Passenger Leakage Analysis
Prescott Municipal Airport
















Table of Contents

SECTION 1 - BACKGROUND

The City of Prescott requested the Louis Berger Group, Inc. to develop a Passenger Leakage Analysis for the Prescott Municipal Airport – Ernest A. Love Field (PRC) as part of the Airport Master Plan Update.

The City initiated this Passenger Leakage Study in order to: a) identify the volume of passenger generated in the Prescott area; b) to quantify the number of passengers lost to other airports; and c) to identify which alternative transportation modes are used by travelers to begin their air travel.

This analysis was prepared in correlation with the passenger Forecast Analysis for the Prescott Master Plan Update. The primary objectives include:

A. Provide a quantifiable estimate of the unconstrained demand for air travel in the airport catchment area;

B. Estimate the current passenger leakage from Prescott Municipal Airport (PRC) towards other airports;

C. Provide supporting socio-economic data;

D. Provide enplaned passenger, and airline service data;

E. Identify and describe the airport service area; and

F. Identify and describe comparable airport service area.

SECTION 2 - INTRODUCTION

For this study, the term "passenger leakage" defines the passengers that choose ground transportation modes to reach their destination or other distant airports.

The majority of the current of air travel demand in PRC is generated by passengers traveling to Phoenix for business or connecting at Phoenix Sky Harbor International Airport (PHX) to another flight. In the last ten years PRC has experienced high enplanement volatility, suggesting that the population in the Prescott area perceives the use of personal vehicle and shuttle services to reach PHX and other airports as a competitive alternative to air travel from PRC.

Three methodologies are used to estimate the unconstrained and potential passenger demand of air service at PRC. The first method is based upon population estimates and estimated enplanement per capita ratios. The second method estimates passenger demand based upon comparisons with other airports. The last method considers data from three surveys, which are: a) Phoenix Sky Harbor O'Neil's Passenger Intercept Survey, b) 2005 Phoenix Sky Harbor Survey, and c) Business Surveys.

Data from an array of sources was collected to support this study. The following list is a sample of the data reviewed:

- Historical airport and regional data, including airport operations, number of enplanements/deplanements passenger data;
- USDOT O&D data;
- Airline charges;
- Airport shuttle van service data, including ridership estimates, destination, schedule and cost;
- Catchment area population and demographics figures;
- Comparable airports in the southwest; and,
- Survey data.

Additionally, other previous studies that have examined PRC passenger leakage were reviewed. These studies include:

- Arizona Rural Air Service Study, Arizona DOT 1999;
- Arizona State Aviation Need Study, 2000;
- Intercity public transportation services: an assessment of the I-10, I-17, and I-19 corridors in Arizona, ADOT 2006;
- Regional Transit Need Study, CYMPO 2006
- Metropolitan Transportation Plan, CYMPO 2006

This study is categorized in the following sections:

- Historical Airport Activity;
- Airport Service Area;
- Socioeconomics & Demographics of ASA
- Comparable Airport Service Areas;
- Common Passenger Leakage Modes;
- Surveys;
- Analysis of Findings; and
- Summary of Findings.

SECTION 3 - HISTORICAL AIRPORT ACTIVITY

Prescott Municipal Airport – Ernest A. Love Field is situated on approximately 760 acres of land located in Yavapai County, in the West-Central region of Arizona. Centrally located approximately eight to ten miles between the City of Prescott, and the towns of Chino Valley and Prescott Valley, PRC's current surveyed elevation is 5,045 feet above Mean Sean Level (MSL).

Interstate 40 is accessible from PRC through US Highway 89 northbound on Mac Curdy Drive. Interstate 17 is accessible from PRC through US Highway 69 eastbound.

Prescott Municipal Airport was inaugurated on July 4, 1926, and renamed Ernest A. Love Field in 1928. The airport is classified by the FAA Class I commercial service public use airport, and is owned by the City of Prescott. The airport serves both the commercial and multi-faceted general aviation needs of the area, including the City of Prescott, Yavapai County and residents of the local Yavapai Reservation.

The terminal building at PRC is a single level structure that was originally constructed in 1948 and expanded in 1957. Its current size is approximately 3,800 sq. ft. The terminal is located west of the intersection between Runways 3R/21L and 12/30, and is accessible via Mac Curdy Drive. The main terminal building is used for commercial passenger traffic. Within the terminal is the Transportation Security Administration (TSA) check point for luggage and passenger screening.

Currently, the air service is subsidized by the U.S. Department of Transportation (USDOT) through the Essential Air Service (EAS) program. The EAS is a program operated by the U.S. DOT that provides subsidies to airlines who agree to provide service on historically non-profitable routes to rural areas, which were served by certified air carriers before the 1979 Airline Deregulation Act. Under EAS contract, Public Law 100-223 states that the airline must provide:

(a) Service to a hub airport, defined as an FAA-designated medium- or large-hub airport;

(b) Service with no more than one intermediate stop to the hub;

(c) Service with aircraft having at least 15 passenger seats at communities that averaged more than 11 passenger enplanements a day in any calendar year from 1976-1986;

(d) Under certain circumstances, service with pressurized aircraft; and

(e) Flights at reasonable times taking into account the needs of passengers with connecting flights.

In order to qualify for the EAS program, the City of Prescott submitted a proposal package to USDOT, and upon approval, the airlines were then permitted to bid on the contract. To maintain

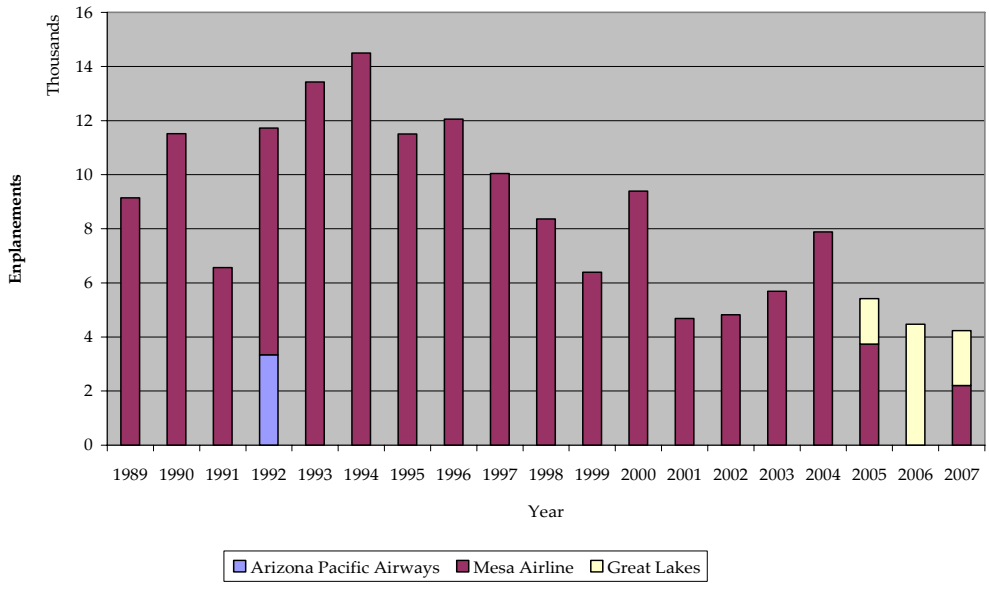
the subsidy however, the average subsidy per passenger for the community must not exceed $200.

Under the program, airline service is currently offered by Mesa Airlines, which has provided continuous service since January 1989, with the exception of the period between May 2005 and October 2007, during which the EAS contract was awarded to Great Lakes Airlines.

The number of passenger enplanements at PRC, as shown in **Figure 3.1**, has been declining since 1994, from a high of 14,000 enplanements per year to a low of 4,233 in 2007. Several factors can be accounted for this decline in enplanements, which are further detailed in the 2008 Master Plan Update. However, the level of aviation activity and general aviation (GA) operations has remained overall stable with only a slight decline in recent years. This is mainly due to higher fuel and operating costs. **Figure 3.2** provides a summary of aviation activity at PRC from 1990 to 2007.

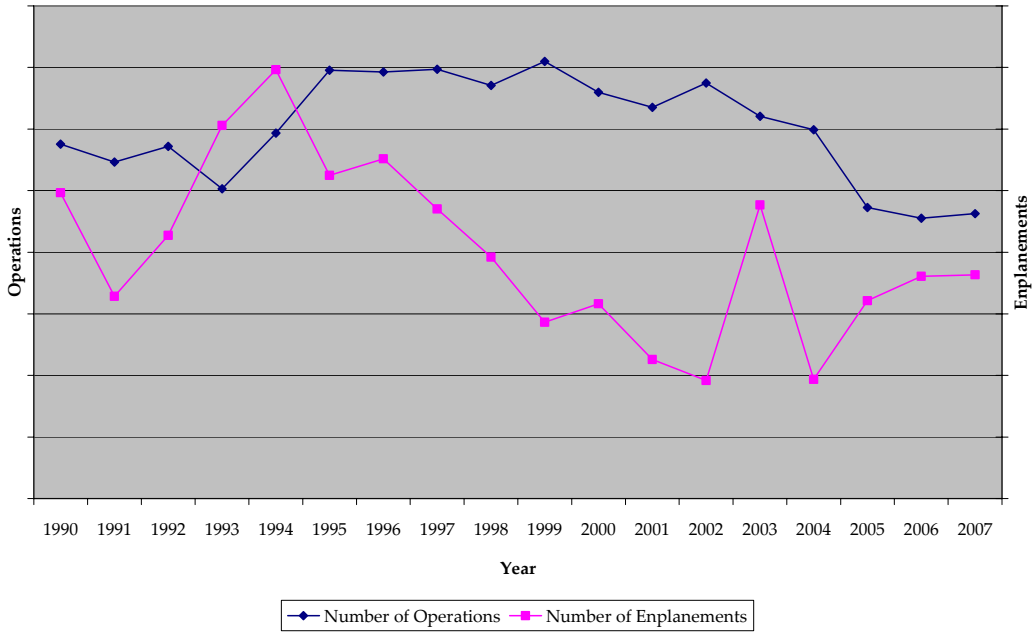
Figure 3.1

PRC Airline Enplanements (1989 – 2007)



Source: Airport Administration Records

Figure 3.2
PRC Historical Operations (1989 – 2007)



Source: FAA TAF & Airport Administration Records

As previously mentioned, Mesa Airlines is currently the only commercial airline operator at PRC, which operates under the US Airways Express logo. The partnership with US Airways provides code-sharing and direct connection to the US Airways domestic and international route system. Mesa Airlines offers flights to PHX arriving and departing from Terminal 4 and to Las Vegas McCarran International (LAS). Responses gathered during a recent Business Survey suggests that the opportunity to arrive and connect to flights in Terminal 4, occupied by US Airways and Southwest, is perceived to be more advantageous by passengers in Prescott. Indicating that in the two year period (2005-2007) Great Lakes Airline was operating in and out of Terminal 2, and therefore, the number of enplanements dropped rapidly. By arriving in Terminal 2, all connecting passengers to flights departing from Terminal 3 and 4 had to exit the terminal and repeat the check-in and screening process, and in some instances collect and recheck their luggage. This had effectively limited the ability of the passenger to select convenient connections, ultimately favoring ground transportation options to reach PHX.

However, despite the improvements, business traveler's main concerns with the service provided at PRC are the reliability problems of Mesa Airline equipment. The majority stated that they have been turned away by Mesa because of the lack of sufficient seating and/or equipment failures. During those occurrences, Mesa Airlines had to reroute passenger on ground shuttles to PHX.

Currently, Mesa Airline operates in Prescott with a fleet of Beechcraft 1900, in a 19 seats configuration. The average flight time between Prescott and Phoenix is 40 minutes, compared to 1 hour and 45 minutes of driving time[*]. Generally, the airlines fare structure is very complex and it is subject to continuous changes in response to the market demands. However, base airfare cost between PRC and PHX currently varies between $79 with advance purchase each way and $99 plus tax. It was noted when connecting at PHX for some destination the average lowest airfare increased only $42 in average, and for some other cases decreased $32 on average. **Table 3.1** presents a summary of the average and lowest airfare cost, with 14-days advance purchase, for a one-way direct flight from PHX to its top five most popular destinations: Denver, Los Angeles, Chicago, San Diego and Dallas Forth Worth, compared to a one-way direct flight from Prescott with one connection in Phoenix.

The average airfare for those city pairs was computed by the US Department of Transportation (USDOT) by averaging the cost of sold tickets for the selected city pairs, and it included Southwest Airline's tickets sales. Because Southwest does not have inter-airline agreement with other airlines, it was not included in the computation of the average airfare cost from/to Prescott.

[*] Travel time on I-17 from Prescott to Phoenix varies significantly. The 2007 ADOT I-17 Alternative Study points out that travel demand south of Anthem currently exceeds capacity, mountainous terrain and high truck volumes currently cause substantial delay from trucks slowing on grades, crashes often close I-17 resulting in long, unpredictable delays, no practical alternates exist for I-17 traffic from Flagstaff and Phoenix, and ultimately, travel delay and unreliability disrupts other transportation modes such as airports.

Table 3.1 – Average Airfare

Destination	Average Airfare From		
	PHX	PRC	Lowest (PRC)
Denver , CO (DEN)	$157	$222	$141
Los Angeles, CA (LAX)	$80	$150	$127
Chicago, IL (ORD)	$141	$235	$205
San Diego CA, (SAN)	$79	$131	$108
Dallas Forth Worth, TX (DFW)	$237	$209	$185

Source: USDOT and web airfares sale sites

Table 3.2 provides the current PRC flight schedule:

Table 3.2 – PRC Flight Schedule

Departure	Arrival	Departure Time	Arrival Time	Frequency
Prescott (PRC)	Phoenix (PHX)	8:30 AM	9:10 AM	Daily
Prescott (PRC)	Phoenix (PHX)	6:42 PM	7:22 PM	Sunday - Friday
Phoenix (PHX)	Prescott (PRC)	9:45 AM	10:25 AM	Sunday - Friday
Phoenix (PHX)	Prescott (PRC)	2:10 PM	2:50 PM	Saturday Only
Phoenix (PHX)	Prescott (PRC)	8:55 PM	9:35 PM	Sunday - Friday
Prescott (PRC)	Las Vegas (LAS)	10:35 AM	11:00 AM	Sunday - Friday
Las Vegas, (LAS)	Prescott (PRC)	4:02 PM	6:27 PM	Sunday - Friday

Source: Airport Administration

SECTION 4 - AIRPORT SERVICE AREA

Generally the Airport Service Area (ASA) refers to the airport passenger's catchment area. The ASA is defined by the surrounding communities' accessibility to the airport in terms of travel time by means of ground transportation. In 1999, The Arizona Department of Transportation (ADOT) in the Arizona Rural Air Service Study (SASP) defined the Prescott Municipal Airport theoretical market service area and an actual market service area.

The SASP acknowledged that on average, commercial service passengers are willing to travel 120-minutes to a major hub airport that can provide frequent direct national and international flights and 60-minutes to an airport with regional commuter service with a major hub airport.

Based on 60-minute driving times, the SASP identified that PRC theoretical service area would include an area spanning from Wickenburg to Williams and Camp Verde – **Figure 4.1** (theoretical service area). It was noted that actual diving times can vary, based upon weather, traffic, and terrain characteristics.

The SASP defined the actual market service area from the collection of information gathered through a travel agent survey, travel agent ticket logs, and passenger surveys. The actual market service area was found to be much smaller than the theoretical service area. PRC was found to attract passenger from only from Prescott and nearby community including Prescott Valley and Chino Valley. This finding reduced the ASA to a 20-miles radius from Prescott Municipal Airport. Several communities that fell within the PRC theoretical service area were attributed to the Flagstaff actual service area with the premise that Flagstaff had a higher level of service than Prescott – **Figure 4.2** (actual service area)

PRC's actual ASA in the SASP is found to be consistent with the definition of airport service areas provided in the National Plan for Integrated Airport Systems (NPIAS). The NPIAS criteria states that the airport system should be extensive, providing as many people as possible with convenient access to air transportation, typically not more than 20-miles travel to the nearest NPIAS airport.

Figure 4.1
Theoretical Service Area

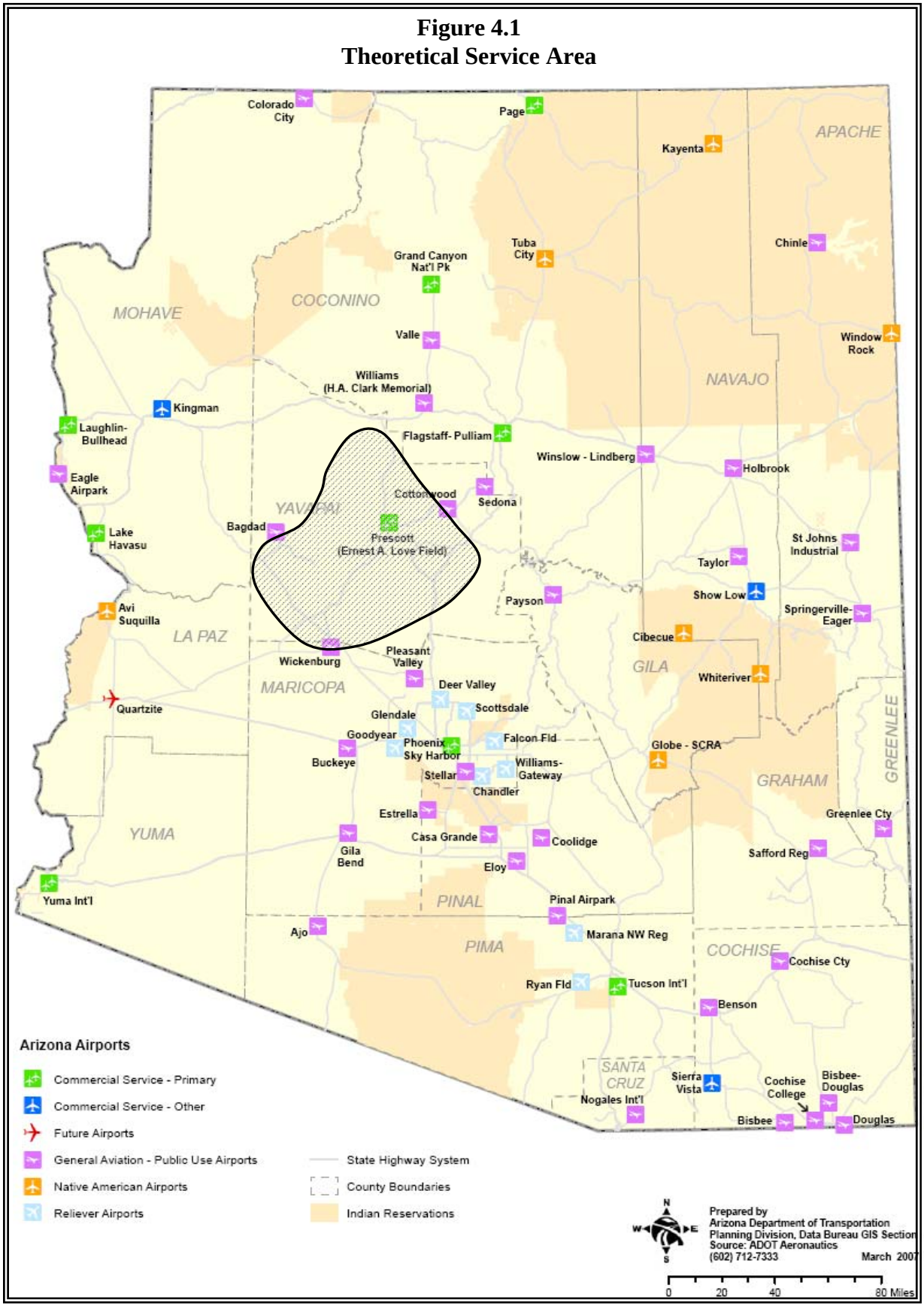
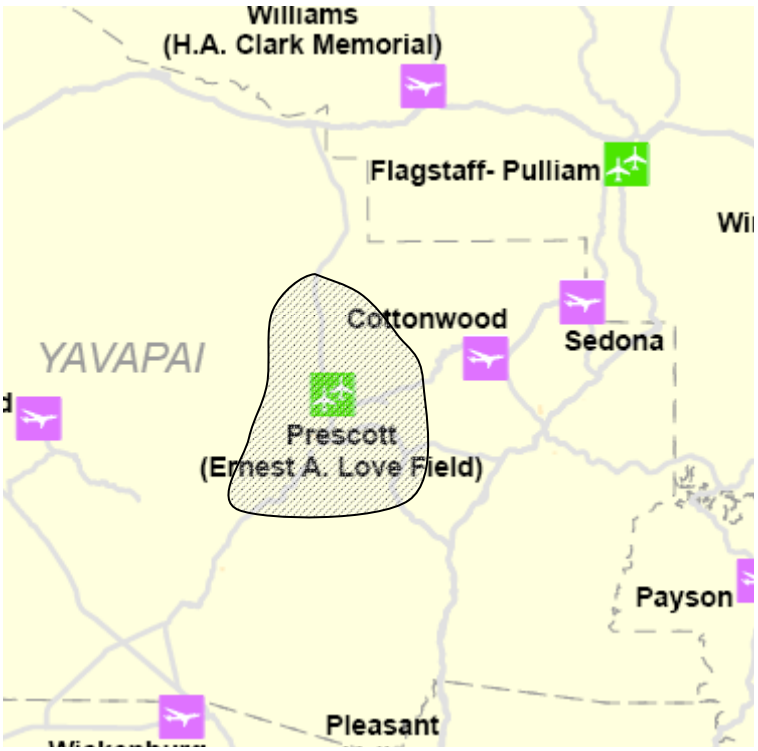


Figure 4.2
Actual Service Area



Therefore, for the purpose of this study, the Prescott Municipal ASA boundaries are set by a 20-miles travel distance radius from the airport, in line with NPIAS criteria and SASP findings.

Based upon the above definition of the Prescott ASA will include the following incorporated communities and zip codes, as shown in **Table 4.1**:

Table 4.1 – Communities & Zip Codes

City	Zip Code
Prescott	86301; 86302; 86303; 86304; 86313; 86314
Prescott Valley	86612; 86314
Chino Valley	86326
Dewey-Humboldt	86314; 86327; 86329

Some unincorporated residential areas of Yavapai County on the south and northwest side of Prescott as well west of Chino Valley are included in the ASA.

SECTION 5 – SOCIOECONOMICS & DEMOGRAPHICS OF ASA

To understand the air service needs in Prescott and to estimate the level of demand, it is useful to explore the characteristics of the communities served by PRC. To estimate demand for air service the following demographical characteristics have been reviewed: a) population, b) density, c) employment, d) taxable sales and e) income.

5.1 - Population

Prescott is identified by the US Census Bureau as a Metropolitan Statistical Area (MSA), defined by the US Office of Management and Budget (OMB) as a "geographic entity…for use by Federal statistical agencies in collecting, tabulating, and publishing Federal statistics". According to the 2007 Census Bureau estimate, more than 208,000 people live in the Prescott MSA. According to the Department of Economic Security (DES) 2007 population estimates, it is estimated that about 60% of the MSA population, 124,477 people live within the 20 miles ASA radius, with the highest population density in the City of Prescott. The recent rapid growth of the region as prompted the Central Yavapai Metropolitan Planning Organization (CYMPO) Long Range Transportation to forecast the population within the tri-city area (Prescott, Prescott Valley and Chino) to be approximately 438,000 by 2030, representing a 5.6% overall annual growth rate in the ASA. Table 5.1 shows the population distribution in the entire ASA.

Table 5.1

ASA Population Estimates			
City	**2007**		**2030**
Chino Valley	13,098		30000
Dewey – Humboldt	4,434		88000
Prescott	43,217		102,000
Prescott Valley	38,357		30,000
Unincorporated	25,371		188,000
Total	**124,477**		**438,000**

5.2 - Taxable Sales

As shown in **Table 5.2**, taxable sales are a strong indicator of economic activity in a region. A high level of taxable sales indicates the existence of potential demand for air service. In 2006 $2.3 billion in total taxable sales were reported in the ASA of which 1.5 billion were spent in Prescott alone. Knowing that Prescott has an estimated population of about 43,217, its taxable sales per capita is equal to $32,455, which is about 30% higher than Phoenix, with $22,587 and 36% higher than Yuma with $20,600 taxable sales per capita. The overall taxable sale per capita in the ASA is 3% higher Phoenix with $23,300[†]. The high taxable sales highlights the role of Prescott as an economic drive for the area and that it benefits from tourist spending and from people that travel to Prescott on a regular basis for every day needs.

Table 5.2

2006 ASA Taxable Sales (million)	
Chino Valley	184.6
Dewey – Humboldt	37.8
Prescott	1,500
Prescott Valley	586.4
Unincorporated areas	Not available
Total	**2,300**
Phoenix	34,400
Yuma	1,900

5.3 - Employment Statistics

It is estimated, based on AZ Department of Economic Security data, that in 2007 the total labor force in the Prescott metropolitan area was over 40,500 with an average 3.2% unemployment rate.

The region employment spectrum is diverse, encompassing different industries and sectors such as education, medical, manufacturing, retail and tourism. A large number of employers are located in city of Prescott, including the Yavapai Regional Medical Center, Yavapai Community College, Embry-Riddle University, Veteran Administration Medical Center, Wal-Mart, Frontier Village and Prescott Gateway Mall, Prescott Municipal Airport and related services, several manufacturing companies and governmental offices. Other employers in the area are the casinos, resorts, various school districts, USPS, and retail stores.

[†] Taxable sales and population numbers for unincorporated areas were not included in the computation of the ASA taxable sale per capita. However it is expected that they contributed in the taxable sales totals of Prescott and other incorporated communities.

5.4 – ASA Income Statistics

The Population Trend Report prepared for the City of Prescott by ABC Demographic Consultants estimates 50,802 households in 2007 are within a 20-mile radius of the Prescott Municipal Airport. The estimated average household income for 2007 was estimated at $56,153, the median income was estimated at $41,348 and the per capita income was estimated at $26,434. Additionally, the report estimated in 2007 41% of the population was between the ages of 20 and 54 years old, while 21.4% of the population was estimated to be above 65 years old. The median age of 43.4 years and an average age of 42.76 years. **Table 5.3** depicts the ASA income distribution.

Table 5.3

ASA Income Distribution	
$250,000 or more	2.54%
$150,000 to $249.999	2.50%
$100,000 to $149,999	7.80%
$75,000 to $99,999	9.22%
$50,000 to $74,999	18.23%
$35,000 to $49,999	18.75%
$25,000 to $34,999	14.36%
$15,000 to $24,999	14.31%
Under $14,999	12.29%

SECTION 6 – COMPARABLE ASA

It is commonly estimated that the annual passenger enplanements demand is strongly correlated to the size of the population that it serves. However, individual markets vary from one another. The regional distribution of air service demand is heavily influenced by low cost carries, routes availability, flights frequency and hub and spoke systems.

The market characteristics and enplanements of four communities and airports in the southwest were reviewed to estimate the market potential of PRC. The selection process was based upon

factors such as a) geographical location, b) proximity to a major hub, c) population in the Metropolitan Statistical Area (MSA), d) level of service, and e) enplanements.

a) **Geographical Location:** The selection of the airports was limited to the south-western region of the United States to maintain analogous population and geographical characteristics.
b) **Proximity to a Major Hub:** Since PRC market share is affected by PHX, only airports that are directly affected by major hubs were selected.
c) **Population in the Metropolitan Statistical Area (MSA):** The MSA is designed to provide a nationally consistent set of standards for collecting, tabulating and publishing federal statistic for geographic areas in the United States. Prescott MSA population was estimated to be about 208,000 with a density estimated to be about 1200 people per square mile; hence only cities with a population density similar to Prescott MSA were selected. Population and population density in the area Metropolitan Statistical Area were obtained from the US Census Bureau
d) **Level of Service**: Only airport with more than one commercial air carrier options were selected.
e) **Enplanements:** Only airport with average capture rate above 35%, reflecting 50,000 or more enplanements were selected.

Based on the criteria mentioned above, the airports in the following cities were selected: St. George, Utah; Redding, California; Yuma, Arizona; and Abilene, Texas. Overall, these cities have similar statistic characteristics. **Table 6.1** provides a summary of their enplanements per capita ratios.

Table 6.1

Enplanement per Capita	
SGU – St. George, Utah	0.42
RDD – Redding, California	0.37
YUM – Yuma, Arizona	0.36
ABI – Abilene, Texas	0.71
Average	**0.46**

Table 6.2 presents a snapshot of pertinent information of the selected cities.

Table 6.2

SGU – St. George, Utah			
Enplanements	53,663	Destinations	LAX, SLC
Nearest Major Hub	LAS	MSA Population	126,000
Distance in Miles	131	Population Density	771
Daily Flights	Up to 20	Taxable Sales	1.8 Billion
Airlines	United Express Sky West	Household Median Income	49,000
RDD – Redding, California			
Enplanements	66,695	Destinations	SFO, LAX, PDX
Nearest Major Hub	SMF	MSA Population	180,000
Distance in Miles	148	Population Density	1383
Daily Flights	Up to 22	Taxable Sales	2.1 billion
Airlines	United Express Horizon Air	Household Median Income	$41,682
YUM – Yuma, Arizona			
Enplanements	67,684	Destinations	PHX, LAX, SLC
Nearest Major Hub	PHX	MSA Population	185,000
Distance in Miles	188	Population Density	880
Daily Flights	Up to 14	Taxable Sales	1.9 billion
Airlines	United Express, Delta Sky West, US Airways	Household Median Income	35,374
ABI – Abilene, Texas			
Enplanements	88,327	Destinations	IAH, DFW
Nearest Major Hub	DFW	MSA Population	124,000
Distance in Miles	175	Population Density	1100
Daily Flights	Up to 10	Taxable Sales	2.1 billion
Airlines	American Eagle Continental express	Household Median Income	39,821

SECTION 7 – COMMON PASSENGER LEAKAGE MODES

Prescott's proximity to other airports such as Flagstaff Pulliam Municipal Airport and Phoenix Sky Harbor (PHX), a major hub, makes ground transportation options (e.g., personal vehicles, shuttle vans, taxis and limos) via interstate I-17 attractive. The use of personal vehicles is very common. According to the CYMPO Regional Transit Need Study, more than 2% of the Prescott tri-city area workforce commutes daily to Phoenix. I-17 offers direct connections to the Phoenix freeway loop system and to the PHX Airport. Taxi services from Prescott to PHX, while available, are limited by regulations imposed at by Sky Harbor. Others like limousine or door-to-door services are also available by reservation only, their prices range from $49 to $75/hour or $40 to $125 one-way.

Another popular mode of transportation dedicated mainly to transfer passenger from the tri-city area directly to PHX are shuttle vans. Nationwide operators have been seizing on the opportunity to transport passengers from rural and outlying area directly to major hubs. According to the CYMPO Regional Transit Need Study, six private companies offer service between the Central Yavapai region and Phoenix Sky Harbor, of which three offer daily trips with scheduled and on-call with pick-ups at private residences. However, two companies control the majority of the market share of this flourishing business, Prescott Transit Authority and Shuttle-U. Combined, they provide 32 daily round trips between Prescott and PHX with prices starting at $21 one-way up to $56 round trip. Both operate commercial Ford minivans and lift-equipped shuttle vans, with a capacity respectively of 8 and 12 passengers. The maximum daily capacity for Prescott Transit is 128 and 180 for Shuttle U. Combined, they have the potential to serve 308 passengers per- day or 112,420 passengers per year. **Table 7.1** provides their current schedule and fare structure.

Table 7.1 – Passenger Shuttle Fare Structures

Prescott Transit Authority

Departures from Prescott		Departures from Phoenix		Purchase Type	One-Way Cost	Round Trip
4:00am	12:00pm	6:30am	2:30pm	Regular	$29.95	$49.95
5:00am	1:00pm	7:30am	3:30pm	At Sky Harbor Airport	$32	n/a
6:00am	2:00pm	8:30am	4:30pm	Child 4-15	$18.95	$29.95
7:00am	3:00pm	9:30am	5:30pm	Child under 4	Free	Free
8:00am	4:00pm	10:30am	6:30pm	Advance Purchase 20 trip	$21	$42
9:00am	5:00pm	11:30am	7:30pm	Advance Purchase 10 trip	$22	$44
10:00am	6:00pm	12:30pm	8:30pm	Advance Purchase 6 trip	$23	$46
11:00am	8:00pm	1:30pm	10:30pm			

Shuttle U

Departures from Prescott		Departures from Prescott Valley		Departures from Phoenix		Purchase Type	One-Way Cost	Round Trip
4:00am	12:00pm	4:20am	12:20pm	7:30am	3:30pm	Regular	$34	$56
5:00am	1:00pm	5:20am	1:20pm	8:30am	4:30pm	Child 4-15	$18	$30
6:00am	2:00pm	6:20am	2:20pm	9:30am	5:30pm	Child under 3	Free	Free
7:00am	3:00pm	7:20am	3:20pm	10:30am	6:30pm	Frequent Rider	$22	$44
8:00am	4:00pm	8:20am	4:20pm	11:30am	7:30pm			
9:00am	5:00pm	9:20am	5:20pm	12:30pm	8:30pm			
10:00am	6:00pm	10:20am	6:20pm	1:30pm	10:30pm			
11:00am	8:00pm	11:20am	7:20pm	2:30pm				

SECTION 8 - SURVEYS

In the effort to estimate the potential passenger demand in the Prescott Airport Service Area, the data from two passenger's surveys and one business survey was reviewed.

8.1 - O'Neil's Passenger Intercept Survey

To understand their market composition, Phoenix Sky Harbor conducts a quarterly passenger intercept survey on a random sample of 750 passengers. As part of the survey, demographic data and ZIP codes of origin are collected. The results are sorted based upon the ZIP Code of origin. ZIP Codes starting with 85 and 86 are commonly used for Arizona. The surveys conducted in the third and fourth quarter of 2007 revealed that 47.1% of the sample had a home address in the

Mountain-West region (AZ, NM, NV, UT, CO, ID, WY) and 3% of the sample originated from Prescott in the 863XX zip code area (see **Table 8.1**).

Table 8.1

2007 3rd & 4th Qt O'Neil Passenger Survey	
City and Communities	**% of traffic**
Phoenix	9.9%
East Valley Communities	14.1%
West Valley Communities	6.4%
Tucson	1.6%
Northern Arizona	1.4%
Prescott	**3%**
Other	10.7
Total	**47.1%**

The second survey reviewed is the 2005 Phoenix O&D Passenger Survey, which aimed to collect demographic data, purpose of travel and other airport pertinent information. As part of the demographic data ZIP codes of the participant passengers were also collected (see **Table 8.2**). The survey was administered to departing passengers only.

The results showed that 2.83% of the sample was composed of residents in the Prescott MSA, which includes Sedona, and 1.69% was composed just of residents of the Prescott ASA. In 2005, Sky Harbor reported 24.7 million O&D passengers.

Table 8.2

2005 Phoenix Passenger Survey – ZIP Codes		
86301	Prescott	Yavapai
86303	Prescott	Yavapai
86305	Prescott	Yavapai
86314	Prescott Valley	Yavapai
86322	Camp Verde	Yavapai
86323	Chino Valley	Yavapai
86324	Clarkdale	Yavapai
86325	Cornville	Yavapai
86327	Dewey	Yavapai

The third survey was conducted by The Louis Berger Group, Inc., as part of the Prescott Municipal Airport Master Plan. The survey was aimed to local business that benefits or may benefit from additional air service in Prescott, to understand their business travel preferences. While the results of the survey did not produce any demand estimates, valuable information about quality of existing service and passenger's preference were recorded. The survey showed that the majority of the business travel would use PRC more for their travel needs if quality and consistency of the current air service is improved. Until then, many prefer using personal, rental vehicles or shuttles to satisfy their travel need.

SECTION 9 – ANALYSIS OF FINDINGS

Passenger leakage is very common in small communities, especially in communities where local air service is viewed by potential customers as not attractive. The same can be said for medium size airports when located within driving distance from a major hub airport.

When large segments of the population are on a fixed income, the demand for airfare is elastic (i.e., sensitive to price change). The choice of using the local airport or drive to a larger one is determined by the lowest overall cost. Prescott has a large number of retirees with 20 percent of its population above 65 years of age, which typically will opt for the cheapest travel solution. In addition, Prescott is approximately 105 miles north of Phoenix Sky Harbor, which is one of the busiest major hubs in the nation, with hundreds of daily direct flight and destination. PHX is also home to US Airways, and Southwest Airline has a heavy presence. Southwest Airline is known for its low cost fare and for the so called “Southwest Effect”, where competing airlines lower their fares on markets served by Southwest; consequently passengers are willing to drive considerably more to reach an airport served by Southwest.

Nevertheless, when comparing airfares from Prescott to the top five PHX city pairs, it was found that average airfares increased less than the cost of the connection between PRC and PHX. In some instances some travel sites quoted lower prices from PRC than from PHX. This shows that the complexity of the airfare system, and the frequent changes, in response to demand and competitors, makes it very difficult to grasp the airfare structure from/to PRC.

At this time, with more than 32 daily round trips, and a daily capacity of 308 passengers, shuttle van companies have been identified to be PRC’s primary competitor. For this study, we were unable to obtain ridership data, nevertheless all documentation and research indicates that morning departure from Prescott are typically full and so returns in the afternoon from PHX, mimicking airline departure and arrival peaking characteristics. Shuttle companies often advise to call and reserve in advance. Therefore, it was believed appropriate to develop three ridership scenarios. As shown in **Table 9.1**, Low, Likely, and High ridership scenarios depict the yearly passenger loads of the shuttle companies.

Based upon the above estimates, shuttle companies have likely achieved a demand capture rate of about 70% of unconstrained demand, while the airport is currently capturing less than 6%, with the remaining 24% still likely to choose to personally drive directly to Phoenix or elsewhere.

Table 9.1

Yearly Shuttle Passenger Load Scenarios		
Low	Likely	High
56,100 – 61,800	73,000 - 78,700	89,850 – 95,550

In the 1999 Arizona Rural Air Service Study, ADOT estimated that statewide enplanements per capita ration was 3.10, lead by Phoenix with a 3.76 ratio and Tucson with 2.18. It was then concluded that the unconstrained overall enplanement per capita rate for the 13 study airports was equal to 2.06 and for Prescott 0.87, estimating that Prescott could capture approximately 40% of its total unconstrained demand.

Knowing that demographic characteristic in the areas have not significantly changed in the last ten years, it is reasonable to believe that the same ratio of enplanement per capita is still valid. As previously described, the population of the Prescott Municipal Airport Service Area was estimated at 124,477, applying the same enplanement per capita ratio calculated in the Arizona Rural Air Service Study the total unconstrained enplanement demand would be 108,295 per year. Applying the 40% capture rate calculated in the SASP to the total unconstrained demand, Prescott could capture 43,318. The 40% capture rate is believed to be reasonable considering that all non regional and secondary airports are affected by passenger leakage. The 2000 Arizona State Aviation Need Study (SANS) pointed out that even lager markets lose 40-50% of their passengers.

Comparing Prescott to the selected comparable airports and MSA, it was noted that Prescott has similar taxable sales and a higher median income than three of the four in the MSA. The average enplanement per capita was found to be equal to 0.46 of the total MSA population. Prescott MSA is larger than any of the 4 MSA reviewed, with an estimated population of about 208,000. Applying their average enplanement per capita, Prescott could draw up to 95,680 enplanements per year from its MSA and 57,260 enplanements from the 20-miles radius ASA. This estimated capture rate is 6% higher than the capture rate in the SASP.

The third estimate comes from the survey results of the Sky Harbor passenger's intercepts surveys and the Prescott Municipal Airport Business survey. The quarterly Passenger Intercept Survey, while not intended specifically for O&D passenger traffic tell us that 3% of the random sample, which capture all passenger traffic, both O&D and connecting, originated in the Prescott area. The second survey, the 2005 Passenger Survey tells us that 2.83% of the sample, which was composed only by O&D departing passenger, originated from the Prescott MSA and 1.69% from the Prescott Airport Service Area previously identified.

Considering that in 2007 Sky Harbor served more than 40 million passengers, it is estimated that more than 152,000 enplanements were from passenger living in the Prescott MSA, with a rate of enplanements per capita of 1.36, still below the national average of 1.53, and below the State average of 3.87.

SECTION 10 – SUMMARY OF FINDINGS

Finding the precise number of passengers that choose not to use PRC is very difficult and elusive. The shuttle van companies are careful not to divulge their ridership numbers. Possibly the only way to find exactly how many passengers begins their air travel in a different airport would be to access each airline reservation systems, a task very difficult to accomplish.

Based upon the review of previous studies, available information, comparables and surveys data, **Table 10.1** shows the following estimates for unconstrained and potential demand of air service. In 2007, PRC reported approximately 4,000 enplanements, which shows that currently the airport is experiencing between a 90.7% to 93.4% passenger leakage of its potential demand to primary airports.

Table 10.1

Summary of Findings			
Estimation Methods	**Unconstrained Demand**	**Potential Demand**	**Leakage**
SASP	108,295	43,318	90.7%
Comparable ASA	95,680	57,260	93.0%
Survey	152,000	60,800	93.4%
Average	118,658	53,792	92.5%