakage to other regional airports.

3.5.2.1 Alternative Forecast Scenario Assumptions

The air service assumptions considered for the increased number of passenger enplanements are:

- Assumption One: United/SkyWest maintains the existing daily service to San Francisco. As demonstrated by the seasonal jet service introduction in 2011 to San Francisco, it can be assumed that jet service during the summer months reoccur, providing additional daily southbound flights on 50-seat regional jet aircraft within the short-term. As turboprops are gradually phased out, it can also be assumed that existing routes will be replaced with 50-seat regional jets, over the medium-term. It is also assumed that SeaPort Airlines will continue northbound service to Portland.
- Assumption Two: The specific new major air carrier service assumption used in this scenario is that Delta Air Lines will add one seasonal flight during the summer months between Southwest Oregon Regional Airport and Salt Lake City International Airport. The Airport won a Small Community Air Service Development Program grant on September 27, 2011 for \$550,000. The service anticipated from this grant is one flight per day on a Delta Air Lines (operated by SkyWest) 50-seat regional jet to/from Salt Lake City. This flight would be operated for three months in during the summer. This service would provide a total of 4,600 available one-way seats per year. At a 75 percent load factor, this would result in 3,450 additional passenger enplanements annually, which would be a 15 percent increase in its inaugural year. Over time, expansion of this service is anticipated to year-round service. Alternatively, this eastbound service may also be provided by United Airlines (see below).
- Assumption Three: United/SkyWest expands with service to an additional hub, by adding at least one daily flight to Denver by 2015, increasing to two daily flights by 2020, and three daily flights to Denver by 2025. These flights would serve local markets between the Air Trade Area and Denver; as well provide passengers connecting opportunities to the Rocky Mountain region and eastern connections via United's Denver hub. These flights are expected to be on a 50-seat or larger regional jet because of the distances involved. Opening an East Coast connection is expected to substantially improve local air service.

- Assumption Four: Due to the anticipated development of the Liquid Natural Gas Terminal Facility that is currently being reviewed under the jurisdiction of the Federal Energy Regulatory Commission, it is prudent to address the impacts and opportunities this project will/could have for the Southwest Oregon Regional Airport. The Jordon Cove project is projected to have a peak labor utilization of 3900 employees, a majority of which would be drawn from the greater Northwest region, with additional labor resources being pulled from other parts of the U.S. This labor traffic and the ancillary traffic it will draw is anticipated to increase air demand and capacity to the Southwest Oregon Regional Airport.

Additionally, the Jordan Cove Project is projected to remove approximately two (2) million cubic yards of usable fill material and has offered up to one (1) million cubic yards to the Southwest Oregon Regional Airport for its use. If the Southwest Oregon Regional Airport were to have the environmental planning and mitigation complete to accept the fill material, the Airport could realize a savings of at least \$10,000,000 million towards a future runway extension.

United/SkyWest, Delta Air Lines will add daily flights starting with an additional RJ200 in September of 2015, increasing to four (4) RJ200's daily in March of 2016 through October 2018. The capacity and demand is expected to shrink/decrease back to preconstruction levels, plus a percentage of ancillary growth.

The growth of Bandon Dunes Golf Resort also supports the case for the reasonable expectation of increased passenger activity. According to internal studies commissioned by Bandon Dunes Golf Resort, nearly half of all resort guests visited from states outside of Oregon, California, and Washington. And of this group, nearly all arrived into a commercial service airport in Oregon. Those arriving into Portland, Eugene and Medford would transfer into a ground transportation mode to complete the trip. Other Bandon Dunes visitors are connecting from Portland or San Francisco into OTH via United/SkyWest. And, according to confidential research conducted by Bandon Dunes Resort, a significant number are arriving into OTH by charter or on other general aviation aircraft.

After the departure of Horizon Air in 2008, a vital link to Portland was eliminated and the data clearly points to the impact in passenger activity. Visitors to Bandon Dunes arriving by air lost one of the options to connect into OTH and it can be assumed are relying more on ground transportation. This "leakage" to another airport can be defined but it is outside of the scope of this forecast. However, it is notable that the goal of the Airport is to recapture that leakage through improved airline service. This may not take the form of restoring the Horizon Air connection to Portland, but other options are possible in this scenario. For instance, the success of the planned 2012 seasonal Delta/SkyWest service to Salt Lake City may gradually expand to year-round service. Other airlines may offer additional frequency and/or larger aircraft. The intent of this scenario is to add a projection of what this enhanced air service could look like so that subsequent phases of this study can test the readiness of the Airport to meet an enhanced level of service and plan accordingly.

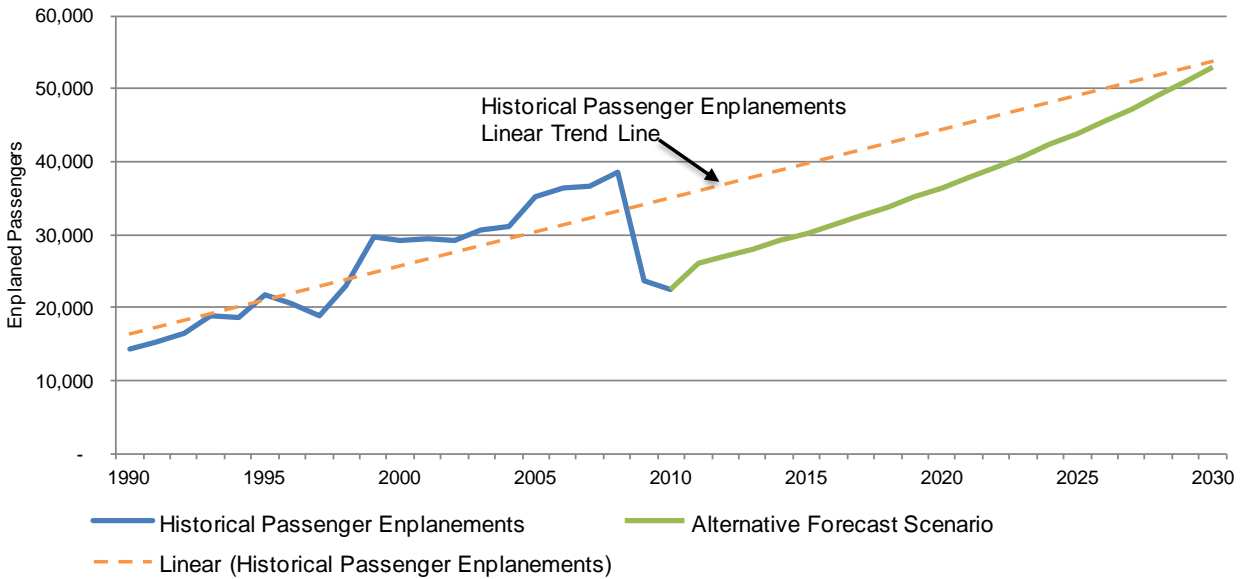
Under this passenger enplanement growth forecast scenario, existing air service is expanded and a major new carrier is added. That is, new markets, larger aircraft, and other air service changes would be expected. Realistically, increased load factors and larger aircraft could accommodate some of the increased volume of passengers. Either way, the replacement of turboprops with regional jets is anticipated within the short-term. With the Salt Lake City route starting out on a seasonal basis, it is assumed that using a 50-seat regional jet, with average load factors around 75%, enplanements would initially increase by 15 percent, and then gradually slow rise as service eventually increases to year-round. The average annual growth rate after the introduction of

seasonal service to Salt Lake City is 3.8 percent between 2011 and 2030, based on the increase in passenger air travel caused by the addition of a second major carrier and increased connections through the SLC hub.

However, if United provided a similar seasonal service to Denver, and expanded to year-round service, forcing out the competition, even with one carrier, the results would be the same: initial 15 percent growth in total enplanements during the start of seasonal service, and gradual recovery to the 2008 enplanement levels as year-round service is provided to multiple routes. Further, in comparison to the historical 32% cumulative growth during 2000-2008, this moderate growth in passenger enplanements could be seen as a recovery period with two carriers providing air service to two or three hubs during that period.

Figure 3-6 presents the Alternative Forecast Scenario for moderate-growth air service, as well as the comparison to the FAA TAF passenger enplanement forecast. Additionally, a trend line from 1990 to 2030 depicting the linear growth based on historical passenger enplanements is illustrated for comparative purposes with both the TAF and the Alternative Forecast passenger enplanement forecast scenarios.

Figure 3-6
ALTERNATIVE FORECAST SCENARIO



Fiscal Year	Passenger Enplanements
Historical	
1990	14,377
1995	21,733
2000	29,130
2005	35,235
2010	22,585
Projected - Alternative Forecast	
2015	30,224
2020	36,419
2025	43,885
2030	52,882
Average Annual Growth Rate	
1990-2010	2.3%
2011-2030	3.8%

Sources: FAA Terminal Area Forecast (January 2012), and RS&H Analysis, 2012.

3.5.2.2 Alternative Forecast Scenario – Moderate-Growth Forecast Summary

In summary, continued population and economic growth of the Air Trade Area is expected under both the scenarios to attract additional air service. The key to further passenger air service growth at the Airport is the intense competition between United and an additional major carrier. The

advantage of having two aggressive carriers serving the Airport is that passengers benefit from the lower fares and increased air service options. The result is more passengers utilize the Airport. These increased Airport passenger numbers result from less leakage to other airports and a higher propensity of local residents choosing to fly locally versus driving or not traveling.

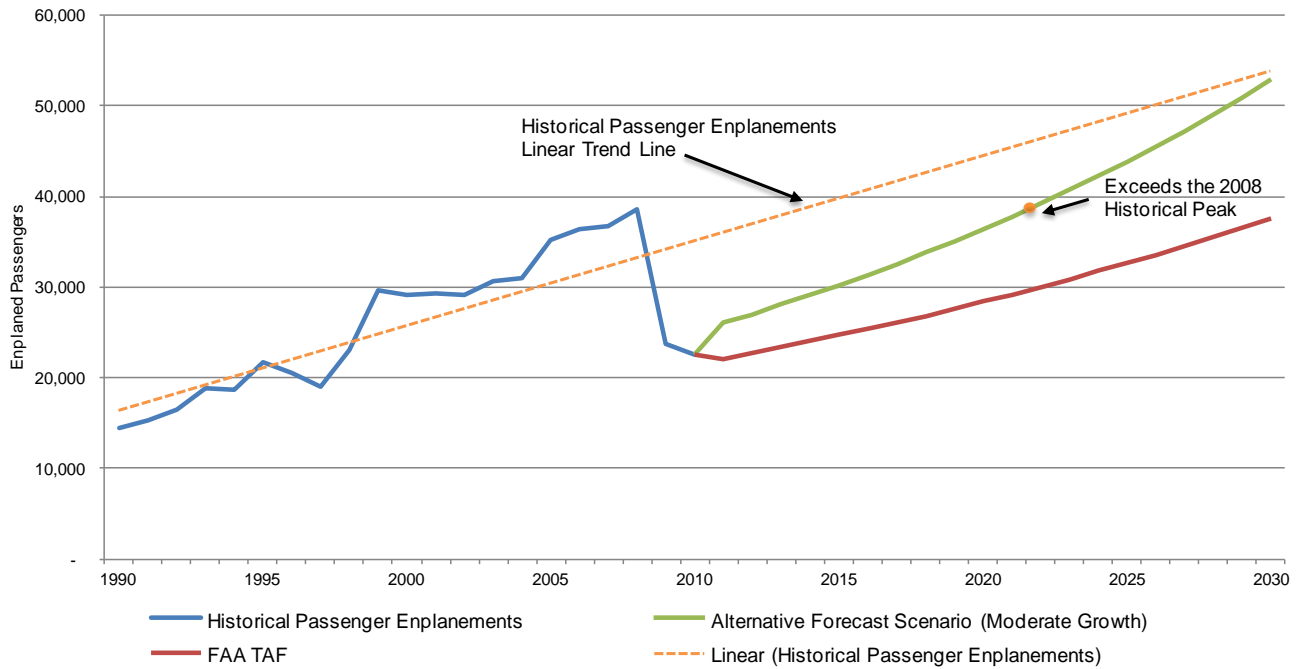
In comparison to the projected TAF passenger enplanements, the Alternative Forecast Scenario annual growth rate averages 3.8 percent, where the TAF averages 2.8 percent shown between 2011 and 2030. Incorporating the 2010 base year, the TAF's average annual growth rate is 2.6 percent, and the Alternative Forecast Scenario is 4.3 percent between 2010 and 2030. Passenger growth increases to 52,882 enplanements by 2030, which is an increase of approximately 30,297 passengers over the 20-year period. It is important to note that this forecast also returns the Airport to its pre-2009 air service position with two carriers.

The graph also includes a linear trend line based on the historical enplanements from 1990 to 2010, and continued future enplanements. This trend line demonstrates that despite the loss of passenger enplanements after Horizon Air discontinued service in 2008, local demand for air service continues to show an upward trend to expand. While it is possible the Airport could return to the historical trend line's indicated enplanement levels, the Alternative Forecast Scenario assumes a gradual return to the pre-2009 enplanement levels in the long-term.

3.5.3 Passenger Enplanement Forecast Summary

The two forecast scenarios developed for this analysis included the FAA Terminal Area Forecast, and an alternative forecast scenario for moderate-growth passenger enplanement from increased air service. The Terminal Area Forecast indicates passenger enplanement levels will be 37,560 by 2030, while the moderate-growth scenario indicates 52,882 enplanements by 2030. The two passenger enplanement forecast scenarios with their average annual growth rates are presented in Figure 3-7. As illustrated below, while the FAA TAF projects passenger enplanements to gradually increase on average 2.8 percent annually over the next 20 years, 2030 enplanements will not reach the historical 2008 levels. In contrast, the Alternative Forecast Scenario for passenger enplanements demonstrates more aggressive growth in the market, by exceeding the 2008 enplanement levels within the next 10 years, and catching up to the upward historical trend within 20 years. Both of these forecast scenarios conclude that Southwest Oregon Regional Airport will see continued increases in passenger enplanements over the next 20 years.

Figure 3-7
PASSENGER ENPLANEMENT FORECAST COMPARISON



Year	FAA TAF	Alternative Forecast
Historical Passenger Enplanements		
1990	14,377	14,377
1995	21,733	21,733
2000	29,130	29,130
2005	35,235	35,235
2010	22,585	22,585
Projected Passenger Enplanements		
2015	24,701	30,224
2020	28,405	36,419
2025	32,661	43,885
2030	37,560	52,882
Average Annual Growth Rate		
1990-2010	2.3%	2.3%
2011-2030	2.8%	3.8%

Source: RS&H Analysis, 2012.

3.5.4 Passenger Forecast Qualifications and General Assumptions

The expectation is that the tourism industry in Air Trade Area continues to grow in the southwestern Oregon region. This economic success will, in turn, attract more passengers from a broad geographic area. The significant assumptions regarding the growth of passengers at the Airport include:

- The strength of the worldwide economic recovery and specifically the expectations for population and economic growth of the Air Trade Area.
- The continued increase in commercial air travel in the United States is encouraged by the availability of jet fuel at a reasonable price, relatively low taxes on air travel, environmental laws that support continued air travel, and the lack of competitor modes (such as rail) for long distance travel.

3.6 ANNUAL AIRCRAFT OPERATIONS FORECAST

This section presents an overview of the historical aircraft operations at Southwest Oregon Regional Airport along with the 2010 TAF operations forecast.

3.6.1 Aircraft Operations Forecast

An aircraft operation is defined as either a takeoff or a landing. Therefore, the typical air carrier flight consists of a landing and a takeoff for a total of two operations. The FAA records annual aircraft operations in the following four categories:

- **Air Carrier** - An air carrier operation involves an aircraft with a seating capacity of more than 60 seats or a cargo payload capacity of more than 18,000 pounds. Further, the aircraft must be carrying passengers or cargo for hire or compensation.
- **Air Taxi / Commuter** – Air Taxi / Commuter operations represent scheduled commercial flights for aircraft with 60 seats or fewer or a cargo payload capacity of 18,000 pounds or less. This category includes air taxi operations, which are nonscheduled commercial flights or those for-hire flights using aircraft with 60 or fewer seats or a payload capacity of 18,000 pounds or less.
- **General Aviation** - General aviation operations are any type of operation that is not included in one of the previous defined categories. These are typically privately owned aircraft used for training, recreation, or personal use.
- **Military** - Military operations are by all classes of U.S. military or Federal government aircraft.

Southwest Oregon Regional Airport's Airport Traffic Control Tower (ATCT) was opened in the fall of 2009, and the first full FAA fiscal year of tower operation was 2010. Prior to that, aircraft operations were not recorded from actual observations. Therefore, it is important to note that the historical record of operations prior to 2010 presented in the TAF does not reflect a consistent record. General observations regarding the forecast of aircraft operations by category are presented below:

- **Commercial** – Most historical and projected commercial flights at the Airport are by commuter type aircraft, as discussed below.
 - Air Carrier - Air carrier operations have been minimal over the past 20-year period. The 6,000+ operations presented in 2008 and 2009 likely represent commuter activity. In the TAF, the FAA indicates the number of air carrier operations will increase from 19 in 2010 to 30 in 2011, remaining steady annually over the next 20 years. Based on national trends that indicate the continued increase in regional air carrier service, it can be assumed that Southwest Oregon Regional Airport will retain service by regional carriers with limited service by charter or scheduled carriers flying large aircraft.
 - Air Taxi / Commuter – Air Taxi / Commuter operations show a relatively stable historical trend except for 2008 and 2009, when air taxi operations increased to over 10,000 as listed in the TAF. The stability of the historical average (5,812 operations) and projected average (7,067 operations) of annual Air Taxi / Commuter operations is likely based upon the schedule of the commuter airlines that serve the Airport. In the future, commuter operations are expected by the FAA to slowly grow. By 2030, approximately 8,109 commuter operations are projected in the TAF.
- **General Aviation** – Based on the TAF data for 2010, the largest share of operations (approximately 36 percent) were flown by general aviation aircraft. The historical record of general aviation operations fluctuates considerably. General aviation activity is projected by the FAA to decrease slightly within the short-term, and remain steady around 7,000 operations annually over the next 20 years.
- **Military** – Military aircraft activity in 2010 consisted of nearly 3,000 itinerant flights and approximately 4,000 local flights. Much of this activity is attributed military helicopter operations from the U.S. Coast Guard station located at Southwest Oregon Regional Airport. It is not unusual for military aircraft operations numbers to increase or decline by large margins as the Department of Defense alters its operational requirements. However, the TAF expects the total number of military operations to increase by 11.8 percent in 2011, and remain steady throughout the 20-year planning period.

Based upon the TAF, airport operations are expected to grow in the 20-year forecast period from 21,036 in 2010 to 23,102 in 2030, which is a 0.5 percent average annual growth and an overall cumulative growth of 9.8 percent. The TAF historical and forecast of operations for Southwest Oregon Regional Airport are presented on Table 3-8.

Table 3-8
HISTORICAL AND FORECAST ANNUAL AIRCRAFT OPERATIONS

Year	Commercial Service			General Aviation			Military			Total Operations	Based Aircraft
	Air Carrier	Air Taxi	Total	Itinerant	Local	Total	Itinerant	Local	Total		
Historical											
1990	0	4,170	4,170	11,000	7,000	18,000	8,300	0	8,300	30,470	60
1991	0	3,550	3,550	13,080	8,016	21,096	6,436	0	6,436	31,082	60
1992	0	3,686	3,686	16,153	8,369	24,522	3,822	0	3,822	32,030	61
1993	0	3,686	3,686	16,153	8,369	24,522	3,822	0	3,822	32,030	61
1994	14	3,690	3,704	21,137	7,537	28,674	3,627	0	3,627	36,005	61
1995	24	5,028	5,052	23,406	7,802	31,208	3,342	0	3,342	39,602	68
1996	50	5,800	5,850	30,000	20,000	50,000	0	0	0	55,850	68
1997	50	6,177	6,227	30,144	20,278	50,422	0	0	0	56,649	68
1998	0	6,381	6,381	30,364	20,431	50,795	0	0	0	57,176	68
1999	0	6,546	6,546	30,589	20,587	51,176	0	0	0	57,722	68
2000	0	5,654	5,654	20,113	9,907	30,020	3,342	0	3,342	39,016	67
2001	0	5,970	5,970	20,558	10,126	30,684	3,342	0	3,342	39,996	65
2002	0	6,078	6,078	20,976	10,329	31,305	3,342	0	3,342	40,725	65
2003	0	6,186	6,186	21,394	10,533	31,927	3,342	0	3,342	41,455	65
2004	0	6,294	6,294	21,807	10,734	32,541	3,342	0	3,342	42,177	65
2005	0	5,477	5,477	22,225	10,938	33,163	3,342	0	3,342	41,982	65
2006	0	5,560	5,560	22,593	11,118	33,711	3,342	0	3,342	42,613	65
2007	0	5,644	5,644	22,967	11,301	34,268	3,342	0	3,342	43,254	62
2008	6,107	10,099	16,206	7,566	2,426	9,992	6,178	0	6,178	32,376	62
2009	6,107	10,099	16,206	7,566	2,426	9,992	6,178	0	6,178	32,376	62
2010	19	6,272	6,291	5,279	2,337	7,616	2,948	4,181	7,129	21,036	51
Projected											
2011	30	6,111	6,141	5,836	1,674	7,510	3,112	4,857	7,969	21,620	52
2012	30	6,203	6,233	5,557	1,437	6,994	3,112	4,857	7,969	21,196	52
2013	30	6,296	6,326	5,557	1,437	6,994	3,112	4,857	7,969	21,289	53
2014	30	6,392	6,422	5,557	1,437	6,994	3,112	4,857	7,969	21,385	54
2015	30	6,489	6,519	5,557	1,437	6,994	3,112	4,857	7,969	21,482	54
2016	30	6,586	6,616	5,557	1,437	6,994	3,112	4,857	7,969	21,579	56
2017	30	6,685	6,715	5,557	1,437	6,994	3,112	4,857	7,969	21,678	56
2018	30	6,785	6,815	5,557	1,437	6,994	3,112	4,857	7,969	21,778	57
2019	30	6,887	6,917	5,557	1,437	6,994	3,112	4,857	7,969	21,880	58
2020	30	6,989	7,019	5,557	1,437	6,994	3,112	4,857	7,969	21,982	58
2021	30	7,093	7,123	5,557	1,437	6,994	3,112	4,857	7,969	22,086	59
2022	30	7,200	7,230	5,557	1,437	6,994	3,112	4,857	7,969	22,193	60
2023	30	7,308	7,338	5,557	1,437	6,994	3,112	4,857	7,969	22,301	62
2024	30	7,417	7,447	5,557	1,437	6,994	3,112	4,857	7,969	22,410	62
2025	30	7,528	7,558	5,557	1,437	6,994	3,112	4,857	7,969	22,521	62
2026	30	7,640	7,670	5,557	1,437	6,994	3,112	4,857	7,969	22,633	62
2027	30	7,754	7,784	5,557	1,437	6,994	3,112	4,857	7,969	22,747	62
2028	30	7,871	7,901	5,557	1,437	6,994	3,112	4,857	7,969	22,864	62
2029	30	7,989	8,019	5,557	1,437	6,994	3,112	4,857	7,969	22,982	62
2030	30	8,109	8,139	5,557	1,437	6,994	3,112	4,857	7,969	23,102	62

Source: FAA Terminal Area Forecast (Fiscal Years 2010-2030), January 2012.

3.6.2 Instrument Operations Forecast

The instrument operations count is a reflection of workload for FAA facilities that are controlling aircraft at a particular facility. An instrument operation is an arrival or a departure of an aircraft operating in accordance with an Instrument Flight Rule (IFR) flight plan or an operation where IFR separation between aircraft is provided. Instrument operations are used in part by the FAA to determine an airport’s eligibility for enhanced instrument approach capability and additional navigations aids.

Fiscal year 2010 and forecast instrument approach data for the Airport are presented in Table 3-9. The ATCT’s first full year of operation was 2010; therefore, the data begins in that year. Instrument operations are anticipated to increase at the same rate as total operations, resulting in approximately 2,700 instrument operations by 2030.

Table 3-9
INSTRUMENT OPERATIONS FORECAST

Fiscal Year	Airport Operations	Instrument Operations
Historical		
2010	21,036	2,190
Projected		
2015	21,482	2,236
2020	21,982	2,288
2025	22,521	2,344
2030	23,102	2,405

Source: FAA Terminal Area Forecast, January 2012.

3.7 DESIGN AIRCRAFT

The FAA recommends the identification of the existing and future design aircraft for airport planning purposes. The design aircraft is defined as the most demanding aircraft in terms of size and approach speeds that performs or is forecast to perform at least 500 annual operations at the Airport.

The Airport Reference Code (ARC) is a system developed by the FAA to relate airport design criteria to the operational and physical characteristics of the airplane types that will operate at a particular airport. The ARC has two components relating to the airport design aircraft. The first component, depicted by a letter, is the aircraft approach category and relates to aircraft approach speed. The second component, depicted by a Roman numeral, is the airplane design group and relates to airplane wingspan and tail height.

The previous Master Plan determined that the “most demanding” type of aircraft at the Airport was the Bombardier Dash 8-200. For commercial airline service, the Embraer E-120 Brasilia (B-II) is the current main aircraft, with some flights by the Bombardier Regional Jet (CRJ) 200 aircraft (C-II). In the future, the CRJ-200 is the passenger aircraft type most likely to operate at the Airport, as it has already been justified in the 2011 *Final Environmental Assessment and Finding of No Significant Impact* study for the initiation of turbojet service, and the 2011 summer season of CRJ-

200 flights to SFO. Corporate jets using the Airport fall within the ARC B-I through D-III categories. Airport records of general aviation landings indicate corporate jets such as the Falcon 50 (B-II), Bombardier Global Express (C-III), and the Gulfstream V (D-III). It is important to note that while many of the corporate aircraft are larger, faster, or otherwise “more demanding” aircraft types, their use of the Airport is less common than the commercial aircraft. Similarly, a few larger passenger and air cargo charter aircraft use the Airport; but, again, they are less frequent.

Based on the analysis of the previous Master Plan, and current and projected use, it is determined the Airport’s ARC will eventually be upgraded from B-III to C-III. The aircraft speed and tail height components (C-III) were based on typical future scheduled passenger airline aircraft.

A re-evaluation of the most demanding aircraft design category was conducted to determine if the projected change in aircraft operations would modify the Airport’s critical aircraft. Specific areas of an airport can be identified to accommodate various categories of aircraft. That is, each runway or aircraft movement area may be designated for a different type aircraft. For example, one runway may be designed to accommodate general aviation aircraft and another designed to serve commercial services aircraft.

Corporate and general aviation aircraft fleet mix is expected to remain similar to today in that most flights are of single engine piston, multi-engine piston, turbo-props, and corporate jet aircraft. At the same time, the number of corporate jets is expected to increase as businesses purchase, lease, or utilize fractional ownership of these aircraft to increase business productivity. Therefore, more mid-sized corporate jets such as models from Bombardier, Gulfstream, Falcon, and Cessna are expected to utilize the Airport. These aircraft range from ARC B-II to D-II.

Military operations at the Airport are largely helicopters including the Coast Guard’s five based Eurocopter HH-65C Dolphin helicopters. Future military operations are expected to remain similar to today’s activity.

In conclusion, the expected fleet mix at the Southwest Oregon Regional Airport is anticipated to remain similar to today over the forecast period. Additional analysis and recommendations regarding a Design Aircraft for the Airport will be included in Chapter 4, Facility Requirements.

3.8 BASED AIRCRAFT FORECAST

Based aircraft represent the total number of active, civil aircraft permanently located or projected to be located at an airport. Categories of based aircraft include; single-engine piston, multi-engine piston, turboprop, jet, rotorcraft, and other. This section forecasts the number and type of based aircraft at the Airport.

The national general aviation industry has experienced declines in nearly all measures of activity since the early 1980s including new aircraft shipments, active Fixed Base Operators (FBOs), hours flown, and number of pilots. The number of aircraft based at individual airports has dropped at many facilities.

According to the FAA Terminal Area Forecast, Southwest Oregon Regional Airport shows a more stable record. Although the FAA TAF indicates there were 60 based aircraft in 1990, Airport records and the FAA TAF report that based aircraft decreased to 51 in 2010. Current airport records of May 2010 indicate 51 based aircraft, and five military helicopters.

The FAA TAF indicates the number of based aircraft is expected to increase to 62 by 2030 from 51 in 2010. Similar to national trends, this analysis indicates a gradual increase in the mix of aircraft during the forecast period. The *FAA Aerospace Forecast Fiscal Years 2011-2031* reports the demand for business jet aircraft has slowed over recent years, and the active national general aviation fleet will increase at 0.9 percent annually. The FAA TAF for Southwest Oregon Regional Airport shows gradual growth in based aircraft on average at 1.0 percent annually, and 2.4 percent cumulative growth over the 20-year period. Table 3-10 shows the forecast of the Airport’s based aircraft.

Table 3-10
BASED AIRCRAFT PROJECTION

Year	Multi-Engine & Business		Jet	Helicopter	Total
	Single-Engine	Turboprop			
2010	36	8	1	6	51
2015	38	9	1	6	54
2020	41	9	1	7	58
2025	44	10	1	7	62
2030	44	10	1	7	62

Sources: Airport Records, FAA TAF (Jan 2012), FAA 5010-1 (2010), RS&H Analysis, 2012.

In addition to the civil aircraft based at the Airport, the U.S. Coast Guard has five based helicopters. While not included in the FAA’s based aircraft database, these aircraft serve a critical regional safety function.

3.9 FORECAST SUMMARY

Information from this forecast summary is used in the remainder of this study to assess the capacity of the existing airport facilities. This analysis will also provide planning guidance for proposed facility expansion or renewal. In summary, this forecast assumes continuation of the current types of aviation activity with growth in line with historical and economic trends. A summary of the aviation demand forecasts is presented in Table 3-11.

Table 3-11
FORECAST SUMMARY

Aviation Activity Measures	2010	2015	2020	2025	2030
Passenger Enplanements					
FAA TAF	22,585	24,701	28,405	32,661	37,560
Alternative Forecast Scenario	22,585	30,224	36,419	43,885	52,882
Annual Operations Forecast					
Commercial	6,291	6,519	7,019	7,558	8,139
General Aviation	7,616	6,994	6,994	6,994	6,994
Military	7,129	7,969	7,969	7,969	7,969
Total	21,036	21,482	21,982	22,521	23,102
Based Aircraft					
Total	51	54	58	62	62

Sources: FAA TAF Summary (Fiscal Years 2010-2030) and RS&H Analysis, 2012.

Table 3-12 presents a comparison of the Alternative Forecast Scenario (for passenger enplanements) to the FAA Terminal Area Forecast for Southwest Oregon Regional Airport. As proposed aviation activity forecasts are submitted to the FAA for review and approval, forecasts are generally considered acceptable if the five, 10, and 15-year proposed airport forecasts are within 10 percent of the TAF. Total airport operations, commercial operations, and passenger enplanements are the relevant parameters that should be within the 10 percent margin.

These airport activity forecasts will be used in the next chapters of the Master Plan Update to assess the capacity of existing facilities and determine facility expansions or improvements needed to satisfy future activity levels. Although passenger enplanements could grow within the TAF and the Alternative Forecast Scenario levels, the Alternative Forecast Scenario for commercial passenger enplanements exceeds beyond 10 percent margin of the TAF. Therefore, the Terminal Area Forecast for commercial passenger enplanements is the preferred forecast for this Master Plan Update. The annual operations forecasts are also based on the TAF projections.

Table 3-12
FAA TAF FORECAST SUMMARY COMPARISON

	Year	Airport Forecast	FAA TAF	AF/TAF (% Difference)
Passenger Enplanements				
<u>FAA Terminal Area Forecast (Preferred)</u>				
Base yr.	2010	22,585	22,585	0.0%
Base yr. + 5yrs.	2015	24,701	24,701	0.0%
Base yr. + 10yrs.	2020	28,405	28,405	0.0%
Base yr. + 15yrs.	2025	32,661	32,661	0.0%
Base yr. + 20yrs.	2030	37,560	37,560	0.0%
<u>Alternative Forecast Scenario</u>				
Base yr.	2010	22,585	22,585	0.0%
Base yr. + 5yrs.	2015	30,224	24,701	22.4%
Base yr. + 10yrs.	2020	36,419	28,405	28.2%
Base yr. + 15yrs.	2025	43,885	32,661	34.4%
Base yr. + 20yrs.	2030	52,882	37,560	40.8%
Commercial Operations				
Base yr.	2010	6,291	6,291	0.0%
Base yr. + 5yrs.	2015	6,519	6,519	0.0%
Base yr. + 10yrs.	2020	7,019	7,019	0.0%
Base yr. + 15yrs.	2025	7,558	7,558	0.0%
Base yr. + 20yrs.	2030	8,139	8,139	0.0%
Total Operations				
Base yr.	2010	21,036	21,036	0.0%
Base yr. + 5yrs.	2015	21,482	21,482	0.0%
Base yr. + 10yrs.	2020	21,982	21,982	0.0%
Base yr. + 15yrs.	2025	22,521	22,521	0.0%
Base yr. + 20yrs.	2030	23,102	23,102	0.0%

Sources: FAA TAF (Fiscal Years 2010-2030); FAA *Forecasting Aviation Activity by Airport*, 2001; RS&H Analysis, 2012.