



## Implementation

The previous chapters have presented a plan for development of the airfield and terminal area at Willows-Glenn County Airport. This chapter addresses how this plan may be implemented. The first section of this chapter presents and summarizes the assumptions that underlie the recommendations contained in this plan. Next, the Capital Improvement Program is presented and funding sources available for its implementation are presented. In the latter part of this chapter, potential environmental issues, particularly noise, will be addressed.



## Plan Assumptions

There are a number of explicit and implicit assumptions that shaped the forecasts and designs presented in this plan. Future interpretation of this plan should consider these assumptions. If future conditions do not match these assumptions, the plan's recommendations should be reassessed in light of the new circumstances. The key plan assumptions are listed in the sections that follow.

## Community Context

- The adjacent industrial park will continue to develop with uses similar to those that have developed to date.
- Residential uses will not develop in the immediate airport environs.
- Closure of nearby airports will not occur.
- Appropriate land acquisition and land use decisions will be made to enable all airport operations to continue.
- Glenn County and adjacent areas will continue to support major agricultural operations.



## Airfield

- No further security mandates will be required from the Transportation Security Administration that will necessitate significant physical changes.
- Agricultural aerial application operations will continue to dominate aircraft operations.





Citation Sovereign

### Transient Aircraft Use

- Transient operations by turboprops and jets will increase due to expansion of cultural events and links with new businesses in the area.
- Corporate jets, similar to the Cessna Citation Sovereign, will be regular users of the airport.<sup>1</sup>
- Use by helicopters will continue to be largely limited operations by the California Highway Patrol with only occasional use by others.

### Implementation

- Funding from the FAA will continue through the planning period.
- Airport development will be carried out on a phased basis and to the extent that required funding is available in a timely manner.
- Rental rates and other fees will be regularly adjusted to maintain consistency with regional prices.
- County policy will be to ensure that the airport is financially self-supporting to the maximum extent practical.



### Capital Improvement Program

The proposed 20-year Capital Improvement Program (CIP) for Willows-Glenn County Airport is set forth in Table 5A. The listed projects include both proposed improvements, as described in previous chapters, and recommended major maintenance work for the airfield and building area pavement. The timing of some of these projects is dependent upon demand and may not occur during the 20-year planning period. Figure 5A shows the locations of the proposed projects listed in Table 5A. The total investment would be approximately \$8.20 Million. FAA matching funds would total about \$7.53 Million. If full state funding participation occurs, Glenn County's local share would be \$478,189. With no state funding participation, this amount would be \$666,552.

The project costs listed in the Capital Improvement Program represent order-of-magnitude estimates in 2007-dollar values and include design engineering and other related costs and contingencies. The estimates are intended only for preliminary planning and programming purposes. More detailed engineering design and, in some cases, market analyses should be performed before proceeding with the projects. Also, those capital expenditures that are most appropriately constructed with private funds (e.g., hangars) have been excluded from the list of proposed capital projects identified in this *Master Plan*. Additionally, as costs for any potential environmental mitigation are not known, they are not included in the CIP.

<sup>1</sup> The Cessna 680 Citation Sovereign is a mid-sized business jet accommodating 8-12

## Capital Funding Sources

There are a variety of resources from which funding and financing for general aviation airport facilities and improvements can be obtained. These resources include federal grants, bonds, airport sponsor self-funding, and private investment.

### Federal Aviation Administration Grants

Currently, the most common source of federal aid for airport facilities is the Airport Improvement Program (AIP) administered by the FAA. Re-authorized in 2004, the current AIP is the latest evolution of a funding program originally authorized by Congress in 1946 as the Federal Aid to Airports Program (FAAP). The current authorization was set to expire at the end of the 2007 fiscal year (September 30). Indications are that the program will be refunded with only minor changes in funding level. However, it appears likely that entitlement funds for general aviation airports will be tied to the number of based aircraft. This would likely reduce the amount of these funds for Willows-Glenn County Airport.

The AIP is based upon a user trust fund concept, allocating aviation-generated tax revenues for specified airport facilities on a local matching share basis. The program currently provides for 95% federal participation and 5% local participation on eligible airport projects in California.

Under the AIP, there are both *entitlement* and *discretionary* grants. There are two types of entitlement grants in the current program. Under the current program, general aviation airports can qualify for up to \$150,000 in an annual entitlement. Discretionary grants are awarded on a competitive basis, based upon need. As a general aviation airport, Willows-Glenn County Airport currently qualifies for the \$150,000 annual entitlement and discretionary funding, if available.

### State Aviation Grants

The State of California operates a grant program similar in concept to the Federal AIP program. All grants are awarded on a competitive basis. Grants are judged using a numerical weighting format. As with the Federal program, priority is given to projects that enhance safety. On July 20, 2006, the California Transportation Commission set the rate for state matching grants at 2.5% (formerly 5%) of FAA-eligible project costs. Once an airport receives an FAA grant, the airport can then apply to the State for matching funds (for up to 2.375% of total project cost). With state funding participation the local share of an AIP grant is only 2.625%.

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*passengers, and has a MGTOW of 30,000 pounds.*

		Estimated Costs (in 2007 dollars)			
		Total	Federal	State	County
<b>Short-Range Projects (within 5 years)</b>					
1.	Hangar Taxilanes (Phase I)	\$410,000	\$389,500	\$9,738	\$10,762
2.	Building Area Security Fencing (at truck parking area)	\$70,000	\$66,500	\$1,663	\$1,838
3.	Aircraft Wash Rack/Waste Oil Collector	\$110,000	\$104,500	\$2,613	\$2,888
4.	Install REIL Runway 34	\$15,000	\$14,250	\$356	\$394
5.	Install PAPI Runway 16	\$20,000	\$19,000	\$475	\$525
6.	Install Lighted Wind Cone	\$15,000	\$14,250	\$356	\$394
<b>Subtotal</b>		<b>\$640,000</b>	<b>\$608,000</b>	<b>\$15,201</b>	<b>\$16,801</b>
<b>Mid-Range Projects (approximately 6 to 10 years)</b>					
7.	Design & Construct Agricultural Aircraft Apron with Access Road	\$836,000	\$794,200	\$19,855	\$21,945
8.	Reconstruct East Side Apron with V Gutter (Phase II)	\$320,000	\$304,000	\$7,600	\$8,400
<b>Subtotal</b>		<b>\$1,156,000</b>	<b>\$1,098,200</b>	<b>\$27,455</b>	<b>\$30,345</b>
<b>Long-Range Projects (approximately 11 to 20 years)</b>					
9.	Hangar Taxilanes (Phase II)	\$190,000	\$180,500	\$4,512	\$4,988
10.	Design & Construct Partial Parallel Taxiway E for Runway 13-31	\$1,020,000	\$969,000	\$24,225	\$26,775
11.	Design & Construct Completion of Parallel Taxiway E	\$500,000	\$475,000	\$11,875	\$13,125
12.	Expand North Apron	\$320,000	\$304,000	\$7,600	\$8,400
13.	Fee Simple Land Acquisition in Approach to Runway 34 (17 acres)	\$700,000	\$665,000	\$16,625	\$18,375
14.	Fee Simple Land Acquisition in Approach to Runway 16 (10 acres)	\$420,000	\$399,000	\$9,975	\$11,025
15.	Move Canal & Relocate Farm Road for ARC B-II RSA Runway 34	\$220,000	\$209,000	\$5,225	\$5,775
16.	Avigation Easement in Approach to Runway 31	\$45,000	\$42,750	\$1,069	\$1,181
<b>Subtotal</b>		<b>\$3,415,000</b>	<b>\$3,244,250</b>	<b>\$81,106</b>	<b>\$89,644</b>
<b>Aviation and Economic Development Projects</b>					
17.	Construct Airport Access Road & replace Beacon (Phase I)	\$540,000	\$513,000	\$12,825	\$14,175
18.	Construct Airport Access Road & Utilities (Phase II) <sup>1</sup>	\$540,000	\$256,500	\$6,413	\$277,087
19.	Construct Airport Access Road & Utilities (Phase III)	\$540,000	\$513,000	\$12,825	\$14,175
<b>Subtotal</b>		<b>\$1,620,000</b>	<b>\$1,282,500</b>	<b>\$32,063</b>	<b>\$305,437</b>
<b>Project Timing Uncertain</b>					
20.	Relocate Parallel Taxiway for Runway 16-34 <sup>2</sup>	\$1,370,000	\$1,301,500	\$32,538	\$35,962
<b>Subtotal</b>		<b>\$1,370,000</b>	<b>\$1,301,500</b>	<b>\$32,538</b>	<b>\$35,962</b>
<b>TOTAL</b>		<b>\$8,201,000</b>	<b>\$7,534,450</b>	<b>\$188,363</b>	<b>\$478,189</b>

<sup>1</sup> Assumes that only 50% of Phase II project eligible for FAA/state funding. Other funding sources may be applicable. Actual participation rate will be contingent of final design.

<sup>2</sup> When annual operations by large aircraft exceed 500.

Source: Mead & Hunt, Inc. (January 2008)

Table 5A

**Capital Improvement Program**  
Willows-Glenn County Airport

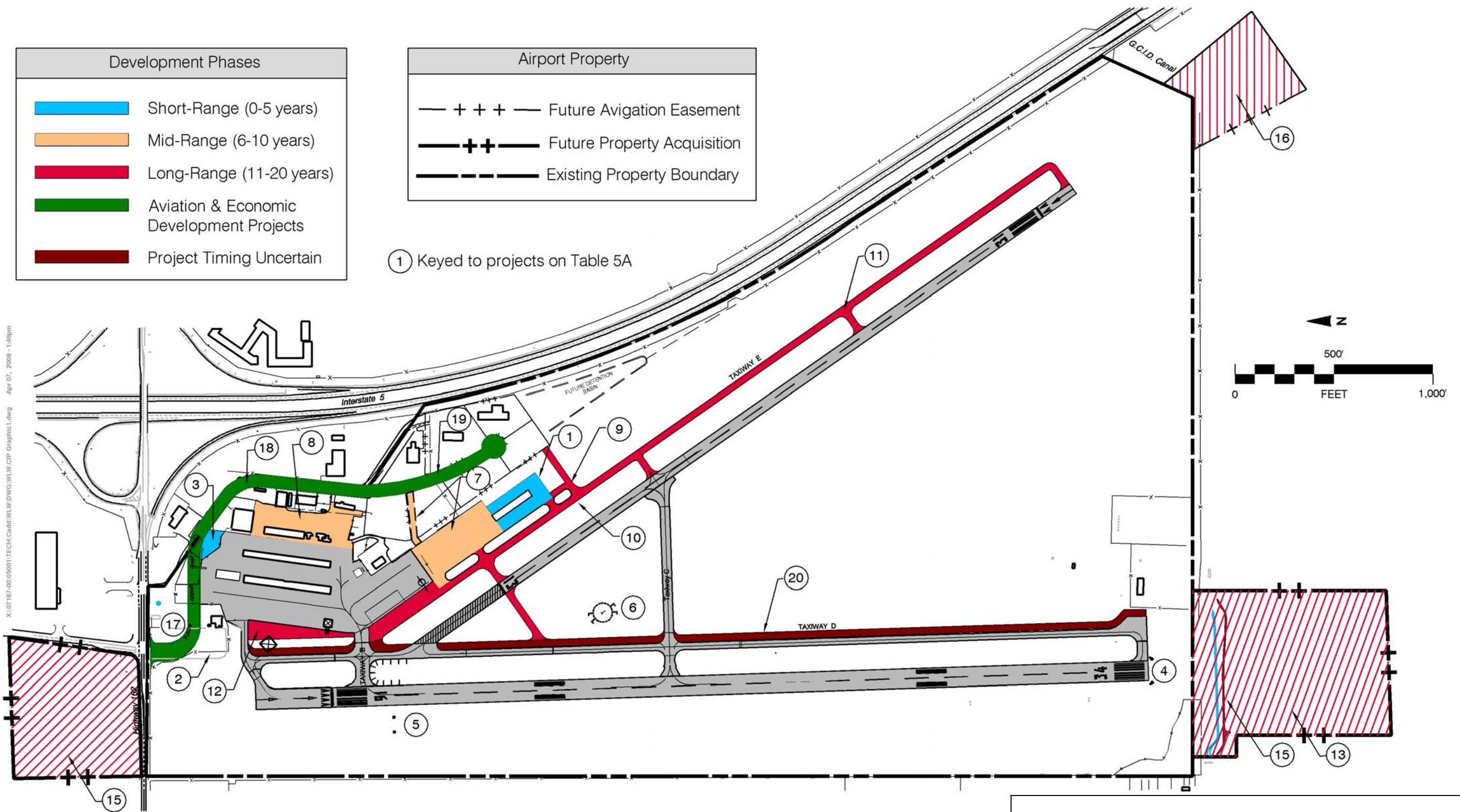


Figure 5A  
**Capital Improvement Phasing Plan**  
 Willows-Glenn County Airport

Source: Mead & Hunt, Inc. (April 2008)

## State Annual Grant

Most publicly-owned, public use general aviation airports in California are eligible to receive a \$10,000 annual grant from the State. These funds can be used for airfield maintenance and construction projects, as well as airfield and land use compatibility planning. Airports designated as *relievers* by the FAA are not eligible for this grant. Willows-Glenn County Airport is not a designated reliever airport and is, therefore, eligible to receive this grant. The Airport has been receiving these grants on a regular basis and the proceeds are used for airport purposes.

## State Loan Program

The Caltrans Division of Aeronautics also administers a revolving loan program. Loans are available to provide funds to match AIP grants or develop revenue-producing facilities (e.g., aircraft storage hangars).

## Other Grant Programs

Airport projects can also sometimes qualify for grant funding from nonaviation sources. Although not commonly available, airports have received grants from a variety of federal and state programs, including: economic development, community development, and rural infrastructure. These funds are most likely to be used for development of a new entrance road, because of the link to development of industrial uses.

## Bonds

Bond funds are a potential source of revenue to support development of larger projects. Given the high underwriting costs and relatively small size of most of Willow's projects, it is not anticipated that bonds would be used. However, it is may be possible to participate in bonds being issued by Glenn County or a regional agency. It is more likely that bond funds would be used to construct revenue-producing facilities, such as hangars.

## Airport Sponsor Self-Funding

At general aviation airports the size and character of Willows-Glenn County, airport sponsor self-funding is principally provided by a combination of airport-generated income and airport owner (municipal) funds. These funds are often used to finance airport improvements that are not grant eligible, and the local matching share for grants-in-aid. Use of this source is the simplest, and often most economical method, because direct interest costs are eliminated.

Given Glenn County's current financial status, it is anticipated that County general fund dollars would not be available to support airport projects. Therefore, it is critical that every opportunity be sought to make the airport financially self-supporting. Ensuring that rental rates and other fees are kept current with regional market prices should be the cornerstone of this effort.

### **Private Investment**

Private sector investment is an important source of funding for some types of airport improvements. At Willows-Glenn County Airport, private funding is most likely to be used to construct aircraft storage hangars and fixed base operator facilities.

The most common sources of funding for private sector development are commercial lending institutions and insurance companies. In the case of private development on public lands, these types of financing may be difficult and expensive to obtain because the borrower can encumber only the improvements as loan collateral. It is essential that agreements be reached with the tenants that provide for adequate airport revenues and facility development, while encouraging private investment and satisfying tenants' borrowing requirements. Specifically, the lease term should be sufficient to allow reasonable investment amortization over the period of the agreement.

Capital expenditures, such as hangars, that are most appropriately constructed with private funds have been excluded from the list of proposed capital projects identified in the *Master Plan*.

### **Financial Summary**

A review of past and present airport financial records suggests that Willows-Glenn County Airport's operating income will not be sufficient to totally fund the County's share of the Capital Improvement Program costs unless rental rates and other fees are increased. These rates and charges should be evaluated regularly to ensure that they meet current market rates.

## Environmental Constraints

Development projects for Willows-Glenn County Airport will occur within the regulatory structure of the State of California and the United States federal government. Both levels of government have environmental regulations that must be considered. This section is intended to identify potential constraints to implementation of the project identified in this plan. Only those factors that might potentially limit proposed development are presented.

### Overview

Topography in the County ranges from over 7,000 feet in the North Coast Range to the lower elevations of the broad, flat alluvial plain of the Sacramento Valley. As a result of such major changes in elevation, Glenn County includes a great variety of climatic, soils and geographic conditions which, in turn, influence the distribution, variety, and abundance of the plant and animal species within the county.

The Willows-Glenn County Airport is located at an elevation of 139 feet above mean sea level on the Sacramento Valley plain. The Airport site abuts Interstate 5 and the City of Willows on the east. To the north and south of the Airport are large tracts of agricultural land, and the land to the west of the airport is largely vacant or is in transition from agricultural to commercial, residential and industrial. Because of its location, subsequent development, and the largely rural nature of the Airport property today, there is no specific evidence of biological or cultural resources associated with the site.

### Biological Resources

**Sensitive Species** (with excerpts from Draft Glenn County General Plan 2007-2027)

The Federal Endangered Species Act of 1973 (50 CFR 17) provides legal protection, and requires definition of critical habitat and development of recovery plans for, plant and animal species in danger of extinction. California has a parallel mandate in the California Endangered Species Act of 1984 and the California Native Plant Protection Act of 1977. These laws regulate the process of determining which plant and animal species are endangered or threatened. In addition, the Federal Endangered Species Act requires federal agencies to make a finding on all federal actions, including the approval by an federal agency of a public or private action (such as the issuance of a Section 10/404 permit), as to the potential to jeopardize the continued existence of any listed species potentially impacted by the action. Species listed by the State are not





necessarily protected by the federal protection agencies. Under the State laws, the California Department of Fish and Game is empowered to review projects for their potential impacts to listed species and their habitats.

In addition to formal endangered and threatened listings by the federal and State governments are the listing of species of special interest due to their limited distribution, declining populations, diminishing habitat, or unusual scientific, recreational, or educational value. These species are not afforded the same legal protection as listed species, but may be added to official lists in the future. There are two general categories of special interest species: 1) candidates for official federal or state listing as threatened or endangered; and 2) species that are not candidates, but which have been unofficially identified as a species of special interest by private conservation organizations or local governments.

Federal candidate species are assigned to one of two categories depending on current knowledge about the species and its biological importance for listing. Federal Category 1 candidate species (FC1) include those for which the USFWS currently has compiled substantial information on biological vulnerability and threats, to support proposing to list the species as endangered or threatened. Federal Category 2 candidates (FC2) include species for which sufficient information is available to indicate possible listings, but for which additional data on vulnerability and threats are required. The state also maintains lists for Candidate-Endangered Species (SCE) and State Candidate-threatened Species (SCT).

The California Department of Fish and Game (DFG) RareFind database (1991) also identifies sensitive species that currently or historically were reported in Glenn County. These data were supplemented with information contained in DFG's *Areas of Special Biological Importance - Glenn County, California* (1979), which delineated historic yellowbilled cuckoo habitat, and mapping of spotted owl habitat within the southwestern section of Glenn County in the Mendocino National Forest (U.S. Department of Agriculture 1986).

Table 5B summarizes the sensitive species reported in Glenn County (Fugro-McClelland [West] Inc., 1991), and those associates with the Willows 7.5 Minute Quadrangle (DFG, 2007).

### **Findings**

In a letter dated May 21, 2007, the California Department of Fish and Game responded to Mead & Hunt's request for a search for occurrences of rare, threatened, endangered, and sensitive animals, plants and

natural communities in proximity to the Airport site. The DFG concluded that there were no Spotted Owl occurrences associated with the Willows U.S.G.S. 7.5 Minute Quadrangle, and that although there were occurrences of the listed species on the Willows quadrangle map, none were in the immediate vicinity of the Airport or master plan project sites (see Table 5B).

## **Cultural Resources**


To update previously documented cultural resources of Glenn County in the vicinity of the Airport, Mead & Hunt requested a record search of the archaeological maps and files maintained by the Northeast Center of the California Historical Resources Information System at California State University, Chico for the Willows Quadrangle (U.S.G.S. 7.5 Minute Series) in May 2007. The following Information was also considered in the analysis of the potential impacts of master plan project implementation on cultural, historical or Archaeological resources.

### ***Definition of an Archaeological Site***

Archaeological sites are places where human activity has measurably altered the earth. Archaeological deposits that predate Spanish colonization are the only source of information about the historical development of Native Californian societies. Archaeological sites formed during and after the Spanish colonization of California can usually be easily distinguished from sites occupied prehistorically. Historic settlements frequently contain iron artifacts, pottery, porcelain, glass, coal, and other materials not used in the region before Spanish contact.

Below the surface of most prehistoric archaeological sites are clusters of burned rocks that are the remains of hearths and ovens. Animal remains and artifacts that are products of prehistoric domestic and ceremonial life can also be found. Soil disconformities caused by the excavation of post holes and pots associated with structures, ovens, storage facilities, and burials also are present at most archaeological sites. Because such physical remains are the products of organized human life, data on the distribution of hearths, ovens, house depressions, storage facilities, manufacturing areas, deposits of food refuse, and other artifacts can be used to reconstruct the organization of human societies which existed in the past.

**Table 5B  
Sensitive Species in the Glenn County Vicinity**

Sensitive Species Reported in Glenn County		Sensitive Species Reported on the Willows 7.5 Minute Quadrangle	
Common Name (Scientific Name)	Status	Common Name (Scientific Name)	Status
<b>Plants</b>		<b>Birds</b>	
Caper-fruited Tropidocarpum <i>(Tropidocarpum capparideum)</i>	FC-2	Swainson's Hawk <i>(Buteo swainsoni)</i>	ST, FC-3
Drymaria-like Dwarf Flax <i>(Hesperolinon drymarioides)</i>	FC-2	Tricolored Blackbird <i>(Agelaius tricolor)</i>	FC-2
California Hibiscus <i>(Hibiscus californicus)</i>	FC-2	<b>Plants</b>	
Brandegee's Eriastrum <i>(Eriastrum brandegeae)</i>	FC-2	Caper-fruited Tropidocarpum <i>(Tropidocarpum capparideum)</i>	FC-2
Plaskett Meadows Linanthus <i>(Linanthus harknessii condensatus)</i>	FC-2	<b>Amphibians and Reptiles</b>	
Dimorphic Snapdragon <i>(Antirrhinum subcordatum)</i>	FC-3C	California Tiger Salamander <i>(Ambystoma tigrinum californiense)</i>	CSC, FC-2
Indian Valley Brodiaea <i>(Brodiaea coronaria rosea)</i>	SE, FC-2	 <p><b>Swainson's Hawk</b>      <b>Tricolored Blackbird</b>      <b>Caper-fruited Tropidocarpum</b>      <b>California Tiger Salamander</b></p>	
Adobe Lily <i>(Fritilaria pluriflora)</i>	FC-2		
Diamond-petaled California Poppy <i>(Eschscholzia rhombipetala)</i>	FC-2		
Ahart's Paronychia <i>(Paronychia ahartii)</i>	FC-2		
Veiny Monardella <i>(Monardella douglassii venosa)</i>	FC-2		
Shippee Meadowfoam <i>(Limnanthes floccosa californica)</i>	SE, FC-1		
<b>Amphibians and Reptiles</b>			* None of these species have been identified as being associated with the Willows Airport Master Plan project area.
California Tiger Salamander <i>(Ambystoma tigrinum californiense)</i>	CSC, FC-2		
Giant Garter Snake <i>(Thamnophis couchii aiaas)</i>	ST, FC-2		<p>Status Key:                      FE = Federal Endangered Species                      SE = State Endangered Species                      FT = Federal Threatened Species                      ST = State Threatened Species                      FC = Federal Candidate Species                      SA = State Special Animal                      CSC = California Species of Special Concern</p>
<b>Mammals</b>			
Pacific Fisher <i>(Martes pennanti pacifica)</i>	CSC		
<b>Insects</b>			
Valley Elderberry Longhorn Beetle <i>(Desmocerus californicus dimorphus)</i>	FT		
<b>Birds</b>			
Great Blue Heron <i>(Ardea herodias)</i>	SA		
Bank Swallow <i>(Riparia riparia)</i>	ST		
Great Egret <i>(Casmerodius albus)</i>	SA		
Osprey <i>(Pandion haliaetus)</i>	CSC		
Bald Eagle <i>(Haliaeetus leucocephalus)</i>	SE, FE		
Northern Goshawk <i>(Accipiter gentilis)</i>	ST, FC-3C		
Spotted Owl <i>(Strix occidentalis)</i>	FT		
Swainson's Hawk <i>(Buteo swainsoni)</i>	ST, FC-3		
Western Yellow-billed Cuckoo <i>(Coccyzus americanus occidentalis)</i>	SE, FC-3B		
Bank Swallow <i>(Riparia riparia)</i>	ST		
Tricolored Blackbird <i>(Agelaius tricolor)</i>	FC-2		

### ***Willows Quadrangle Record Search Results***

**Prehistoric Resources.** According to the records of the Northeast Center of the California Historical Resources Information System, no prehistoric sites have been recorded in the Airport Master Plan project area or vicinity. However, because the project area is located near the ethnographic boundary between the Maidu and Nomlaki populations, unrecorded prehistoric cultural resources may exist in the project area.

**Historic Resources.** According to the records of the Northeast Center, no sites of this type have been recorded in the project area itself. However, the Glenn Colusa Canal has been recorded in the immediate project vicinity, and numerous sites of historical and cultural significance are associated with the community of Willows. Other unrecorded historic cultural resources may be located in the project area, including a former racetrack on the Airport site.

**Recommendations.** There are no records of the project area having been previously surveyed for cultural resources and the project area is located in an area considered to be moderately sensitive for prehistoric, protohistoric, and historic cultural resources. The project area is located in a region utilized by prehistoric and historic populations. Therefore, it is recommended that a professional archaeologist be contacted to conduct a cultural resources survey of the project area. The archaeologist will be able to offer recommendations for any new cultural resources encountered as a result of the field survey. The archaeologist should also contact the appropriate local Native American representatives for information regarding traditional cultural properties that may be located in the project area.

If any potential prehistoric, protohistoric, and/or historic cultural resources are encountered during any phase of project development, all work should cease in the area of the find pending an examination of the site and materials by the project archaeologist. This should be made a condition of project approval. This condition is intended for the accidental discovery of cultural resources made during construction activities, and does not replace the need for a Phase I inventory that assists planners and developers in meeting CEQA obligations. A Phase I Cultural Resource Evaluation enables the lead agency to fulfill its obligations under CEQA to identify potentially significant historical resources. A Phase I inventory includes background research, a field inspection, and report documenting the presence or absence of prehistoric or historic features, buildings, or archaeological sites. If potentially significant sites are identified during the Phase I investigation, further work may be

necessary to determine site significance, as well as appropriate protection or mitigation measures.

## Noise Effects

Noise is often described as unwanted or disruptive sound. Because of its routine, everyday occurrence, it is usually perceived as the most significant adverse impact of airport activity. This section will evaluate the noise effects of implementation of the master plan.

### *Integrated Noise Model Inputs*

- *The number of operations by aircraft type or group.*
- *The distribution of operations by time of day for each aircraft type.*
- *The average takeoff profile and standard approach slope used by each aircraft type.*
- *The amount of noise transmitted by each aircraft type, measured at various distances from the aircraft.*
- *The runway system configuration and runway lengths.*
- *Runway utilization distribution by aircraft type and time of day.*
- *The geometry of common aircraft flight tracks.*
- *The distribution of operations for each flight track.*

A pure sound is measured in terms of: its magnitude, (often thought of as loudness) as indicated on the decibel (dB) scale; its frequency, (or tonal quality) measured in cycles per second (hertz); and its duration or length of time over which it occurs. To measure the noise value of a sound or series of sounds, other factors must also be considered. Airport noise is particularly complex to measure because of the widely varying characteristics of the individual sound events and the intermittent nature of these events' occurrence.

In an attempt to provide a single measure of airport noise impacts, various cumulative noise level metrics have been devised. The metric most commonly used in California is the Community Noise Equivalent Level (CNEL). This measure is similar to the Day-Night Average Sound Level (DNL or  $L_{dn}$ ) metric used elsewhere in the United States. The results of CNEL calculations are normally depicted by a series of contours representing points of equal noise exposure in 5 dB increments. Key factors involved in calculation CNEL contours are noted to the left.

Noise contours were prepared using the FAA's Integrated Noise Model (Version 6.1). Both current and forecast operational levels were modeled. Figure 5B presents the noise contours for the current activity level. Future noise contours for 2025 are presented in Figure 5C. These contours assume that there are no changes in length to either runway. Noise model inputs are presented in *Appendix B*.

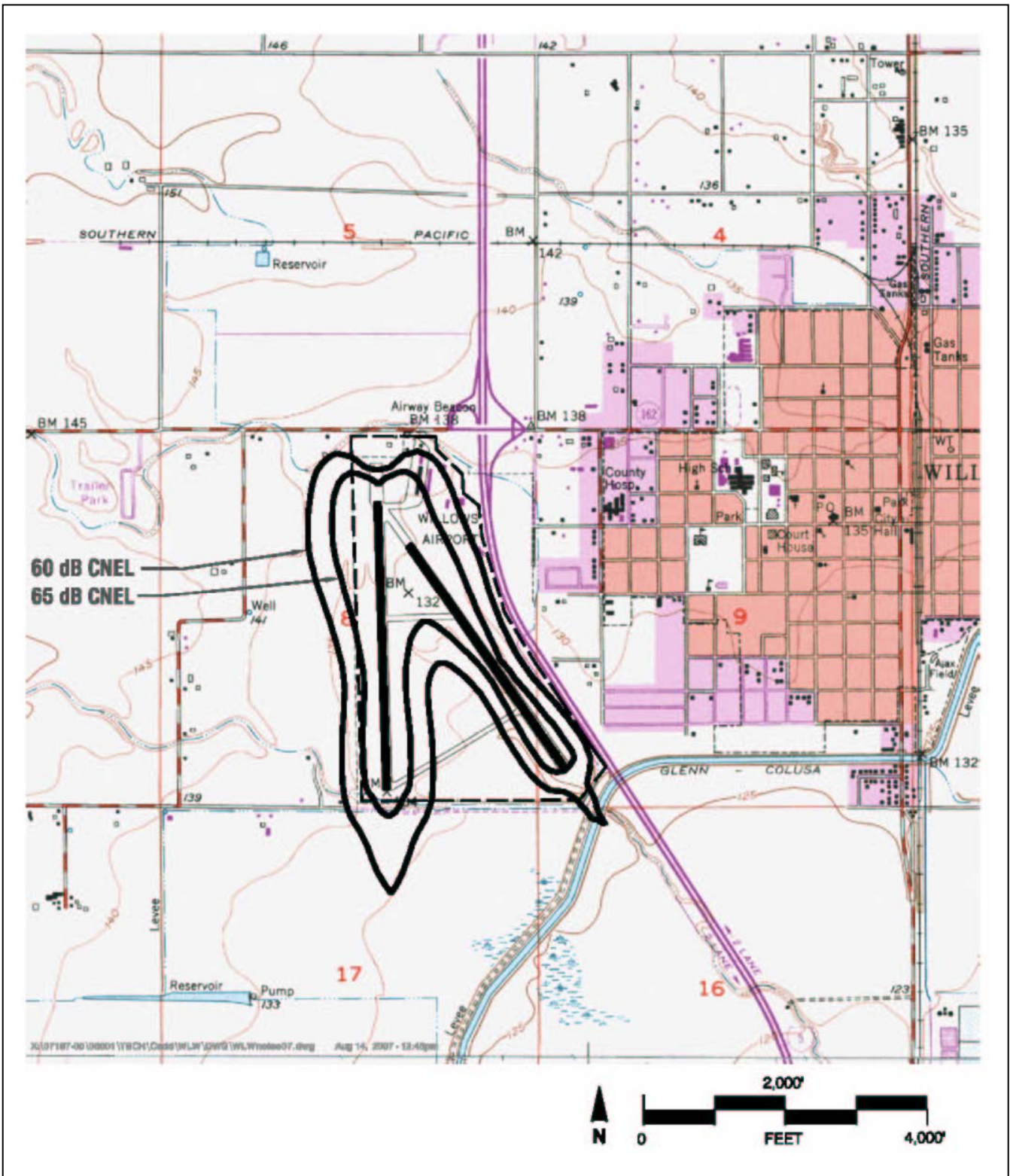


Figure 5B  
Existing Noise Contours (2005)

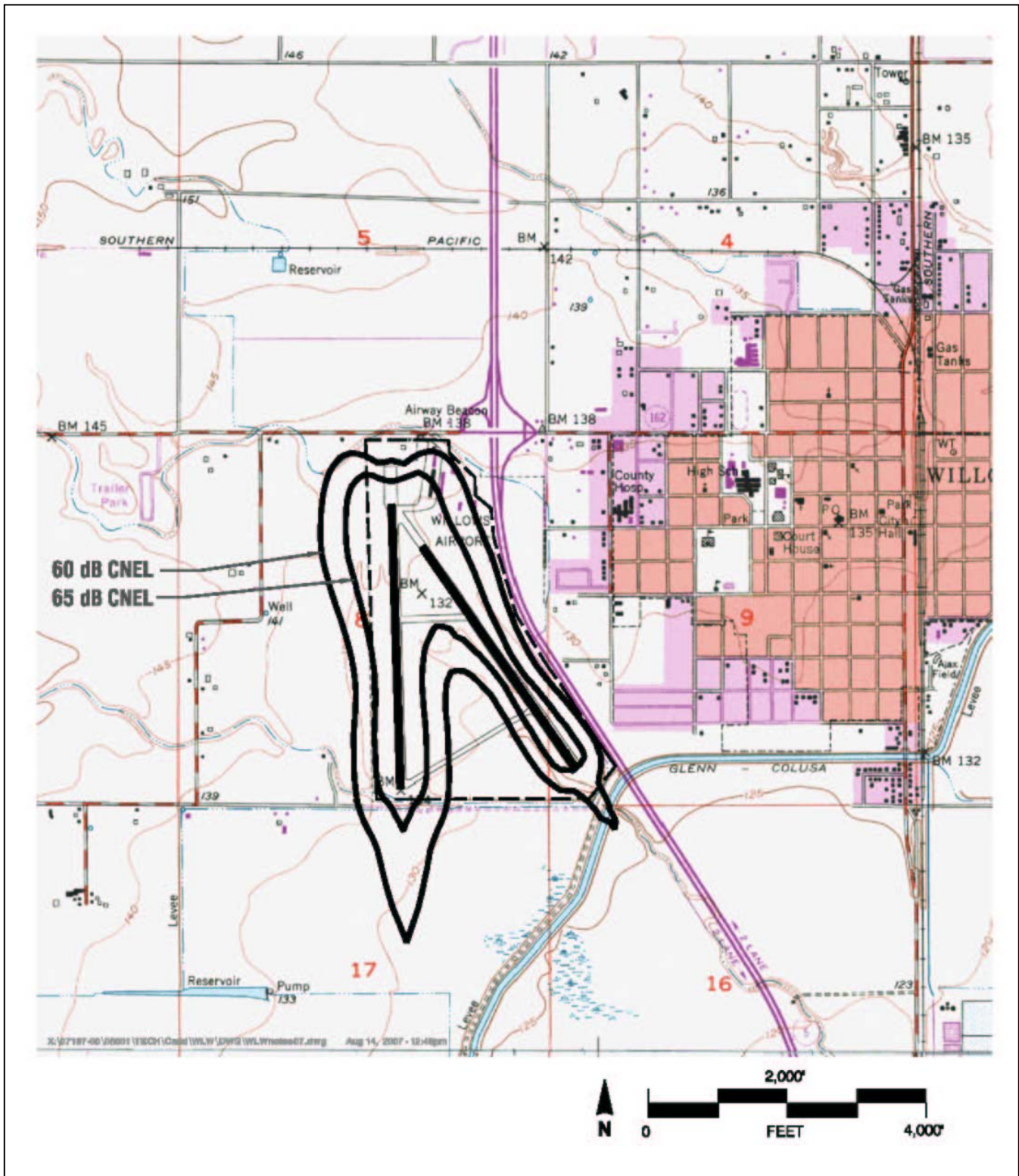


Figure 5C  
Future Noise Contours (2025)

Federal guidelines suggest that all land uses are acceptable outside of the 65 CNEL contour. However, this standard was established with major metropolitan areas in mind. With Glenn County's lower ambient noise levels, it is appropriate to consider noise effects outside of the 65 CNEL contour. The *Comprehensive Airport Land Use Plan (1990)* adopted by the Glenn County Airport Land Use Commission sets a limit of 60 CNEL for most residential uses in the airport's environs. A 60 CNEL limit can be applied for residential uses where higher ambient noise levels exist (e.g., next to freeways).

Currently almost all of the 60 and 65 CNEL contours fall within airport property. There is a small segment of the 60 CNEL contour that extends about 500 feet outside of airport property southeast of the end of Runway 31. A small segment of the 65 CNEL contour extends about 225 feet outside of airport property south of Runway end 34. A larger portion of the 60 CNEL contour extends roughly 1,300 feet outside of airport property south of Runway end 34. Both the 60 and 65 CNEL contours extend west of airport property into nearby agricultural fields. The contours extend off airport property by roughly 300 feet for 65 CNEL contours and 600 feet for 60 CNEL contour. Neither the 65 nor 60 CNEL contours extend off airport property to the east and north.

Noise contour inputs for 2025 include:

- Activity level increases (described in Chapter 2)
- Shift in fleet mix to larger aircraft (described in Chapter 2)
- Reestablishing Runway 16 threshold, thereby increasing total Runway length available to approximately 4,500 feet (described in Chapter 3).

Under the forecast assumptions listed above, the 2025 noise contours have the same basic shape as current contours. However, the contours have been expanded by the forecast increase in operations. Most of the 65 CNEL contour remains within airport property. However, the 65 CNEL contour extends about 500 feet from the airport property line, at the south end of Runway 34. The 65 CNEL contour also extends about 300 feet west of the airport property. The 60 CNEL contour extends about 2,050 feet beyond the airport to the south along the common approach path to Runway 34. It also extends roughly 650 feet beyond airport property to the west.

*Precision of noise contours: As with all modeling, there are inherent limitations to the precision of noise contours prepared using the Integrated Noise Model program. On average, the model is only accurate within about 3 decibels. The location of contour boundaries for lower noise levels are less precise than higher noise level contours. To a large degree this is because variability in pilot and aircraft performance becomes more pronounced further from the runways.*



No residential uses lie within any of the modeled noise contours for current (2005) conditions. A portion of a small farm complex located to the west of the approach end of Runway 34 could be included within the CNEL 60 contour for 2025 conditions. Continued implementation of the adopted ALUC compatibility plan will ensure compatibility with future land uses. Noise complaints from areas outside of the noise contours can be addressed through existing management processes.

### Air Quality

The volume of aircraft use is forecast to increase over the 20-year planning period. Growth in aircraft use will result in a parallel growth in automobile use. Both of these will cause an incremental increase in air pollutants attributable to airport operations. Construction activities will also create short-term increases in air pollution. It is anticipated that modeling will be required to quantify air quality impacts of *Master Plan* projects.



### Traffic

Forecast growth in based and transient aircraft and future developments within the adjacent “Industrial Park” and the expansion of the Wal-Mart Supercenter. Growth on or around the airport will result in an increase in automobile traffic. Although the increase in traffic is anticipated to be large, improved access to the airport will be provided via the proposed new airport road. Nonetheless, the increase in airport-related traffic will incrementally contribute to the further congestion of the intersection. It is expected that traffic modeling will be needed to identify the magnitude of the impact. The likely mitigation for impacts will be contribution of funds towards intersection improvements.

### Hydrology

Most of the airport lies outside the 100-year flood zone presented on the Federal Emergency Management Agency’s Flood Insurance Rate Maps (No. 060057-0589B). The southern end of the airport, which includes Runway 31 and a small portion of Runway 34, is located within Zone AO of the Flood Insurance Rate Map. That means that this portion of the airport lies within the 100-year floodplain and may be subject to flooding. However, the southern ends of each runway are designated as being in “areas of minimal flooding.” Therefore, special building or site designs will not be required.

**Environmental Review**

Environmental review under the provisions of the California Environmental Quality Act (CEQA) will be required before this plan can be implemented. Based upon the available information, it appears possible that the plan may qualify for a statutory exemption.