Chapter Six
NOISE COMPATIBILITY PROGRAM

The Noise Compatibility Program for Williams Gateway Airport includes measures to abate aircraft noise, control land development, and implement and update the program. F.A.R. Part 150 requires that the plan apply to a period of no less than five years into the future, although it may apply to a longer period if the sponsor so desires. This Noise Compatibility Program has been developed based on a 20-year planning period.

The objective of the noise compatibility planning process has been to improve the compatibility between aircraft operations and noise-sensitive land uses in the area, while allowing the airport to continue to serve its role in the community, state, and nation. The Noise Compatibility Program includes three elements which are aimed at satisfying this objective.

- The **Noise Abatement Element** includes noise abatement measures selected from the alternatives evaluated in Chapter Four, Noise Abatement Alternatives.

- The **Land Use Management Element** includes measures to mitigate or prevent noise impacts on existing noise-impacted land uses and future land use development in the airport environs. Potential land use management techniques were evaluated in Chapter Five, Land Use Alternatives.

- The **Program Management Element** includes procedures and documents for implementing the recommended noise abatement and land use measures, monitoring the progress of the program, and updating the Noise Compatibility Program.

Each measure of the Noise Compatibility Program is summarized in **Table 6D** at the end of the chapter. The table includes a brief description of the noise abatement, land use, and program management measures, the entity responsible for implementing each measure, the cost of each measure, the proposed timing for implementation of each measure, and potential sources of funding.

NOISE ABATEMENT AND LAND USE MEASURES DROPPED FROM CONSIDERATION

Several noise abatement and land use alternatives were evaluated in this study. These were discussed with the Planning Advisory Committee, local citizens, and government officials. As a result of the public review process, and consultation with the airport staff, 11 noise abatement and eight land use measures are recommended.

Before describing the selected noise abatement and land use measures, it is appropriate to discuss the measures which deserved further consideration in Chapters Four and Five but were subsequently eliminated in the review process.

Chapter Four considered the possibility of establishing a departure turn from Runways 12L/C to the southeast. This measure was evaluated as Alternative 2 in Chapter Four. The noise impact analysis indicated that it is only marginally effective at reducing impacts at lower noise levels and would concentrate noise closer to existing noise sensitive land uses to the southeast of the airport. Consequently this measure is not included in the final noise compatibility program.

Chapter Five considered the adoption of an Airport Influence Area for Williams Gateway Airport (Revised Arizona Statute Section 28-8485). A recent revision (May 2000) of Revised Arizona Statute Section 28-8486, Public Airport Disclosure, requires the recording of a public airport disclosure map in the office of the county recorder in each county that contain property in the territory in the vicinity of the public airport. This map is therefore sufficient to notify ***current owners*** and ***potential purchasers*** that the property of interest is located in or outside of a territory in the vicinity of a public airport. Thus, the revision to Arizona Revised Statute 28-8486 eliminates the need to establish an Airport Influence Area under Arizona Revised Statute Section 28-8485.

NOISE ABATEMENT ELEMENT

The recommended noise abatement measures are described in this section.

1. Continue Calm Wind Runway 30 L/C/R Use Program.

Description. Currently Williams Gateway Airport utilizes an informal preferential runway use program that

designates Runways 30 L/C/R as the calm wind runways. Calm winds generally consist of winds up to 5 knots. The airport operates in a northwest flow configuration approximately 70 percent of the time. This program allows lower and slower approaching aircraft to arrive over less concentrated noise-sensitive areas southeast of the airport.

Aircraft approaching the airport for landing are confined over a narrower undeveloped corridor as they line up with the runway. This causes the concentration of aircraft overflights over undeveloped areas in line with the runway centerline. Departing aircraft fly on varied flight tracks after takeoff as they head to their destinations. Although aircraft departure noise is often seen as the more disruptive, the effects and overall impacts are less because departures are more dispersed and, therefore, not confined to one particular residential area to the north of the airport.

Implementation Actions. Since this is an existing policy, no specific implementation actions are necessary. The Airport Authority should continue to reflect this policy in the "Fly Friendly" program and in future published pilots guides.

Cost and Funding. As an existing policy, no additional costs would be borne by the airport users. The Airport Authority will incur normal administrative costs for informational efforts.

Timing. This is an existing policy which is recommended to continue.

3. Continue to Encourage use of NBAA Noise Abatement Procedures.

Description. The Airport Authority should actively encourage business jet operators to use the National Business Aviation Association (NBAA) Approach and Landing Procedure and

2. Continue using Runway 12R-30L for Light Piston Aircraft and Runways 12C/L-30C/R for Large Turbojet Aircraft Operations.

Description. Currently Williams Gateway Airport encourages heavy and turbojet aircraft to use the eastern two runways (Runways 12C/L and 30C/R) whenever possible. Light piston powered aircraft are encouraged to use Runway 12R-30L. This configuration of runway use provides relief from aircraft arrival and departure noise over noise-sensitive areas west of the airport including the Williams Campus. In addition, Runway 12C/30C is the only runway offering instrument approaches and is, therefore, often used by jet aircraft operating under instrument flight rules (IFR) or conducting instrument flight training. Runway 12L/30R is used by large aircraft since it possesses the greatest runway load bearing strength of the three runways.

Implementation Actions. Since this is an existing policy, no specific implementation actions are necessary. The Airport Authority should continue to reflect this policy in the "Fly Friendly" program and in future published pilots guides.

Cost and Funding. As an existing policy, no additional costs would be borne by the airport users. The Airport Authority will incur normal administrative costs for informational efforts.

Timing. This is an existing policy which is recommended to continue.

Standard Noise Abatement Departure Procedures, or equivalent quiet flying procedures developed by aircraft manufacturers. The NBAA standard procedure involves the management of thrust, flap settings, speed, and climb rate to reduce noise quickly after takeoff. (A complete description of the procedure is in **Appendix C**.)

The NBAA has also published noise abatement approach procedures for jet aircraft. These include the using minimum approach flap settings, maintaining minimum speed, and minimizing the use of reverse thrust after landing, consistent with safety. These procedures are also included in **Appendix C**.

Implementation Actions. Since this is an existing policy, no specific implementation actions are necessary. The Airport Authority should continue to reflect this policy in the "Fly Friendly" program, on future published pilots guides, signs, pilot mailings, and on the Williams Gateway Airport Internet Web Site.

Cost and Funding. As an existing policy, no additional costs would be borne by the airport users. The Airport Authority will incur normal administrative costs for informational efforts.
Timing. This is an existing policy which is recommended to continue.

4. Continue to Promote use of AOPA Noise Awareness Steps by light single and twin-engine aircraft.

Description. The Aircraft Owners and Pilots Association (AOPA) encourages quiet and neighborly flying by distributing generalized noise abatement procedures for use by propeller aircraft. These "Noise Awareness Steps" have recommend-ations on how to fly the aircraft, as well as where to fly. Most of the steps provide guidance on pilot technique when maneuvering near noise-sensitive areas. The steps also encourage cooperation with the airport staff on noise abatement issues. These procedures are listed in **Appendix C** of this document.

It is not possible to predict how often these procedures would be used, so it is not possible to quantify their effects on noise. Nevertheless, any use of these procedures will help the overall noise conditions around the airport. Consequently, the airport staff should continue to encourage their use.

Implementation Actions. Since this is an existing policy, no specific implementation actions are necessary. The Airport Authority should continue to reflect this policy in the "Fly Friendly" program, on future published pilots guides, signs, pilot mailings, and on the Williams Gateway Airport Internet Web Site.

Cost and Funding. As an existing policy, no additional costs would be borne by the airport users. The Airport Authority will incur normal administrative costs for informational efforts.

Timing. This is an existing policy which is recommended to continue.

5. Continue to Promote the Departure Procedure for the AANG 161st Air Refueling Wing KC-135 Aircraft.

Description. Currently, aircraft greater than 12,500 pounds departing Runways 30C/R are requested to turn right prior to the power lines ½ mile north of Elliot Road. This procedure helps prevent overflights of residential and noise-sensitive areas north of the airport by departing aircraft. KC-135 aircraft from the Arizona Air National Guard 161st Air Refueling Wing have successfully used this departure turn procedure to remain south of residential areas. It should be noted than even though these aircraft may physically be able to comply with the right turn procedure, several other factors may preclude this from occurring including other traffic, weather conditions, air traffic control directives, and pilot proficiency.

It should also be stressed that while smaller jet and most military aircraft are able to complete this departure turn procedure, large transport category aircraft are unable to make the turn. The excessive angle between the runways and the present noise compatible corridors would require turns in excess of 150-degrees and the use of steep bank angles. Typical airline departure policies prohibit turns in excess of 120-degrees and bank angles in excess of 15-degrees until the aircraft is in a "clean" configuration (landing gear and flaps retracted). Large transport category aircraft departure turns needed to avoid noise-sensitive areas north and north east of the airport would often exceed FAA standards or airline policy and, therefore, are not recommended.

Implementation Actions. The Airport Authority should continue to reflect this policy for military and aircraft less than 12,500 pounds in the "Fly Friendly" program and in future

Description. Williams Gateway Airport currently has one instrument landing system (ILS) which is located on Runway 30C. Relocating the ILS from Runway 30C to Runway 30R shifts the noise contours eastward, further away from residential areas south, southwest and northwest of the airport and over undeveloped areas

Implementation Actions. Relocating the ILS on Runway 30C to Runway 30R involves the relocation of all ground based equipment (localizer and glide slope antennas) as well as defining the new approach. The new approach would also need to be reviewed for environmental impacts, flight-checked, and published by the FAA.

Costs and Funding. The cost of this recommendation would entail expenses incurred in the relocation of ground based navigational equipment and the design and publishing of the published pilots guides. Using the distance measuring equipment (DME) from the Willie VORTAC to create a DME fix would help pilots unfamiliar with the airport to initiate this turn procedure. The Authority should also request that the Airport Traffic Control Tower to note this procedure in a letter of agreement with the 161st Air Refueling Wing of the Arizona National Guard.

Costs and Funding. As an existing policy, no additional costs would be borne by the airport users. The Airport Authority will incur normal administrative costs for informational efforts.

Timing. This is an existing policy which is recommended to continue.

6. Relocate Instrument Landing System to Runway 30R.

new approach. The cost to move such a system is estimated at about $200,000. Slight costs to aircraft operators may include additional fuel usage due to increased taxi distance to the ramp.

Since no individuals are currently impacted within the 65 DNL contour, the cost of relocation for noise abatement purposes would not be eligible for funding under the noise set-a-side of the Federal Airport Improvement Program (AIP), however, the recently completed Airport Master Plan for Williams Gateway Airport also recommended the relocation of the ILS system on Runway 30R. Funding for the ILS relocation, therefore, is eligible from State and Federal sources. This project would be eligible for up to 91.06 percent funding through the set-a-side for reliever airports within AIP. The balance would be evenly split between the Arizona Department of Transportation and the airport capital budget.

Timing. In the Airport Master Plan this is projected for the intermediate term, 2005 to 2010. If possible, the Airport Authority should begin pursuing AIP funding for this recommendation as soon as the Noise Compatibility Program is approved.

7. Install PAPI-4 Lighting on Runway 12R-30L

Description. Approach lighting systems, if properly used by approaching pilots, can aid in the reduction of aircraft noise generated on approach. While pilots are trained to visually follow an appropriate descent path on approach, Aircraft that approach "below" the glide slope do not have the benefit of excess altitude to maintain aircraft approach speeds. Low approaches often result in numerous engine power fluctuations in order to maintain a proper approach and landing speed. In addition, these approaches result in low altitude overflights which increase noise levels.

Precision Approach Path Indicator (PAPI) lighting systems are considered the "next generation" of visual approach lighting systems. The PAPI consists of a series of four lights (PAPI-4) relaying detailed information to the approaching pilot. The PAPI system is able to inform a pilot of the aircraft's relation to the glide slope in increments of being "slightly above" or "slightly below" the designed glide slope. An additional benefit of the PAPI is that it can be utilized by the pilot until aircraft touchdown.

PAPI-4 lighting systems are installed and available to pilots on Runways 12L/30R and 12C/30C at Williams Gateway. Runway 12R/30L is currently without a visual approach lighting system. Since this runway is often used by inexperienced student pilots, visual approach lighting may prove beneficial in maintaining a usually approximating three-degrees, variations such as runway length, width, and pilot experience can alter the aircraft's true approach course. Aircraft on final approach that are "too high" will need to expedite their descent in order to land. This requires slowing the aircraft to the appropriate approach and landing speed often requiring the use of full flaps and premature lowering of the landing gear. The use of these items causes excessive airframe noise due to the friction created from the slowing aircraft. In addition, aircraft landing at higher speeds will often use engine thrust reversers to reduce brake wear.

proper aircraft approach glide slope from a noise abatement and safety perspective.

Implementation Actions. This project would be sponsored by the Airport Authority, as airport proprietor. After approval of the Noise Compatibility Program by the FAA, the Authority must seek grant funding through the Federal Airport Improvement Program, prepare required environmental documentation, and design the project. It would then prepare bidding documents, select a contractor, and supervise the construction.

Costs and Funding. The cost of this recommendation would entail expenses incurred in the installation of the PAPI lighting system. The system is estimated to cost about $130,000.

Since no individuals are currently impacted within the 65 DNL contour, the cost of new construction for noise abatement purposes would not be eligible for funding under the noise set-a-side of the Federal AIP program. The recently completed Airport Master Plan for Williams Gateway Airport, however, also recommended the installation of a PAPI lighting system on Runway 12R-30L. Therefore, funding for the PAPI lighting system is eligible from State and

Federal sources. This project would be eligible for up to 91.06 percent funding through the set-a-side for reliever airports within AIP. The balance would be evenly split between the Arizona Department of Transportation and the airport capital budget.

Timing. This is projected for the intermediate term, 2005 to 2010 in the Airport Master Plan.
Description. Currently, rotor wing aircraft are requested to approach/ depart in a southwest corridor to avoid overflight of the Williams Campus and residential development. A number of additional potential noise abatement corridors exist for helicopters including the Roosevelt Canal, Southern Pacific Railroad, and the General Motors Proving Grounds. In addition, visual check points should be established to assist both pilots and the air traffic control tower in following these noise abatement corridors.

It should be noted that large military helicopters create large amounts of down-wash turbulence disturbing large amounts of dust. Therefore, these aircraft fly a straight-in visual approach to Runway 30L. Consideration should be given to maintaining this procedure to limit the potential damage to ground facilities in and around the Airport.

Implementation Actions. The Airport Authority should incorporate these routes and procedures in the "Fly Friendly" program and in future published pilots guides. The Authority should also request that the Airport Traffic Control Tower note these routes and procedures in letters of agreement with helicopter operators. A sample letter of agreement can be found in **Appendix C**.

Costs and Funding. The Airport Authority will incur administrative costs in distributing information about these routes and procedures. These costs will be covered by the airport operating budget.

If possible, the Airport Authority should begin pursuing AIP funding for this recommendation as soon as the Noise Compatibility Program is approved.

8. Develop Helicopter Reporting Points and Arrival and Departure Routes.

Timing. Implementation of these routes and procedures should be undertaken as soon as possible after approval of the Noise Compatibility Program by the FAA. Implementation is anticipated in 2001.

9. Request Aircraft Using Runway 12R-30L Traffic Pattern to Remain East of the Southern Pacific Railroad.

Description. Current noise abatement procedures have established Runway 12R-30L for use by light propeller powered aircraft performing pattern operations. So as not to conflict with operations on Runways 12C-30C and Runway 12L-30R, the light aircraft traffic pattern is flown to the west of the airfield. This pattern does not create aircraft overflights of current noise-sensitive areas, other than the Williams Campus. The majority of noise-sensitive development is situated west of the Southern Pacific Railroad, essentially paralleling the traffic pattern. Aircraft using the western traffic pattern could be requested to remain east of the Southern Pacific Railroad during the "downwind leg", thereby avoiding residential overflights.

Implementation Actions. The Airport Authority should reflect this policy in the "Fly Friendly" program and in future published pilots guides. The Authority should also request the Airport Traffic Control Tower to note this policy in a Tower Order or in its internal operating policy.

Costs and Funding. The Airport Authority will incur administrative costs in distributing information about these routes and procedures. These costs will be covered by the airport operating budget.

Timing. Implementation of this policy should be undertaken as soon as possible after approval of the Noise Compatibility Program by the FAA. Implementation is anticipated in 2001.

10. Encourage Use of AC 91.53A Noise Abatement Departure Procedures by Air Carrier Jets.

Description. The Airport Authority should promote the use of noise abatement departure procedures described in Advisory Circular (AC) 91-53A by future airlines operating jet aircraft over 75,000 pounds, certificated gross takeoff weight.

Throughout the 1980s and early 1990s, the FAA and the airlines did considerable work in studying noise abatement departure procedures. In 1993, the FAA published an advisory circular (91-53A) describing general parameters for two alternative noise abatement departures. (A copy of FAA AC 91-53A is in **Appendix C**.) Both involve thrust reductions soon after takeoff, but at an altitude no less than 800 feet above the ground. The procedures differ as to when the flaps should be retracted – either before or after the thrust reduction. Both reduce aircraft noise, but the "close-in" procedure, involving thrust reduction before flap retraction tends to produce greater noise reduction near the runway end, while the "distant" procedure, involving thrust reduction after flap retraction, tends to produce greater noise reduction further from the airport.

The airlines have implemented the AC 91-53A guidelines, although the specific details vary among the airlines based on their own operating philosophies and system needs. The airlines now routinely use noise abatement departures in accordance with the AC 91-53A criteria.

Implementation Actions. No specific implementation actions are needed. Noise abatement departures are routinely used by air carrier jet aircraft in accordance with airline policy and wind, weather, and runway surface conditions. The Airport Authority should notify airlines of the importance it places on noise abatement departure procedures to ensure the airlines use them at Williams Gateway Airport.

Costs and Funding. The Airport Authority will incur normal administrative costs for informational efforts.

Timing. Implementation of this policy should be undertaken as soon as possible after approval of the Noise Compatibility Program by the FAA. Implementation is anticipated in 2001.

11. Support 161st Air Refueling Wing of the Arizona Air National Guard's efforts to re-engine KC-135 Aircraft.

Description. The 161st Air Refueling Wing KC-135 aircraft are currently equipped with older TF-33 engines. The Air Refueling Wing is attempting to obtain new CFM-56 engines for the KC-135 fleet. Funding for new engines, however, is currently not available. The Williams Gateway Airport Authority should support the efforts of the 161st Air Refueling Wing via contacting local, state and federal representatives to lobby for military funds for engine replacement.

Implementation Actions. The Williams Gateway Airport Authority should monitor the progress of the 161st Air Refueling Wing efforts and provide support via contacting local, state and federal representatives to lobby for military funds for engine replacement.

Costs and Funding. Administrative costs will be borne by the Williams Gateway Airport Authority.

Timing. This is recommended for implementation after FAA review and approval of the NCP. Implementation is anticipated in 2001.

LAND USE MANAGEMENT ELEMENT

The recommended land use manage-ment measures for the Williams Gateway Airport vicinity are presented below. They are summarized in **Table 6D** at the end of this chapter.

1. Update General Plans to Reflect the "Land Use Planning Scenario" noise contours and Airport Planning Area as a basis for noise compatibility planning (Mesa, Gilbert, Queen Creek, and Maricopa and Pinal County).

Description. Mesa, Gilbert, Queen Creek, Maricopa County, and Pinal County should amend their general plans to show the "Land Use Planning Scenario" noise contours for Williams Gateway Airport. It is recommended that they use both the 2015 noise exposure contour from the 1993 Williams Gateway Airport Master Plan and noise contours developed using the 1999 Williams Gateway Airport Master Plan high range 2020 forecasts as a basis for the "Planning Scenario noise contour" for noise compatibility planning. This can be accomplished by graphically overlaying the two contour sets and drawing a combined noise contour, as shown in **Exhibit 6A**. This is justified because the noise contours are subject to change over time as the use of the airport changes. By defining a reasonable "worst case" noise contour for land use planning purposes, the boundaries of the compatible land use planning area can be kept constant over a longer period of time instead of being subject to small variations due to periodic changes in the noise contours.

Two Technical Information Papers prepared for this study and included in this document provide the rationale for using 60 DNL as a noise compatibility threshold – (*Effects of Noise Exposure*, and *Noise and Land Use Compatibility Guidelines)*.

Exhibit 6A shows the boundaries of a recommended Airport Planning Area (APA) for Williams Gateway Airport. It includes land within the 60 DNL noise contour; areas of aircraft overflight (as documented in Chapter Two of the Williams Gateway Airport Noise Exposure Map Document-Exhibits 2F, 2G, 2H and 2J); and areas beneath the F.A.R. Part 77 horizontal surface.

Implementation Actions. This policy can be established by each jurisdiction (Mesa, Gilbert, Queen Creek, Maricopa County, and Pinal County) amending their general plans.

Cost and Funding. Adoption of this measure would involve administrative expenses for Mesa, Gilbert, Queen Creek, Maricopa County, and Pinal County. These would have to be borne by the operating budgets of each jurisdiction.

Timing. Amendments to general plans take time to prepare and process. The Growing Smarter legislation requires communities to update and re-adopt their General Plans by the end of 2001. This would be an ideal opportunity to incorporate the recommended airport related amendments into the General Plans.

2. Retain Compatible Land Use designations for undeveloped land within the APA (Mesa, Gilbert, Queen Creek, Maricopa County).

Description. A large portion of the undeveloped area within the APA continues to be designated for compatible use, including commercial, industrial, public/semi-public facilities, and parks and open space. It is recommended that within the APA that existing compatible use designation remain unchanged. **Exhibit 6B** depicts the General Plan designations within the APA to be retained.

Implementation Actions. This measure would be implemented through general plan amendments reflecting this policy by the City of Mesa, the Town of Gilbert, the Town of Queen Creek, and Maricopa County.

Cost and Funding. This measure would involve administrative expenses. Funding would come from the operating budgets of each jurisdiction.

Timing. For planning purposes, implementation is projected for 2000 to 2001 to allow time for preparation and processing of the amendments.

3. Develop a New Mixed Use Category that does not allow Residential within the Planned Mixed Use Areas inside the Planning Scenario's 60 DNL Boundary and Immediately North of the Airport (Mesa and Gilbert).

Description. As depicted on **Exhibit 6B**, large areas of planned mixed-use development north and west of the airport, within Mesa and Gilbert, could allow high densities of residential development within the 60 DNL Planning Scenario noise contour and under the primary departure path of aircraft departing from Runways 30C/L. Developing a new mixed use category that does not allow residential within these planned mixed use areas is recommended.

Implementation Actions. This measure would be implemented through general plan amendments by the City of Mesa and the Town of Gilbert.

Cost and Funding. This measure would involve administrative expenses. Funding would come from the operating budgets of each jurisdiction.

Timing. For planning purposes, implementation is projected for 2000 to 2001 to allow time for preparation and processing of the amendments.

4. Establish Noise Compatibility Guidelines for the Review of Development Projects within the "Planning Scenario" 60 DNL Noise Contour (Mesa, Gilbert, Queen Creek, Maricopa County, Pinal County).

Description. This policy is proposed to apply throughout the Planning Scenario's 60 DNL contour as shown in **Exhibit 6A**, where airport-compatible land use designations should be preserved. Situations may arise from time to time where proposals are filed for development within those areas. The adoption of special project review criteria, specifically addressing airport land use compatibility needs, would provide guidance to land use decision-makers as they review project proposals.

The following project review criteria should be included in the local general plans or as checklists for consideration by local planners, planning commissions, and governing bodies. These criteria are specifically suggested for use in reviewing planned development, rezoning, special use, conditional use, and variance applications within the Planning Scenario's 60 DNL contour. The following criteria are suggested:

A. Determine the sensitivity of the subject land use to aircraft noise levels. The F.A.R. Part 150 land use compatibility table can be used for this purpose. **Exhibit 6C** depicts the F.A.R. Part 150 land use compatibility guidelines.

B. Advise the airport management of development proposals involving noise-sensitive land uses within the Planning Scenario's 60 DNL noise contour.

C. Locate noise-sensitive public facilities outside the Planning Scenario 60 DNL contour and away from the primary aircraft traffic pattern, if possible. Otherwise, require building construction to provide an outdoor to indoor noise level reduction of 25 decibels within the 60-65 DNL range. Also, require the dedication of noise and avigation easements to the Williams Gateway Airport Authority as airport proprietor and the recording of a fair disclosure agreement and covenant noting the proximity of the airport and the existing and projected airport noise contours.

D. Discourage the approval of rezonings, exceptions, variances, and conditional uses which introduce noise-sensitive development into areas exposed to noise exceeding 60 DNL.

E. Where noise-sensitive development within the Planning Scenario's 60 DNL contour must be permitted, encourage developers to incorporate the following measures into their site designs.

(1) Where noise-sensitive uses will be inside a larger, mixed use building, locate noise-sensitive activities on the side of the building opposite the airport or, if the building is beneath a flight track, opposite the prevailing direction of aircraft flight.

(2) Where noise-sensitive uses are part of a larger mixed use

development, use the height and orientation of compatible uses, and the height and orientation of landscape features such as natural hills, ravines and manmade berms, to shield noise-sensitive uses from ground-noise generated at the airport.

Implementation Actions. The City of Mesa, the Town of Gilbert, the Town of Queen Creek, Maricopa County and Pinal County should adopt these project review criteria either through general plan amendments or as administrative guidelines.

Cost and Funding. This measure would involve administrative expenses. Funding would come from the operating budgets of each jurisdiction.

Timing. For planning purposes, this is projected for 2000.

5. Encourage rezoning areas within "Planning Scenario" Noise Contours and APA to Match the Compatible Land Use Designations in the General Plans. (Mesa, Gilbert, Queen Creek, and Maricopa County).

Description. Large tracts of undeveloped land in the APA are designated in local general plans for compatible uses but zoned for non-compatible uses. It is recommended that Mesa, Gilbert, Queen Creek, and Maricopa County should encourage rezoning areas not zoned for compatible use to conform with their respective General Plans. Recommended areas to be rezoned are depicted on **Exhibit 6D**.

In addition, it is recommended that Mesa, Gilbert, Queen Creek, and Maricopa County should require that future development conform with the future compatible land use designations of the general plans and that no rezonings contrary to the general plans would be approved in the APA without appropriate revisions to the general plans.

Implementation Actions. It is recommended that the City of Mesa, the Town of Gilbert, the Town of Queen Creek, and Maricopa County should encourage rezoning these areas when appropriate. In addition, future development should conform with the future compatible land use designations of the general plans.

Cost and Funding. This will involve administrative expenses that will have to be covered through the operating budget of each jurisdiction.

Timing. For planning purposes, implementation is projected for 2000-2001.

6. Amend Airport Overflight Zoning Ordinance: Reflect Planning Scenario Noise Contours and APA; Require Fair Disclosure Covenants and Amend Sound Insulation Standards (Mesa, Gilbert, Queen Creek, Maricopa County, Pinal County).

Description. In order to fully promote airport compatibility throughout the area, it is recommended that the City of Mesa, the Town of Gilbert, the Town of Queen Creek, Maricopa County and Pinal County amend the Williams Regional Planning Study (WRPS) overflight zoning ordinance for the Williams Gateway Airport area. These communities should consider revising, broadening and adopting the standards of the WRPS Overflight Zoning Districts as depicted on **Table 6A** and **Exhibit 6E**. Seven amendments are suggested.

1. Expand the current 60 and 65 DNL boundaries to include areas from the high range forecast noise contours that fall outside the WRPS contours (this would be the same as the Planning Scenario noise contour).

2. Revise the boundary of Over-flight Area III to reflect the APA boundary that reflects actual flight patterns based on radar data.

3. Add Runway Protection overlay zones to protect the approaches to each runway end.

4. Increase exterior to interior noise level reduction from 20 to 25 for residential development within the 60 DNL boundary or AOZ-2 zone. (For more information see Guidelines for the Sound Insulation of Residences Expose to Aircraft Operations, U.S. Department of Transportation, 1992)

5. Prohibit all noise-sensitive land uses within the Planning Scenario 65 DNL contour.

6. Expand noise level reduction efforts to other land use categories.

7. Adopt overflight districts as part of zoning ordinance for Mesa, Gilbert, Queen Creek, Maricopa County, and Pinal County.

Implementation Actions. The City of Mesa, the Town of Gilbert, the Town of Queen Creek, Maricopa County, and Pinal County must approve these amendments by ordinance.

Cost and Funding. This will involve administrative expenses that will have to be covered through the operating budget of each jurisdiction.

Timing. For planning purposes, implementation is projected for 2000-2001.

TABLE 6A
Potential Revised Noise Compatibility Matrix for the Overflight Zoning District
Mesa, Gilbert, Queen Creek, Maricopa County, and Pinal County

	RPZ[8]	***AOZ-1 65 + DNL***	***AOZ-2 60-65 DNL***	**AOZ-3 60-APA**
RESIDENTIAL				
Single-family, duplex, multi-family, manuf. housing	N	N	Y[*1*,2,4,9]	Y[*1*,2]
Recreational vehicle parks	N	N	Y[*1*,2,4,9]	Y[*1*,*2*]
Other residential	N	N	Y[*1*,2,4,9]	Y[*1*,*2*]
PUBLIC FACILITIES				
Education facilities	N	N	N	Y[*1*]
Religious facilities, libraries, museums, galleries, clubs and lodges	N	N	Y[*1*,4]	Y[*1*]
Outdoor sport events, entertainment and public assembly, except amphitheaters	N	N	N	Y[1]
Indoor recreation, amusements, athletic clubs, gyms and spectator events	N	Y[1,5]	Y[*1*,4]	Y[*1*]
Neighborhood parks	N	Y[*1*]	Y[*1*]	Y[*1*]
Community and regional parks	N	Y[*1*]	Y[*1*]	Y[*1*]
Outdoor rec.: tennis, golf courses, riding trails, etc.	N	Y[*1*]	Y[*1*]	Y[*1*]
Cemeteries	N	Y[*1*]	Y[*1*]	Y[*1*]
COMMERCIAL				
Hotels/motels	N	Y[*1*,*5*]	Y[*1*,4]	Y[*1*]
Hospitals and other health care services	N	N	N	Y[*1*]
Services: finance, real estate, insurance, professional and government offices	N	Y[*1*,4]	Y[*1*,*3*]	Y[*1*]
Retail sales: building materials, farm equipment, automotive, marine, mobile homes, recreational vehicles and accessories	N	Y[*1*,4]	Y[*1*,*3*]	Y[*1*]
Restaurants, eating and drinking establishments	N	Y[*1*,4]	Y[*1*,*3*]	Y[*1*]
Retail sales: general merch., food, drugs, apparel, etc.	N	Y[*1*,4]	Y[*1*,*3*]	Y[*1*]
Personal services: barber and beauty shops, laundry and dry cleaning, etc.	N	Y[*1*,4]	Y[*1*,*3*]	Y[*1*]
Automobile service stations	N	Y[*1*]	Y[*1*]	Y[*1*]
Repair services	N	Y[*1*]	Y[*1*]	Y[*1*]

TABLE 6A (Continued)
Potential Revised Noise Compatibility Matrix for the Overflight Zoning District
Mesa, Gilbert, Queen Creek, Maricopa County, and Pinal County

	RPZ[8]	*AOZ-1 65+ DNL*	*AOZ-2 60-65 DNL*	AOZ-3 60-APA
INDUSTRIAL				
Processing of food, wood and paper products; printing and publishing, warehouses, wholesale and storage activities	N	Y[1,6]	Y[1,6]	Y[1]
Refining, manufacturing and storage of chemicals, petroleum and related products, manufacturing and assembly of electronic components, etc.	N	Y[1,6]	Y[1,6]	Y[1]
Manufacturing of stone, clay, glass, leather, gravel and metal products; construction and salvage yards; natural resource extraction and processing, agricultural, mills and gins	N	Y[1,6]	Y[1,6]	Y[1]
AGRICULTURE				
Animal husbandry; livestock farming, breeding and feeding; plant nurseries (excluding retail sales)	N	Y[1]	Y[1]	Y[1]
Farming (except livestock)	7	Y	Y	Y
MISCELLANEOUS				
Transportation terminals, utility and communication facilities	N	Y[1]	Y[1]	Y[1]
Vehicle parking	N	Y[1]	Y[1]	Y[1]
Signs	N	Y	Y	Y

KEY TO TABLE 6A

Y	Land use is compatible and is permitted.
N	Land use is incompatible and is not permitted.
1	A fair disclosure agreement and covenant shall be recorded as a condition of development approval for all permitted uses in the APA Zoning Overlay District.
2	All plats recorded shall be inscribed with the following: "*These properties, due to their proximity to Williams Gateway Airport, are likely to experience aircraft overflights, which could generate noise levels that may be of concern to some individuals.*"
3	The land use or activity is permitted. The developer shall be encouraged to incorporate features into the design and construction of buildings where people live, work, or are otherwise received to achieve an outdoor-to-indoor noise level reduction (NLR) of 25 decibels.
4	The land use or activity is permitted; however, an outdoor-to-indoor noise level reduction (NLR) of 25 decibels must be incorporated into the design and construction of those buildings where people live, work, or are otherwise received.
5	The land use or activity is permitted; however, an outdoor-to-indoor noise level reduction (NLR) of 30 decibels must be incorporated into the design and construction of those buildings where people live, work, or are otherwise received.
6	Uses which produce air pollutants that may obscure vision in any way, or which involve raw materials, products or by-products that pose a potential explosive hazard, are not permitted.
7	Structures are not permitted in the runway protection zone.
8	In order to minimize public exposure to accident hazard and crash potential as generated by aircraft operations, no building shall be located within any portion of a runway protection zone as defined and designated by this Code. However, such on-site improvements as vehicle parking, storm water retention, landscaping, and yard set-backs, as otherwise required by this Code or other city regulation, may be permitted within the designated runway protection zones. No element of any landscaping shall be allowed to penetrate any runway protection zone slope or other approach surface.
9	Avigation easements are required which acknowledges that an airport is located nearby and aircraft to/from the airport have a right to fly over the property.

7. Amend subdivision regulations to require recording of fair disclosure covenants and granting of avigational easements in Airport Planning Area. (Mesa, Gilbert, Queen Creek, Maricopa County, Pinal County).

Description. The City of Mesa, the Town of Gilbert, the Town of Queen Creek, Maricopa County, and Pinal County should amend their respective subdivision regulations to support the relevant requirements of its Airport Overflight Zoning Ordinance as it is proposed to be amended. Specifically, the ordinance should be amended to require the recording of fair disclosure agreements and covenants and the dedication of avigational easements within Airport Overflight Zones 2 and 3. This would apply to all new subdivisions. This will ensure that these things are taken care of even if no rezoning actions are required prior to subdivision approval. A copy of a suggested amendment to the subdivision regulations is in **Appendix C**.

Implementation Actions. This requires adoption of an ordinance by each jurisdiction amending its subdivision regulations.

Cost and Funding. This will involve administrative expenses that will have to be covered through the operating budget of each jurisdiction.

Timing. For planning purposes, implementation is projected for 2000-2001.

8. Amend building codes to add sound insulation standards supporting APA overflight zoning requirements (Mesa, Gilbert, Queen Creek, Maricopa County, Pinal County).

Description. The Airport Overflight zoning ordinance establishes a standard for the outdoor-to-indoor noise level reduction for selected land uses within various noise overlay zones. In order to assist with the implementation of these requirements, the City of Mesa, the Town of Gilbert, the Town of Queen Creek, Maricopa County, and Pinal County should amend their local building codes to establish specific construction standards for sound insulation. This would provide builders and inspectors with specific guidance on the materials and construction techniques to ensure adequate sound insulation.

The Maricopa Association of Governments published a model set of sound insulation standards in support of a land use study in the Luke Air Force Base environs. This would be an appropriate model for the local jurisdiction to use. A copy of these standards is in **Appendix C**, Implementation Materials.

Implementation Actions. This requires adoption of an ordinance by each jurisdiction amending its building code.

Cost and Funding. This will involve administrative expenses that will have to be covered through the operating budget of each jurisdiction.

Timing. For planning purposes, implementation is projected for 2000-2001.

PROGRAM MANAGEMENT ELEMENT

The success of the Noise Compatibility Program requires a continuing effort to monitor compliance and identify new or unanticipated problems and changing conditions. Four program management measures are recommended at Williams Gateway Airport. The Airport Authority, as airport operator, is responsible for implementing these

measures. They are discussed below and summarized in **Table 6D**.

1. Maintain and update the system for receiving, analyzing, responding to noise complaints, and community outreach.

Description. The airport currently has a system of recording, responding to noise complaints, as well as pro-active community outreach efforts. In addition to recording and filing complaints, it is important for the airport management to respond to complaints, even if it is not possible to take remedial action. As part of this effort, it is recommended that the Airport Authority update the current noise complaint mapping system. The Airport Authority should develop a computerized geographic information system to map the noise complaints to better identify geographic patterns and trends that emerge which may deserve special attention.

Complaints are an imperfect indicator of noise problems. The tendency of an individual to file a complaint depends on many personal variables including socioeconomic status, housing tenure, sensitivity to noise, feelings about the aviation industry, and expectations about overall neighborhood livability. Recognizing that ***Timing.*** Implementation is dependent upon Airport Improvement Program funding and therefore, the timing for this recommendation is not predictable. For planning purposes, however, implementation is projected for 2000-2001.

2. Acquire noise monitors.

Description. The Airport Authority should acquire up to four noise monitors. The noise monitoring system would serve the following primary purposes:

- Track changes in noise levels over time.

complaints are limited in their ability to clearly reveal the existence and scope of noise problems, the staff should nevertheless periodically analyze the complaint records. If the geographic pattern of complaints, or the causes of complaints, indicate that consistent problems exist, the airport management should investigate and, if possible, seek corrective action.

Implementation Actions. When the Airport Authority has the funding to buy the geographical information system, it should request cost proposals from qualified software suppliers and consultants for installation and training.

Cost and Funding. This will involve administrative costs, purchasing of a geographic information system, setup of the system and training. This is estimated at $50,000.

Acquisition of the geographical information system would be eligible for Federal funding through the noise set-aside of the Airport Improvement Program. This would cover up to 91 percent of the costs. The balance would be split between the ADOT and the airport capital budget.

- Monitor noise levels for comparison with predictions of the Integrated Noise Model made in the F.A.R. Part 150 Study.

- Provide data to assist in investigating and responding to noise complaints.

The noise monitors could also be used as testing devices to provide information to local pilots. The airport staff could work with local aircraft operators to provide demonstrations of the effectiveness of various noise abatement measures, including NBAA noise abatement departure procedures and the AOPA noise awareness steps.

Implementation Actions: When the Airport Authority has the funding to buy the noise monitors, it should request cost proposals from qualified suppliers.

Cost and Funding. For budgeting purposes, $50,000 should be set aside for acquisition of noise monitoring equipment. This will allow for the purchase of up to four monitors.

Acquisition of the noise monitors would be eligible for Federal funding through the noise set-aside of the Airport Improvement Program. This would cover up to 91 percent of the costs. The balance would be split between the ADOT and the airport capital budget.

Timing. Implementation is dependent upon Airport Improvement Program funding and therefore, the timing for this recommendation is not predictable. For planning purposes, however, implementation is projected for 2000-2001.

3. Review Noise Compatibility Program implementation.

Description. The airport management must monitor compliance with the Noise Abatement Element. This will involve checking periodically with airport users and the local Tower Manager regarding compliance with the procedures.

It may be necessary from time to time to arrange for noise monitoring, noise modeling, or flight track analysis to study issues that may arise in the future.

The Airport Authority also should maintain communications with Mesa, Gilbert, Queen Creek, Maricopa County, and Pinal County planning officials to follow their progress in implementing the relevant measures of the Land Use Management Element.

Implementation Actions. The administrative actions discussed above in the "Description" will be necessary.

Costs and Funding. This measure will require administrative time and staff support. Expenditures for special noise monitoring or modeling studies could be necessary from time to time. For budgeting purposes, this cost is estimated at $30,000 every three years. This would be covered through the airport operating budget.

Timing. This is an ongoing activity that should begin as soon as the Noise Compatibility Program is approved.

4. Update Noise Exposure Maps and Noise Compatibility Program.

Description. The airport management should review the Noise Compatibility Program (NCP) and consider revisions and refinements as necessary. A complete plan update will be needed periodically to respond to changing conditions in the local area and in the aviation industry. This can be anticipated every five to ten years. An update may be needed sooner, however, if major changes occur. An update may not be needed until later if conditions at the airport and in the surrounding area remain stable or do not change as anticipated in the Plan.

Proposed changes to the NCP should be reviewed by the FAA and all affected aircraft operators and local agencies. Proposed changes should be submitted to the FAA for approval after local consultation and a public hearing to comply with F.A.R. Part 150.

Even if the NCP does not need to be updated, it may become necessary to update the Noise Exposure Maps (NEMs). F.A.R. Part 150 requires the NEMs to be updated if any change in the operation of the airport would create a substantial, new non-compatible use. The FAA interprets this to mean an increase in noise levels of 1.5 DNL or more, above 65 DNL, over non-compatible areas that had formerly been compatible.

As a rule of thumb, the trigger for determining the need for contour updating is a 17 percent change in equivalent operations by the loudest aircraft regularly using the airport. To calculate "equivalent operations," any nighttime operations, (between 10:00 p.m. and 7:00 a.m.) must be multiplied by ten and added to daytime operations.

Implementation Actions. No specific implementation actions, other than those discussed above, are required.

Cost and Funding. Costs of a complete update of the Noise Compatibility Program are estimated at $225,000. This would be eligible for up to 91.06 percent funding from the FAA. The Arizona Department of Transportation and the Williams Gateway Airport Authority would evenly split the remainder. The Authority's share would come from the airport operating budget.

Timing. This should be done as necessary. Updates are typically needed every five to ten years, depending on how much change occurs at the airport and in the local area. For planning purposes, two updates can be expected over the next 20 years.

RESIDUAL NOISE IMPACTS

Noise contours for current conditions are shown in **Exhibit 6F**. These can be compared with the projected noise contours for 2004 and 2020 in **Exhibits 6G** and **6H**.

Table 6B shows the number of dwelling units exposed to noise for baseline conditions and after the implementation of the Noise Compatibility Program. With the implementation of the program, 106 existing and future potential dwellings would be removed from the noise contours, including 41 within the 60-65 DNL contour, 64 within the 65-70 DNL contour, and one within the 70-75 DNL contour in 2004.

There is no change between the 2020 baseline noise contours and 2020 noise contours with the program. This is because the relocation of the instrument landing system (ILS) is schedule in the long range planning horizon of the Airport Master Plan and therefore incorporated into the 2020 baseline contours.

Table 6C shows the population exposed to noise with implementation of the Noise Compatibility Program in comparison with baseline conditions. With the implementation of the program, 371 existing and future potential residents would be removed from the noise contours, including 200 within the 60-65 DNL contour, 168 within the 65-70 DNL contour, and 3 within the 70-75 DNL contour in 2004.

As previously mentioned, there is no change between the 2020 baseline noise contours and 2020 noise contours with the program.

TABLE 6B
Noise-Sensitive Land Uses Exposed to Noise
With Noise Compatibility Program Versus Baseline Conditions

	Baseline Noise (Without Program)			With Noise Compatibility Program	
	1999	2004	2020	2004	2020
Existing Noise-Sensitive Institutions					
60+ DNL	1	1	0	1	0
Potential Future Noise-Sensitive Institutions					
60+ DNL	0	0	0	0	0
Existing Dwellings					
60-65 DNL	35	41	23	34	23
65+	0	0	0	0	0
Additional Potential Dwellings					
60-65 DNL	0	2,909	2,192	2,875	2,192
65-70 DNL	0	718	689	654	689
70-75 DNL	0	318	336	317	336
75+ DNL	0	1	40	1	40
Total Future Dwellings					
Total Above 60	35	3,987	3,280	3,881	3,280
Total Above 65	0	1,037	1,065	1,008	1,065

Source: Coffman Associates analysis.

TABLE 6C
Population Exposed to Noise
With Noise Compatibility Program Versus Baseline Conditions

	Baseline Noise (Without Program)			With Noise Compatibility Program	
	1999	2004[1]	2020[1]	2004[1]	2020[1]
60-65 DNL	94	7,850	5,893	7,741	5,893
65-70 DNL	0	1,909	1,832	1,741	1,832
70-75 DNL	0	847	894	844	894
75+ DNL	0	2	107	2	107
Total Above 60	94	10,608	8,726	10,328	8,726
Total Above 65	0	2,758	2,833	2,587	2,833
LWP[2] Above 60	20	2,874	2,580	2,788	2,580
LWP[2] Above 65	0	1,266	1,372	1,201	1,372

[1] Includes potential future residents of additional housing that may be developed inside noise contours.

[2] LWP - level-weighted population is an estimated of the number of people actually annoyed by noise. The actual

population within each 5 DNL range is multiplied by the appropriate response factor to compute LWP. The factors are: 60-65 DNL - 0.205; 65-70 DNL - .376; 70-75 DNL - .644; 75+ DNL - 1.00. See the Technical Information Paper, "Measuring the Impact of Noise on People."

Source: Coffman Associates analysis.

SUMMARY

The Noise Compatibility Program for Williams Gateway Airport is summarized in **Table 6D** on the next page. The total cost of the program is estimated at $1,090,000. Most of the costs are related to the relocation of the ILS to Runway 30R and addition of a PAPI lighting system to Runway 12R-30L ($330,000). Other significant costs in include future updates of the Program ($450,000) and miscellaneous special studies that may be needed to assist with monitoring Program implementation ($210,000).

Seventy-three percent of the cost ($801,328) would be eligible for FAA funding through the reliever and noise set-asides of the Federal Airport Improvement Program. Approximately three and one-half percent ($39,336) would be eligible for funding assistance from the Arizona Department of Transportation. Nineteen percent of the cost ($210,000) would be paid through the airport operating budget. Approximately three and one-half percent ($33,336) would be covered through the airport capital budget.

The recommended noise abatement measures can reduce disturbing aircraft noise in the area. The land use planning measures also can help to limit the potential for future noise-sensitive development in the airport area. Continuing program management will provide for a timely response to conditions that may change over time and require a re-evaluation of future noise conditions. While the airport management must provide leadership and coordination of the entire program, success hinges on the cooperation of all involved parties.

TABLE 6D
Summary of Noise Compatibility Program, 2000-2020
Williams Gateway Airport

Measure	Cost to Airport or Government	Direct Cost to Users[1]	Timing	Lead Responsibility[2]	Potential Funding Sources
NOISE ABATEMENT ELEMENT					
1. Continue Runway 30L/C/R Calm Wind Runway Use Program.	Administrative	None	2000 and ongoing	Williams Gateway Airport Authority	Airport operating budget
2. Continue using Runway 12R-30L for Light Piston Aircraft and 12C/L-30C/R for Large Piston/Turbojet Aircraft Operations	Administrative	None	2000 and ongoing	Williams Gateway Airport Authority	Airport operating budget
3. Continue to Encourage use of NBAA Noise Abatement Procedures.	Administrative	None	2000 and ongoing	Williams Gateway Airport Authority	Airport operating budget
4. Continue to Promote use of AOPA's "Noise Awareness Steps."	Administrative	None	2000 and ongoing	Williams Gateway Airport Authority	Airport operating budget
5. Continue to Promote Departure Procedure for AANG 161st Air Refueling Wing KC-135 Aircraft.	Administrative	None	2000 - 2001	Williams Gateway Airport Authority	Airport operating budget
6. Relocate Instrument Landing System to Runway 30R.	$200,000	None	2000-2001	Williams Gateway Airport Authority	FAA (91.06%) ADOT (4.47%) Airport capital budget (4.47%)
7. Install PAPI-4 Lighting on Runway 12R/30L.	$130,000	None	2000-2001	Williams Gateway Airport Authority	FAA (91.06%) ADOT (4.47%) Airport capital budget (4.47%)
8. Develop Helicopter Reporting Points and Arrival and Departure Routes.	Administrative	None	2000-2001	Williams Gateway Airport Authority	Airport operating budget

TABLE 6D (Continued)
Summary of Noise Compatibility Program, 2000-2020
Williams Gateway Airport

Measure	Cost to Airport or Government	Direct Cost to Users[1]	Timing	Lead Responsibility[2]	Potential Funding Sources
NOISE ABATEMENT ELEMENT (Continued)					
9. Request Aircraft Using Runway 12R/30L Traffic Pattern to Remain East of the Southern Pacific Railroad.	Administrative	None	2000 and ongoing	Williams Gateway Airport Authority	Airport operating budget
10. Encourage Use of AC 91.53A Noise Abatement Departure Procedures By Air Carrier Jets.	Administrative	None	2000 and ongoing	Williams Gateway Airport Authority	Airport operating budget
11. Support AANG 161st Air Refueling Wing's efforts to re-engine KC-135 Aircraft.	Administrative	None	2000 - 2001	Williams Gateway Airport Authority	Airport operating budget
LAND USE MANAGEMENT ELEMENT					
1. Update General Plans to reflect the "Land Use Planning scenario" noise contours and Airport Planning Area as basis for Noise Compatibility Planning.	Administrative	None	2000 - 2001	Mesa, Gilbert, Queen Creek, Maricopa County, and Pinal County	Operating budgets
2. Retain compatible land use designations for undeveloped land within the APA.	Administrative	None	2000 - 2001	Mesa, Gilbert, Queen Creek, Maricopa County, and Pinal County	Operating budgets
3. Develop a new Mixed Use Category that does not allow Residential inside the 60 DNL Planning Scenario Contour and Immediately North of the Airport.	Administrative	None	2000 - 2001	Mesa and Gilbert	Operating budgets

TABLE 6D (Continued)
Summary of Noise Compatibility Program, 2000-2020
Williams Gateway Airport

Measure	Cost to Airport or Government	Direct Cost to Users[1]	Timing	Lead Responsibility[2]	Potential Funding Sources
LAND USE MANAGEMENT ELEMENT (Continued)					
4. Establish guidelines specifying noise compatibility criteria for the review of development projects within the Planning Scenario 60 DNL boundary.	Administrative	None	2000 - 2001	Mesa, Gilbert, Queen Creek, Maricopa County, and Pinal County	Operating budgets
5. Encourage rezoning areas within the Planning Scenario Contours and APA to Match the Compatible Land Use Designations in the General Plans.	Administrative	None	2000 - 2001	Mesa, Gilbert, Queen Creek, Maricopa County	Operating budgets
6. Amend Overflight Zoning Ordinance: Reflect Planning Scenario Noise Contours and APA; Require Fair Disclosure Covenants; and Amend Sound Insulation Standards.	Administrative	None	2000 - 2001	Mesa, Gilbert, Queen Creek, Maricopa County, and Pinal County	Operating budgets
7. Amend subdivision regulations to require recording of fair disclosure covenants, avigation noise and overflight easements in APA District.	Administrative	None	2000 - 2001	Mesa, Gilbert, Queen Creek, Maricopa County, and Pinal County	Operating budgets
8. Amend building code to add sound insulation standards supporting APA zoning requirements.	Administrative	None	2000 - 2001	Mesa, Gilbert, Queen Creek, Maricopa County, and Pinal County	Operating budgets

TABLE 6D (Continued)
Summary of Noise Compatibility Program, 2000-2020
Williams Gateway Airport

Measure	Cost to Airport or Government	Direct Cost to Users[1]	Timing	Lead Responsibility[2]	Potential Funding Sources
PROGRAM MANAGEMENT ELEMENT					
1. Maintain and update the system for receiving, analyzing, responding to noise complaints, and community outreach.	$50,000	None	2000-2001	Williams Gateway Airport Authority	FAA (91.06%) ADOT (4.47%) Airport Capital budget (4.47%)
2. Acquire noise monitors.	$50,000	None	2000-2001	Williams Gateway Airport Authority	FAA (91.06%) ADOT (4.47%) Airport Capital budget (4.47%)
3. Review Noise Compatibility Program implementation.	$210,000 (assumes average of $30,000 every three years)	None	Ongoing	Williams Gateway Airport Authority	Airport operating budget
4. Update Noise Exposure Maps and Noise Compatibility Program.	$450,000 (assumes $225,000 every 5 to 10 years)	None	Update every 5 to 10 years as needed	Williams Gateway Airport Authority	FAA (91.06%) ADOT (4.47%) Airport Capital budget (4.47%)

Summary of Noise Compatibility Program, 2000-2020
Williams Gateway Airport

Total Costs and Funding	FAA	$801,328	73.5%
	ADOT	$39,336	3.6%
	Airport capital budget	$39,336	3.6%
	Airport Operating budget	$210,000	19.3%
	Total	$1,090,000	100%

NOTES:
N.A. -- Not applicable.
[1] Airport users will be indirectly responsible for at least part of Airport's share of funding for the noise abatement and program management measures through lease payments and user fees.
[2] Where the Airport Authority does not have direct responsibility for implementing a given measure, the Authority will encourage the listed jurisdictions to implement measures as described.