

CHAPTER ONE: AIR TRANSPORTATION SYSTEM VISION, GOALS, AND PERFORMANCE MEASURES

INTRODUCTION

This chapter represents the first in a series of technical chapters that document the Arizona State Airports System Plan (SASP). This chapter provides an overview of the study; background information on previous state and regional studies, state duties, and the existing state airport system; identifies aviation issues impacting the state and its airports; and establishes the study vision, goals, and performance measures.

STUDY OVERVIEW

The Arizona Department of Transportation- Aeronautics Division (ADOT or Aeronautics) has long recognized the importance of planning as a proactive approach to ensuring aviation continues its role in the statewide transportation system. The State Airports System Plan for Arizona was developed in 1978. Aeronautics has been diligent in updating various components of the system plan over the last 30 years, conducting various elements of a Continuous Airport System Planning Process (CASPP). These components include State Aviation Needs Study (SANS), Economic Impact studies, Rural Air Service studies, Navigational Aids and Services studies, Recreational Airport studies, and other special studies.

The 2008 Arizona State Airports System Plan is a comprehensive update to the 1978 study. This study provides direction for state aviation system planning for years to come. The purpose of this plan is to provide a framework for the integrated planning, operation, and development of Arizona's aviation assets.

This plan updates the 2000 Arizona State Aviation Needs Study (SANS 2000), which looked at the current and future performance of the state airport system. The state airport system will again be analyzed to determine the impact of historic, current, and pending changes in the aviation industry. This plan provides Aeronautics with an important planning tool that enables them to remain current with industry trends and to determine how Arizona's airports should be positioned to respond to future needs and challenges.

In addition to a SANS update, the 2008 Arizona State Airports System Plan also analyzes several other nontraditional system planning items. These items include:

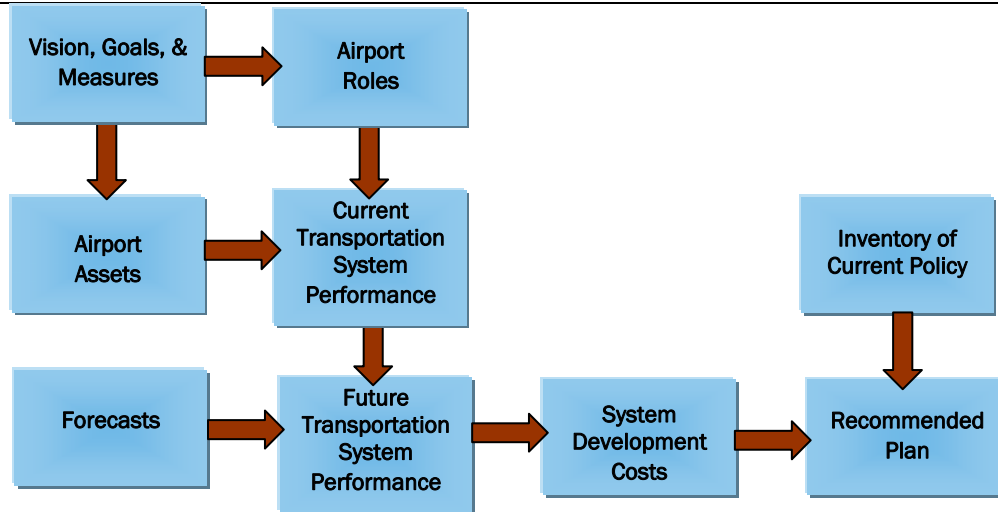
- A review of the effectiveness of current state policies and statutes and suggestions on possible modifications to these policies and statutes or the development of new policies based on findings from the plan.
- An evaluation of Aeronautics' Priority Rating System regarding which airport development projects take precedence over other projects and the development of a priority list for implementing recommended projects.
- A DVD promoting the importance of aviation in the state.

There are nine tasks included in the 2008 Arizona State Airports System Plan. Each of these tasks is described below.

Study Process

The nine tasks being undertaken to develop the Arizona State Airports System Plan are graphically depicted in **Figure 1-1**.

Figure 1-1: Arizona Airports System Plan Study Process



A brief description of each of the plan's tasks is as follows:

1. **Air Transportation System Vision, Goals, and Performance Measures:** The first task outlines the purpose of and sets the stage for the entire SASP. This element provides a backdrop of historic information and current conditions that have the ability to impact the findings of the study. The task also establishes of a system vision, goals, and performance measures. In order to analyze the airport system's needs, a system vision and system goals are translated into goal categories. Performance measures specific to each goal category will provide the foundation for a "report card" that will be used to determine how well the Arizona airport system is performing.
2. **Inventory of Current Policy:** The task reviews policies and statutes that currently govern Aeronautics and impact aviation in the state, including Arizona Revised Statutes, Arizona State Transportation Board Policies, and Five-Year Airport Capital Improvement Program guidelines. Suggestions for changes to these items are developed in Task Nine in order to best support the future needs of the airport system.
3. **Aviation/Airport Assets (Inventory):** One of the first steps in developing Arizona's plan for its airport system is the collection of current facility and activity data for all system airports. A business survey and pilot survey are also conducted to collect important information from users of the airports around the state.
4. **Forecasts:** It is important to have a general understanding of which airports in the airport system are likely to experience the most notable growth for the 5, 10, and 20-year forecast milestones. This task provides projections through 2030 of key commercial and general aviation demand indicators.
5. **Airport Roles:** As part of the 2008 SASP, an extensive analysis is undertaken to assign all system airports to functional roles. These roles are valuable in determining the level of recommended development needed since not all airports in the state should be treated the same.

6. **Current Air Transportation System Performance:** Goal categories and measures developed in Task One form the framework for an updated report card for the Arizona system of airports. This report card identifies adequacies and deficiencies in the system, as well as possible duplications. This task is the cornerstone of the system plan. Results from this analysis are the primary input for developing recommendations for the airport system.
7. **Future Air Transportation System Performance:** As part of this task, targets for future system performance are set. Actions needed to raise the bar for the overall performance of the Arizona airport system are the primary output of this task. This task considers if there is a need for additional airports to supplement the existing system and provides information on how Arizona’s airport system can be protected.
8. **System Development Costs:** Cost estimates for improving the system to meet established targets are identified in this task. This task also recommends appropriate ADOT funding levels and takes the best return on investment into consideration.
9. **Recommended Plan:** The final task of the Plan provides actions needed to implement study recommendations and policy or legislative changes suggested to enhance the system.

Project Advisory Committee

A Project Advisory Committee (PAC) was assembled by Aeronautics to provide input and direction for the study. The PAC is comprised of volunteer members with a broad base of airport/aviation and statewide knowledge and responsibilities. The PAC includes representatives from the following:

- Federal Aviation Administration (FAA)
- Arizona Department of Transportation (ADOT)
- Arizona Department of Commerce
- Regional Associations of Governments
- League of Arizona Cities and Towns
- Arizona Airports Association (AzAA)
- Aircraft Owners and Pilots Association (AOPA)
- Arizona Pilots Association
- Arizona Business Aviation Association
- U.S. Military
- Boeing
- Several Arizona airport directors

This committee provides Aeronautics with outside input into the system planning process and provides the Consultant Team with first-hand knowledge of the key factors impacting aviation demand and needs throughout the state. Six PAC meetings were held at key junctures of the study to help guide the development of the system plan.

REVIEW OF PREVIOUS STUDIES

The Arizona State Airports System Plan is only the latest aviation study in Arizona. The Aeronautics Division of ADOT, regional planning agencies, municipalities, and airport sponsors have also conducted numerous studies related to airports and aviation. These studies provide valuable information on current and historical conditions within the Arizona aviation environment. The following sections summarize recent planning efforts that have the potential to influence the information and recommendations developed in the SASP.

Not all data found in existing plans is applicable to the SASP. The information may no longer be current, or may be too specific to be applicable. However, local plans provide a level of detail and insight that would not be cost-effective to duplicate. As a result, information presented in previous studies is used, except in cases where more current or more relevant data is available.

National Plan of Integrated Airport Systems (NPIAS)

The FAA updates its National Plan of Integrated Airport Systems (NPIAS) every other year. State system plans, such as this, are used to develop NPIAS recommendations. The FAA draws money for eligible airport development projects from the Airport Improvement Program (AIP). AIP funding is derived from the Aviation Trust Fund; the source for this trust fund is a dedicated stream that is derived from taxes on the aviation fuel and commercial airline tickets. Airports must be included in the NPIAS for their projects to be eligible for AIP funding. While there are a variety of criteria that are considered for an airport to be included in the NPIAS, generally speaking, to be in the NPIAS, an airport must:

- Be more than 30 miles from the closest NPIAS airport
- Have at least 10 based aircraft
- Have a willing public sponsor

Recommendations from this SASP will be coordinated with both the NPIAS as well as individual airport master plans.

The FAA assigns each airport a ‘service level’, depending on the level of activity accommodated and services provided. Each service level has a congressionally established funding category associated with it. The service levels are:

- **Primary Service (PR)** – Primary service airports are public use airports receiving scheduled airline passenger service which enplane 10,000 or more passengers per year.
- **Commercial Service (CM)** – Commercial service airports are public use airports receiving scheduled airline passenger service which enplane 2,500 or more passengers per year.
- **General Aviation (GA)** – General aviation airports are either publicly or privately owned public use airports that serve general aviation users.
- **Reliever (RL)** – Reliever airports are general aviation airports that are capable of providing relief to Primary Service airports in the event that the airport becomes unavailable due to congestion or other causes. They also provide general aviation and minor commercial operators alternative access to communities already served by Commercial Service airports. Reliever airports often receive higher priority for funding assistance than other general aviation airports.

State Planning – SASP, CASPP, and SANS

The first State Airports System Plan (SASP) was completed in 1973, and updated in 1978. In 1988, it was replaced by the Continuous Aviation System Planning Process (CASPP). In 1995, the first State Aviation Needs Study (SANS) was conducted. The SANS was updated in 2000.

The 2000 SANS set four developmental goals: adequate facilities, system maintenance, economic development, and consistency with surface transportation and land-use plans. These goals are developed into a set of nine specific objectives that are as follows:

1. Facilitate commercial air service in both urban and rural areas throughout Arizona.
2. Ensure conformance with physical development standards established by federal, state, and local agencies.
3. Provide a system of aviation facilities within reasonable access to all system users.
4. Promote the use of aviation facilities for the delivery of emergency and rural health care services.
5. Encourage economic development opportunities through the utilization of an effective aviation system.
6. Maintain compatibility with local land use patterns and plans.
7. Raise the efficiency of the aviation system.
8. Maximize the return on investment for aviation dollars.
9. Foster input from potentially impacted parties through a variety of means including public forums and questionnaires.

The methodology of the SANS 2000 was to:

1. Identify quantifiable measures to define system performance.
2. Determine the status, condition, and performance of the existing system.
3. Forecast future system demands and future funding.
4. Develop multiple scenarios of aviation development.
5. Analyze all scenarios on a performance basis and choose one accordingly.

Three scenarios were developed: 'A'- Existing Funding; 'B'- Existing Performance; and 'C'- Increased. The 'A' scenario resulted in dramatic decreases in system performance. The 'B' scenario maintained the existing performance of the system at 10-year cost of \$1.04 billion. Scenario 'C' increased the performance of the system at a 10-year cost of \$1.9 billion. In both scenarios 'B' and 'C' approximately 40 percent of funds were allocated to commercial service airports.

The 10-year total for expected revenue was \$760 million: \$592 million federal, \$129 million state, and \$39 million local/private. An additional \$276 million in 10-year revenue was determined to be necessary to maintain the current system and \$1.12 billion to improve all airports to meet SANS 2000 recommendations. Investment since the 1995 SANS has allowed larger, more active airports to keep up with demand, resulting in an increase in the total economic impact from \$4.1 billion to \$6.3 billion.

However, the report also identified a decline in performance in some aspects of the system. Between the development of the 1995 SANS and the 2000 SANS, more airports experienced community noise concerns and fewer communities were served by business aircraft. Fewer airports complied with the recommended planning measures. The decline in airports meeting planning standards may be a result of changes in the standards or changes in which standards are applied to specific airports.

The number of communities with scheduled commercial aviation also decreased. The loss of commercial air service was the result of several factors, including the emergence of Phoenix Sky Harbor as a major hub for discount carriers Southwest and America West. This caused airfares at Phoenix Sky Harbor to decline, and made flying from Phoenix even more cost-efficient.

The cost of average annual aircraft delay also increased substantially. The increase in delay is a result of aviation activity growing faster than capacity and the concentration of activity at a few airports. The majority of aircraft delay is experienced at high growth airports in the Phoenix metropolitan area.

Special Studies

In addition to performing statewide system planning, ADOT has also produced a number of special studies dedicated to specific topics. The following studies were developed by ADOT previous to the 2000 SANS:

- Feasibility Study and Environmental Review for a Regional Rescue and Firefighter Training Facility (ARFF) – 1995
- The Economic Impact of Aviation in Arizona – 1998
- Navigational Aids and Aviation Services Special Study – 1998

The following studies were developed by ADOT subsequent to the 2000 SANS:

- Airport Small Community Economic Development & Transportation Program (ASCET)– 1999
- Rural Air Service Study – 1999 and 2006
- Arizona Airport Pavement Management System – 2003
- The Economic Impact of Aviation in Arizona – 2004
- Automatic Weather Observation System (AWOS) Network Study – 2007
- Governor’s Advisory Council on Aviation Final Report – 2007

Airport Small Community Economic Development & Transportation Program (ASCET)

The ASCET sought to provide economic development through aviation improvements. Noting that the lack of sufficient airport facilities is often enough to preclude greater economic development in rural Arizona communities, the program surveyed all Arizona communities, and focused on those with populations of more than 10,000 that were more than 50 miles from a major metropolitan location. These communities were classified according to the primary use of aviation in the community. It identified seven communities as focused on tourism (three ‘national’ and four ‘regional’) and 10 on business/corporate (two ‘major’, four ‘intermediate’, and four ‘emerging’). The ASCET suggested a series of improvements applicable to each group and noted the importance of ‘soft’ efforts such as marketing in economic development efforts.

The opportunities for, and challenges to, further industrial and business development at each location were reviewed, and an exhaustive review of potential funding sources and their limitations performed. This showed that funding was not available for all projects. A process for prioritizing and sequencing projects was devised which emphasized economic development benefits, stated level of need, the availability of matching funds, and the degree of local support. On a whole, the ASCET emphasis was on using specific market or local industry attractions to attract and retain jobs in rural Arizona communities.

Rural Air Service Study – 1999 and 2006

This study reported that airline deregulation caused a general decline in scheduled commercial service to rural areas, which had strong negative economic impacts due to the dependence of rural communities on income from tourism. Rural airports were also impacted by the commercial shift to jet aircraft and larger aircraft. This forced smaller airports to compete more often with airports offering more nonstop flights that were located within a one to two hour drive. The number of commercial enplanements at rural airports was also declining, as passengers chose to drive to larger airports to begin their flights. Another complication was many airports were beyond the effective stage length of the turboprop aircraft, which was in predominant use at the time of the study. It was noted that assuring commercial service might require municipalities (or groups of municipalities working together) to follow Show Low's example in acquiring their own aircraft to ensure service.

In 2003, ADOT initiated an update of the 1999 Rural Air Service Study. Air service conditions in Arizona and nationwide had changed drastically, with even further erosion of service and passengers in the small markets. The study was directed at the small communities, with individual reports prepared for each community as opposed to a statewide-only report which was prepared in 1999. The focus of the study was to provide action items, not just an analysis of needs and demand in each of the communities. Community-specific public meetings were conducted on three separate occasions to get the local buy-in needed for air service enhancements to be realized, recognizing that the state can only serve as the facilitator of change that must be activated at the local level.

In addition to the study, ADOT participated in development of Small Community Air Service Development Pilot Program (SCASDPP) grants on behalf of the airports. A \$1.5 million grant from the USDOT was received for the Arizona Rural Consortium of Airports (ARCA) that included Kingman, Page, Prescott, Show Low, and Sierra Vista. ADOT served as the sponsor for this grant and worked closely with the airports and USDOT to implement the program.

Arizona Airport Pavement Management System

Grant assurances for projects funded under the FAA Airport Improvement Program (AIP), require a pavement maintenance system be utilized. To meet this requirement and ensure that the limited pavement maintenance funds are spent in the most cost effective manner, ADOT developed the Airport Pavement Management System (APMS). The APMS is a database of pavement condition at 51 Arizona airports, comprising a total of 16,294,345 square yards of pavement. The APMS identified the area-weighted average age of the pavement was 13 years, with an area-weighted Pavement Condition Index (PCI) of 79. The system prioritizes 'preventative maintenance' projects that have historically proven to have the greatest benefit for pavement dollar expended. The system also identifies all pavement sections whose PCI has fallen below the level where they are unable to be maintained, and instead require rehabilitation. The annual pavement maintenance costs identified by the pavement management system are presented in **Figure 1-2**.

Figure 1-2: 2004–2012 APMS Projected Pavement Maintenance Costs

Year	Projected Annual Cost
2004	\$5,549,517
2005	\$5,681,098
2006	\$1,436,081
2007	\$1,814,326
2008	\$2,200,600
2009	\$2,331,967
2010	\$1,940,303
2011	\$2,962,384
2012	\$1,606,559

Source: Arizona Airport Pavement Management System, 2003

The Economic Impact of Aviation in Arizona

Aviation plays a key role in Arizona's economic performance. Because of this, ADOT commissioned *The Economic Impact of Aviation in Arizona* study, and several updates, to quantify the impacts aviation has on the state's economy. The 2002 study indicated the state's dry climate and wide open spaces help create an environment for aviation-related activity and development to thrive. Aviation activities supporting the state's economy include pilot training, aerospace engineering and manufacturing, airpark development, and aerial sightseeing tours. In 2002 aviation activity in Arizona generated \$38.5 billion in primary and induced economic activity. This is an increase from the 1998 study which noted \$28.2 billion in total economic activity. Total jobs increased from 420,000 in 1998 to over 470,700 in the 2002 study.

Automatic Weather Observation System (AWOS) Network Study

The purpose of the AWOS Network Study was to explore methods to link with federal data networks in an effort to provide near real-time aviation weather data to Arizona airports and their users. It identified 26 Arizona airports that would benefit from the presence of an AWOS. The study estimated an AWOS system could be established for \$2.3 million with an additional \$0.3 million in annual maintenance costs. The study was an update of the 1998 "Navigational Aids and Aviation Services Special Study."

Governor's Advisory Council on Aviation Final Report

Governor Janet Napolitano established the Governor's Advisory Council on Aviation (ACA) through Executive Order 2004-22 on September 21, 2004. The ACA was tasked to study and issue consensus findings and recommendations that specifically addressed the following issues:

- Airspace utilization and airport capacity
- Land use compatibility
- Federal funding for aviation in Arizona
- Criteria for evaluating aviation facility and system needs
- Future aviation needs assessments and funding strategies

These five issues were combined into three categories for further study; Land Use, Capacity and Funding Needs. The ACA met 19 times in various capacities beginning January 31, 2005 through January 31, 2007 in locations throughout the state (Phoenix, Tucson, Flagstaff, and

Yuma). In those meetings the ACA consulted with, or took testimony from, as many aviation interests as possible. Those interests consisted of stakeholders in commercial, military, and general aviation, including representatives from the Federal Aviation Administration, Arizona Department of Transportation – Aeronautics Division, Maricopa Association of Governments, Pima County Association of Governments, Arizona State Land Department, Arizona Department of Real Estate, Southern Arizona Leadership Council, airport operators, Governor’s Office on the Governor’s Growth Initiative, ADOT’s Multi-modal Transportation Study and Arizona Airports Association (AzAA), Arizona Pilots Association, Aircraft Owners and Pilots Association (AOPA), and the Aviation Safety Advisory Group of Arizona.

The meetings, consultations, and testimonies contributed to ensure all necessary information could be gathered, the issues identified and thoroughly studied, and meaningful and achievable recommendations developed. Further discussion of the ACA and its findings and recommendations is provided later in this chapter.

Regional Airport System Plans (RASP)

In addition to system plans developed by ADOT, regional system plans have been completed by county-level organizations. Cochise County developed a RASP in 1982 and 1994. The Pima Association of Governments (PAG) completed its initial RASP in 1985, with subsequent updates in 1995 and 2002. The Maricopa Association of Governments (MAG) completed its initial RASP in 1993, followed by an update in 2005. Results of the RASPs completed since 2000 are summarized below.

Pima Association of Governments (PAG)

The 2002 RASP included the following elements:

- System Performance Criteria
- Inventory
- Intermodal System Trends and Issues
- Aviation Industry Trends
- Forecasts of Demand
- System Airport Roles and Facility & Service Objectives
- System Evaluation
- System Recommendations
- Implementation Plans

The following airports were included in the 2002 PAG RASP: Ajo Municipal, Benson Municipal, Davis-Monthan Air Force Base, La Cholla Airpark, Marana Northwest Regional, Pinal Airpark, Ryan Airfield, Sells Airport, and Tucson International Airport. Benson Municipal Airport was added since the previous RASP.

Downtown Tucson remains the primary intermodal link, despite the decentralization of public transportation within the county and growing inter-county linkages. A future passenger rail system offered potential for an intermodal link between downtown Tucson and the airport. The study suggested that the limited airport freight activity is partially due to the lack of rail connections to the airport. Puerto Nuevo was identified as the location of a potential regional and national transportation hub, but lacked access to other regional transportation infrastructure.

The study noted the dependency of business on air travel to increase productivity, as well as the lack of any practical alternative to air travel. The RASP also identified the increase in fractional ownership programs for general aviation business class aircraft which has lowered the cost of utilizing this form of air travel. As a result, businesses in the region increased usage of general aviation aircraft.

The percent of the aviation fleet comprised of single-engine aircraft was expected to decline. The proportion of jet aircraft in the 2002 study area was higher than the national average and was projected to continue increasing. The study suggested that capacity based analysis of airports is no longer sufficient.

Metrics included in PAG's development of roles included the size of the access roads, the area of the airport, the population within a 30-minute drive time, ownership, facilities, and services. The airports were then classified as Level I or Level II. Level I airports were to support all commercial aviation activities and the Level II were dedicated to single-engine aircraft, with limited jet usage.

Based on system plan calculations, Tucson International Airport and potentially Ryan Field were expected to exceed operational capacity during the 20 year forecast period. It should be noted that Tucson International has planned for improved operational capacity during this forecast period. Scheduled commercial service at Tucson International had improved, despite the then-recent events of September 11, 2001. System wide, there was a need for more auto parking and more hangar space. For security purposes, it was suggested that auto parking no longer be co-located with airplanes.

Airports within the PAG region had no serious obstruction or airspace issues, but still needed to take action relevant to height-based zoning. The majority of airports had taken steps to make themselves compliant with ADOT guidelines for preparing an AIA and Disclosure map. However, not all airports had implemented Part 77 zoning or developed current noise contours.

While a large portion of employers were located near existing airports, the population was much more decentralized, with only eight percent within a 30-minute drive of an airport with a 5,000-foot long runway. While the suggested improvements are too extensive to be detailed here, the PAG recommended the highest dollar amounts of improvements occur at Marana Northwest Regional, followed by Tucson International.

Maricopa Association of Governments (MAG)

In 2000, the Maricopa Association of Governments initiated an update of its RASP. The purpose of the Plan was to analyze the long-range air transportation needs of Maricopa County and the immediate environs, and to meet these needs in a safe and efficient manner. This plan concluded in 2005 with an acceptance of the analysis by the MAG Policy Committee.

In addition to study goals and objectives, specific assumptions were noted upon which the study should be based. These study assumptions provided an understanding of the approach to the MAG RASP Update and were used to provide direction to the consultant for the project. Principal assumptions included:

- The study area for the RASP was defined as Maricopa County along with a portion of Pinal County and Yavapai County to reflect the growth of cities within Maricopa County into neighboring counties.

- The study time frame extended to 2025, with 1999 serving as the base year.
- Luke Air Force Bases (AFB) was assumed to remain open during the planning period. The RASP recognized and respected the right of Luke to carry out its military mission; and did not make recommendations that impaired the ability of the base to carry out its mission.
- It was assumed that the existing public use airport facilities in the region would remain open. Future development options recognized the functions of existing airports and made every effort to avoid infringement on their ability to exist.
- The Intergovernmental Agreement between Phoenix and Tempe and the east bound jet departure procedure known as 4 DME was assumed to continue throughout the planning period.
- The MAG RASP Update will seek to accommodate projected demand.

Based on these assumptions and the goals and objectives stated for the study, technical analysis was prepared to evaluate the MAG regional airport system through six working papers. The RASP provided an overview of the existing system, projected demand for aviation, determined future needs, evaluated alternatives to meet future needs, and developed a selected alternative. This selected alternative identifies those projects that have the potential to help the system meet its goals, but will require more detailed airspace review and analysis, including the potential impact to Luke Air Force Base's mission, in order to determine its implementation feasibility.

The selected alternative is actually a hybrid of several of the alternatives. While the Status Quo alternative was not included as a whole, this and the other alternatives including the Improved Technology, Maximized Airport Development, and New Airport Development alternatives, each had projects that were included in the selected alternative. After analysis of each alternative for each of 10 evaluation criteria, the following projects were noted to have the most potential for development as part of the Maximized Airport Development alternative and are included in the selected alternative:

- Buckeye Municipal – runway extension
- Chandler Municipal – runway extension, precision approach
- Glendale Municipal – taxiway extension
- Memorial – airport facility restoration
- Mesa Falcon Field – precision approach
- Phoenix-Deer Valley – parallel runway and precision approach from the east
- Phoenix-Goodyear – parallel runway and precision approach from the east
- Phoenix-Sky Harbor International – 4th runway, runway extension, precision approaches (4th runway and 25R), additional terminal building space
- Scottsdale – precision approach, additional terminal building space
- Williams Gateway – additional terminal building space¹

These projects would enhance the region's ability to meet long-term air transportation needs by improving the capacity of the airport system and providing additional facilities and approaches. While improving the capacity of the system, even with these enhancements, further capacity increases could be needed to meet the projected level of demand for 2025.

Development of a new general aviation airport was recommended for further analysis as the cursory review revealed two potential areas where the impacts are considered moderate. The

¹ The development of curved instrument approaches at Williams Gateway is also included in the selected alternative.

New East Valley and New South Valley sites present opportunities where the region's capacity could be increased through development of new runway facilities at either site. This would help to fulfill the study's goal of meeting the long-term air transportation needs, however the extent of the impact to congestion, the environment, and airspace are not sufficiently detailed. The analysis also showed that, both in the Maximized Airport Development alternative and the New Airport Development alternative that a supplemental Williams Gateway commercial airport has significant potential to address several of this study's goals. This New Airport Development alternative for commercial activity appears to have the highest potential for implementation.

The following are policy considerations that have been identified in the evaluation of recommendations for the MAG RASP:

- **Airspace analysis:** The RASP included development of additional runways and improved instrument approach capabilities that will enhance the ability of the system to accommodate future demand in the selected alternative. All of these changes will dictate analysis of airspace requirements, including how to integrate these improvements into the existing airspace structure. Significant analysis of potential impacts to Luke AFB's existing airspace needs and Phoenix-Sky Harbor International was conducted, however, a systemwide analysis of how implementing all of these projects would impact the airspace was not prepared. In addition, it is assumed that as technology improvements are made, airspace impacts may be reduced, although the extent is not known at this time. While a single project can be accommodated within the existing airspace environs based on current technology, when combined, the total impact of the recommendations will require more detailed analysis, including computer-aided airspace modeling wherein these improvements are analyzed together as a "single improvement" versus individual projects. Airspace modeling may also afford the opportunity to examine how the new technological advances related to approach procedures may impact the airspace requirements. It was the recommendation of the MAG RASP Technical Advisory Committee to the MAG RASP Policy Committee that a detailed airspace analysis be conducted, possibly by the FAA for whom airspace is a responsibility.
- **Environmental impacts:** The RASP primarily evaluated noise impacts as a result of the alternatives. The noise impact analysis was based on existing available noise contours, supplementing these contours with development of estimated noise impact areas where identified. Prior to implementation of projects, additional environmental review would be required, including noise and other environmental categories such as air quality.
- **Land use:** As part of the noise evaluation in the alternatives analysis, the impacts to incompatible land uses near airports were identified. This cursory analysis also reviewed the state's policies regarding airport land use compatibility. Arizona has several statutes in place that were developed to reflect the importance of addressing airport noise including Airport Influence Area, Military Airport Registry, Military Airport Disclosure, and Public Airport Disclosure. Many of the airports have implemented Public Airport Disclosure and Luke has complied with Military Airport Registry and Disclosure, but none of the MAG airports have implemented Airport Influence Area which serves as a notification that properties located in the vicinity of an airport may be impacted by noise levels of aircraft overflights. Consideration of this statute and its ability to impact future airport development should be part of follow-on planning

efforts for the MAG airports. In addition to noise issues, the location of other incompatible uses, such as the gas storage facility that was planned near Luke Air Force Base, should also be considered for the long-term preservation of the region's airport system. The land uses and zoning around airports should consider the need for potential airport expansion to accommodate growth projected for airports in the region. As part of a feasibility study for a new airport, land uses would be a significant evaluation factor in determining the viability of constructing a new general aviation airport in the region.

ADOT AERONAUTICS DIVISION DUTIES

The following section identifies the duties and role the Aeronautics Division plays in maintaining and developing Arizona's airport system. The duties discussed are those that are pertinent to the development of the state's airport system, and have been defined by the Arizona Revised Statutes (ARS) Title 28, Chapter 25, Article 2 28-8242 *Powers and duties*, and the NASAO State Aviation Funding and Organizational Data Report FY 2007. Additionally, the duties of aeronautical organizations within other states are compared with those of ADOT Aeronautics.

The following duties relate directly to the development of the state's airport system and are identified in the ARS:

- Cooperate with local, state, and federal organizations to encourage and advance the safe and orderly development of aviation in this state.
- Assemble and distribute to the public information relating to aviation, landing fields, navigational aids and other matters pertaining to aviation.
- Accept, in the name of this state, federal monies made available for the advancement of aviation.
- Represent the state on issues of routing structures and rate schedules concerning commercial airline traffic (developed prior to Airline Deregulation Act of 1978).
- Accept and receive federal and other public or private monies for the acquisition, construction, enlargement, improvement, maintenance, equipment, or operation of airports and other air navigation facilities and sites for air navigation facilities or for any other purpose authorized by this section.
- Contract for the operation of state owned airports.
- In conjunction with local authorities, plan, build, and develop airports, airport terminals and other related navigational facilities.
- Operate and maintain the Grand Canyon National Park Airport.

The NASAO State Aviation Funding and Organizational Data Report notes the following generalized duties of the ADOT Aeronautics Division:

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| • Aircraft registration | • State funding (FAA matching only) |
| • Airfield pavement management program | • State loans (to airports from Aviation Fund) |
| • Air service assistance program | • Operate state-owned airports |
| • State funding (state-only grants) | • Airfield maintenance project funding |
| • Aviation education | • NAVAID project funding |
| • State aeronautical chart | • Hangar construction funding (loans only) |

Figure 1-3 compares these duties with those performed by other state aeronautical organization in the western United States.

Figure 1-3: Comparison of ADOT Aeronautics Division Duties/Programs with Other Western U.S. States (where available)

State Duty	AZ	CA	CO	NV	NM	UT	WA	WY
Block grant state								
Channeling state						X		X
Aviation education	X	X		X	X		X	
Pilot registration								
Aircraft registration	X				X	X	X	
License airports		X				X		
Airfield pavement management program	X	X	X	X	X	X	X	X
Air service assistance program	X			X	X		X	X
Airport preservation program		X	X				X	
Search and rescue program						X	X	
Own and operate state aircraft		X		X		X	X	X
State funding (FAA matching only)	X	X	X	X	X	X	X	X
State funding (state-only grants)	X	X	X		X	X	X	X
State-only loans	X	X	X					X
Operate state-owned airports	X				X	X	X	
Hangar construction funding	X	X			X			X
NAVAID project funding	X	X	X		X	X	X	X
Airfield maintenance project funding	X	X	X		X	X	X	X
Airport directory			X	X	X		X	X
Aeronautical chart	X	X	X	X	X	X		X

Source: NASAO State Aviation Funding and Organizational Data Report FY 2007

EXISTING AIRPORT SYSTEM ORGANIZATION

Airport classifications or roles are defined differently from national, state, and local perspectives. Historically, Arizona has used a classification system developed by the ADOT Aeronautics Division to define each airport’s role in the system. Airports in Arizona have been grouped into two main categories: Primary and Secondary Airports. Arizona system airports were categorized into one of these two groups based on the size and level of activity occurring at each airport. All airports in the Primary category are public-use and meet one or more of the following criteria:

- Ten or more based aircraft
- 2,000 or more annual operations
- Scheduled commercial air carrier service
- Projected to meet any of the above criteria within 10 years

Airports in the Secondary category are generally located in rural areas and are designed to accommodate single-engine and light twin-engine aircraft. Secondary airports do not provide facilities or services necessary to serve larger business class or commercial aircraft. Secondary airports are generally defined as airports that have been recognized by the FAA through inclusion in their 5010 database and are open for public-use.

Arizona’s airport system was defined by ADOT Planning Division and contained a total of 91 airports. Sixty-six of the airports were classified as Primary and 25 were classified as Secondary. In addition to the Primary and Secondary classifications, each system airport was also grouped into one of several sub-classifications based primarily on airport ownership and activity. Four of the categories: Primary Service, Commercial Service, Reliever, and General

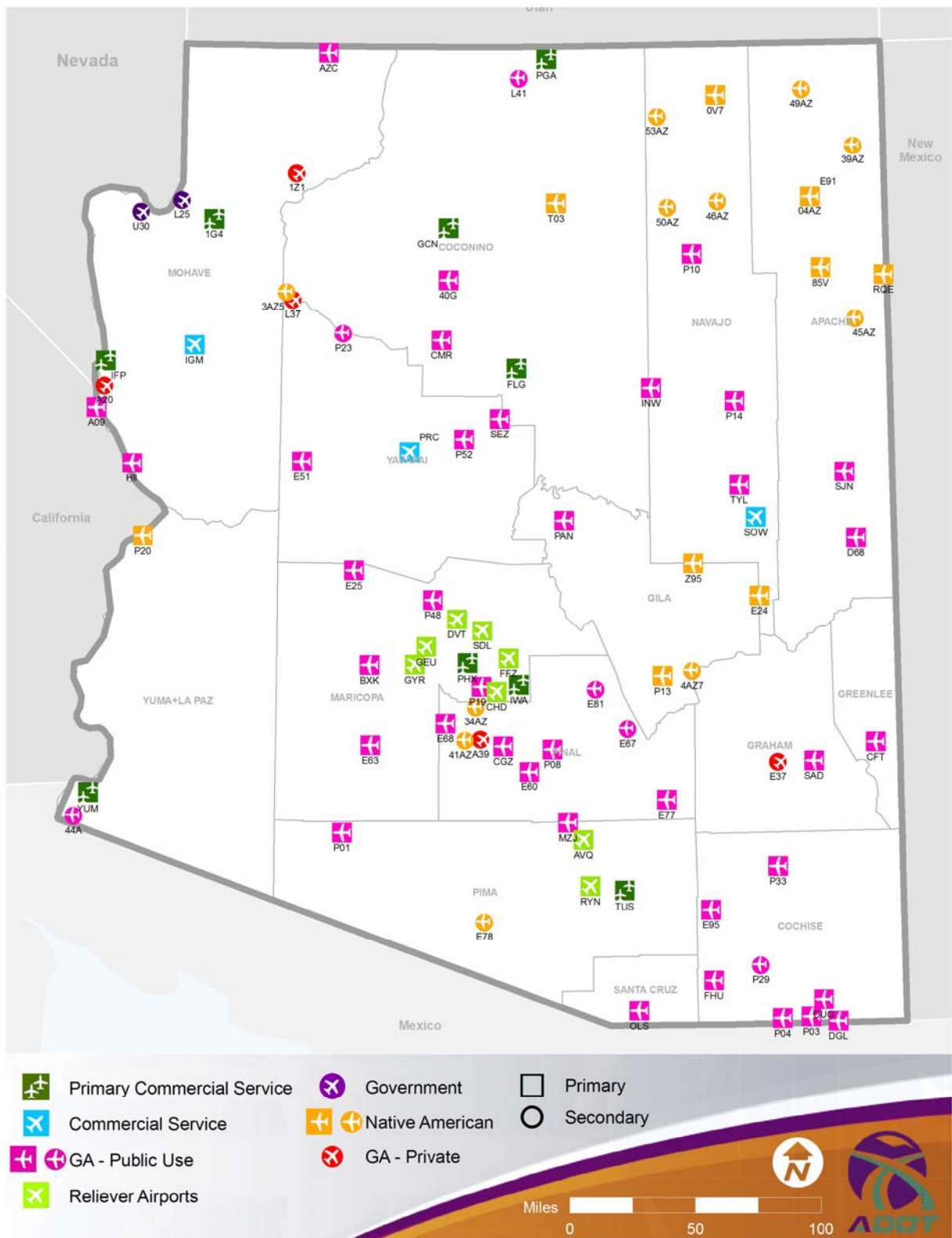
Aviation, are identical to the NPIAS designations defined earlier in the chapter, while the remaining designations are based on the ownership of the airport. **Figure 1-4** identifies the number of airports included in each category. **Figure 1-5** graphically depicts the airports included in Arizona’s Primary and Secondary airport system. A reference table containing the airport codes, airport name, and associated city name can be found in **Appendix A**.

Figure 1-4: Primary and Secondary Airport System

<i>Classification</i>	<i>Number of Airports</i>	
Primary	Primary Service	9
	Commercial Service	3
	Reliever	8
	General Aviation - Public Use	37
	Native American	9
Secondary	General Aviation - Public Use	6
	Native American	12
	Government	2
	General Aviation - Private Use	5
Total	91	

Source: ADOT Planning Division Primary and Secondary Airport System Maps

Figure 1-5: Primary and Secondary Arizona Airport System



Source: ADOT Planning Division Primary and Secondary Airport System Maps, 2008

Note: A reference table containing airport codes, airport names, and associated city can be found in Appendix A

IDENTIFICATION OF AVIATION ISSUES

Issues that affect the aviation system range from national in scope to local issues, with the impacts affecting airports in different ways. To address specific issues facing Arizona's airports, Governor Janet Napolitano established the Governor's Advisory Council on Aviation (ACA) in 2004.

ACA

The ACA was tasked to study and report its consensus findings and recommendations regarding the following issues:

- Land use compatibility
- Airspace utilization and airport capacity
- Federal funding for aviation in Arizona
- Criteria for evaluating aviation facilities and system needs
- Future aviation needs assessments and funding strategies

These five key issues were combined by the ACA into the following three categories for analysis during the two-year Advisory Committee process:

- Land use
- Capacity
- Funding needs

A brief summary of these issues and the findings of the ACA are presented below.

Land Use

The land use analysis conducted by the ACA identified “formidable challenges” that are facing the development of Arizona's airport system. Coordination between airport planning and general planning, cross-jurisdictional concerns, and the lack of a state or federal policy to protect airports were identified as the most significant barriers that exist in the promulgation of compatible land use for airports.

Capacity

Capacity was identified as an issue facing Arizona's airports in terms of airfield capacity, terminal/hangar capacity, airspace capacity, and ground access capacity. While there are many airports in Arizona's system, only a third were identified as planning for future capacity improvements. The ACA also included Grand Canyon National Park Airport and its funding situation as a capacity impact. Additional capacity issues included military airspace, mobile aircraft rescue fire fighting training unit, outlying system plan development, additional funding for airport pavement maintenance management program, need for an adopt-an-airport program, and creation of a statewide AWOS inspection and maintenance program.

Funding Needs

Funding for airport projects comes from a variety of sources depending upon the airport. Some airports are eligible for federal Airport Improvement Program (AIP) funding, state airport funding, and local monies. The federal AIP is a critical element of Arizona's airport funding. The current reauthorization of the legislation to fund the AIP expired in 2007 and significant changes are proposed for the funding mechanism and distribution to airports. In addition, the state's aviation funding which is intended to supplement federal allocations and provide opportunities for "smaller non-commercial publicly owned and operated airports" has been insufficient to meet the growing demand for infrastructure development. The state's Aviation Fund is also subject to the appropriations process and has experienced a diversion of the funds. Protection of the state's Aviation Fund is recommended by the ACA.

In addition to these significant issues identified as impacting Arizona's aviation system, other issues that are more national and regional in scope also have the potential to impact the future development of airports. These issues are discussed below.

National Issues

On the national level, some of the same Arizona-specific issues are being faced by other states and agencies. These include land use compatibility, funding for airport projects, and airport capacity. The impact of these issues on the national aviation environment is similar to what has been described in Arizona.

Other issues that are raised at the national level by the FAA, national interest groups such as the Airport Owners and Pilots Association (AOPA) and National Business Aviation Association (NBAA), and airport groups such as American Association of Airport Executives (AAAE) and Airports Council International (ACI) include fuel prices, loss of airports, fees, new technology, and maintaining airport pavements. A brief description of these issues and their potential impact on Arizona is provided below.

Fuel Prices

The price of aviation fuel impacts both commercial airlines and the general aviation community. Commercial service airlines are taking drastic measures to cut expenses in other areas to account for increased fuel prices, changing their business models, and increasing prices. The decline in the level of service provided by the commercial airlines has caused some businesses to utilize general aviation to a higher degree. Within the general aviation community, higher fuel prices have resulted in less activity especially by discretionary flyers that are flying for personal and not business reasons.

Airline Bankruptcies, Mergers, and Acquisitions

Airline bankruptcies, mergers, and acquisitions have altered the landscape of the U.S. commercial airline industry. Commercial service airports in Arizona have not been able to avoid the air service changes that have accompanied airline restructuring. Airline bankruptcies were prevalent following the events of September 11, 2001. Several of the largest U.S. airlines, including Trans World, US Airways, United, Delta, and Northwest, declared bankruptcy. While United, Delta, and Northwest did emerge, American purchased Trans World in 2001 and America West acquired US Airways in 2005.

Fueled largely by exorbitant fuel prices and an excess of capacity, a new wave of bankruptcies and mergers is emerging and once again has the potential to impact future air service in Arizona. The impact of Frontier's recent entry in bankruptcy, the Delta-Northwest merger, and additional airline restructurings will be monitored during this study.

Loss of Airports

Additional development occurring near airports has encroached upon airports' ability to expand and operate efficiently. In some areas, the rising value of land in some areas has resulted in the development of non-aviation uses on and around airports. The loss of airports is most critical in major metropolitan areas but is also occurring throughout the country where sponsors cannot afford to maintain airports due to cost.

Fees

Funding for the FAA's Airport Improvement Program has been generated primarily from a tax imposed on passengers flying on commercial airlines. With the lapsing of the current funding source in 2008, a new system of user fees was proposed by federal legislators to fund the future development of US airports. A component of the proposed funding system is a user fee for general aviation aircraft. Presently, general aviation pays fees via a fuel tax but pays no distinct or separate fee for the use of air traffic control services. As of April 2008, a final decision has not been made regarding future funding mechanisms for the aviation system. The existing funding mechanisms have been extended by a series of congressional continuing resolutions.

New Technology

New technologies including the very light jet (VLJ) and satellite-based navigation have created substantial change within the aviation community. VLJ technology utilizes new fuel efficient engines and lower cost manufacturing processes to lower the operating and acquisition costs of these aircraft. These lower-cost jet aircraft provide an opportunity for more individuals and corporations, that have otherwise relied on commercial service aircraft or typical business jets, to purchase or utilize general aviation aircraft. The increased utilization of VLJ aircraft creates an opportunity for growth at general aviation airports. These aircraft can operate at smaller airports throughout the US, requiring runway lengths as low as 2,500 feet. In the future as utilization of these aircraft increases, smaller airports may need to provide additional services and instrument approaches.

The implementation of global positioning systems (GPS) in the late 1990s and development of wide area augmentation system and local area augmentation system (WAAS and LAAS) technology will allow for precision approach capabilities, with near instrument landing system (ILS) descent and visibility minimums. These new instrument approaches are referred to as Approach Procedures with Vertical Guidance (APV) and are derived from the WAAS technology. Lateral Precision with Vertical Guidance (LPV) approaches rely on space-based satellite signals rather than land-based facilities, precluding terrain interference. APV/LPV approaches currently provide approach descent minimums to 250 feet above the runway elevation, with lower descent minimums expected to be published in the near future. GPS satellite data in concert with a ground-based transmitter can provide the three-dimensional guidance for a GPS near-precision approach.

Maintaining Airport Pavements

Significant investment has been made by the FAA, states, and individual airport sponsors in airport pavements, one of the most critical elements of any airport. While pavements can be developed for long-term use, their maintenance must be provided to maximize the investment. Similar to other airport needs, airport pavements require monitoring and evaluation to ensure the safety of the airport users. While many sponsors monitor and evaluate their pavements, the cost of even routine maintenance must be justified in the sponsor’s budget, whether it is a city-owned, county-owned, or privately owned facility. Because of this and the increasing cost of pavement projects, many airport pavements are falling further into disrepair and beyond the curve of “preventative maintenance.” At a certain point, the pavement requires rehabilitation, a costly project for any airport sponsor.

Sustainability

The concept of sustainability has historically been used in reference to environmental concerns but has, more recently, taken on a larger definition in relation to airport development and maintenance. Sustainability in terms of airports has been defined by the concept of what is in place that is sustainable and worth sustaining and how we can better develop airports that are sustainable long-term and more cost-effective and balanced in terms of actual cost and environmental impact. This is challenging in an environment of cost-cutting by airlines and increased costs for airport improvements, as the process of sustainability typically requires spending more up-front on projects to create longer sustaining infrastructure. While many can justify the long-term cost savings that may be realized, the higher up-front costs mean that fewer projects will be funded, leading to more delay in airport development.

All of these issues contribute to the current environment in which the aviation system operates and the issues expected to affect Arizona’s airports in the future.

State Airport Issues

As previously noted, the Governor’s Advisory Council on Aviation was created to address aviation issues specific to Arizona. The three issues evaluated through the ACA process included:

- Land use
- Capacity
- Funding needs

Somewhat unique to Arizona is the ownership of one of the state’s primary airports by the state, Grand Canyon National Park Airport. While other states own and sometimes operate airports, these airports are typically small in nature and do not receive the high level of activity that exists at Grand Canyon. Other state issues raised during the ACA process are similar to those experienced at the national level including capacity, land use, and military airspace interactions.

Regional Airport Issues

There are two major metropolitan areas within Arizona, Phoenix and Tucson. While each of these metropolitan areas operate independently, the aviation issues faced by both regions are very similar. Regional aviation system plans have been prepared in each of these regions in the past five years. Both of the plans addressed the following issues:

- Capacity
- Military activity
- Expanding population base

These issues mirror those identified at the national level, with the exception of the expanding population base. Unlike other metropolitan areas, Phoenix and Tucson continue to experience growth beyond the average, with many new residents and businesses locating in the state to take advantage of the area's many positive aspects. The growth experienced in population has caused expansion of the development limits in many directions. The growth in development limits has meant new aviation demand in areas that previously had limited or no demand. Airports such as Buckeye near Phoenix and Marana near Tucson have experienced significant growth associated with new population and business development. These airports are examining ways to accommodate the projected continued increase in demand.

ESTABLISHMENT OF SYSTEM VISION, GOALS & PERFORMANCE MEASURES

The Arizona SASP is being conducted in a series of separate, but related, technical steps. The first step in the analysis of the airport system's needs is to establish a system vision and system goals, then translate them into goal categories. System goal categories are subsequently used to evaluate the adequacy of Arizona's airport system. To facilitate the evaluation process, performance measures specific to each goal category are employed to provide the foundation for a "report card" that will ultimately be used in the SASP to determine how well the Arizona airport system is performing.

The remainder of this chapter is devoted to describing the plan vision, goal categories, and performance measures for the Arizona SASP.

System Plan Vision

The vision for the 2008 Arizona State Airports System Plan is to:

Provide an airport system that accommodates demand, supports economic and transportation needs, and maximizes funding resources

This vision requires that the process used to develop the SASP include input from a variety of sources. The process brings together representatives of airports and other public agencies to work with ADOT and the consultant team to ensure that a comprehensive evaluation of the airport system is conducted. States, as well as individual communities within those states, continue to recognize the importance of an airport system to their statewide and local economic and transportation infrastructures, and to that end, development of a SASP that can be supported on all levels is the primary vision.

System Plan Goals & Goal Categories

Establishment of this overall vision for the plan led to the development of the following goals, which were established for the airport system that serves Arizona:

- Arizona should provide an airport system that is adequately maintained to meet current and projected demand and is easily accessible from both the ground and the air.
- Arizona should advance a system of airports that is supportive of Arizona’s economy, ensuring that the airport system is matched to Arizona’s socioeconomic and demographic characteristics.
- Arizona should provide for a safe airport system, as measured by compliance with applicable safety and security standards, as well as supports health, welfare and safety-related services and activities.
- Arizona should promote a system of airports that is considerate of the environment and supports aviation programs and outreach opportunities in Arizona.

These four goals for the system are translated into the following goal categories:

- Development
- Economic Support
- Safety and Standards
- Environmental Sensitivity and Stewardship

When developing the goal categories, Title 28, Chapter 2, Article 7 of the Arizona Revised Statutes (ARS) was reviewed to determine its applicability to the Arizona SASP. The ARS provides guidelines for performance-based transportation planning in the state. Much of the terminology and items noted in the ARS were directly related to planning for highways. ARS did outline performance measures and factors that can be broadly applied to aviation. These items were considered in the development of the goal categories for this plan.

The SANS 2000 outlined three categories similar to the goal categories developed for this system plan. These categories were Economic, Facility, and Service Levels. Each of these categories was evaluated using several performance measures. The categories from the SANS 2000 have not been used in this system plan. However, most of the performance measures analyzed in the SANS 2000 will also be performance measures in the 2008 Arizona SASP. This will allow the plan to measure how the system has changed since the SANS 2000. The performance measures included in the SANS 2000 and the 2008 plan are noted below.

System Plan Performance Measures

In developing a “report card” for Arizona’s airport performance, the Arizona airport system will be evaluated or graded on the four goal categories. Performance measures for each of the goal categories are the “tests” that are applied to determine how well the system is currently performing.

Figure 1-6 provides a summary of the goal categories and their associated performance measures that will be used in this update to the Arizona SASP. Some performance measures were chosen based on inclusion in the SANS 2000. Other measures were selected by ADOT Aeronautics for their relevance and importance to the Arizona airport system. Some of the performance measures used to evaluate the Arizona aviation system are action-oriented,

while others are more informational in nature. Many of the measures are performance based and have the ability to be tracked in the future. The performance measures included from the SANS 2000 are noted in parentheses. The information presented in Figure 1-6 is integral to the remainder of this study.

Figure 1-6: Goal Categories and Performance Measures for the 2008 Arizona State Airports System Plan

GOAL CATEGORY: DEVELOPMENT
<ul style="list-style-type: none"> • Percent of communities in the state with a population greater than 5,000 within 60 minutes driving time of a commercial service airport (SANS 2000) • Percent of communities in the state with a population greater than 1,000 within 30 minutes driving time of a general aviation airport(SANS 2000) • Population within 60 minutes of commercial service airports served by one airline • Percent of population within 30 minutes of a public use airport • Percent of population within 30 minutes of a NPIAS Airport • Percent of population within a 30 minutes of each airport, by role category • Percent of population within 30 minutes of an airport and the number of airports with an instrument approach • Percent of licensed pilots within 30 minutes of an airport • Percent of airports capable of supporting physician/medical transport aircraft • Percent of communities in the state with a population greater than 15,000 within 30 minutes driving time of a general aviation airport that can accommodate large general aviation aircraft (ARC B-II) and has Instrument Meteorological Conditions (IMC) capability (SANS 2000) • Percent of airports within 30 minutes of an alternate airport with an ILS or LPV (300', 1 mile) • Percent of population within 30 minutes of an all weather runway (paved, instrument approach, AWOS) • Percent of population within 30 minutes of an airport with on-site weather reporting • Percent of airports with 24/7 fuel • Percent of airports with jet fuel • The number of airports with an annual demand less than 60 percent of runway annual service volume (SANS 2000) • Percent of airports currently operating below FAA target demand/capacity ratio • Percent of airports projected to be operating below FAA target demand/capacity ratio in 2028 • Number of airports experiencing delay to aircraft operations: the maximum and average delay in minutes an aircraft experiences due to airside congestion (SANS 2000) • Percent of population and employment centers that are within a 30-minute drive time of a system airport exceeding 60 percent demand/capacity, current and 2020 • Airports with a current (past 5 years) master plan • Percent of airports that are compliant with FAR Part 77 (height zoning) • Percent of airports with surrounding municipalities that have adopted controls/ zoning to make land use in the airport environs compatible with airport operations and development • Percent of airports with surrounding municipalities that have adopted “disclosure areas” • Percent of airports that are recognized in local comprehensive plan • Percent of airports included in regional transportation plans

Figure 1-6: Goal Categories and Performance Measures for the 2008 Arizona State Airports System Plan (continued)

GOAL CATEGORY: ECONOMIC SUPPORT
<ul style="list-style-type: none"> • Dollars of direct and indirect economic impact on the state from aviation (SANS 2000) • Number of major recreational areas in the state within 30 minutes driving time of a general aviation airport (SANS 2000) • Percent of total employment that is within 30 minutes of an airport • Percent of businesses with the propensity to use aviation within a 30-minute drive of a system airport • Percent of population within 30 minutes of a system airport meeting business user needs • Number of airports without adequate utilities (electricity, telephone, water, sewer, and gas) (SANS 2000) • Percent of airports with a PCI of 70 or greater • Percent of airports meeting minimum facility and service objectives
GOAL CATEGORY: SAFETY AND STANDARDS
<ul style="list-style-type: none"> • Percent of airports with clear approaches to primary runway ends • Percent of airports with adopted Wildlife Management Plans • Percent of airports with adopted Security Plans • Airports controlling all runway end RPZs • Percent of airports that have active programs (including vegetation management plans) to clear obstructions from their approaches • Percent of airports that meet runway/taxiway separation criteria for their current ARC • Percent of airports that have RSAs on their primary runway that meet the standards for their current ARC • Percent of airports that have a written emergency response plan • Percent of airports that have procedures in place to conduct self-inspections on a regular basis • Percent of hospitals in the state within 30 minutes driving time of an airport with Instrument Meteorological Conditions (IMC) capability, on-site weather reporting, and jet fuel availability (SANS 2000) • Percent of airports that support search and rescue operations • Percent of airports that support aerial fire fighting operations
GOAL CATEGORY: ENVIRONMENTAL SENSITIVITY AND STEWARDHIP
<ul style="list-style-type: none"> • Number of airports that have Storm Water Pollution Prevention Plan (SWPPP) • Percent of system airports supporting flight training • Percent of the population that are within 30 minutes of a system airport with a full-time flight school/flight instructor. • Percent of system airports supporting A&P programs • Percent of system airports that have aviation maintenance and repair. • Percent of system airports that have educational programs that are affiliated with local elementary/secondary schools, community colleges, or technical/vocational schools.

SUMMARY

The groundwork established in this phase of the study is used to guide the remainder of the system plan. This chapter of the Arizona State Airports System Plan provides a foundation for subsequent analysis. Information presented in this chapter is used to:

- Guide the collection of data and information at system airports during the inventory phase of the study.
- Determine how well Arizona’s system of public use airports is currently performing.
- Identify where Arizona’s airport system is currently adequate, as well as where it is presently deficient, or where overlaps may be present.
- Identify the need for change in the airport system and Aeronautics’ policies to meet Arizona’s future aviation needs.