

**BUCKEYE MUNICIPAL AIRPORT
Buckeye, Arizona**

**Part 150 Noise Compatibility Study
Planning Advisory Committee Members**

June 4, 2008

Enclosed is the revised Chapter Seven, Noise Compatibility Program for the 14 CFR Part 150 Noise Compatibility Study. A Public Hearing on the Noise Compatibility Program has been scheduled for Thursday, July 24, 2008, from 6:00 p.m. to 7:30 p.m. The Public Hearing will be held at the **Buckeye Chamber of Commerce**, which is located at **508 E. Monroe, Buckeye, Arizona**.

**PART 150 NOISE COMPATIBILITY STUDY
CHAPTER SEVEN – NOISE COMPATIBILITY PROGRAM**

- I have read the working papers and have no comments.*
- I have read the working papers and have the following comments. (Please add extra sheets if necessary.)*

Please mail this response sheet by August 15, 2008 to:

**COFFMAN ASSOCIATES, INC.
237 N.W. Blue Parkway, Suite 100
Lee's Summit, Missouri 64063**

Or Fax: 816-524-2575

Attn: Dave Fitz, dfitz@coffmanassociates.com

Name: _____

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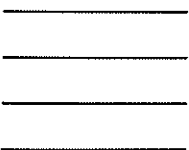
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WELCOME TO THE PLANNING ADVISORY COMMITTEE

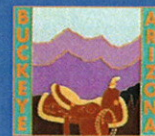
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EFFECTS OF NOISE EXPOSURE
MEASURING THE IMPACT OF NOISE ON PEOPLE
AIRCRAFT NOISE AND LAND USE COMPATIBILITY GUIDELINES



NOISE COMPATIBILITY PROGRAM

The Buckeye Municipal Airport 14 CFR Part 150 Noise Compatibility Program (NCP) includes measures to educate pilots and the public about aircraft noise issues, guide land use decisions, and implement and update the program in the future. Part 150 requires that the program apply to a time period of no less than five years into the future, although it may apply to a longer period if the sponsor so desires. This NCP has been based on a ten-year planning period.

As previously stated, this program has been developed with the use of federal funds. According to Federal Aviation Administration (FAA) policy, when an airport sponsor, such as the Town of Buckeye, accepts funds from an FAA-administered airport financial assistance program, it must agree to certain

obligations (or assurances). These obligations require the recipient to maintain and operate their facilities safely and efficiently and in accordance with specified conditions. With respect to airport land use compatibility, the grant agreement states that the airport will take appropriate action, to the extent reasonable, including the adoption of zoning laws, to restrict the use of land adjacent to or in the immediate vicinity of the airport to activities and purposes compatible with normal airport operations. In addition, if the project is for noise compatibility program implementation, it will not cause or permit any change in land use within its jurisdiction that will reduce its compatibility, with respect to the airport, of the noise compatibility program measures upon which Federal funds have been ex-



pending. For additional information regarding grant assurances, consult the document titled *Airport Assurances*, dated March 2005, available at www.faa.gov.

In compliance with the aforementioned assurances, the Town of Buckeye has worked with the affected parties to generate this Noise Compatibility Program. The NCP includes three elements intended to satisfy this objective.

- The **Noise Abatement Element** includes a public and pilot education program selected from the alternatives evaluated in Chapter Five, Noise Abatement Alternatives
- The **Land Use Management Element** includes measures to prevent noise impacts on existing and future land use development near the airport. These measures were selected from the alternatives screened in Chapter Six, Land Use Alternatives.
- The **Program Management Element** includes procedures for implementing the recommended noise abatement and land use measures, overseeing the progress of the program and, updating the Noise Compatibility Program.

Each measure of the NCP is summarized in **Table 7D** at the end of this chapter. Included in the table is a brief description of each recommended measure, the entity responsible for

implementing the measure, the estimated cost of the measure, the proposed timing of measure implementation, and potential sources of funding.

NOISE ABATEMENT ELEMENT

1. Develop a pilot and community outreach program.

Description. The Town of Buckeye should establish a pilot and community outreach program to educate airport users and existing and future residents of the community about the noise abatement efforts at the airport. The pilot education component of the plan could include monthly meetings with airport staff to discuss noise-related issues and to encourage the use of good neighbor policies such as Aircraft Owners and Pilots Association (AOPA) noise awareness steps. The community education component could include airport open house events to explain and promote the airport's role in the community and to provide information to the public about the airport's noise abatement efforts.

This program will aid the Town of Buckeye in understanding the public's perception and sensitivity to airport noise issues and help to minimize conflicts between the public and the airport.

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

Costs and Funding. The Town of Buckeye will incur administrative costs associated with implementing these programs.

Timing. Implementation of these programs should occur following the Town's adoption of the NCP.

LAND USE MANAGEMENT ELEMENT

1. Develop Project Review Guidelines for development proposals within the Public Airport Disclosure Area.

Description. A checklist for discretionary project review that relates to airport land use compatibility can be useful for governing bodies to make recommendations and decisions regarding development near the airport. A checklist addressing the following criteria could be adopted by the Town of Buckeye and Maricopa County to evaluate projects within the Town of Buckeye Public Airport Disclosure Area, as illustrated on **Exhibit 7A**:

- Advise airport management of development proposals that include noise-sensitive uses within the Public Airport Disclosure Map.
- Require issuance of aviation easements and fair disclosure notices in the appropriate zones.
- Determine the sensitivity of the subject land use to aircraft noise based on their location within the overlay zones or noise contours.

- Locate noise-sensitive public facilities outside Zone One of the proposed noise compatibility overlay zone noise contour and away from aircraft approach paths whenever possible.

Implementation Actions. None, other than those outlined above, are required.

Costs and Funding. The Town and Maricopa County would incur administrative costs associated with adopting and implementing the checklist.

Timing. The Town of Buckeye should incorporate the airport compatibility checklist into the development review process following the adoption of the NCP. The Town should also request Maricopa County to incorporate a similar compatibility checklist into their development review process.

2. The Town of Buckeye should discourage re-zoning parcels near the airport to allow more than one dwelling unit per acre.

Description. For those areas between the existing airport boundary and Zone One of the proposed noise compatibility overlay zone, the Town of Buckeye should discourage re-zoning parcels to allow more than one dwelling unit per acre. This measure will help to ensure that only low-density development will occur near the airport. The Town of Buckeye should also encourage Maricopa County to discourage similar re-zonings in the unincorporated areas near the airport.

Implementation Actions. None, other than those outlined above, are required.

Costs and Funding. The Town and Maricopa County would incur administrative costs associated with discouraging re-zoning these parcels.

Timing. This is an ongoing measure.

PROGRAM MANAGEMENT ELEMENT

The success of the Noise Compatibility Program relies on continuous effort of monitoring implementation and identification of new or unanticipated problems and changing conditions. The following program management measures are recommended for Buckeye Municipal Airport.

1. Update Noise Exposure Maps and Noise Compatibility Program.

Description. Airport management should review the *Noise Compatibility Program* 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 seven to ten years.

An update may be needed sooner, however, if major changes in the noise conditions or surrounding development occur. Proposed changes to the NCP should be reviewed by the FAA

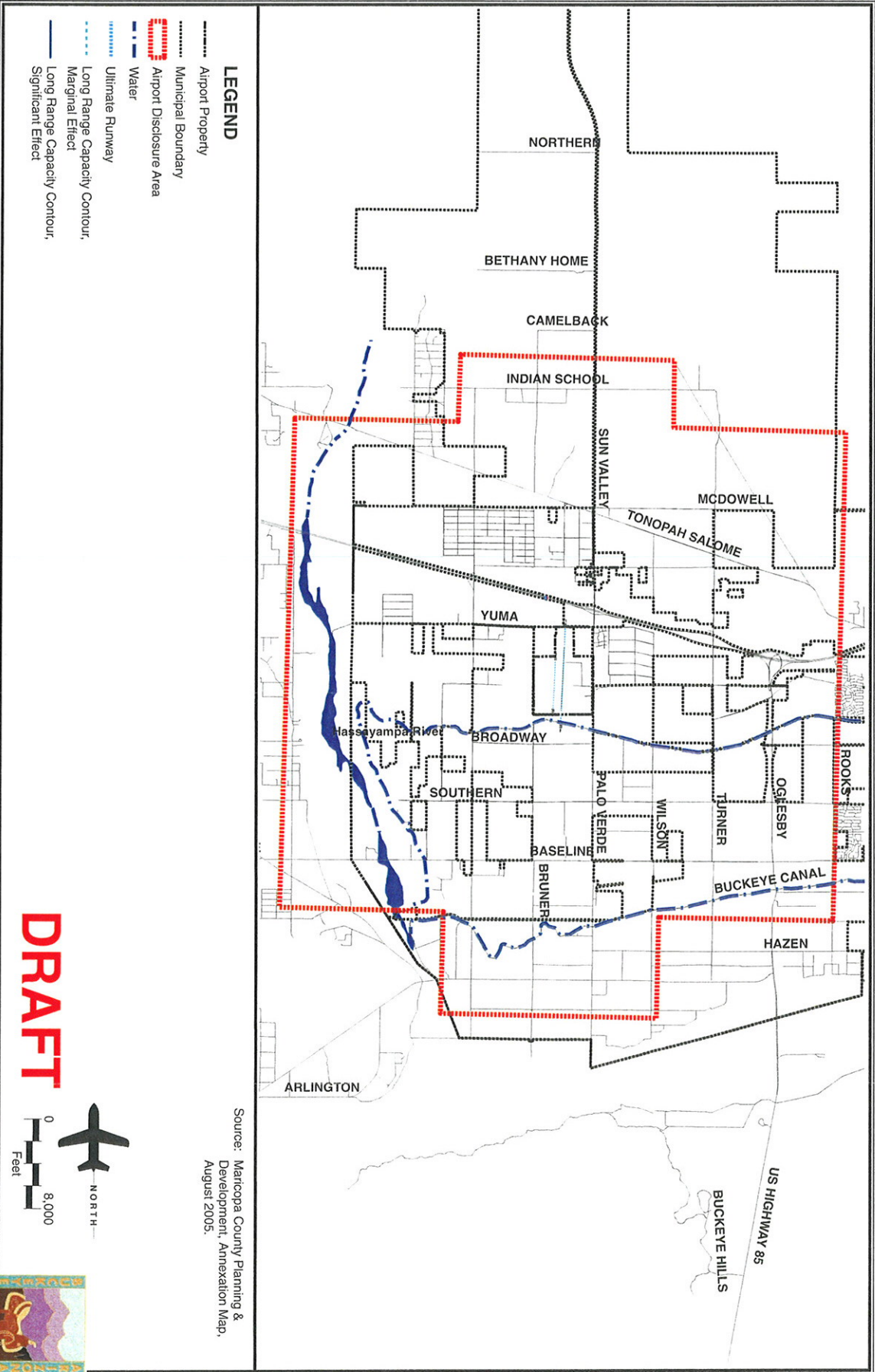
and all affected aircraft operators and local agencies. Proposed changes should be submitted to the FAA for approval after local consultation and a public hearing in compliance with Part 150.

Even if the NCP does not need to be updated, it may become necessary to update the *Noise Exposure Maps (NEM)*. Part 150 requires the NEM 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 a non-compatible area that had formerly been compatible.

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

Costs and Funding. The cost of a complete update of the Noise Compatibility Program is estimated at \$250,000. This would be eligible for up to 95 percent funding from the FAA and 2.5 percent from the Arizona Department of Transportation (ADOT). The remaining portion would be the responsibility of the Town of Buckeye. This would come from the airport department operating budget.

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



2. Oversee implementation of the Part 150 Noise Compatibility Program

Description. Airport management must oversee implementation of the Noise Compatibility Program. This will involve periodically checking with airport users, the public and Town of Buckeye officials to ensure that components of the plan are being effectively implemented.

Implementation Actions. No specific implementation actions are required other than those discussed in the description of this measure.

Timing. This is an ongoing measure.

LOCAL LAND USE MEASURES NOT SUBMITTED UNDER 14 CFR PART 150

The Town of Buckeye is one of the fastest growing communities in the Phoenix metropolitan area and the demand for housing is at an all time high. Rural areas, such as the vicinity of Buckeye Municipal Airport, can be very attractive to residential developers because of access to utilities, large tracts of land available, and land is generally cheaper. However, as the Town of Buckeye grows, so does the demand for aviation services. Airports and residential land uses generally do not co-exist very well next to each other. Noise complaints and pressure to restrict or close the airport occur as aviation activity increases and more homes are built.

Mitigating noise impacts on large tracts of land is very costly and does not reduce noise levels when homeowners are outside in their backyards. A better alternative is to encourage noise-compatible (agriculture, commercial/industrial) development adjacent to the airport instead of noise-sensitive development. The use of land use tools such as overlay zoning are ideal for creating a buffer of noise-compatible development between the airport and noise-sensitive development.

FAA has recently interpreted in 14 CFR Part 150 that all measures must be based upon the current year or short term (must be dated at least five years after date of submission) noise exposure map contours. Measures based upon long range noise exposure contours will no longer be approved for the purposes of 14 CFR Part 150. To plan the Buckeye community growth based upon a short term noise exposure contour would allow development to occur up to the current airport boundary. This is clearly not a viable option given the growth seen in the community, the FAA grant assurances the Town has signed, and the aviation activity forecasted in the recent Airport Master Plan for Buckeye Municipal Airport.

Local land use planning decisions are at the sole discretion of the local jurisdictions and are not controlled by the FAA or any other federal agency. Therefore, the following recommendations for land use planning based upon the long range contours are included in the Buckeye Municipal Airport Noise Compatibility Program but are not submitted under 14 CFR Part 150.

1. Adopt an airport land use compatibility threshold for noise-sensitive use as part of the Town of Buckeye's General Plan update.

Description. In addition to the existing land use compatibility recommendations used by the Town of Buckeye, the Town should consider including language in the General Plan Update that establishes a noise compatibility threshold of 55 DNL for noise-sensitive land uses. This would support the implementation of the overlay zone proposed as part of this plan. The Town of Buckeye should also encourage Maricopa County to adopt a similar policy for those unincorporated areas near the airport.

Implementation Actions. A noise compatibility threshold, based on the noise exposure contours created as part of this study, should be included as part of the ongoing General Plan update.

Costs and Funding. The Town of Buckeye will incur administrative costs associated with revising or amending the General Plan.

Timing. Amendments and revisions to the General Plan must follow the Town and County's established procedures. Amendments to the General Plan are projected for 2006.

2. Adopt Airport Overlay Zone to regulate land uses within the Public Airport Disclosure Area.

Description. The Town of Buckeye should adopt an overlay zone to en-

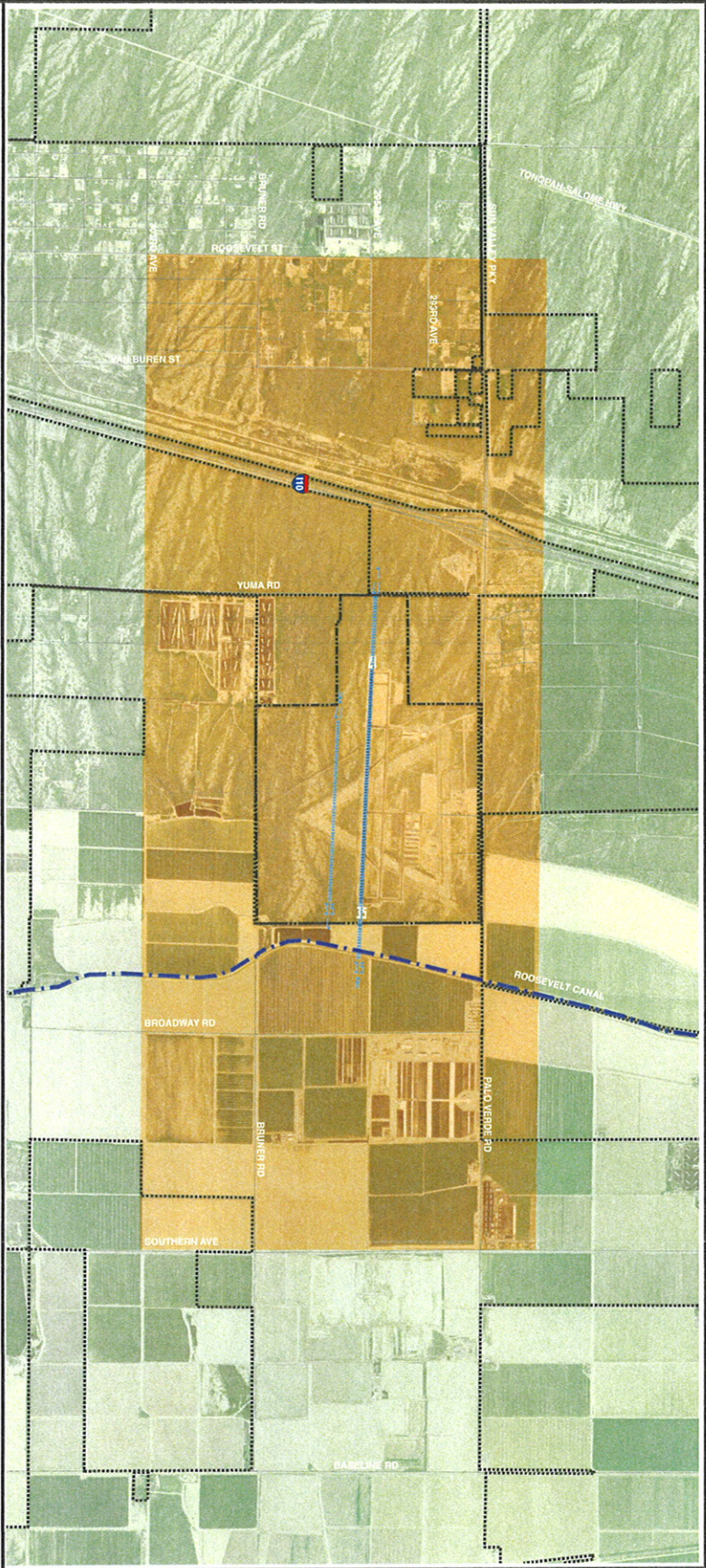
sure compatible land development near the airport.

The overlay zone would be comprised of two geographic areas, as illustrated on **Exhibit 7B**, each with corresponding criteria as outlined in **Table 7A**.

Within Zone One, noise-sensitive development would be prohibited. This would create a compatible buffer around the airport and allow for airport-related development near the airport. Additionally, it would prevent future development of noise-sensitive land uses in the airport environs. The existing land uses within Zone One would be allowed to remain as non-conforming uses, however, property owners seeking approvals for additions and modifications to existing noise-sensitive land uses in Zone One would be required to sign an avigation easement and fair disclosure notice before a building permit is issued. New infill residential development within established residential areas would require the issuance of avigation easement and fair disclosure notice. New noise-compatible development within this area would require the issuance of fair disclosure notice.

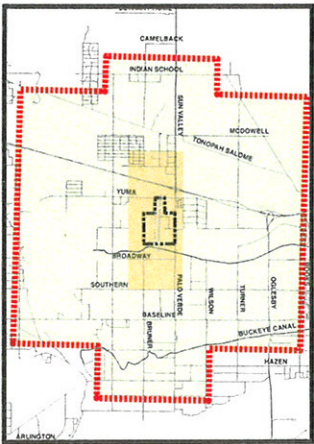
Zone Two would require that all owners of new noise-sensitive development release an avigation easement and fair disclosure notice. New noise-compatible development within this area would require the issuance of fair disclosure notice.

Additionally, the residential categories within this zone would be subject to building code standards that would limit the intrusion of noise within the



Source: Aerial Photography, March 2005.
 Colfman Associates Analysis.

- LEGEND**
- Airport Property
 - Municipal Boundary
 - Ultimate Runway
 - Airport Disclosure Area
 - Zone 1
 - Zone 2
 - Water



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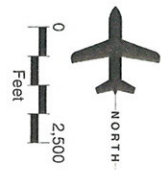


Exhibit 7B
 OVERLAY ZONE

structure. Existing structures would only be subject to these regulations in the event of a major remodeling project.

Implementation Actions. The Town of Buckeye should adopt the zones as outlined on **Exhibit 7B** and the asso-

ciated compatibility criteria presented in **Table 7A** as the airport compatibility overlay zone. The Town of Buckeye should also encourage Maricopa County to adopt a similar overlay zone for the unincorporated areas near Buckeye Municipal Airport.

TABLE 7A Airport Environs Noise District Overlay Matrix Buckeye Municipal Airport		
	Uses Allowed Within Each Zone	
	Zone 1^A	Zone 2^B
RESIDENTIAL		
Single-family, duplex, multi-family, manufactured housing	N	Y[1,2,3]
Recreational vehicle parks	N	Y[1,2,3]
Other residential	N	Y[1,2,3]
PUBLIC FACILITIES		
Education facilities	N	Y[1,2,3]
Religious facilities, libraries, museums, galleries, clubs and lodges	N	Y[1,2,3]
Outdoor sport events, entertainment and public assembly, except amphitheaters	N	Y[1,2]
Indoor recreation, amusements, athletic clubs, gyms and spectator events	N	Y[1,2,3]
Community and neighborhood parks	N	Y
Extensive natural recreational areas	N	Y
Outdoor recreation: tennis, golf courses, riding trails, etc.	N	Y
Cemeteries	N	Y
COMMERCIAL		
Hotels/motels	N	Y[1,2,3]
Hospitals and other health care services	N	Y[1,2,3]
Services: finance, real estate, insurance, professional and government offices	Y[1,2,3]	Y[2]
Retail sales: building materials, farm equipment, automotive, marine, mobile homes, recreational vehicles and accessories	Y[1,2,3]	Y[2]
Restaurants, eating and drinking establishments	Y[1,2,3]	Y[2]
Retail sales: general merchandise, food, drugs, apparel, etc.	Y[1,2,3]	Y[2]
Personal services: barber and beauty shops, laundry and dry cleaning, etc.	Y[1,2,3]	Y[2]
Automobile service stations	Y[1,2]	Y[2]
Repair services	Y[1,2]	Y[2]
INDUSTRIAL		
Processing of food, wood and paper products; printing and publishing, warehouses, wholesale and storage activities	Y[1,2]	Y[2]
Refining, manufacturing and storage of chemicals, petroleum and related products; manufacturing and assembly of electronic components, etc.	Y[1,2]	Y[2] Y[2]
Manufacturing of stone, clay, glass, leather, gravel and metal products; construction and salvage yards; natural resource extraction and processing; agricultural; mills and gins	Y[1,2]	Y[2]
AGRICULTURE		
Animal husbandry; livestock farming, breeding and feeding; plant nurseries (excluding retail sales)	Y[1,2]	Y[2]
Farming (except livestock)	Y[1,2]	Y[2]

TABLE 7A (Continued)
Airport Environs Noise District Overlay Matrix
Buckeye Municipal Airport

	Uses Allowed Within Each Zone	
	Zone 1 ^A	Zone 2 ^B
MISCELLANEOUS		
Transportation terminals, utility and communication facilities	Y[1,2]	Y[2]
Vehicle parking	Y	Y
Signs	Y	Y

KEY TO TABLE 6A

Y Land use is compatible and is permitted.

N Land use is incompatible and is not permitted.

1 Development requires an aviation easement be issued as a condition of, and prior to, the authorization for development.

2 A fair disclosure agreement and covenant shall be recorded as a condition of development approval for all permitted uses in the Airport Environs Noise District. All new plats recorded shall be inscribed with the following: *"These properties, due to their proximity to Buckeye Municipal Airport, are likely to experience aircraft overflights, which could generate noise levels that may be of concern to some individuals."*

3 Development is required to incorporate acoustical features as a condition of building permit issuance. Acoustical features include wall and attic insulation, solid core or metal-clad door equipped with a wood or metal storm door, storm or multiple-glazed windows, and mechanical ventilation to provide adequate environmental comfort with all windows and doors closed. Through-the-door mailboxes, skylights, or other direct openings to the outside are prohibited.

A – Zone One is based on the squared-off long range 55 DNL noise contour.

B – Zone Two is based on the Town of Buckeye's Public Airport Disclosure Map

Note: Where property is undeveloped, only such portion of it as is actually within the overlay zone lines shall be considered at or within that zone. However, at such time as said property shall be subdivided or platted, any platted buildable lots intersected by a zone line shall be deemed to be wholly within the most restrictive zone.

Costs and Funding. The Town of Buckeye and Maricopa County would incur administrative costs to implement this measure. These funds would come from each entity's operating budget.

Timing. Amendments to the zoning ordinance should be made after the Town's approval of the Noise Compatibility Plan.

RESIDUAL NOISE IMPACTS

The recommended noise abatement and land use management programs will reduce the cumulative aircraft noise exposure impact now and in the future. A review of the noise conditions resulting from the Noise Compatibility Plan is presented below.

NOISE-SENSITIVE LAND USES

Table 7B provides a comparison between the baseline noise conditions and the condition upon implementing the proposed Noise Compatibility Plan and local land use measures. For the 2006 baseline condition, illustrated in **Exhibit 7C**, there are no dwelling units within any of the noise contours. In the projected 2011 noise contours,

displayed on **Exhibit 7D**, there are a total of 135 dwelling units anticipated to be exposed to noise between 55 and 65 DNL. The long range scenario, depicted on **Exhibit 7E**, includes a total of 3,270 dwelling units according to development potential for those areas within the long range contours, including 28 between 65 and 70 DNL and 11 above 70 DNL.

	Baseline Noise (Without Plan)			With Noise Compatibility Plan	
	2006	2011 ¹	Long Range ¹	2011 ²	Long Range ²
55-60 DNL	0	129	3,085	0	7
60-65 DNL	0	6	146	0	0
65-70 DNL	0	0	28	0	0
70+	0	0	11	0	0
Total	0	135	3,270	0	7

¹Totals include noise-sensitive growth risk areas.
²Assumes noise-sensitive growth risk areas will be developed with land uses that are compatible with aircraft noise, if the plan is implemented.
Source: Coffman Associates analysis.

Full implementation of the plan, including the local land use measures, would substantially reduce these potential impacts. In the 2011 condition, there would be zero dwelling units within the noise contours, and seven would be located between the long range 55 and 60 DNL noise contours.

POPULATION

Table 7C presents the population in the airport environs in the baseline condition and the anticipated totals following implementation of the Noise Compatibility Plan and local land use

measures. In the existing condition, there are no people residing within any of the noise contours. For the 2011 forecast contours, a total of 409 people could be expected to be exposed to noise levels between 55 and 65 DNL. This represents the conditions resulting if all of the growth-risk areas were fully developed. In the long range scenario, a total of 9,908 people could reside within the noise exposure contours, including 85 between 65 and 70 DNL and 33 above 70 DNL. If the plan is implemented, the total numbers would drop to zero in 2011 and 21 in the long range scenario.

TABLE 7C
Population Exposed To Noise
With Noise Compatibility Plan Versus Baseline Conditions

	Baseline Noise (Without Plan)			With Noise Compatibility Plan	
	2006	2011 ¹	Long Range ¹	2011 ²	Long Range ²
55-60 DNL	0	391	9,348	0	21
60-65 DNL	0	18	442	0	0
65-70 DNL	0	0	85	0	0
70+ DNL	0	0	33	0	0
Total	0	409	9,908	0	21

¹Totals include noise-sensitive growth risk areas.

²Assumes noise-sensitive growth risk areas will be developed with land uses that are compatible with aircraft noise, if the plan is implemented.

Source: Coffinan Associates analysis.

SUMMARY

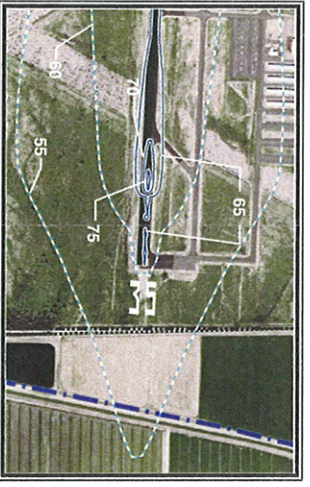
The Noise Compatibility Program for Buckeye Municipal Airport is summarized in **Table 7D**. The total cost of the program is estimated at \$250,000, which is the cost of updating the plan in the future.

Most of the cost (\$237,500) would be eligible for FAA funding through the noise set-aside portion of the Airport Improvement Program. A grant for 2.5 percent (\$6,250) of the cost of the project could be available from the Arizona Department of Transportation. The remaining 2.5 percent would be the responsibility of the Town of Buckeye.



- LEGEND**
- Airport Property
 - Municipal Boundary
 - 2006 Contour, Marginal Effect
 - 2006 Contour, Significant Effect
 - Water
 - Residential
 - Noise-Sensitive Institutions
 - Place of Worship
 - Community Center

Runway 35 End



Source: Aerial Photography, March 2005.
Coffman Associates Analysis.

DRAFT

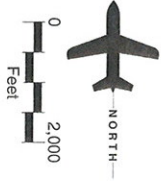
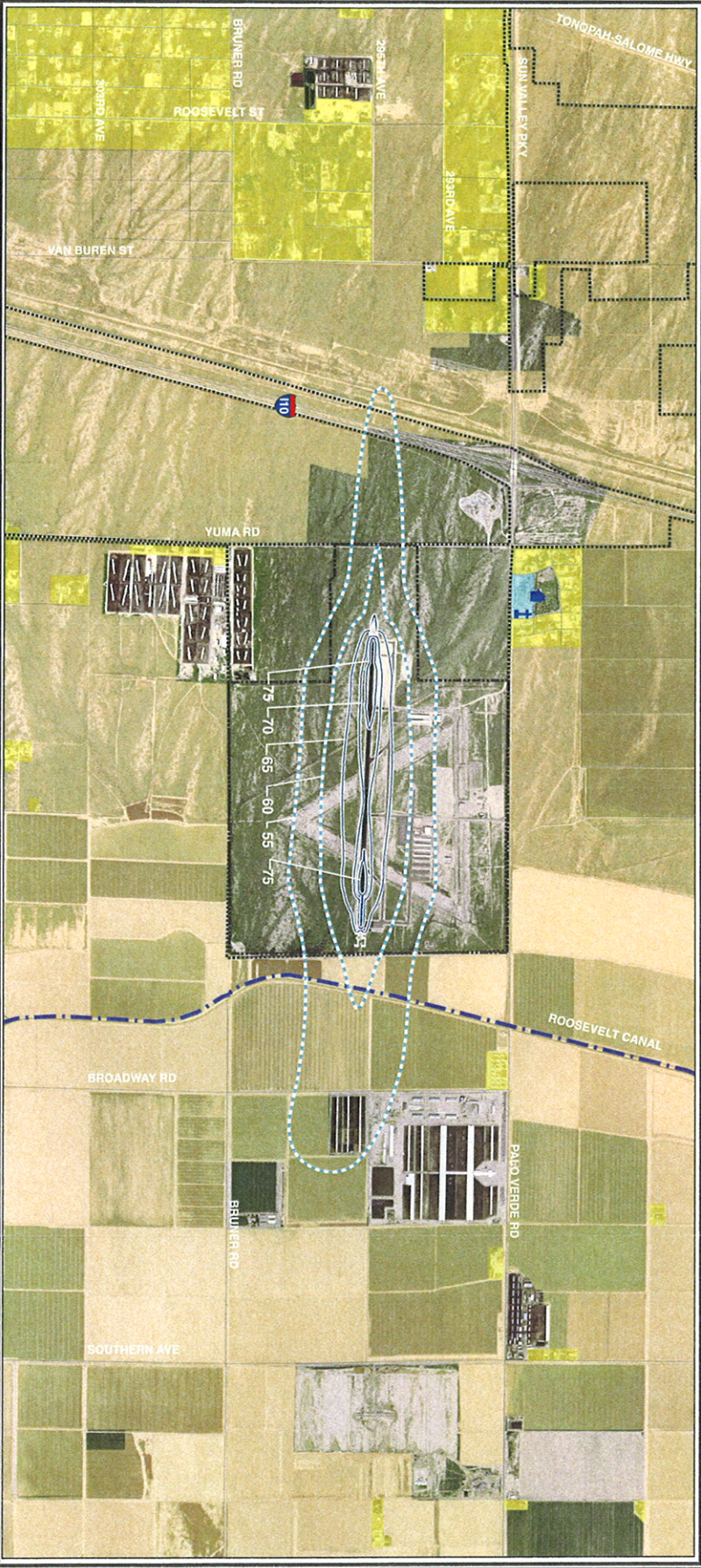


Exhibit 7C
2006 NOISE EXPOSURE CONTOURS
WITH LAND USE





LEGEND

- Airport Property
- Municipal Boundary
- 2011 Contour, Marginal Effect
- 2011 Contour, Significant Effect
- Water
- Residential
- Noise-Sensitive Institutions
- ✈ Place of Worship
- ☛ Community Center
- ☐ Growth Risk

Source: Aerial Photography, March 2005.
Coltman Associates Analysis.

DRAFT

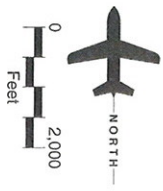
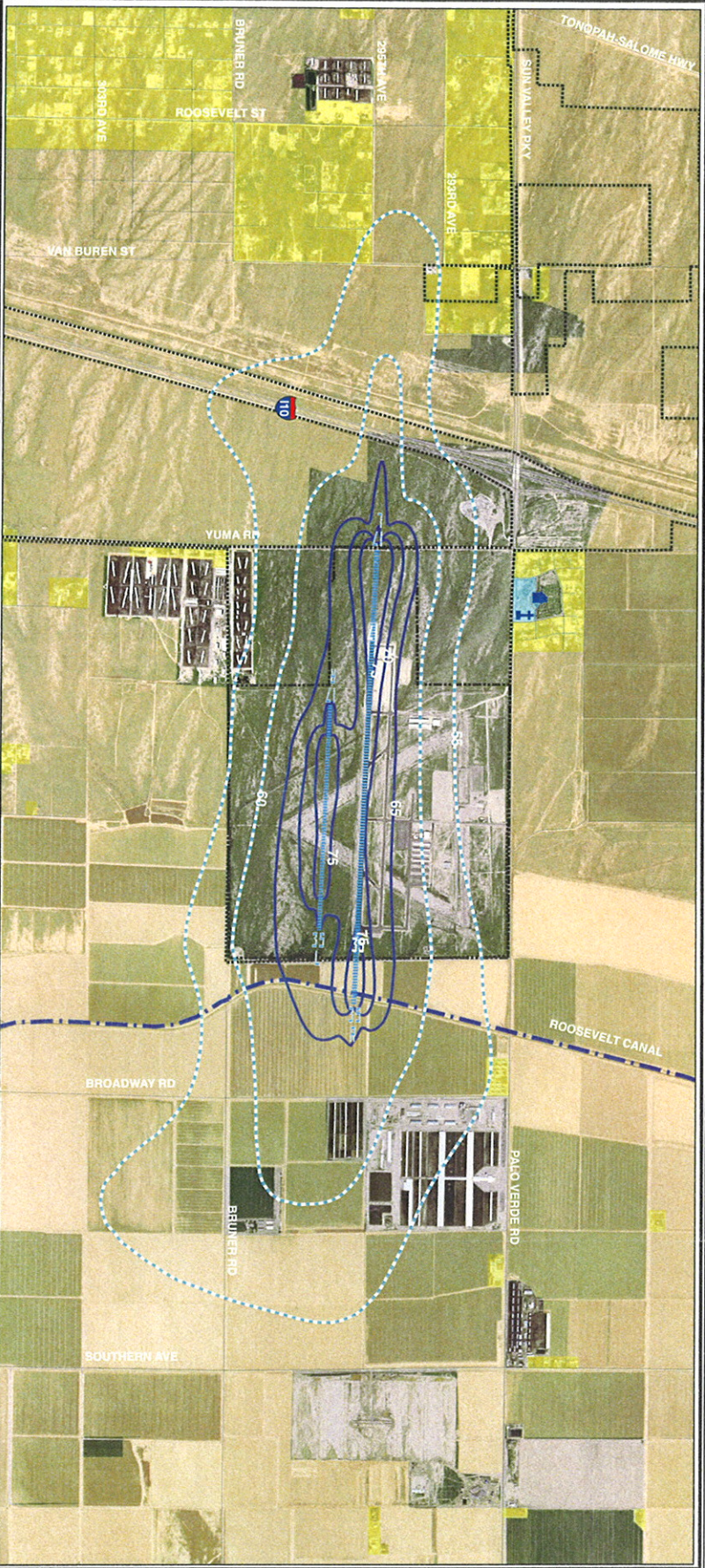


Exhibit 7D
2011 NOISE EXPOSURE CONTOURS
WITH LAND USE





Source: Aerial Photography, March 2005.
Coffman Associates Analysis.

- LEGEND**
- Airport Property
 - Municipal Boundary
 - Long Range Capacity Contour, Marginal Effect
 - Long Range Capacity Contour, Significant Effect
 - Ultimate Runway
 - Water
 - Residential
 - Noise-Sensitive Institutions
 - ⊥ Place of Worship
 - ⊥ Community Center
 - Growth Risk

DRAFT

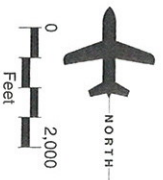


Exhibit 7E
LONG RANGE NOISE EXPOSURE CONTOURS
WITH LAND USE

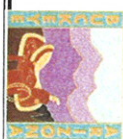


TABLE 7D
Summary of Noise Compatibility Program, 2005-2015
Buckeye Municipal Airport

Measure	Cost to Airport or Government	Timing	Lead Responsibility	Potential Funding Source
<i>NOISE ABATEMENT ELEMENT</i>				
1. Develop a Pilot and Public Education Program.	Administrative	Following NCP adoption	Town of Buckeye, Maricopa County	Operating Budget
<i>LAND USE MANAGEMENT ELEMENT</i>				
1. Develop Project Review Guidelines for proposals within the Public Airport Disclosure Area.	Administrative	Following NCP adoption	Town of Buckeye, Maricopa County	Operating Budget
2. The Town of Buckeye should discourage re-zoning parcels near the airport to allow more than one dwelling unit per acre.	Administrative	Following NCP adoption	Town of Buckeye, Maricopa County	Operating Budget
<i>PROGRAM MANAGEMENT ELEMENT</i>				
1. Update Noise Exposure Maps and Noise Compatibility Program.	\$250,000	2016	Town of Buckeye	FAA, Town of Buckeye Capital Budget
2. Monitor implementation of the Part 150 Noise Compatibility Program.	Administrative	Ongoing	Town of Buckeye	Operating Budget
Total Cost	Funding Source		Amount	Percent
	FAA		\$237,500	95%
	Arizona Department of Transportation		\$6,250	2.5
	Town of Buckeye Capital Budget		\$6,250	2.5%
Total		\$250,000	100%	

