Chapter Two

Aviation Demand Forecasts

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AVIATION DEMAND FORECASTS

An important factor in facility planning involves a definition of demand that may reasonably be expected to occur during the useful life of the facility's key components. In airport master planning, this involves projecting potential aviation activity over at least a 20-year timeframe. For general aviation airports such as Eric Marcus Municipal Airport, forecasts of based aircraft and general aviation operations (takeoffs and landings) serve as a basis for facility planning.

The Federal Aviation Administration (FAA) has a responsibility to review aviation forecasts that are submitted to the agency in conjunction with airport planning, including master plans, 14 CFR Part 150 studies, and environmental studies. The FAA reviews such forecasts with the objective of including them in its *Terminal Area Forecasts* (TAF) and the *National Plan of Integrated Airport Systems* (NPIAS). In addition, aviation activity forecasts are an important input to the benefit-cost analyses associated with airport development, and the FAA reviews these analyses when federal funding requests are submitted.

As stated in FAA Order 5090.3C, *Field Formulation of the National Plan of Integrated Airport Systems* (NPIAS), dated December 4, 2004, forecasts should:

- Be realistic.
- Be based on the latest available data.
- Reflect current conditions at the airport.

- Be supported by information in the study.
- Provide adequate justification for airport planning and development.

The forecast process for an airport master plan consists of a series of basic steps that can vary depending upon the issues to be addressed and the level of effort required to develop the forecast. The steps include a review of previous forecasts, determination of data needs, identification of data sources, collection of data, selection of forecast methods, preparation of the forecasts, and evaluation and documentation of the results.

The following forecast analysis for Eric Marcus Municipal Airport was produced following these basic guidelines. Other forecasts dating back to the previous master plan were examined and compared against current and historic activity. The historical aviation activity was then examined along with other factors and trends that could affect demand. The intent is to provide an updated set of aviation demand projections for Eric Marcus Municipal Airport that will permit Pima County to make planning adjustments for the future management of the facility.

NATIONAL AVIATION TRENDS

Each year, the FAA updates and publishes a national aviation forecast. Included in this publication are forecasts for passengers, airlines, air cargo, general aviation, and FAA workload measures. The forecasts are prepared to meet the budget and planning needs of the constituent units of the FAA and to provide information that can be used by state and local authorities, the aviation industry, and the general public.

The current edition when this chapter was prepared was FAA *Aerospace Forecasts - Fiscal Years 2008-2025*, published in March 2008. The forecasts use the economic performance of the United States as an indicator of future aviation industry growth. Similar economic analyses are applied to the outlook for aviation growth in international markets.

Following more than a decade of decline, the general aviation industry was revitalized with the passage of the *General Aviation Revitalization Act* in 1994, which limits the liability on general aviation aircraft to 18 years from the date of manufacture. This legislation sparked an interest to renew the manufacture of general aviation aircraft due to the reduction in product liability, as well as renewed optimism for the industry. The high cost of product liability insurance had been a major factor in the decision by many American aircraft manufacturers to slow or discontinue the production of general aviation aircraft.

In the seven years prior to the events of September 11, 2001, the U.S. civil aviation industry experienced unprecedented growth in demand and profits. The impacts to the economy and aviation industry from the events of 9/11 were immediate and significant. Thousands of general aviation aircraft were grounded for weeks due to no-fly zone restrictions imposed on opera-

tions of aircraft in security-sensitive areas. This, in addition to the economic recession that began in early 2001, had a negative impact on the general aviation industry. General aviation shipments by U.S. manufacturers declined for three straight years from 2001 through 2003.

Stimulated by an expanding U.S. economy as well as accelerated depreciation allowances for operators of new aircraft, general aviation staged a relatively strong recovery with over ten percent growth in each of the last three years. The economic climate and aviation industry had been recovering until early 2008 when it became clear that an economic downturn was underway. High oil prices and an economic recession have put airlines and aircraft manufacturers on the brink of bankruptcy.

Despite the current recession, the Office of Management and Budget (OMB) expect the U.S. economy to rebound in the short term and continue to grow moderately in terms of Gross Domestic Product (GDP) at an average annual rate of 2.7 percent through 2025. The world GDP is forecast to grow at an even faster rate of 3.2 percent over the same period. This will positively influence the aviation industry, leading to passenger, air cargo, and general aviation growth throughout the forecast period (assuming there will be no new successful terrorist incidents against either U.S. or world aviation).

Resilience being demonstrated in the piston aircraft market offers hope that the new aircraft models are attracting interest in the low-end market of general aviation. The introduction of new, light sport aircraft is expected to provide further stimulation in the coming years.

New models of business jets are also stimulating interest for the high-end market. The FAA still expects the business segment to expand at a faster rate than personal/sport flying. Safety and security concerns combined with increased processing time at commercial terminals make business/corporate flying an attractive alternative. In addition, the bonus depreciation provision of President Bush's economic stimulus package began to help business jet sales late in 2004.

In 2008, there were an estimated 228,155 active general aviation aircraft in the United States. **Exhibit 2A** depicts the FAA forecast for active general aviation aircraft. The FAA projects an average annual increase of 1.4 percent through 2025, resulting in 286,500 active aircraft. Piston-powered aircraft are expected to grow at an average annual rate of 0.3 percent. This is driven primarily by a 4.7 percent annual increase in piston-powered rotorcraft and growth in experimental and sport aircraft, as single engine fixed-wing piston aircraft are projected to increase at just 0.5 percent annually, and multi-engine fixed-wing piston aircraft are projected to decrease by 0.9 percent per year. This is due, in part, to declining numbers of multi-engine piston aircraft and the attrition of approximately 1,500 older piston aircraft annually. In addition, it is expected that the new, light sport aircraft and the relatively inexpensive microjets will dilute

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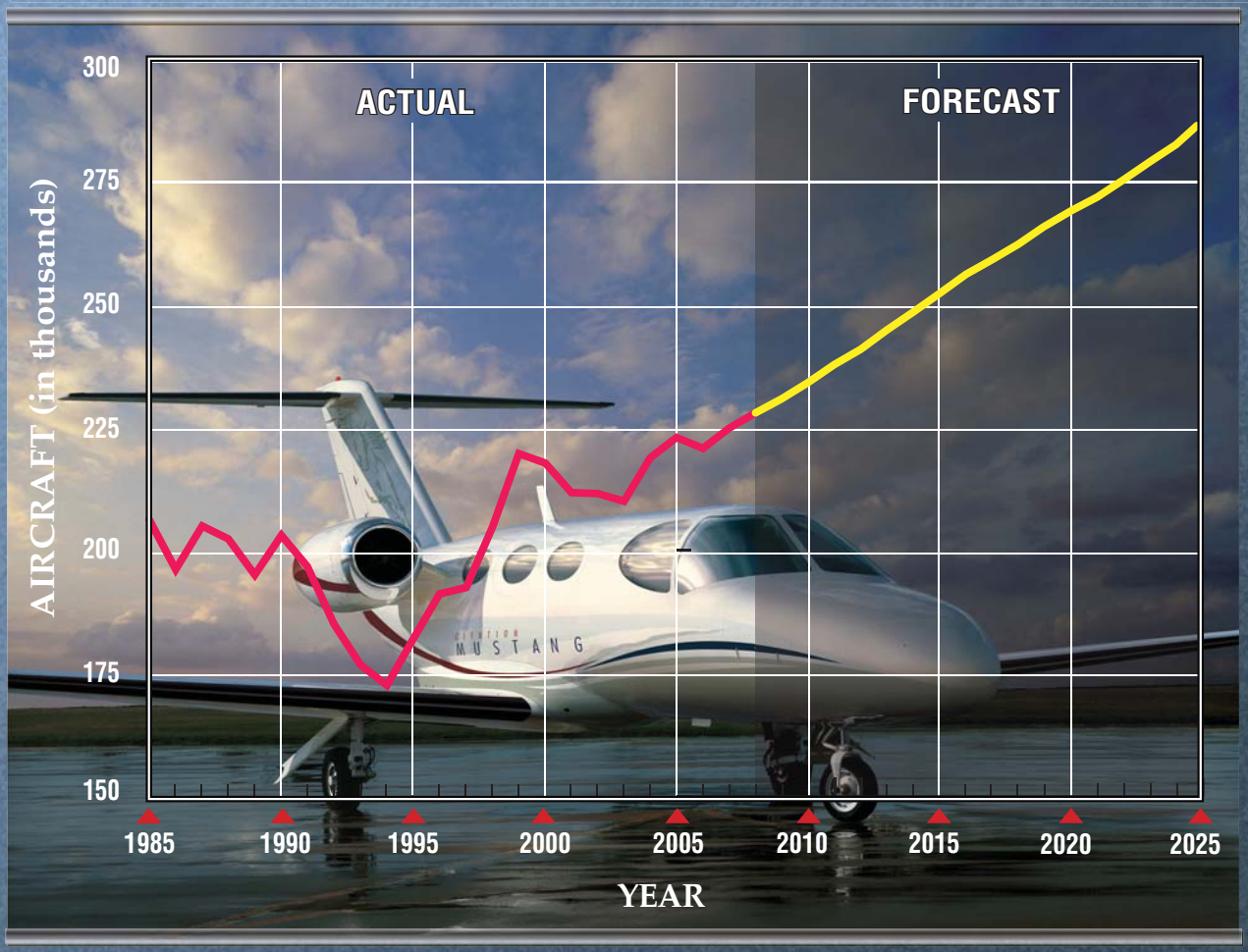
U.S. ACTIVE GENERAL AVIATION AIRCRAFT



U.S. ACTIVE GENERAL AVIATION AIRCRAFT (in thousands)

Year	FIXED WING				ROTORCRAFT		Experimental	Sport Aircraft	Other	Total
	PISTON		TURBINE							
	Single Engine	Multi-Engine	Turboprop	Turbojet	Piston	Turbine				
2008 (Est.)	144.2	18.4	8.3	12.0	4.0	6.2	24.8	3.8	6.5	228.2
2015	145.6	17.2	9.3	19.8	6.2	7.3	29.7	10.5	6.5	252.3
2020	150.0	16.5	10.1	24.9	7.3	7.9	32.6	13.2	6.4	268.9
2025	157.4	15.6	10.8	29.5	8.3	8.6	35.2	14.7	6.4	286.5

Source: FAA Aerospace Forecasts, Fiscal Years 2008-2025.

Notes: An active aircraft is one that has a current registration and was flown at least one hour during the calendar year.

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Exhibit 2A
U.S. ACTIVE GENERAL AVIATION
AIRCRAFT FORECASTS

or weaken the replacement market for piston aircraft.

Owners of ultralight aircraft began registering their aircraft as "light sport" aircraft in 2005. At the end of 2006, a total of 1,273 aircraft were estimated to be in this category. The FAA estimates there will be a registration of 5,600 aircraft by 2010, and it will grow to 14,700 aircraft by 2025.

Turbine-powered aircraft (turboprop and jet) are expected to grow at an average annual rate of 4.2 percent over the forecast period. Even more significantly, the jet portion of this fleet is expected to almost double in size in 10 years, with an average annual growth rate of 5.6 percent. The total number of jets in the general aviation fleet is projected to grow from 10,997 in 2007, to 29,515 by 2025.

A significant portion of the turbine aircraft growth is anticipated to occur within the very light jet (VLJ), or microjet aircraft, market. Microjets entered the active fleet in 2007, with the delivery of 143 new aircraft. VLJs are commonly defined as a jet aircraft that weighs less than 10,000 pounds and include aircraft such as the Eclipse 500 and Adams 700 jets. While not categorized by Cessna Aircraft as a VLJ, the Cessna Mustang is a competing aircraft to many of the VLJs expected to reach the market. These jets cost between $1 and $2 million, can takeoff on runways less than 3,000 feet, and cruise at 41,000 feet at speeds in excess of 300 knots. The VLJ manufacturing industry has fallen on hard times in 2008 due to the global economic crisis with both Adams Aircraft and Eclipse Aviation filing for bankruptcy and halting manufacturing. It is unclear at this point if or when either of these companies will resume aircraft manufacturing operations. Despite these hardships, the VLJ is still expected to redefine the business jet segment by expanding business jet flying and offering operational costs that can support on-demand air taxi point-to-point service. They are forecast to grow by 400 to 500 aircraft per year, contributing a total of 8,145 aircraft to the jet forecast by 2025.

FORECASTING APPROACH

The development of aviation forecasts proceeds through both analytical and judgmental processes. A series of mathematical relationships are tested to establish statistical logic and rationale for projected growth. However, the judgment of the forecast analyst, based upon professional experience, knowledge of the aviation industry, and their assessment of the local situation, is important in the final determination of the preferred forecast.

However, it is important to use forecasts which do not overestimate revenue-generating capabilities or understate demand for facilities needed to meet public (user) needs.

A wide range of factors are known to influence the aviation industry and can have significant impacts on the extent and nature of air service provided in both the local and national markets. Technological advances in aviation have historically altered and will continue to change the growth

rates in aviation demand over time. The most obvious example is the impact of jet aircraft on the aviation industry, which resulted in a growth rate that far exceeded expectations. Such changes are difficult, if not impossible, to predict, and there is simply no mathematical way to estimate their impacts. Using a broad spectrum of local, regional, and national socioeconomic and aviation information, and analyzing the most current aviation trends, forecasts are presented in the following sections.

To determine the types and sizes of facilities that should be planned to accommodate general aviation activity, certain elements of this activity must be forecast. Indicators of general aviation demand include:

- Based aircraft
- Based aircraft fleet mix
- General aviation operations

The remainder of this chapter will examine historical trends with regard to these areas of general aviation and project future demand for these segments of general aviation activity at the airport.

BASED AIRCRAFT

The number of aircraft based at an airport is, to some degree, dependent upon the nature and magnitude of aircraft ownership in the local service area. Therefore, the process of developing a projection of based aircraft for Eric Marcus Municipal Airport begins with a review of historical aircraft registrations in Pima County.

REGISTERED AIRCRAFT FORECASTS

Historical records of aircraft ownership in Pima County, presented on **Table 2A**, were obtained from the U.S. Census of Civil Aircraft, Aviation Goldmine, and Avantext, Inc. Since 1988, registered general aviation aircraft in the county have grown from 919 to 1,446, for an annual average growth rate of 2.3 percent. A check of registered aircraft growth from 1993 to 2008 showed that registered aircraft within a 30-mile radius of Eric Marcus Municipal Airport has remained static at three during this time frame. This illustrates that all the registered aircraft growth has taken place in the eastern portion of the county and reflects the limited amount of general aviation activity in the region.

Table 2A also compares registered aircraft to active general aviation aircraft in the United States. The Pima County share of the U.S. market of general aviation aircraft in 2008 was 0.634 percent. **Table 2A** presents a projection of registered aircraft in Pima County based upon maintaining the 2008 percentage as a constant share of projected U.S. active aircraft in the future. This forecast results in almost 1,900 registered aircraft by 2028 at an average annual growth rate of 1.36 percent. Due to the 20-year history of an increasing market share, a forecast was prepared to reflect this trend. The resulting forecast reached 1,988 registered aircraft by 2028 with a growth rate that matched the projected population growth rate of 1.61 percent annually.

TABLE 2A
Registered Aircraft and Independent Variables
Pima County

Year	Registered Aircraft	U.S. Active Aircraft	% of U.S. Market	Population	PCPI (2004 $)
1988	919	N/A	N/A	664,400	23,305
1989	949	N/A	N/A	675,300	23,693
1990	918	N/A	N/A	668,500	23,128
1991	909	N/A	N/A	682,875	23,006
1992	932	185,650	0.502%	700,250	22,988
1993	1,033	177,120	0.583%	712,600	23,446
1994	1,074	172,935	0.621%	728,425	23,968
1995	1,102	182,605	0.603%	758,050	23,891
1996	1,101	187,312	0.588%	780,750	24,224
1997	1,131	189,328	0.597%	789,650	24,495
1998	1,127	205,700	0.548%	823,900	25,650
1999	1,165	219,500	0.531%	845,775	26,073
2000	1,260	217,533	0.579%	843,746	26,517
2001	1,279	211,446	0.605%	870,610	26,481
2002	1,284	211,244	0.608%	890,545	26,236
2003	1,298	209,606	0.619%	910,950	26,302
2004	1,301	219,319	0.593%	931,210	27,467
2005	1,337	224,262	0.596%	957,635	27,923
2006	1,341	221,942	0.604%	981,280	28,020
2007	1,448	225,007	0.644%	1,003,235	28,277
2008	1,446	228,155	0.634%	1,026,506	28,613
Constant Share of U.S. Active Aircraft					
2013	1,553	245,090	0.634%	1,134,853	30,405
2018	1,663	262,460	0.634%	1,234,697	32,357
2028	1,893	298,702	0.634%	1,410,235	36,770
Increasing Share of U.S. Active Aircraft					
2013	1,600	245,090	0.653%	1,134,853	30,405
2018	1,741	262,460	0.663%	1,234,697	32,357
2028	1,988	298,702	0.666%	1,410,235	36,770

Sources:
Registered Aircraft – U.S. Census of Civil Aircraft (1988-1992), Aviation Goldmine (1993-2000), Avantext, Inc., Aircraft & Airmen (2001-2008).
U.S. Active Aircraft – *FAA Aerospace Forecasts 2008-2025*
Population – Arizona Department of Economic Security (1988-2006), Arizona Department of Commerce (2007-2028)
PCPI – U.S. Department of Commerce, Bureau of Economic Analysis (1988-2006), Woods & Poole *CEDDS*, 2008 (2007-2008, 2013-2028).

A time-series extrapolation of registered aircraft was developed based upon the period from 1988 to 2008. The correlation coefficient, (r^2), was determined to be 0.966 for this time-series extrapolation. The correlation coefficient (Pearson's "r") measures the association between changes in the dependent variable (registered aircraft) and the independent variable(s). An r^2 greater than 0.900 generally indicates good predictive reliability. A

lower value may be used with the understanding that the predictive reliability is lower.

Several regression analyses were prepared to determine the association between U.S. active aircraft, socioeconomic indicators (population and PCPI), and registered aircraft growth. This association is represented by the correlation coefficient. **Table 2B** and **Exhibit 2B** present the resulting projections for comparison with the market share projections.

Each of the regression analyses were found to have high correlation coefficient numbers indicating a strong association. As a result, a narrow range of forecasts were generated with a high end of 2,042 and a low end of 1,994 county registered aircraft by 2028. The selected forecast is an approximate average of these four regression forecasts with a resulting growth rate of 1.67 percent annually. The selected forecast reflects a reasonable amount of growth, which can be associated with the socioeconomic expansion anticipated in the county over the course of the next 20 years. The selected forecast yields 1,603 by 2013, 1,750 by 2018, and 2,012 by 2028. **Table 2B** summarizes the registered aircraft forecasts developed for Pima County as well as the selected forecast.

TABLE 2B
Registered Aircraft Projections
Pima County

	r^2	2008	2013	2018	2028	Avg. Annual Growth Rate
Market Share Projection						
U.S. Active Aircraft		228,155	245,090	262,460	298,702	1.36%
Constant Share of U.S. Active Aircraft		1,446	1,553	1,663	1,893	1.36%
Increasing Share of U.S. Active Aircraft		1,446	1,600	1,741	1,988	1.61%
Regression Analysis Projections						
Time-Series 1988-2008	0.966	1,446	1,577	1,716	1,994	1.62%
Population & PCPI 1988-2008	0.961	1,446	1,617	1,765	2,032	1.72%
Population 1988-2008	0.960	1,446	1,617	1,763	2,019	1.68%
U.S. Active Aircraft, Population & PCPI 1992-2008	0.953	1,446	1,598	1,745	2,042	1.74%
Selected Forecast		**1,446**	**1,603**	**1,750**	**2,012**	**1.67%**

BASED AIRCRAFT FORECAST

Before preparing new forecasts for based aircraft, previous based aircraft projections were reviewed for current validity. These included the FAA *Terminal Area Forecast* (TAF) 2008; Pima Association of Governments (PAG) *Regional Aviation System Plan* (RASP) 2002; Arizona *State Aviation Needs Study* (SANS) 2000; and the previous *Ajo Municipal Airport Master*

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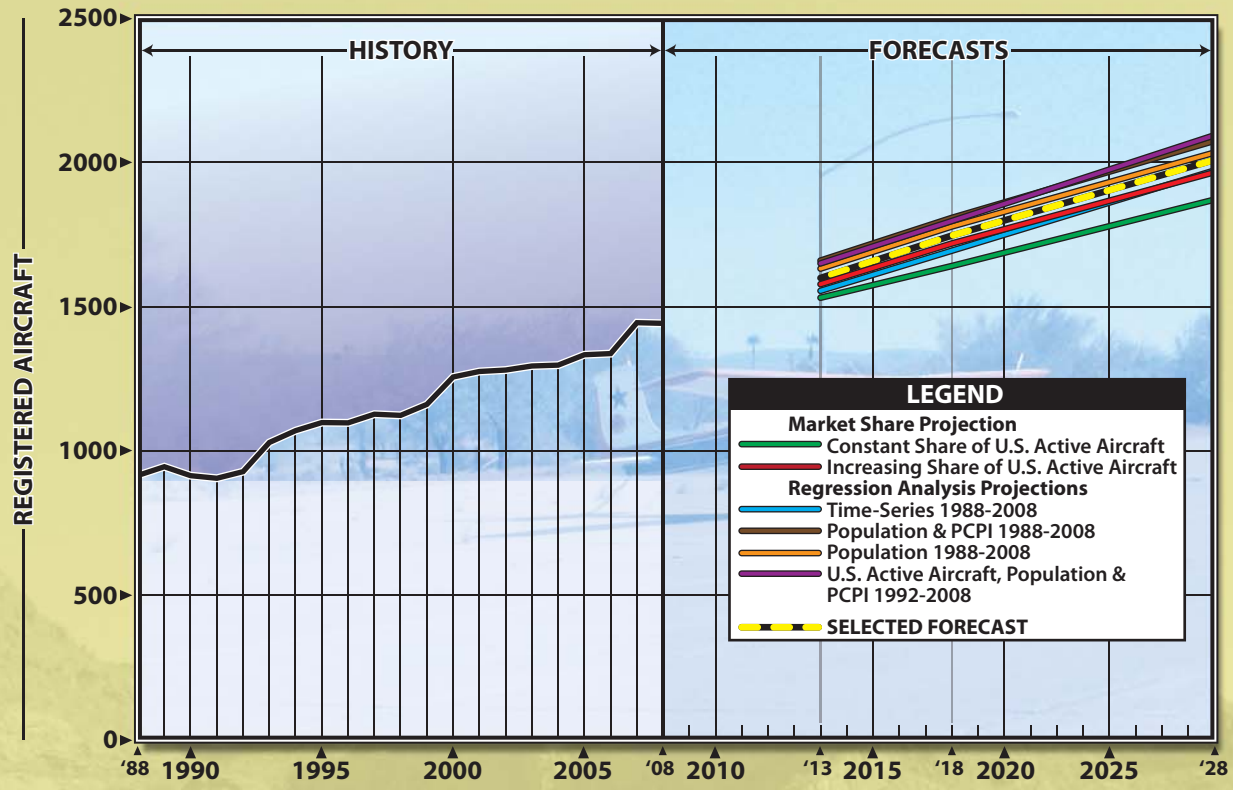

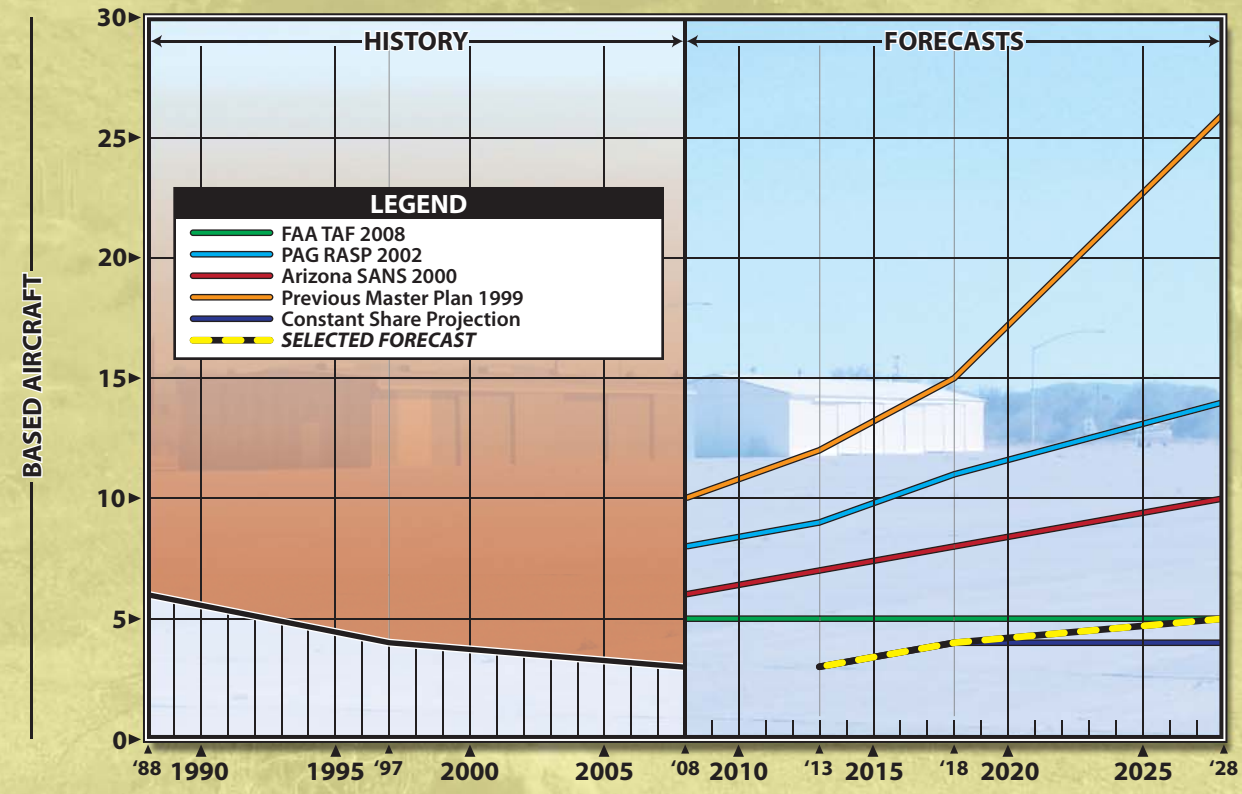

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Exhibit 2B
REGISTERED & BASED AIRCRAFT

Plan from 1999. Each of the previous forecasts use different base years as well as projection years. For comparison purposes, the forecasts were interpolated and extrapolated to correlate with this Master Plan's projection years. Each of these previous based aircraft forecasts are presented in **Table 2C**.

TABLE 2C
Previous Based Aircraft Projections
Eric Marcus Municipal Airport

	Current	2008	2013	2018	2028
Airport Master Record	3				
FAA TAF 2008		5	5	5	5
PAG RASP 2002		8	9	11	14
Arizona SANS 2000		6	7	8	10
Previous Master Plan 1999		10	12	15	26

Since each of these previous studies was prepared at different times, it is expected that they may not match recent historical counts. According to the airport's FAA Form 5010, *Airport Master Record*, the current based aircraft count is three. The interpolated 2008 projections for these previous studies are all higher than the current based aircraft record. The long range forecast in the FAA TAF shows zero growth in based aircraft. No explanation was given for the based aircraft growth at Eric Marcus Municipal Airport in the PAG RASP or the Arizona SANS studies. The previous Master Plan based its projection on the possibility that the open-pit mine in Ajo would become operational in the short term, which could trigger socioeconomic growth and revitalize aviation activities in the local area. The mine never resumed operations and, presently, there are no plans for the mine to reopen in the future.

Having forecast the aircraft ownership demand in Pima County, historic based aircraft figures at Eric Marcus Municipal Airport were reviewed to examine the change in market share over the years. **Table 2D** examines Eric Marcus Municipal Airport's historical share of County registered aircraft.

Between 1988 and 2008, Eric Marcus Municipal Airport based aircraft has decreased by three at a rate of -3.4 percent annually, and the airport's market share has shrunk from 0.65 percent to 0.21 percent. As it was discussed earlier, the vast majority of the County's registered aircraft growth since 1993 has taken place in the eastern portion of the county near the Tucson metropolitan area.

An updated based aircraft projection was prepared based on the airport's market share of registered aircraft in the county. The constant market share projection maintains the airport's current share of registered aircraft through the planning period resulting in four based aircraft by 2028 with an average annual growth rate of 1.7 percent.

TABLE 2D
Updated Based Aircraft Projections
Eric Marcus Municipal Airport

Year	County Registered Aircraft	Eric Marcus Based Aircraft	% of Registered
1988	919	6	0.65%
1997	1,131	4	0.35%
2008	1,446	3	0.21%
Average Annual Growth Rate		-3.4%	
Constant Share Projection			
2013	1,603	3	0.21%
2018	1,750	4	0.21%
2028	2,012	4	0.21%
Average Annual Growth Rate		1.7%	
Selected Forecast			
2013	1,603	3	0.19%
2018	1,750	4	0.23%
2028	2,012	5	0.25%
Average Annual Growth Rate		2.6%	

Source: Based Aircraft – FAA *Terminal Area Forecast* (1988); *Ajo Municipal Airport Master Plan* (1997); FAA Form 5010, *Airport Master Record*, (2008)

Although economic activity and population growth in Ajo is essentially static, the selected based aircraft forecast takes into account the potential for two new based aircraft through the long term. While this projected based aircraft growth may not occur at the airport, it is important to plan for at least the possibility of new based aircraft at Eric Marcus Municipal Airport. This will allow the County to be prepared for any facility demands that may come from based aircraft growth. The selected based aircraft forecast is shown on **Exhibit 2B** compared to the previous projections as well as the updated projections.

BASED AIRCRAFT FLEET MIX

The based aircraft fleet mix at Eric Marcus Municipal Airport currently consists of three single-engine piston aircraft. The selected based aircraft forecast projects the potential of two new based aircraft in the long term. It is anticipated that the fleet mix at the airport will continue to be made up of single-engine piston aircraft throughout the planning period.

GENERAL AVIATION OPERATIONS

General aviation (GA) operations are classified as either local or itinerant. A local operation is a take-off or landing performed by an aircraft that operates within sight of the airport, or which executes simulated approaches or touch-and-go operations at the airport. Itinerant operations are those performed by aircraft with a specific origin or destination away from the airport. Generally, local operations are characterized by training opera-

tions. Typically, itinerant operations increase with business and commercial use, since business aircraft are operated on a higher frequency.

Eric Marcus Municipal Airport operations are comprised of entirely GA operations. Since Eric Marcus Municipal Airport is not a towered airport, precise operations records are not available. The FAA Form 5010, *Airport Master Record*, for Eric Marcus Municipal Airport reports an estimated 300 annual general aviation operations. To confirm the accuracy of this figure, an FAA approved statistical methodology for estimating general aviation operations using local variables was utilized.

This method, the *Model for Estimating General Aviation Operations at Non-Towered Airports*, was prepared for the FAA Statistics and Forecast Branch in July 2001. This report develops and presents a regression model for estimating general aviation operations at non-towered airports. The model was derived using a combined data set for small towered and non-towered general aviation airports and incorporates a dummy variable to distinguish the two airport types. In addition, the report applies the model to estimate activity at 2,789 non-towered general aviation airports contained in the FAA *Terminal Area Forecast*. The forecasts of annual operations at Eric Marcus Municipal Airport were computed using the recommended equation (#15) for non-towered airports. Independent variables used in the equation include airport characteristics (i.e., number of based aircraft, number of flight schools), population totals, and geographic location. The result of this equation confirms the Form 5010 annual operations estimate. Local and itinerant operation percentages for 2008 were derived from the Form 5010 estimates for 2008 (20 percent and 80 percent, respectively).

ITINERANT OPERATIONS

Table 2E depicts estimated GA itinerant operations at Eric Marcus Municipal Airport for 2008. This data shows a market share of 0.0013 percent of all GA itinerant operations reported at airports with an airport traffic control tower. This also equates to 80 itinerant operations per based aircraft, which is considerably lower than most other GA airports in the State of Arizona. The low number of itinerant operations can be attributed to the airport's accessibility issues due to its location within a military operating area (MOA) and abutting restricted airspace. The airport also does not provide GA services that might attract pilots to the airport.

In *Aerospace Forecasts Fiscal Years 2008-2025*, the FAA projects itinerant GA operations at towered airports. **Table 2E** presents this forecast, as well as a projection for Eric Marcus Municipal Airport, based upon maintaining its current share of the itinerant GA operations market. This forecast has itinerant operations reaching 338 by 2028.

TABLE 2E
General Aviation Itinerant Operations Forecast
Eric Marcus Municipal Airport

Year	Itinerant Operations	U.S. ATCT GA Itinerant (millions)	Eric Marcus Market Share	Eric Marcus Based Aircraft	Itinerant Ops Per Based Aircraft
2008	240	18.64	0.0013%	3	80
Constant Market Share Projection					
2013	261	20.26	0.0013%	3	87
2018	284	22.04	0.0013%	4	71
2028	338	26.25	0.0013%	5	68
Operations Per Based Aircraft Projection (Selected Forecast)					
2013	240	20.26	0.0012%	3	80
2018	480	22.04	0.0022%	4	120
2028	800	26.25	0.0030%	5	160
FAA-TAF Projection					
2013	196	20.26	0.0010%	3	65
2018	196	22.04	0.0009%	4	49
2028	196	26.25	0.0007%	5	39

The table also displays the findings of an analysis that examined the relationship of annual operations to based aircraft. The second projection in **Table 2E** reflects the itinerant operational levels that could be expected if the operations per based aircraft ratio were to increase to levels more common at general aviation airports. This forecast results in 800 itinerant GA operations by 2028.

The itinerant operations per based aircraft forecast was chosen as the selected master plan forecast. Due to the airport's constrained airspace and limited growth, it is anticipated that the itinerant operations per based aircraft ratio will remain low through the planning period; however, some growth is planned to account for an increase in based aircraft. The selected master plan forecast, shown at the bottom of **Table 2E**, has itinerant GA operations at Eric Marcus Municipal Airport growing to 800 by 2028.

LOCAL OPERATIONS

A similar methodology was utilized to forecast local GA operations. **Table 2F** depicts estimated local operations at Eric Marcus Municipal Airport in 2008 and examines its market share of GA local operations at towered airports in the United States. In 2008, Eric Marcus Municipal Airport is estimated to have experienced 0.0004 percent of all local GA operations at towered airports. This equates to 20 local GA operations per based aircraft, which like itinerant GA operations is much lower than most general aviation airports in the state. With only three based aircraft, limited GA services, and no flight training operations, a small local GA operations figure can be expected.

Table 2F presents a market share projection based upon carrying forward a constant share of 0.0004 percent. This projection results in 70 local GA operations by 2028.

The second projection in **Table 2F** examines local operations by increasing the operations per based aircraft up to 40 by 2028 resulting in 200 local operations.

TABLE 2F
General Aviation Local Operations Forecast
Eric Marcus Municipal Airport

Year	Local Operations	U.S. ATCT GA Local (millions)	Eric Marcus Market Share	Eric Marcus Based Aircraft	Local Ops Per Based Aircraft
2008	60	14.78	0.0004%	3	20
Constant Market Share Projection					
2013	62	15.25	0.0004%	3	21
2018	64	15.65	0.0004%	4	16
2028	70	17.16	0.0004%	5	14
Operations Per Based Aircraft Projection (Selected Forecast)					
2013	60	15.25	0.0004%	3	20
2018	120	15.65	0.0008%	4	30
2028	200	17.16	0.0012%	5	40
FAA-TAF Projection					
2013	1,470	15.25	0.0096%	3	490
2018	1,470	15.65	0.0094%	4	368
2028	1,470	17.16	0.0086%	5	294

The operations per based aircraft projection was selected as the local GA forecast for this Master Plan. Without training operations and GA services, the airport can expect its local operations per based aircraft ratio to remain low throughout the planning period. However, as based aircraft growth occurs, local operations can potentially increase.

GENERAL AVIATION OPERATIONS SUMMARY

Table 2G depicts estimated 2008 GA operations at Eric Marcus Municipal Airport, as well as the updated Master Plan projections. Total GA operations are projected to increase to 1,000 annually by 2028. This is a growth rate of 6.2 percent annually through the planning period.

TABLE 2G
General Aviation Operations Forecast Summary
Eric Marcus Municipal Airport

Year	Total Operations	Itinerant Operations	Local Operations	Based Aircraft	Itinerant Ops/BA	Local Ops/BA
2008	300	240	60	3	80	20
Forecast						
2013	300	240	60	3	80	20
2018	600	480	120	4	120	30
2028	1,000	800	200	5	160	40

SUMMARY

This chapter has outlined the various activity levels that might reasonably be anticipated over the planning period. The airport's isolated location in the state and its proximity to heavy-use MOAs and restricted airspace impair the airport's growth possibilities. In addition, socioeconomic factors in the local area do not support significant based aircraft or operational growth at the airport through the planning period. The affect the forecasts will have on the airport's existing facilities will be analyzed in the Facility Requirements chapter.