

APPENDIX D: RELIEVER CANDIDATE AIRPORT ANALYSIS

The FAA classifies NPIAS airports as primary commercial service, non-primary commercial service, or general aviation. In addition to these classifications, a fourth class of airport deemed “Reliever” is also eligible to compete for federal funding from the FAA’s Airport Improvement Program (AIP). Reliever airports are designated by the FAA to relieve congestion at commercial service airports and to provide improved general aviation access to the overall community. They may be publicly or privately owned. Currently, there are eight general aviation airports in Arizona that have reliever status, six of which are located in Greater Phoenix. These airports are listed here:

- Phoenix Metro Area
 - Chandler Municipal
 - Glendale Municipal
 - Phoenix Deer Valley
 - Phoenix Goodyear
 - Phoenix-Mesa Gateway
 - Mesa Falcon Field
 - Scottsdale
- Tucson Metro Area
 - Marana Regional
 - Ryan Field

It should be noted that while the most recent FAA NPIAS (2009-2013) still shows Phoenix-Mesa Gateway as a reliever, that the airport should be classified as a Primary Commercial Service Airport. This airport has maintained commercial airline service and has surpassed the 10,000 annual enplanement mark.

NPIAS RELIEVER CRITERIA

FAA Order 5090.3C, *Field Formulation of the National Plan of Integrated Airport Systems*, identifies criteria to determine the eligibility of airports to be included in the NPIAS. In Arizona’s State Airports System, there are existing or proposed airports which could be considered for inclusion in the NPIAS as relievers. Significant changes in airport economics and Arizona since the previous State Aviation Needs Study have lead to this evaluation, based upon data from the 2008 Arizona State Airports System Plan.

An individual review should be conducted for each candidate reliever to determine whether there is a current or future significant requirement for additional general aviation capacity to relieve congestion at the nearby commercial service airport or to enhance general aviation access to the overall community. An airport should be designated as a reliever airport only if the review documents a significant requirement. The following sections discuss reliever airport criteria.

- **High Activity Level** – The reliever airport must have current activity levels of at least 100 based aircraft or 25,000 annual itinerant operations (a heliport may qualify as a reliever if it has one half of this activity level). In the case of a new airport or an existing airport it must have a forecasted activity level of at least 100 based aircraft or 25,000 annual itinerant operations for the time period in which it is being designated as a reliever.
- **Reliever to Commercial Airport** – The relieved airport must be a commercial service airport that serves a metropolitan area with a population of at least 250,000 persons or at least 250,000 annual enplaned passengers. The relieved airport also must

operate at 60 percent of its capacity, or would be operated at such a level before being relieved by one or more reliever airports, or is subject to restrictions that limit activity that would otherwise reach 60 percent of capacity.

- **Grandfathered Reliever Status** – Privately owned airports currently designated as reliever airports that do not meet the new reliever criteria but have received AIP funds and are subject to grant obligations will retain the reliever airport designation and therefore remain eligible for AIP funds. These grandfathered airports will retain their reliever designation until the grant obligations have been met (10 years for privately owned airports). Those airports that do not meet the new reliever criteria and have not received AIP funds should be re-designated as general aviation airports or removed from the NPIAS.

Once it is established that one or more reliever airports are determined to be necessary to serve a community, issues of complexity, general location, and total number of reliever airports must be considered.

- **Complexity** – One reliever should be recommended as an all-weather instrumented facility primarily to serve itinerant general aviation activity. This reliever should be located with respect to the city center or business or industrial district served by the relieved airport, so that it will provide essentially the same user conveniences as those provided by the relieved airport.
- **General Location** – Any additional relievers, if required, may be less complex if they primarily will accommodate locally based small aircraft. Location in relationship to aircraft owners to be served or to an area well suited for instrument training should not be a consideration; access to the city center is the primary concern.
- **Total Number of Relievers** – Depending upon optimum siting conditions, there are situations where a single reliever can adequately serve both transient itinerant activity and based aircraft requirements. There are also situations where more than one reliever is needed to provide the required degree of relief. Most of the latter instances occur in large, densely populated metropolitan areas where reliever airports must be planned on a system basis and where optimum airport locations are not available (not unlike Phoenix).

It should be noted that prior to recommending the inclusion of a reliever airport in the NPIAS, the airport to be relieved must be examined for alternative means of expanding its capacity and relieving congestion. In every instance, recommendation of a short runway (not necessarily parallel) should be considered to serve general aviation in lieu of or in conjunction with a reliever airport.

EXISTING RELIEVERS FOR PHX

In 2007, Phoenix Sky Harbor International Airport (PHX) enplaned 15.4 million passengers and had over 539,000 annual operations. According to the 2008 SASP, PHX operated at 79 percent of capacity in 2007. Operations at PHX are expected to exceed capacity during the forecast period, with the demand/capacity ratio reaching 132 percent by 2030.

There are currently seven reliever airports (including Phoenix-Mesa Gateway) in the Greater Phoenix area, all helping to relieve congestion at Phoenix Sky Harbor International Airport (PHX) while providing valuable general aviation access to their respective communities. **Figure D-1** shows the locations of each existing reliever in relation to PHX.

Figure D-1: Location of Existing Reliever Airports in Phoenix Metro Area



Source: Wilbur Smith Associates

Figure D-2 below displays the activity levels and driving times/distances for the existing reliever airports, which are criteria for determining reliever status. All existing reliever airports meet or exceed minimum requirements.

Figure D-2: Based Aircraft and Activity at Phoenix Metro Area Reliever Airports and Driving Time/Distance to Phoenix Sky Harbor

FAA ID	Airport	Based Aircraft (2007))	Itinerant Operations (2007)	Driving Miles to Phoenix	Driving Time to Phoenix
CHD	Chandler Municipal	499	89,379	27	35
DVT	Phoenix Deer Valley	1274	141,224	20	32
FFZ	Falcon Field	947	141,665	25	31
GEU	Glendale Municipal	413	43,753	20	27
GYR	Phoenix Goodyear	276	87,416	20	28
IWA	Phoenix-Mesa Gateway	103	88,327	31	44
SDL	Scottsdale	447	133,374	20	33

Sources: Airport Inventory and Data Survey, Google Maps

POSSIBLE NEW RELIEVERS

The airport relieved, PHX, far exceeds its criteria of having 250,000 annual enplanements or serving a community of at least 250,000 people, which fulfills one of the desired criteria for a reliever. Despite the current presence of seven reliever airports in Greater Phoenix, projections of future aviation demand due to the staggering growth of the Phoenix Metropolitan Statistical Area (second fastest growth rate in the U.S.) will require greater reliever capacity. This section discusses the suitability of two regional general aviation airports to become Reliever airports for Phoenix Sky Harbor International (PHX). The airports are Buckeye Municipal and Maricopa Airport, the latter of which is a proposed airport. **Figure**

D-3 depicts the location of both Buckeye Municipal and the proposed Maricopa Airport in relation to PHX and existing reliever airports.

Figure D-3 Current and Potential Candidate Reliever Airports in Phoenix Metro Area



Source: Wilbur Smith Associates

Buckeye Municipal Airport

Buckeye Municipal Airport is located in the City of Buckeye approximately 38 miles west of downtown Phoenix. Buckeye was ranked as the second fastest growing suburb in the U.S. after the population grew 192 percent between 2000 and 2006. In 2007, Buckeye Municipal had 62 based aircraft and a total of 9,425 itinerant operations; which does not currently meet the desired criteria of 100 based aircraft or 25,000 itinerant operations.

Although the population of Buckeye is rapidly growing, there is not enough current activity from itinerant flights to warrant reliever status at Buckeye Municipal. Not only are the activity levels not sufficient, but its location in relation to existing relievers also works against its cause. Buckeye lies directly west of Phoenix where two existing relievers, Phoenix Goodyear and Glendale Municipal, lie halfway between Buckeye and downtown Phoenix. Situated in the path of major population and economic growth west of Phoenix, these two airports are heavily used and absorb much of the general aviation demand in the area. Current planning for Phoenix Goodyear includes development of a parallel runway to provide capacity relief and to better separate single engine aircraft from the larger aircraft, while plans for Glendale Municipal include a runway extension and taxiway development to accommodate larger business jets and increase overall capacity. There are also potential issues related to the expansion of Buckeye Municipal due to the location of the Yuma Proving Ground to the southwest.

It appears that by expanding capacity at Phoenix Goodyear and Glendale Municipal would be sufficient, at least in the near term, to provide the region with an effective reliever airport system. However, activity levels at Phoenix Sky Harbor, as well as Phoenix Goodyear and Glendale Municipal should be monitored to determine the need for additional activity relief.

Proposed Maricopa Airport

Maricopa Airport is a proposed airport for the City of Maricopa, to be located in south central Arizona, approximately 42 miles south of Phoenix. Future growth projections for the City of Maricopa are sizeable. With population and business growth comes growth in aviation demand, so a future Maricopa Airport could be a key asset to the growing economy of Greater Phoenix. A 2006 feasibility study estimates Maricopa Airport to have 80 based aircraft in 2010 and 140 by 2015, assuming the aircraft was constructed before that time. Annual operation estimates from the 2006 study are 48,000 in 2010 and 84,000 by 2015. These estimates do not account for the recent economic downturn which would likely drastically decrease the activity estimates. As of early 2009, the community was requesting airport inclusion in the FAA NPIAS and no construction had been initiated.

It is estimated that initial activity levels at Maricopa Airport would most likely not be sufficient for reliever status. However, with the growth that had occurred in the City of Maricopa prior to the economic downturn, it was estimated that activity levels would grow rapidly at the newly built airport. The study's projections, which were prepared based on registered aircraft per capita growth rates in Pinal County, estimate 31,000 itinerant operations and 140 based aircraft by 2015, more than sufficient for reliever status if these levels were achieved and additional capacity relief was still important in the Phoenix metropolitan area.

Location is the other major factor considered in the NPIAS Reliever analysis. The distance from Maricopa to downtown Phoenix is on par with the other reliever airports, and its proposed location would make it the only NPIAS airport southwest of Phoenix. This, in conjunction with general aviation demand projections, makes it a potential candidate to achieve reliever status should the airport be constructed and demand in the region continue at its recent pace.