ENVIRONMENTAL ASSESSMENT
INTERIM WESTERN UNITED STATES C-17 LANDING ZONE



Department of the Air Force
Air Mobility Command
Scott Air Force Base, Illinois

May 2008

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14. ABSTRACT

The purpose of the proposed action is to establish interim C-17 LZs in the western United States at which tactical arrival, departure, and landing training could be accomplished by aircrews from Travis AFB, California on an interim basis until a permanent LZ is available for aircraft operations. Under the Proposed Action, C-17s from Travis AFB would accomplish operations on an existing LZ at Grant County International Airport, Moses Lake Washington and a LZ that would be established at Travis AFB, California by painting the LZ threshold and side boundaries in the middle of Runway 21Left/03Right. Under the Travis AFB Alternative, operations would be accomplished on the painted LZ at Travis AFB and the existing LZ at the Grant County Airport. Under the Southern California Logistics Airport Alternative (SCLA), operations would be accomplished on a LZ that would be established by painting the LZ threshold and side boundaries in the middle of Runway 17/35 at the airport on the existing LZ at the Grant County Airport, and on the painted LZ at Travis AFB. Resources considered in the impact analysis were: aircraft operations and safety and bird/wildlife-aircraft strike hazard; noise; land use; air quality; cultural resources; and environmental justice.

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Finding of No Significant Impact
Interim Western United States C-17 Landing Zone

AGENCY

Department of the Air Force, Headquarters, Air Mobility Command (HQ AMC), Scott Air Force Base (AFB), Illinois.

BACKGROUND

The Air Force will complete basing 13 C-17 aircraft at Travis AFB, California in 2008. A key ability of the C-17 aircraft is its capability to land and take off from a short runway called a landing zone (LZ) that is 3,500 feet to 5,000 feet long and 90 feet wide. An important element of C-17 basing is that aircrews have access to an airfield with a LZ at which they can conduct tactical arrival, departure, and landing training. Currently, there is no LZ available near Travis AFB where aircrews from the base can conduct training. The Air Force and HQ AMC propose to construct a LZ in California as the long-term solution for a LZ. However, because Travis AFB already has C-17 aircrews that must accomplish training, the Air Force and HQ AMC have a need for LZs in the western United States where training can be accomplished on an interim basis until the permanent LZ is available for operations.

Pursuant to National Environmental Policy Act (NEPA) guidance, 32 Code of Federal Regulations (CFR) 989 (*Air Force Environmental Impact Analysis Process*), and other applicable regulations, the Air Force completed an EA of the potential environmental consequences of constructing and operating interim C-17 LZs in the western United States. The attached EA, which is incorporated herein by reference and supports this Finding of No Significant Impact, evaluated the No Action Alternative, Proposed Action, Travis AFB Alternative, and Southern California Logistics Airport (SCLA) Alternative.

NO ACTION ALTERNATIVE

HQ AMC would not establish and operate an interim LZ in the western United States. Aircraft operations would remain at the current levels at Travis AFB, the SCLA, and the Grant County International Airport (Grant County Airport), Moses Lake, Washington, currently used for training by C-17 aircrews from McChord AFB, Washington.

PROPOSED ACTION

The existing C-17 LZ at the Grant County Airport will be used for C-17 LZ training on an interim basis. Additionally, LZ operations will be accomplished on a 3,500 foot-long, 90-foot-wide LZ that will be established at Travis AFB by painting the LZ threshold and side boundaries in the middle of Runway 21Left/03Right and installing landing zone marking panels and an infrared (IR) lighting system. Approximately 18 and four average daily operations will occur at the Grant County Airport and Travis AFB, respectively.

TRAVIS AFB ALTERNATIVE

Operations will be accomplished at Travis AFB on a LZ painted on Runway 21Left/03Right and on the existing LZ at the Grant County Airport. Approximately 11 average daily operations would occur, respectively, at Travis AFB and the Grant County Airport.

SOUTHERN CALIFORNIA LOGISTICS AIRPORT ALTERNATIVE

A 3,500 foot-long, 90-foot-wide LZ would be established by painting the LZ threshold and side boundaries about 3,000 feet from the northern end of Runway 17/35 and installing landing zone marking panels and an IR lighting system. Additionally, operations will be accomplished on the existing LZ at the Grant County Airport and on a LZ painted on Runway 21Left/03Right at Travis AFB. Approximately 10, 10, and two average daily operations would occur at SCLA, Grant County Airport, and Travis AFB, respectively.

EVALUATION OF THE NO ACTION ALTERNATIVE

Aircraft Operations and Safety and Bird/Wildlife-Aircraft Strike Hazard. The air traffic control procedures, which accommodate current aircraft operations, would continue to be used to control aircraft operations at Grant County Airport, Travis AFB, and SCLA, respectively. The risk would continue to be low that an aircraft involved in an accident would strike a person or structure on the ground at or around any of the three airfields. Likewise, it would continue to be unlikely that any of the bird/wildlife-aircraft strike incidents at or around any of the three airfields would involve injury to aircrews or the public, or damage to property (other than the aircraft).

Noise. The number of persons exposed to aircraft noise and potentially highly annoyed by noise at Grant County Airport, Travis AFB, and the SCLA, respectively, would remain at current levels and would continue to be below the level at which risk to the general population may occur. No structural damage would occur from aircraft noise at or around any of the three airfields.

Land Use. Activities associated with continuation of current aircraft operations will be consistent with land use in the area surrounding Grant County Airport, Travis AFB, and SCLA, respectively.

Air Quality. Emissions from aircraft operations will continue at the current rates and will not exceed air quality standards at Grant County Airport, Travis AFB, and the SCLA, respectively.

Cultural Resources. No National Register of Historic Places (NRHP)-eligible cultural resources have been identified at Grant County Airport or the SCLA. NRHP-eligible resources at Travis AFB would continue to be managed under existing regulations and in accordance with procedures outlined in the Travis AFB Integrated Cultural Resources Management Plan.

EVALUATION OF THE PROPOSED ACTION

Aircraft Operations and Safety and Bird/Wildlife-Aircraft Strike Hazard. **Grant County Airport**. The airfield has the capacity to accommodate the 8 percent increase in operations. The existing air traffic control procedures for the airspace surrounding and at the airfield will accommodate increased C-17 operations on the runways and the LZ. The risk is low that an aircraft involved in an accident or bird/wildlife aircraft strike at or around the airport will strike a person or structure on the ground. **Travis AFB**. The airfield has the capacity to accommodate the 2 percent increase in operations. The summary for Grant County Airport applies.

Noise. **Grant County Airport**. The 2,258 persons exposed to day-night average sound level (DNL) 65 decibels (dBA) and greater equate to about 18 percent of the persons who live within a 5-mile radius of the airfield, an increase of 1 percent. (Averaged sound exposure is expressed as the

DNL metric except for California where the Community Noise Equivalent Level [CNEL] is used. In practice, CNEL and DNL are often used interchangeably.) Approximately 17 additional persons could be awakened by aircraft noise from operations occurring during the nighttime (10:00 p.m. to 7:00 a.m.). Noise-induced hearing loss will not occur because individuals will not be exposed to noise for the duration at which loss could occur. Noise from C-17 operations will remain below the level at which damage to structures occurs. Therefore, there will be no damage to structures from increased C-17 operations. **Travis AFB**. The 381 persons exposed to CNEL 60 dBA and greater equate to about 1 percent of the persons who live within a 5-mile radius of the airfield, or no change from the baseline. One additional person could be awakened by aircraft noise from operations occurring during the nighttime. The summary for the Proposed Action at Grant County Airport applies.

Land Use. Grant County Airport. Land use plans for the area surrounding the airport will not be affected. The airport will not need to update or revise its Airport Master Plan. **Travis AFB**. In accordance with Air Installation Compatible Use Zone (AICUZ) program guidance, Travis AFB may provide the noise contours and the land use sections of the attached environmental assessment and any other relative data to local planning agencies to serve as an interim AICUZ report. A full update to the Travis AFB AICUZ Report will be provided to the community within one year of the completed mission change, funding and other constraints permitting. The Proposed Action at Travis AFB will be consistent with county and community plans because the noise contours from the project activities will not extend as far from the airfield as the contours contained in the plans.

Air Quality. **Grant County Airport**. The greatest increase in emissions from recurring aircraft operations for any of the six criteria pollutants, when compared to the baseline emissions inventory, will be 0.166 percent for nitrogen oxides (NO_x). These emissions will not cause a violation of federal standards. A General Conformity Rule Conformity Determination is not required. **Travis AFB**. The greatest increase in emissions from recurring aircraft operations for any of the six criteria pollutants, when compared to the baseline emissions inventory, will be 0.700 percent for NO_x. These emissions will not cause a violation of federal standards. A General Conformity Rule Conformity Determination is not required.

Cultural Resources. **Grant County Airport**. No NRHP-eligible resources have been identified at the Grant County Airport; therefore, the Proposed Action will have no effect on cultural resources. **Travis AFB**. No NRHP-eligible resources were identified in the project area at Travis AFB; therefore, the Proposed Action will have no effect on cultural resources.

EVALUATION OF THE TRAVIS AFB ALTERNATIVE

Aircraft Operations and Safety and Bird/Wildlife-Aircraft Strike Hazard. **Travis AFB**. The airfield has the capacity to accommodate the 5 percent increase in operations. The summary for the Proposed Action applies. **Grant County Airport**. The airfield has the capacity to accommodate the 5 percent increase in operations. The summary for the Proposed Action applies.

Noise. **Travis AFB**. The 380 persons exposed to CNEL 60 dBA and greater equate to about 1 percent of the persons who live within a 5-mile radius of the airfield, or no change from the baseline. One additional person could be awakened by aircraft noise from operations occurring during the nighttime. The summary for the Proposed Action applies. **Grant County Airport**. The 2,147 persons exposed to DNL 65 dBA and greater equate to about 17 percent of the persons who live within a 5-mile radius of the airfield, or no change from the baseline. Approximately six additional

persons could be awakened by aircraft noise from operations occurring during the nighttime. The summary for the Proposed Action applies.

Land Use. **Travis AFB**. The summary for the Proposed Action applies. **Grant County Airport**. The summary for the Proposed Action applies.

Air Quality. **Travis AFB**. The greatest increase in emissions from recurring aircraft operations for any of the six criteria pollutants, when compared to the baseline emissions inventory, would be 0.719 percent for NO_x. These emissions would not cause a violation of federal standards. A General Conformity Rule Conformity Determination would not be required. **Grant County Airport**. The greatest increase in emissions from recurring aircraft operations for any of the six criteria pollutants, when compared to the baseline emissions inventory, would be 1.252 percent for NO_x. These emissions would not cause a violation of federal standards. A General Conformity Rule Conformity Determination would not be required.

Cultural Resources. **Travis AFB**. The summary for the Proposed Action applies. **Grant County Airport**. The summary for the Proposed Action applies.

EVALUATION OF THE SOUTHERN CALIFORNIA LOGISTICS AIRPORT ALTERNATIVE

Aircraft Operations and Safety and Bird/Wildlife-Aircraft Strike Hazard. **SCLA**. The airfield has the capacity to accommodate the 8 percent increase in operations. The volumes of traffic in the airspaces at and surrounding the airport, in conjunction with the air traffic control procedures that would be developed to accommodate the C-17 operations, would not impair operations at the SCLA. The aircraft safety and bird/wildlife aircraft strike summary for the Proposed Action at Grant County Airport applies. **Grant County Airport**. The airfield has the capacity to accommodate the 4 percent increase in operations. The summary for the Proposed Action applies. **Travis AFB**. The airfield has the capacity to accommodate the 1 percent increase in operations. The summary for the Proposed Action applies..

Noise. **SCLA**. The six persons exposed to CNEL 60 dBA and greater equate to less than 1 percent of the persons who live within a 5-mile radius of the airfield. The summary for the Proposed Action at Grant County Airport applies. **Grant County Airport**. The 2,139 persons exposed to DNL 65 dBA and greater equate to about 17 percent of the persons who live within a 5-mile radius of the airfield, or no change from the baseline. Approximately five additional persons could be awakened by aircraft noise from operations occurring during the nighttime. The summary for the Proposed Action applies. **Travis AFB**. The 393 persons exposed to CNEL 60 dBA and greater equate to about 1 percent of the persons who live within a 5-mile radius of the airfield, or no change from the baseline. Two additional persons could be awakened by aircraft noise from operations occurring during the nighttime. The summary for the Proposed Action applies.

Land Use. **SCLA**. The increase in noise would not impact land uses and would be consistent with the Comprehensive Airport Land Use Plan. The airport would not have to revise its Airport Master Plan. **Grant County Airport**. The summary for the Proposed Action applies. **Travis AFB**. The summary for the Proposed Action applies.

Air Quality. **SCLA**. The greatest increase in emissions from recurring aircraft operations for any of the six criteria pollutants, when compared to the baseline emissions inventory, would be

0.060 percent for NO_x. These emissions would not cause a violation of federal standards. A General Conformity Rule Conformity Determination would not be required. **Grant County Airport**. The greatest increase in emissions from recurring aircraft operations for any of the six criteria pollutants, when compared to the baseline emissions inventory, would be 1.242 percent for NO_x. These emissions would not cause a violation of federal standards. A General Conformity Rule Conformity Determination would not be required. **Travis AFB**. The greatest increase in emissions from recurring aircraft operations for any of the six criteria pollutants, when compared to the baseline emissions inventory, would be 0.716 percent for NO_x. These emissions would not cause a violation of federal standards. A General Conformity Rule Conformity Determination would not be required.

Cultural Resources. **SCLA**. The summary for the Proposed Action applies. **Grant County Airport**. The summary for the Proposed Action applies. **Travis AFB**. The summary for the Proposed Action applies.

ENVIRONMENTAL JUSTICE

Activities associated with the No Action Alternative, Proposed Action, Travis AFB Alternative, and the SCLA Alternative will not impose significant adverse environmental effects on adjacent populations. Therefore, no disproportionately high and adverse effects will occur to minority and low-income populations.

DECISION

Based on my review of the facts and analyses contained in the attached environmental assessment incorporated by reference, I conclude that implementation of the Proposed Action will not have a significant impact either by itself or when considering cumulative impacts. Accordingly, requirements of the NEPA, regulations promulgated by the Council on Environmental Quality, and 32 CFR 989 are fulfilled and an environmental impact statement is not required.

Theresa C. Carter

THERESA C. CARTER
Colonel, USAF
Director, Installations & Mission Support

5 MAY 08
Date

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Environmental Assessment
Interim Western United States C-17 Landing Zone

Department of the Air Force
Air Mobility Command
Scott Air Force Base, Illinois

May 2008


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ENVIRONMENTAL ASSESSMENT
Interim Western United States C-17 Landing Zone

Responsible Agency: Department of the Air Force, Air Mobility Command, Scott Air Force Base (AFB), Illinois.

Proposed Action: Establish and operate an interim C-17 landing zone (LZ) in the western United States.

Written comments and inquiries regarding this document should be directed to: Mr. Doug Allbright, HQ AMC/A7PC, 507 Symington Drive, Scott AFB, Illinois 62225 (618) 229-0846.

Abstract: The purpose of the proposed action is to establish interim C-17 LZs in the western United States at which tactical arrival, departure, and landing training could be accomplished by aircrews from Travis AFB, California on an interim basis until a permanent LZ is available for aircraft operations. Under the Proposed Action, C-17s from Travis AFB would accomplish operations on an existing LZ at Grant County International Airport, Moses Lake, Washington and a LZ that would be established at Travis AFB, California by painting the LZ threshold and side boundaries in the middle of Runway 21Left/03Right. Under the Travis AFB Alternative, operations would be accomplished on the painted LZ at Travis AFB and the existing LZ at the Grant County Airport. Under the Southern California Logistics Airport Alternative (SCLA), operations would be accomplished on a LZ that would be established by painting the LZ threshold and side boundaries in the middle of Runway 17/35 at the airport, on the existing LZ at the Grant County Airport, and on the painted LZ at Travis AFB. Resources considered in the impact analysis were: aircraft operations and safety and bird/wildlife-aircraft strike hazard; noise; land use; air quality; cultural resources; and environmental justice.

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ACRONYMS AND ABBREVIATIONS

AFB	Air Force Base
AFI	Air Force Instruction
AGL	above ground level
AICUZ	Air Installation Compatible Use Zone
AIRFA	American Indian Religious Freedom Act
ALUC	Airport Land Use Commission
ANSI	American National Standards Institute
APCD	Air Pollution Control District
APZ	accident potential zone
AQCR	Air Quality Control Region
AQMD	Air Quality Management District
ARFF	Aircraft Rescue and Firefighting
BAAQMD	Bay Area Air Quality Management District
BASH	bird/wildlife-aircraft strike hazard
bgs	below ground surface
CAA	Clean Air Act
CARB	California Air Resources Board
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CNEL	Community Noise Equivalent Level
CO	carbon monoxide
CO_2	carbon dioxide
Community Plan Element	Southern California Logistics Airport Community Plan Element
CZ	clear zone
dB	decibel
dBA	A-weighted sound level measured in decibels
DNL	day-night average sound level
DoD	Department of Defense
DoDI	Department of Defense Instruction
EO	executive order
EA	environmental assessment
EIAP	environmental impact analysis process
EIS	environmental impact statement
FAA	Federal Aviation Administration
FAR	Federal Aviation Regulation
FICAN	Federal Interagency Committee on Aviation Noise
FICON	Federal Interagency Committee on Noise
FICUN	Federal Interagency Committee on Urban Noise
FONSI	finding of no significant impact
FY	fiscal year
Grant County Airport	Grant County International Airport
HQ AMC	Headquarters, Air Mobility Command
HUD	United States Department of Housing and Urban Development

IFR	instrument flight rule
ICRMP	Integrated Cultural Resources Management Plan
IICEP	Interagency and Intergovernmental Coordination for Environmental Planning
INM	Integrated Noise Model
IR	infrared
L_{eq}	average sound level
L_{max}	maximum sound level
LZ	landing zone
μg/m3	micrograms per cubic meter
msl	mean sea level
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act
NAS	Naval Air Station
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NO	nitric oxide
NO_2	nitrogen dioxide
NO_x	nitrogen oxides
NPS	National Park Service
NRHP	National Register of Historic Places
NRIS	National Register Information System
NVG	night vision goggle
O_3	ozone
Pb	lead
PM10	particulate matter equal to or less than 10 microns in aerodynamic diameter
PM2.5	particulate matter equal to or less than 2.5 microns in aerodynamic diameter
ppm	parts per million
RAPCON	Radar Approach Control
ROI	Region of Influence
RPZ	runway protection zone
SAIC	Science Applications International Corporation
SEL	sound exposure level
SIP	State Implementation Plan
SO_2	sulfur dioxide
SO_x	sulfur oxides
SCLA	Southern California Logistics Airport
SHPO	State Historic Preservation Office
the Base	Travis AFB
tpy	tons per year
TRACON	Terminal Radar Approach Control
TSP	total suspended particulates
UFC	Unified Facilities Criteria
USC	United States Code

USEPA	United States Environmental Protection Agency
VOC	volatile organic compounds
VFR	visual flight rule
West Coast C-17 Basing EA	Environmental Assessment West Coast Basing of C-17 Aircraft, June 2003

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CHAPTER 1
PURPOSE OF AND NEED FOR ACTION

This chapter has an introduction and discusses the purpose of and need for action, the scope of the environmental review, and applicable regulatory requirements.

1.1 INTRODUCTION

The Air Force distributed a first draft of this environmental assessment (EA) for comment by governmental agencies, citizens, and interested parties in June 2007. A second draft EA was prepared because of changes that occurred to the Proposed Action and Alternatives after the first draft EA was made available for agency, citizen, and interested party review. Differences between the first and second draft EAs include:

- A reduction in the number of C-17 landing zone (LZ) operations resulting from the elimination of operations by March Air Reserve Base, California C-17 aircrews from the proposed action.
- The Proposed Action in the second draft EA includes operations at both the Grant County International Airport (Grant County Airport), Moses Lake, Washington and Travis Air Force Base (AFB), California instead of only at the Grant County Airport.
- The Travis AFB Alternative in the second draft EA includes operations at both Travis AFB and the Grant County Airport instead of only at Travis AFB.
- The Southern California Logistics Airport (SCLA) Alternative in the second draft EA includes operations at the SCLA, Travis AFB, and the Grant County Airport instead of only at the SCLA.
- The inclusion of cultural resources, to include Native American concerns, in the EA.

1.2 PURPOSE OF AND NEED FOR ACTION

The Air Force and Headquarters, Air Mobility Command (HQ AMC) have a need to establish interim LZs in the western United States at which C-17 tactical arrival, departure, and landing training could be accomplished by C-17 aircrews from Travis AFB (the Base), California until a permanent LZ is available for aircraft operations. The interim LZ airfields should: allow LZ operations without conflicting with other aircraft operations; be conducive for night vision goggle (NVG) training; have other longer runway(s) and crash, rescue, and fire protection services; weather that is favorable for training; and allow operations at times that coincide with Travis AFB training schedules.

1.3 SCOPE OF THE ENVIRONMENTAL REVIEW

This EA assesses the proposed establishment of an interim LZ and the recurring C-17 LZ operations on an interim basis at the Grant County Airport; Travis AFB; the SCLA (formerly George AFB, Victorville, California); and the No Action Alternative. The EA identifies, describes, and evaluates the potential environmental impacts that may result from establishing and operating the interim LZs. The EA also identifies required environmental permits relevant to the establishment and operation of the interim LZs. As appropriate, the affected environment and environmental consequences from establishing and operating the interim LZs and No Action Alternative may be described in terms of site-specific descriptions or regional overview.

The Air Force is basing a total of 13 C-17 aircraft at Travis AFB. The first C-17 aircraft arrived at Travis AFB in fiscal year 2006 (FY06), with the 13th aircraft scheduled to arrive in FY08. The federal fiscal year begins October 1st and ends September 30th of the following year.

The action to base and operate C-17 aircraft at Travis AFB was assessed in an EA entitled *Environmental Assessment West Coast Basing of C-17 Aircraft, June 2003* (West Coast C-17 Basing EA) (USAF 2003a). The Finding of No Significant Impact (FONSI) for the proposal was signed July 21, 2003.

An important element of C-17 basing is that aircrews have access to an airfield with a short runway, called a landing zone, that is 3,500 feet to 5,000 feet long and 90 feet wide. The LZ is used to train and evaluate aircrews in conditions that closely approximate what they will experience in an operational environment. Air Force planning prior to initiation of the Travis AFB C-17 basing environmental impact analysis process (EIAP) identified the need for a LZ. The West Coast C-17 Basing EA states: "There are no LZs within a reasonable proximity to Travis AFB. As a result, a LZ needs to be identified. However, a location for the LZ has yet to be determined. Due to lack of available complete information, the proposed construction of a LZ will undergo analysis for decision-making at a later time. In this particular case, basing of C-17s at an active duty west coast Air Force base is ripe for decision. However, the decisions to identify, operate, and support a LZ for the Proposed Action have not been resolved at this time. As a result, analyses specific to the proposed LZ for the Proposed Action will be presented in a separate National Environmental Policy Act (NEPA) document that will include a cumulative impacts analysis of the entire Proposed Action (32 CFR 989.10)."

Based on the preceding paragraph, the Air Force and HQ AMC at Scott AFB, Illinois have a need for LZs in the western United States at which tactical arrivals, departures, and landings could be accomplished on a permanent basis by Travis AFB C-17 aircrews. HQ AMC proposes to construct a permanent LZ at either Travis AFB or SCLA, and then conduct recurring C-17 operations at the constructed LZ and other LZs in the western United States as the long-term solution for the LZ. However, it is anticipated that the permanent LZs would not be available for aircraft operations until 2009 at the earliest. Because Travis AFB has

C-17 aircrews that must accomplish training, there is a need for LZs at which training could be accomplished on an interim basis until the permanent LZs are available for operations.

1.3.1 Resource Evaluation in the Environmental Assessment

The following biophysical resources are assessed in this EA: aircraft operations and safety and bird/wildlife-aircraft strike hazard (BASH); noise; land use; air quality; cultural resources; and environmental justice.

The following paragraphs describe why no earth resources; hazardous waste, hazardous materials and stored fuels; water resources; biological resources; socioeconomic resources; infrastructure and utilities; and environmental management impacts would occur and why the resources are not analyzed further in this EA.

- **Earth Resources**. Installation of day/night LZ markings and an infrared (IR) lighting system would occur along the sides of existing runways at Travis AFB or the SCLA. These areas have been disturbed and altered by previous activities. Trenching for electricity lines for the LZ lights would occur at depths estimated to be no greater than 2 feet below ground surface (bgs). Erosion control measures identified in the Storm Water Pollution Prevention Plan that would be prepared for the installation project, and which would be implemented by the construction contractor, would minimize erosion. Installation would not be required at the Grant County Airport.
- **Hazardous Waste, Hazardous Materials, and Stored Fuels**. Aircraft maintenance and refueling at Travis AFB, the SCLA, and the Grant County Airport would not increase above current levels as a result of the proposed action. It is anticipated that the quantity of hazardous waste generated during installation of LZ markings and the IR lighting system at Travis AFB or the SCLA would be negligible and limited to fuel and equipment maintenance products. The installation contractor would maintain records of all waste determinations, including appropriate results of analysis performed, substances and sample locations, date and time of collection, and other pertinent data as required by regulatory guidance. Installation would not be required at the Grant County Airport.
- **Water Resources**. A stream and wetlands occur in the area surrounding the runway where the LZ would be established at Travis AFB. Installation of the LZ markings and lighting system would not require activity in the stream. The location where the markings and the lighting system would be installed is not in wetlands. There are no surface water features (*i.e.,* wetlands, ponds, or streams) on or immediately adjacent to the proposed SCLA LZ site (USFWS 2007). Groundwater depths near the proposed Travis AFB LZ occur at 5 feet bgs and deeper (USAF 2003a). The water table below the SCLA LZ site ranges from between 90 and 100 to 6.5 feet bgs, and installation activity is estimated to occur at depths no greater than 2 feet bgs. The distance between the Travis AFB LZ site and the nearest 100-year

floodplain is greater than 5,000 feet (USAF 2003a). The LZ site at the SCLA is outside the area that would flood during a 100-year flood event (City of Victorville undated b). Standard erosion control measures would be implemented during installation of the LZ markings and IR lighting system to minimize the potential for nutrients, pollutants, and sediment from entering a surface or groundwater feature. Installation would not be required at the Grant County Airport.

- **Biological Resources**. Past land use practices and grading activities in the area immediately surrounding the runways where the LZ would be established at Travis AFB included construction of the original airfield, which leveled much of the topography. Airfield land management practices at Travis AFB converted native grasslands into stands of non-native species (USAF 2003a). The remnant chaparral and creosote shrub vegetation community types at the SCLA are not well represented due to past construction and airfield development activities. Installation of the LZ markings and IR lighting system would occur on areas of the Travis AFB and SCLA airfields where the biological communities have been degraded due to past activities. Additionally, they are maintained/mowed following guidance in management plans such as an Integrated Natural Resources Management Plan and a BASH Plan. These plans contain management procedures to control vegetation and keep wildlife away from the runways to avoid wildlife strikes by aircraft. Installation would not be required at the Grant County Airport.

- **Socioeconomic Resources**. There would be no change in the number of personnel at Travis AFB, the SCLA, or the Grant County Airport as a result of the proposed action. Thus, no long-term changes would be anticipated to area population, housing requirements, school enrollment, or economic factors (*i.e.*, sales volume, income, or employment). It is not anticipated that installation workers would relocate to either the Travis AFB or the SCLA areas as a result of the proposed activities because both Travis AFB and the SCLA are located near highly populated areas with large labor pools. Thus, there would be no short-term impacts to area population, housing requirements, or school enrollment. There could be a positive benefit to the economic factors from the proposed installation activities. However, these benefits would end when the project is completed.

- **Infrastructure and Utilities**. There would be no long-term change in water consumption or wastewater generation from the current levels because no additional Air Force personnel would be assigned to Travis AFB and no Air Force personnel would be assigned to the SCLA or Grant County Airport as a result of the action. No additional storm water would be generated because the LZ would be established on an existing runway and there would be no increase in impervious cover. Storm water control features would be developed and constructed during the installation process to comply with regulatory guidance. No buildings requiring use of electricity and natural gas

would be constructed. The amount of solid waste generated by installation of the day/night LZ markings and the IR lighting system would be minimal, and generation would end when installation is complete. Contracts for installation would require the contractor to recycle construction debris to the maximum extent possible, thereby reducing the amount of debris that would be disposed in a landfill. Installation contractor vehicle traffic would be consistent in both level and type with similar on-going projects. Installation would not be required at the Grant County Airport.

- **Environmental Management**. No structures would be demolished. Therefore, no asbestos or lead-based paint would be encountered at Travis AFB, the SCLA, or the Grant County Airport as a result of the proposed action. Additionally, there is no contaminated groundwater, soil, or sediment where the LZ markings and IR lighting system would be installed at Travis AFB (USAF 2003a). Likewise, on- and off-site groundwater and soil at the SCLA do not present a past, present, or future public health hazard (ATSDR 2007). Because the proposed LZ sites at Travis AFB and the SCLA are an active runway, the sites are open areas with no structures or other activities. Installation would not be required at the Grant County Airport.

1.3.2 Interagency and Intergovernmental Coordination for Environmental Planning and Public Involvement

Interagency and Intergovernmental Coordination for Environmental Planning

To comply with the Air Force's Interagency and Intergovernmental Coordination for Environmental Planning (IICEP) process, the Air Force notified numerous agencies in California and Washington of the intent to prepare an EA for the construction and operation of an interim C-17 LZ in the western United States. One agency commented on the first draft EA that Native American concerns should be included in the EA. No substantive agency comments were received on the second draft EA. Appendix A contains the IICEP correspondence associated with preparation of this EA.

Public Involvement

The Air Force EIAP (32 CFR 989) sets forth the public involvement process. Public involvement is accomplished to provide citizens and interested parties the opportunity to participate in the EIAP.

In addition to sending the first draft EA to governmental agencies, citizens, and interested parties, newspaper ads announcing the availability of the EA were published in four newspapers on June 29, 2007. The second draft EA was sent to agencies, citizens, and interested parties and newspaper ads announcing the EA were published in the four newspapers on December 5, 2007. Appendix B contains information concerning public involvement, including comments from the public on draft EAs.

Following is a summary of public comments associated with the first draft EA.

- Airplanes fly over houses at altitudes so low under the baseline condition at the Grant County Airport that: (1) the noise levels are extremely loud: (2) the window seals have been broken; (3) the sound pressure causes houses to shake/rattle; (4) farm animals are upset; (5) the pilot is clearly visible in the cockpit window; and (6) aircraft sound as though they will crash into the building.
- The Grant County Airport experiences a huge number of low level operations by C-17 aircraft from McChord AFB, Washington. The addition of 12,960 annual C-17 operations at the Grant County Airport will negatively affect the quality of life through increased noise and air pollution (to include aircraft dumping liquid).
- The Grant County Airport commissioners had previously promised residents in the area surrounding the airport that there would be no flights after 10:00 p.m.
- Concern about any proposal that would increase landings after 10:00 p.m.
- The C-17 aircraft are welcome during the day, but the commenter does not want landings after 7:00 p.m. or before 7:00 a.m. (9:00 a.m. on weekends).
- Why should residents of the community surrounding the Grant County Airport, staff/workers/students at the college, and workers in businesses near the airport have to suffer the noise of the C-17 aircraft when the aircraft are not based in the community?
- Aircraft fly at altitudes at the Grant County Airport that violate FAA regulations on minimum altitude.
- Late night flights under the baseline condition at the Grant County Airport already keep residents awake and are disruptive to homes and sleep. Additional flights would be detrimental to health by causing sleep loss.
- Concerns about the use of the Grant County Airport by aircraft from bases in California. These planes should practice where they are based.
- Residents around the Grant County Airport can remember in grade school and junior high school when teachers would have to quit talking/teaching until the aircraft would pass because the noise was so loud.
- Opposed to communities in western Washington and California benefiting from huge military payrolls, contracts, and DoD spending while Moses Lake gets extremely high levels of noise pollution 24 hours a day, seven days a week.
- The Air Force failed to provide adequate notice of the availability of the first draft EA.

- The first draft EA lacks of consideration of less impactful decisions such as other possible military bases or former military bases in the western United States.
- The first draft EA failed to fully consider adverse environmental impacts within the local area and beyond.
- The first draft EA failed to address adverse impacts on the local economy and orderly growth of the adjoining communities.
- The first draft contained: (1) no assessment of the implications on the Travis AFB Land Use Compatibility Plan adopted by the Solano County Airport Land Use Commission (ALUC); and (2) no discussion of the financial impacts that a C-17 landing zone would impose on property owners in the area around Travis AFB.
- The first draft EA did not present the existing condition or at the time the LZ would be established should the Air Force chose to locate it at Travis AFB for bird populations to the immediate northeast of the airfield.

1.3.3 Past, Present, and Reasonably Foreseeable Future Actions

The complete EIAP of the No Action Alternative and the proposed action must consider cumulative impacts due to other actions. A cumulative impact, as defined by the President's Council on Environmental Quality (CEQ) (40 Code of Federal Regulations [CFR] 1508.7), is the "…impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of which agency (federal or non-federal) or person undertakes such actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time."

Other actions at Travis AFB and the SCLA include facility construction activities on the installation; however, none of the other actions at either installation contain aircraft operations. No other construction or aircraft operation actions were identified for the Grant County Airport. The following paragraphs explain why no cumulative impacts would occur from the proposed action and other actions at Travis AFB or the SCLA.

- **Aircraft Operations and Safety and BASH**. None of the other actions at Travis AFB or the SCLA include activities that would change the number or type of aircraft operations from the current condition.

- **Noise**. The proposed action consists of aircraft operations that would generate noise; however, none of the other actions contain aircraft operations that would produce noise. The other actions have facility construction that would generate construction noise; however, construction noise would not be generated by the proposed action because no construction activities would occur.

- **Land Use**. Other facilities would be constructed on Travis AFB and the SCLA; however, none of the other facilities would be constructed in the general area associated with the LZ. As with the LZ, establishment of the other facilities would be accomplished in accordance with the Travis AFB General Plan or the SCLA airport master plan.

- **Air Quality**. No short-term construction emissions would occur from the proposed action; however, the other actions would generate construction emissions. No long-term recurring emissions would occur from the other actions; however, recurring emissions would occur from the proposed action. Short-term construction emissions would end when the project is completed. Long-term recurring emissions would continue as long as aircraft operations are accomplished.

- **Cultural Resources**. The potential for cumulative impacts between the Proposed Action at Travis AFB and other projects would be prevented or minimized through implementation of the procedures identified in the Travis AFB Integrated Cultural Resources Management Plan. No National Register of Historic Places (NRHP) resources occur at the SCLA.

1.3.4 Environmental Justice

Executive Order (EO) 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, was issued by the president on February 11, 1994. In the EO, the president instructed each federal agency to make "…achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations." The EO also required federal agencies to identify and address, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority and low-income populations. Based on analysis conducted for this EA, it is determined that activities associated with the No Action Alternative, Proposed Action, Travis AFB Alternative, and SCLA Alternative would not impose significant adverse environmental effects on adjacent populations. Therefore, no disproportionately high and adverse effects would occur to minority and low-income populations.

1.4 APPLICABLE REGULATORY REQUIREMENTS

To comply with NEPA, the planning and decision-making process for actions proposed by federal agencies involves a study of other relevant environmental statutes and regulations. The NEPA process, however, does not replace procedural or substantive requirements of other environmental statutes and regulations. It addresses them collectively in the form of an EA or environmental impact statement (EIS), which enables the decision-maker to have a comprehensive view of major environmental issues and requirements associated with the proposed action. According to CEQ regulations, the requirements of NEPA must be

integrated "…with other planning and environmental review procedures required by law or by agency regulation so that all such procedures run concurrently rather than consecutively."

National Environmental Policy Act and Air Force Environmental Impact Analysis Process

The *National Environmental Policy Act* of 1969, as amended, requires federal agencies to consider environmental consequences in the decision-making process. The CEQ issued regulations to implement NEPA that include provisions for both content and procedural aspects of the required environmental analysis. The Air Force EIAP is accomplished through adherence to the procedures set forth in CEQ regulations (40 CFR Sections 1500-1508) and 32 CFR 989, *Air Force Environmental Impact Environmental Impact Analysis Process*. These federal regulations establish both the administrative process and substantive scope of the environmental impact evaluation designed to ensure that deciding authorities have a proper understanding of the potential environmental consequences of a contemplated course of action. The CEQ regulations require that an EA:

- Provide a summary of the evidence and analysis to determine whether the Proposed Action or alternative actions might have significant effects that would require preparation of an EIS. If analysis determines that the environmental effects would not be significant, a FONSI will be prepared;
- Facilitate preparation of an EIS, when required; or
- Aid an agency's compliance with NEPA when no EIS is necessary.

Interagency and Intergovernmental Coordination for Environmental Planning

Air Force Instruction (AFI) 32-7060 (*Interagency and Intergovernmental Coordination for Environmental Planning*) provides the procedures to comply with applicable federal, state, and local directives for IICEP. AFI 32-7060 implements:

- Air Force Planning Document 32-70, *Environmental Quality*;
- Department of Defense Directive 4165.61, *Intergovernmental coordination of DoD Federal Development Programs and Activities*;
- EO 12372, *Intergovernmental Review of Federal Programs*;
- Title IV of the *Intergovernmental Coordination Act of 1968*; and
- Section 204 of the Demonstration Cities and Metropolitan Development Act of 1966.

Aircraft Safety and Bird/Wildlife-Aircraft Strike Hazard

AFI 91-202, *The U.S. Air Force Mishap Prevention Program,* establishes mishap prevention program requirements (including the BASH program), assigns responsibilities for program elements, and contains program management information.

Noise

Land Use guidelines established by the United States Department of Housing and Urban Development (HUD) and findings of the Federal Interagency Committee on Noise (FICON) recommend acceptable levels of noise exposure for land use.

Land Use

AFI 32-7063, *Air Installation Compatible Use Zone (AICUZ) Program,* provides guidance to air bases and local communities in planning land uses compatible with airfield operations. The AICUZ program describes existing aircraft noise and flight safety zones on and near Air Force installations with a flying mission.

Air Quality

The *Clean Air Act* (CAA) (42 United States Code [USC] 7401-7671g) establishes federal policy to protect and enhance the quality of the nation's air resources to protect human health and the environment. The CAA requires that adequate steps be implemented to control the release of air pollutants and prevent significant deterioration in air quality. The 1990 amendments to the CAA require federal agencies to determine the proposed actions with respect to state implementation plans (SIP) for attainment of air quality goals.

Title V of the CAA amendments of 1990 requires most large source emitters and some smaller sources to obtain a permit called a Title V operating permit. An operating permit is a legally enforceable document that permitting authorities issue to air pollution sources after the source has begun to operate. Most Title V permits are issued by state and local permitting authorities. The purpose of Title V permits is to reduce violations of air pollution laws and improve enforcement of those laws.

Cultural Resources

The *National Historic Preservation Act* of 1966, as amended (NHPA) (16 USC 470, *et seq*.) provides the principal authority used to protect historic resources, establishes the NRHP, and defines in Section 106, the requirements for federal agencies to consider the effects of an action on properties on or eligible for inclusion on the NRHP. *Protection of Historic and Cultural Properties* (36 CFR Part 800 [1986]) provides an explicit set of procedures for federal agencies to meet their obligation under the NHPA, including inventorying of resources and consultation with state historic preservation offices. *The Archaeological Resources Protection Act of 1979* (16 USC 470, *et seq*.) ensures that federal agencies protect and preserve archaeological resources on federal or Native American lands, and establishes a permitting system to allow legitimate scientific study of such resources.

The Air Force initiated consultation with federally recognized Native American tribes, pursuant to 36 CFR 800.2, to ensure that any sites of traditional cultural value are identified and adequately considered under the proposed action. The Air Force sent correspondence to the tribes announcing the action and requesting concerns regarding the proposed action (see Appendix C).

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CHAPTER 2
ALTERNATIVES INCLUDING THE PROPOSED ACTION

This chapter presents the following: discussion of the alternatives formulation and consideration; detailed descriptions of the proposed alternatives; identification of the preferred alternative; and a comparison of the environmental effects of all alternatives.

2.1 ALTERNATIVES FORMULATION AND CONSIDERATION

2.1.1 Selection Standards for Alternatives

Tactical arrival, departure, and landing training are best accomplished at an airfield that has both a LZ and longer main runway. This allows the aircrew to practice tactical training and other non-tactical takeoffs and landings at the same airfield, thereby maximizing use of training time. Landings on the LZ are typically followed by a takeoff from the main runway to a closed pattern to either the LZ or main runway.

The Air Force prepared selection standards for use in developing and evaluating alternatives for the location for an interim LZ. The following paragraphs describe the selection standards.

Airspace. Other aircraft operating at the LZ airfield should not conflict with C-17 tactical arrivals, departures, and landings and other training operations. The LZ airfield should not be located in or near airspace that would prohibit maneuvering for approaches to the LZ and which could restrict C-17 training operations.

Night Vision Goggle Environment. Lighting around the airfield should be low intensity, allowing for an environment conducive to NVG training.

Existing Infrastructure. A LZ location that allows the aircraft to land on the LZ and taxi to a longer runway (minimum length 5,000 feet) to take off is desired. Aircraft crash, rescue, and fire protection services must be available at the LZ airfield during the hours C-17 training would be accomplished.

Weather. The potential LZ location should have recorded cross-wind, visibility, and precipitation data to determine if weather at the airfield is favorable for LZ operations and other associated aircraft movements such as take-off after a tactical landing.

Operations Hours. The times at which the potential LZ location is available for training must coincide with the Travis AFB training schedules.

2.1.2 Alternatives Formulation

Table 2.1-1 lists the 18 airfields initially identified as viable locations as an interim LZ.

Table 2.1-1 Potential Airfields for Interim Landing Zones in the Western United States

Site
Barstow-Daggett, Daggett, California
Beale AFB, California
Bicycle Lake Army Airfield, Fort Irwin, California
Castle Airport (formerly Castle AFB), Merced, California
Former Naval Auxiliary Landing Field Crows Landing (Crows Landing), Crows Landing, California
Desert Center, California
EAF Twentynine Palms, California
Edwards AFB, California
Grant County Airport
Marine Corps Air Station Yuma, Arizona
Meadows Field, Bakersfield, California
Naval Air Facility El Centro, California
Naval Air Station (NAS) Lemoore, California
Production Flight Test Installation, Air Force Plant 42, Palmdale, California
SCLA
Tonopah Test Range, Nevada
Travis AFB
Vandenberg AFB, California

2.1.3 Application of Selection Standards to Alternatives Considered

No Action Alternative

The Air Force EIAP (32 CFR 989.8(d)) states: "Except in those rare instances where excused by law, the Air Force must always consider and assess the environmental impacts of the 'no action' alternative." Thus, the alternative of not establishing an interim LZ in the western United States and conducting aircraft operations at the LZ was also identified (No Action Alternative) and is analyzed in detail in the EA.

Landing Zone Location Alternatives Evaluation

The Air Force applied the selection standards listed in Subchapter 2.1.1 to the 18 identified airfields. As a result of the process, the list of airfields was narrowed to the eight airfields listed in Table 2.1-2, and site visits and preliminary environmental assessments were accomplished for each airfield.

Table 2.1-2 Narrowed List of Potential Airfields for Use as Interim Landing Zones in the Western United States

Site
Beale AFB
Crows Landing
Grant County Airport
NAS Lemoore
Plant 42
SCLA
Tonopah Test Range
Travis AFB

Based on application of the information acquired during the site visits and preliminary EAs to the selection standards, the Air Force further narrowed the potential sites for the interim LZs to SCLA, Tonopah Test Range, Travis AFB, and Grant County Airport. Further evaluation was accomplished, and Table 2.1-3 summarizes the results of the analysis.

Table 2.1-3 Comparison of the Final Four Potential Airfields for an Interim Landing Zone in the Western United States

	Airspace		NVG Environment	Existing Infrastructure	Weather	Operations Hours	
Airfield	**Scheduling**	**Training**					**Overall**
Tonopah Test Range	Yellow	Yellow/ Green	Green	Green	Green	Yellow	Yellow
SCLA	Green	Yellow	Yellow	Green	Green	Green	Yellow/ Green
Travis AFB	Green	Green	Green	Green	Green	Green	Green
Grant County Airport	Green	Yellow/ Green	Green	Green	Green	Green	Green

The Air Force EIAP (32 CFR 989.8[b]) states: "Reasonable alternatives are those that meet the underlying purpose and need for the proposed action…." The guidance also states: "If the Air Force identifies a large number of reasonable alternatives, it may limit alternatives selected for detailed environmental analysis to a reasonable range or to a reasonable number of examples covering the full spectrum of alternatives." Based on this guidance and the alternatives evaluation process outlined in the preceding paragraphs, the Air Force decided that, rather than accomplishing all LZ operations at only one airfield, various combinations of operations at the Grant County Airport, Travis AFB, and the SCLA would be considered for the Proposed Action and alternative actions.

2.2 DESCRIPTION OF PROPOSED ALTERNATIVES

2.2.1 No Action Alternative

Under the No Action Alternative, HQ AMC would not establish an interim LZ in the western United States. Airfield operations at Grant County Airport, Travis AFB, and SCLA would continue at the baseline levels. Tables 2.2-1 through 2.2-3 list the baseline aircraft operations at the three airfields.

Table 2.2-1 Baseline Grant County Airport Annual and Average Daily Airfield Operations

	Arrival and Departure Operations		Closed Pattern Operations		Total Operations	
Aircraft	**Annual**	**Avg. Daily**	**Annual**	**Avg. Daily**	**Annual**	**Avg. Daily**
Air Carrier						
B-747	8,171	22.39	7,219	19.78	15,390	42.17
B-777	327	0.90	1,031	2.83	1,358	3.73
B-767	327	0.90	1,031	2.83	1,358	3.73
B-737	817	2.24	3,049	8.48	3,911	10.72
DC-9	817	2.24	3,049	8.48	3,911	10.72
Subtotal	10,459	28.67	15,470	42.40	25,929	71.07
Air Taxi						
C-208	4,367	11.96	1,031	2.83	5,398	14.79
General Aviation						
C-172	12,611	34.55	3,300	9.04	15,911	43.59
C-210	3,153	8.64	825	2.26	3,978	10.90
subtotal	15,764	43.19	4,125	11.30	19,889	54.49
Military						
C-17	7,667	21.00	17,033	46.67	24,700	67.67
P-3	885	2.42	1,965	5.38	2,850	7.80
EA-6B	295	0.81	655	1.79	950	2.60
Subtotal	8,846	24.23	19,654	53.84	28,500	78.07
Total	39,436	108.05	40,280	110.37	79,716	218.42

Note: Approximately 9 percent (all of which are C-17) of the total aircraft operations at the airfield occur during nighttime (10:00 p.m. to 7:00 a.m.).

Source: Grant County International Airport 2006.

Table 2.2-2 Baseline Travis AFB Annual and Average Daily Airfield Operations

	Arrivals and Departures		Closed Patterns		Total	
Aircraft	**Annual**	**Avg. Daily**	**Annual**	**Avg. Daily**	**Annual**	**Avg. Daily**
C-17	2,184	6.17	4,807	13.73	6,991	19.90
C-5	1,642	4.50	15,159	51.39	16,801	55.89
KC-10	5,439	14.90	26,450	89.66	31,889	104.56
Navy E-6	1,236	3.38	3,066	8.40	4,302	11.78
Coast Guard C-130	1,356	3.72	2,172	7.43	4,068	11.15
Transient	5,644	15.45	1,124	3.08	6,768	18.53
Total	17,501	48.12	52,778	173.69	70,279	221.81

Note: Approximately 14 percent of the operations occur during the evening (7:00 p.m. to 10:00 p.m.), while about 11 percent occur during nighttime (10:00 p.m. to 7:00 a.m.).

Note: Operations reflect the end state aircraft operations condition at Travis AFB in the West Coast C-17 Basing EA.

Note: USAF 2003a contains operations for the Travis AFB Aero Club. These operations occurred on a runway about 2 miles west of the main airfield dedicated to the aero club aircraft. Aero club operations have been discontinued on Travis AFB and occur at an off-Base airfield. The data in this table have been adjusted to reflect discontinuation of aero club operations on Travis AFB.

Source: USAF 2003a.

Table 2.2-3 Baseline Southern California Logistics Airport Annual and Average Daily Airfield Operations

	Arrival and Departure Operations		Closed Pattern Operations		Total Operations	
Aircraft	**Annual**	**Avg. Daily**	**Annual**	**Avg. Daily**	**Annual**	**Avg. Daily**
B-727	339	0.93	0	0.00	339	0.93
B-737	2448	0.68	0	0.00	248	0.68
B-747	245	.067	599	1.64	844	2.31
Bell 222	2,000	5.48	500	1.37	2,500	6.85
Beech Baron	3,843	10.53	7,534	20.64	11,377	31.17
C-17	770	2.11	1,201	3.29	1,971	5.40
Cessna Turboprop	142	0.39	2,190	6.00	2,332	6.39
DHC-6	1,102	3.02	1,164	3.19	2,266	6.21
Single Engine Fixed Pitch Propeller	1,205	3.30	11,304	30.97	12,509	34.27
Single Engine Variable Pitch Propeller	1,924	5.27	11,304	30.97	13,228	36.24
Gulfstream II	241	0.66	2,190	6.00	2,431	6.66
Gulfstream IV	172	0.47	2,190	6.00	2,362	6.47
Learjet 35	416	1.14	0	0.00	416	1.14
MD-83	391	1.07	0	0.00	391	1.07
UH-60	1,500	4.11	2,000	5.48	3,500	9.59
Total	14,538	39.83	42,176	115.55	56,714	155.38

Note: Approximately 8 percent of the total aircraft operations at the airfield occur during nighttime (10:00 p.m. to 7:00 a.m.).
Source: SCLA 2005.

Travis AFB is converting from 37 C-5 and 27 KC-10 aircraft to 13 C-17, 21 C-5, and 27 KC-10 aircraft. Conversion will be complete in FY08 with the arrival of the 13th C-17 aircraft. The Grant County Airport and SCLA are civil airports. Figure 2-1 depicts the location of the three installations.

2.2.2 Proposed Action

The existing LZ at the Grant County Airport (see Figure 2-2), which has the LZ markings and IR lighting system for NVG operations installed, would be used to support tactical arrival, departure, and landing training. Additionally, A 3,500 foot-long, 90-foot-wide LZ would be established by painting the LZ threshold and side boundaries in the middle of Runway 21Left/03Right at Travis AFB (see Figure 2-3) and the LZ would be used for training. It is estimated that aircraft operations on interim LZs would begin in 2008.

2.2.2.1 Airfield Operations

Tables 2.2-4 and 2.2-5, respectively, list the projected annual and average daily airfield operations for the Grant County Airport and Travis AFB under the Proposed Action. Approximately 82 percent of the C-17 operations associated with the Proposed Action would be accomplished at the Grant County Airport, while 18 percent would be accomplished at Travis AFB.

Table 2.2-4 Proposed Action Annual and Average Daily Airfield Operations at Grant County Airport

	Arrival and Departure Operations		Closed Pattern Operations		Total Operations	
Aircraft	**Annual**	**Avg. Daily**	**Annual**	**Avg. Daily**	**Annual**	**Avg. Daily**
Interim C-17 LZ Related Operations	644	1.79	5,775	16.04	6,419	17.83
Other Aircraft	39,436	108.05	40,280	110.37	79,716	218.42
Total	40,080	109.84	46,055	126.41	86,135	236.25

Note: Table 2.2-1 lists the specific operations for the other aircraft. Approximately 10 percent (all of which are C-17) of the total aircraft operations at the airfield would occur during the nighttime (10:00 p.m. to 7:00 a.m.).

Table 2.2-5 Proposed Action Annual and Average Daily Airfield Operations at Travis AFB

	Arrival and Departure Operations		Closed Pattern Operations		Total Operations	
Aircraft	**Annual**	**Avg. Daily**	**Annual**	**Avg. Daily**	**Annual**	**Avg. Daily**
Interim C-17 LZ Related Operations	137	0.38	1,225	3.40	1,362	3.78
Based and Transient Aircraft	17,501	48.12	52,778	173.69	70,279	221.81
Total	17,638	48.50	54,033	177.09	71,641	225.59

Note: Table 2.2-2 lists the specific operations for the non-LZ operations by Travis AFB C-17, C-5, and KC-10 aircraft and other aircraft. Approximately 14 percent of the total aircraft operations at the airfield would occur during the evening (7:00 p.m. to 10:00 p.m.) and about 11 percent of the operations would occur during the nighttime (10:00 p.m. to 7:00 a.m.).

2.2.2.2 Landing Zone Support

Department of Defense (DoD) Instruction (DoDI) 6055.6, *DoD Fire and Emergency Services Program*, requires Aircraft Rescue and Firefighting (ARFF) vehicles to respond to any incident on the runways or overruns within 1 minute after pre-positioning for an announced emergency and to any incident on the runways or overruns within 3 minutes for an unannounced emergency. Although the DoDI 6055.6 ARFF requirement does not apply to Grant County Airport because it is not a military airfield, the airport meets the Federal Aviation Administration (FAA) ARFF response times, which are comparable to the DoDI standard. Air traffic control for C-17 LZ-related operations would be provided by the Grant County Airport air traffic control tower, which operates from 6:00 a.m. to 10:00 p.m., 7 days per week.

Aircrews from Travis AFB would schedule operations at the Grant County Airport through McChord AFB. This would ensure compliance with the McChord AFB-Grant County Airport agreement that states the maximum number of C-17s operating at the airport would not exceed two aircraft and would not operate between 2:00 a.m. and 7:00 a.m. (Ryan 2007).

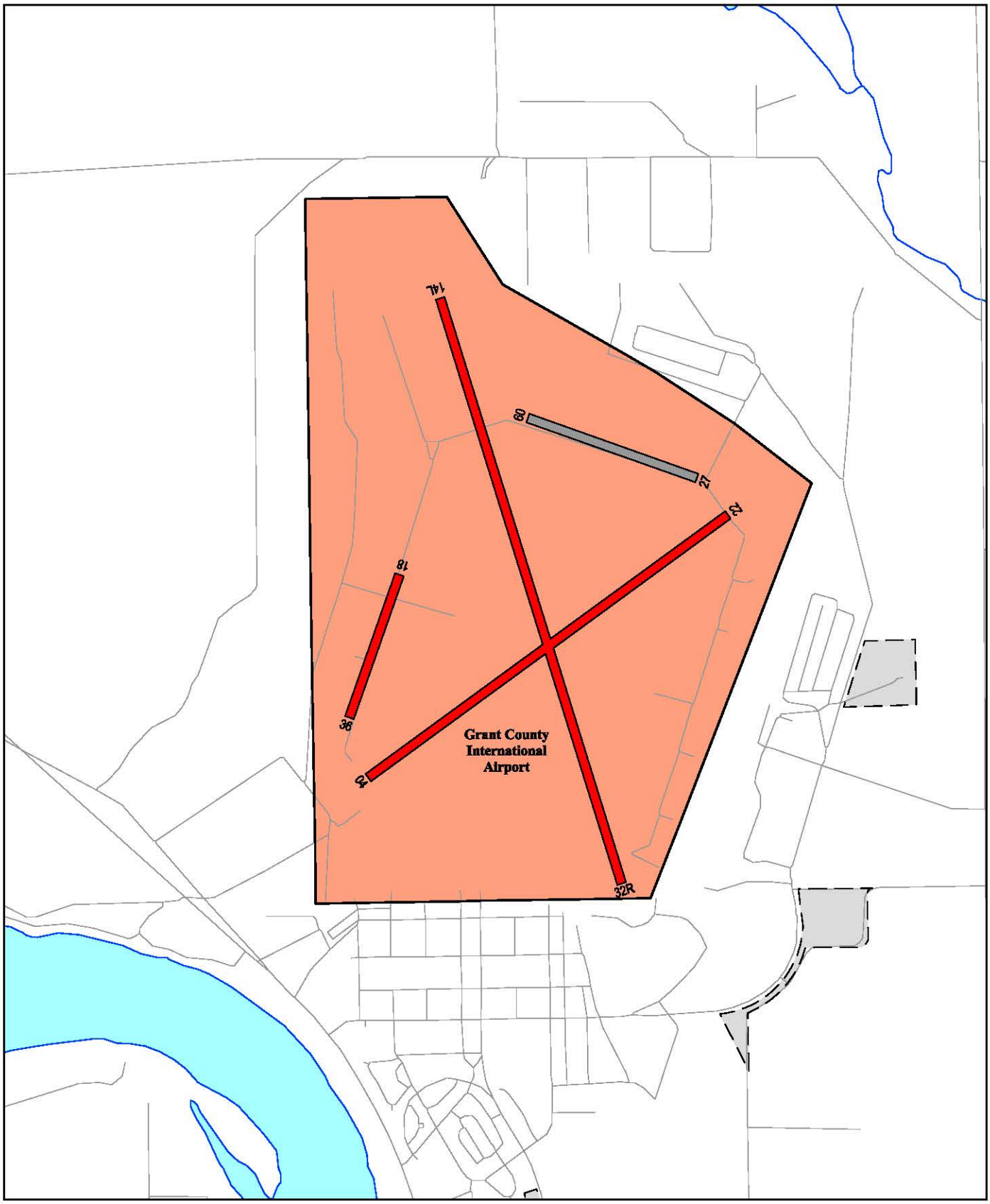


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Location of Sites

Figure 2-1

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Grant County International Airport

LEGEND

Landing Zone Location

Roadway

Note:
Proposed LZ location is approximate.

N

0 3,000

Feet

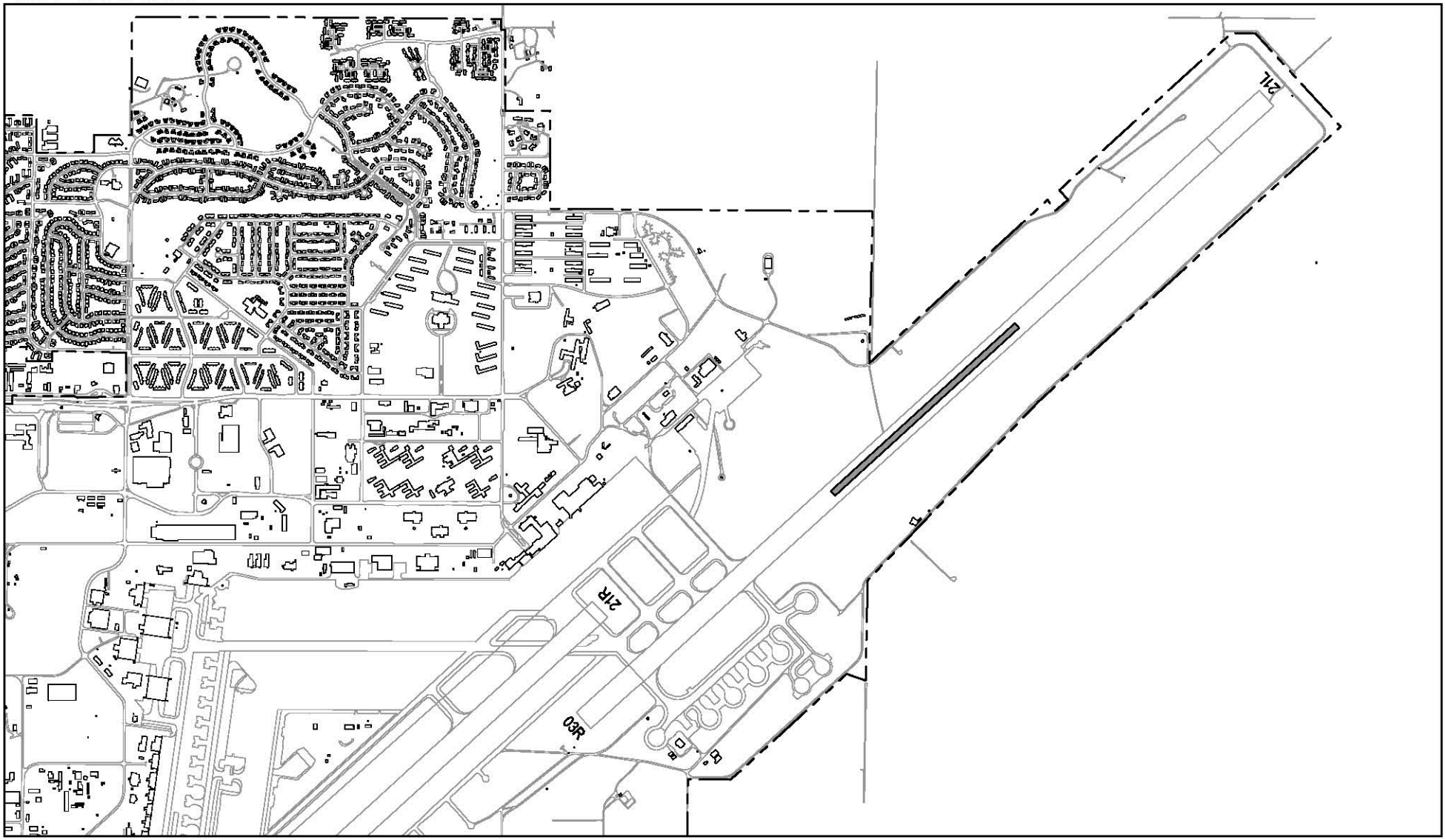
Landing Zone Location, Grant County Airport

Figure 2-2

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Travis AFB

LEGEND

Proposed Landing Zone Location

Installation Boundary

Note:
Proposed LZ location is approximate.

N

0 2,000
Feet

Landing Zone Location, Travis AFB Alternative

Figure 2-3

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Travis AFB meets the DoDI 6055.6 ARFF requirements. Air traffic control for C-17 LZ-related operations would be provided by the Travis AFB air traffic control tower, which operates 24 hours per day, 7 days per week.

2.2.3 Travis AFB Alternative

Operations would be accomplished on the LZ that would be established by painting the LZ threshold and side boundaries in the middle of Runway 21Left/03Right (see Subchapter 2.2.2 and Figure 2-3). Additionally, the existing LZ at the Grant County Airport (see Figure 2-2) would be used to support tactical arrival, departure, and landing training.

2.2.3.1 Airfield Operations

Tables 2.2-6 and 2.2-7, respectively, list the projected annual and average daily airfield operations for Travis AFB and Grant County Airport under the alternative. Approximately 50 percent of the C-17 operations associated with the Travis AFB Alternative would be accomplished at Travis AFB, while 50 percent would be accomplished at the Grant County Airport.

Table 2.2-6 Travis AFB Alternative Annual and Average Daily Airfield Operations at Travis AFB

	Arrival and Departure Operations		Closed Pattern Operations		Total Operations	
Aircraft	**Annual**	**Avg. Daily**	**Annual**	**Avg. Daily**	**Annual**	**Avg. Daily**
Interim C-17 LZ Related Operations	390	1.09	3,500	9.72	3,890	10.81
Based and Transient Aircraft	17,501	48.12	52,778	173.69	70,279	221.81
Total	17,891	49.21	56,278	183.41	74,169	232.62

Note: Table 2.2-2 lists the specific operations for the non-LZ operations by Travis AFB C-17, C-5, and KC-10 aircraft and other aircraft. Approximately 14 percent of the total aircraft operations at the airfield would occur during the evening (7:00 p.m. to 10:00 p.m.) and about 12 percent of the operations would occur during the nighttime (10:00 p.m. to 7:00 a.m.).

Table 2.2-7 Travis AFB Alternative Annual and Average Daily Airfield Operations at Grant County Airport

	Arrival and Departure Operations		Closed Pattern Operations		Total Operations	
Aircraft	**Annual**	**Avg. Daily**	**Annual**	**Avg. Daily**	**Annual**	**Avg. Daily**
Interim C-17 LZ Related Operations	390	1.09	3,500	9.72	3,890	10.81
Other Aircraft	39,436	108.05	40,280	110.37	79,716	218.42
Total	39,826	109.14	43,780	120.09	83,606	229.23

Note: Table 2.2-1 lists the specific operations for the other aircraft. Approximately 10 percent (all of which are C-17) of the total aircraft operations at the airfield would occur during the nighttime (10:00 p.m. to 7:00 a.m.).

2.2.3.2 Landing Zone Support

The landing zone support description in Subchapter 2.2.2.2 applies.

2.2.4 Southern California Logistics Airport Alternative

A 3,500 foot-long, 90-foot-wide LZ would be established by painting the LZ threshold and side boundaries about 3,000 feet from the northern end of Runway 17/35 (see Figure 2-4) to support tactical arrivals, departures, and landings. Additionally, operations would be accomplished at the Grant County Airport and Travis AFB on the LZs described in Subchapter 2.2.2.

2.2.4.1 Airfield Operations

Tables 2.2-8, 2.2-9, and 2.2-10, respectively, list the projected annual and average daily airfield operations for the SCLA, Grant County Airport, and Travis AFB under the SCLA alternative. Approximately 45 percent of the C-17 operations associated with the SCLA Alternative would be accomplished at the SCLA, 45 percent would occur at the Grant County Airport, and 10 percent would be accomplished at Travis AFB.

Table 2.2-8 Southern California Logistics Airport Alternative Annual and Average Daily Airfield Operations at the Southern California Logistics Airport

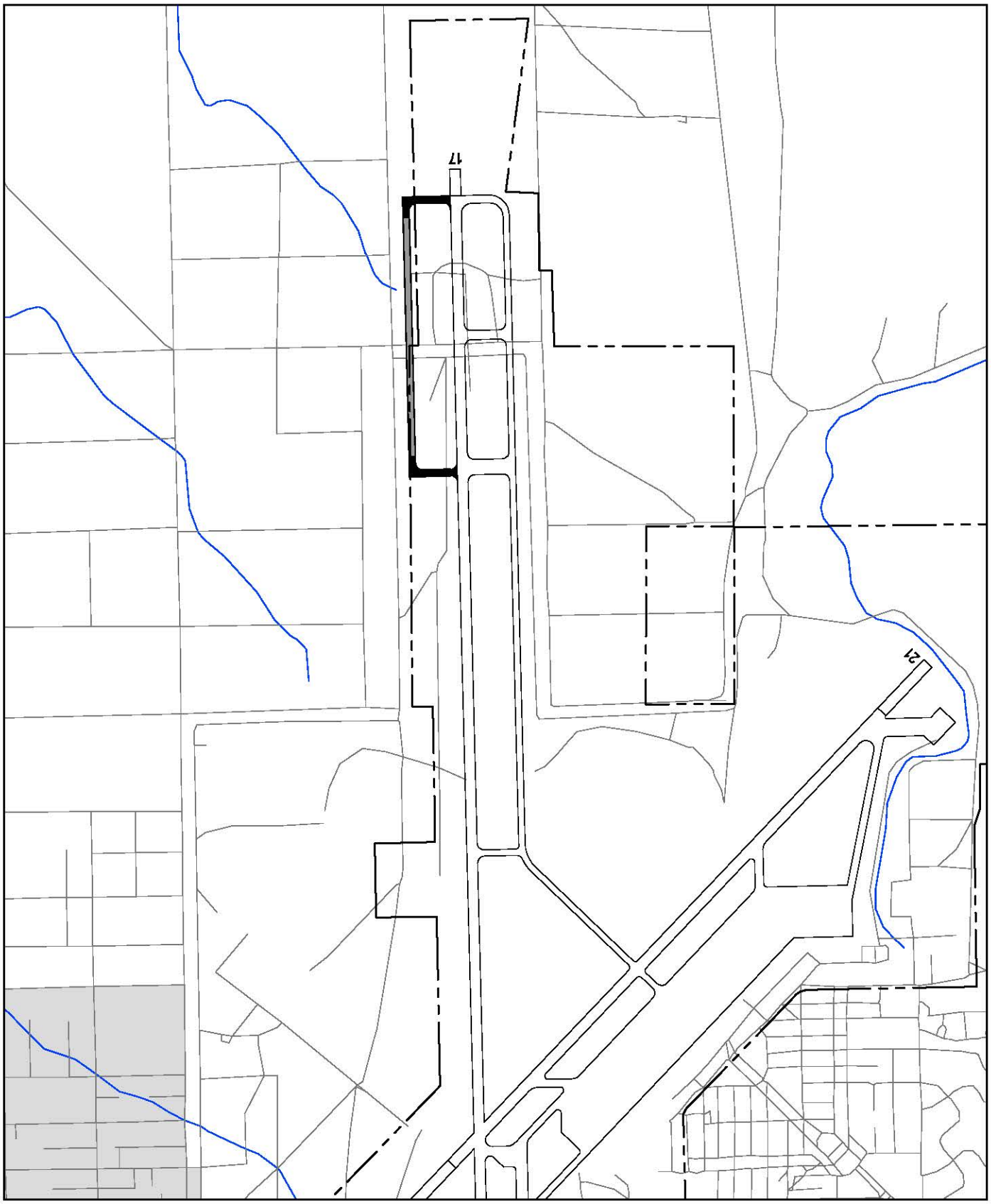
	Arrival and Departure Operations		Closed Pattern Operations		Total Operations	
Aircraft	**Annual**	**Avg. Daily**	**Annual**	**Avg. Daily**	**Annual**	**Avg. Daily**
Interim C-17 LZ Related Operations	351	0.98	3,150	8.75	3,501	9.73
Other Aircraft	14,538	39.83	42,176	115.55	56,714	155.38
Total	14,889	40.81	45,326	124.30	60,215	165.11

Note: Table 2.2-3 lists the specific operations for the other aircraft. Approximately 1 percent of the total aircraft operations at the airfield would occur during the evening (7:00 p.m. to 10:00 p.m.) and about 9 percent of the operations would occur during the nighttime (10:00 p.m. to 7:00 a.m.).

Table 2.2-9 Southern California Logistics Airport Alternative Annual and Average Daily Airfield Operations at the Grant County Airport

	Arrival and Departure Operations		Closed Pattern Operations		Total Operations	
Aircraft	**Annual**	**Avg. Daily**	**Annual**	**Avg. Daily**	**Annual**	**Avg. Daily**
Interim C-17 LZ Related Operations	351	0.98	3,150	8.75	3,501	9.73
Other Aircraft	39,436	108.05	40,280	110.37	79,716	218.42
Total	39,787	109.03	43,430	119.12	83,217	228.15

Note: Table 2.2-1 lists the specific operations for the other aircraft. Approximately 10 percent (all of which are C-17) of the total aircraft operations at the airfield would occur during the nighttime (10:00 p.m. to 7:00 a.m.).



Southern California Logistics Airport

LEGEND

Proposed Landing Zone Location

Installation Boundary

N

0 2,000

Feet

Note:
Proposed LZ location is approximate.

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Landing Zone Location, Southern California Logistics Airport Alternative at Southern California Logistics Airport

Figure 2-4

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Table 2.2-10 Southern California Logistics Airport Alternative Annual and Average Daily Airfield Operations at Travis AFB

	Arrival and Departure Operations		Closed Pattern Operations		Total Operations	
Aircraft	**Annual**	**Avg. Daily**	**Annual**	**Avg. Daily**	**Annual**	**Avg. Daily**
Interim C-17 LZ Related Operations	78	0.22	700	1.94	778	2.16
Based and Transient Aircraft	17,501	48.12	52,778	173.69	70,279	221.81
Total	17,579	48.34	53,478	175.63	71,057	223.97

Note: Table 2.2-2 lists the specific operations for the non-LZ operations by Travis AFB C-17, C-5, and KC-10 aircraft and other aircraft. Approximately 14 percent of the total aircraft operations at the airfield would occur during the evening (7:00 p.m. to 10:00 p.m.) and about 11 percent of the operations would occur during the nighttime (10:00 p.m. to 7:00 a.m.).

2.2.4.2 Landing Zone Support

Although the DoDI 6055.6 ARFF requirement does not apply to SCLA because it is not a military airfield, the airport meets the FAA's ARFF response times and are comparable to the DoDI standard. Air traffic control for C-17 LZ-related operations would be provided by the SCLA air traffic control tower, which operates from 6:00 a.m. to 10:00 p.m., 7 days per week. The landing zone support description in Subchapter 2.2.2.2 applies for the Grant County Airport and Travis AFB.

2.3 IDENTIFICATION OF THE PREFERRED ALTERNATIVE

The preferred alternative is the Proposed Action, which includes conducting about 82 percent of the proposed operations at the Grant County Airport and 18 percent of the operations at Travis AFB.

2.4 COMPARISON OF ENVIRONMENTAL EFFECTS OF ALL ALTERNATIVES

Table 2.5-1 summarizes the impacts of the No Action Alternative, Proposed Action, Travis AFB Alternative, and SCLA Alternative.

Table 2.5-1 Summary of Environmental Impacts for Establishment and Operation of an Interim C-17 Landing Zone in the Western United States

Aircraft Operations and Safety and Bird/Wildlife-Aircraft Strike Hazard

No Action Alternative

- The air traffic control procedures, which accommodate the current level of activity, would continue to be used to control aircraft operations at Grant County Airport, Travis AFB, and SCLA, respectively.
- The potential for aircraft accidents or bird/wildlife-aircraft strikes would remain at baseline conditions at Grant County Airport, Travis AFB, and SCLA, respectively. The risk that an aircraft involved in an accident at or around any of the three airfields would strike a person or structure on the ground would continue to be low. Likewise, it would continue to be unlikely that any of the bird/wildlife-aircraft strike incidents at or around any of the three airfields would involve injury either to aircrews or to the public, or damage to property (other than the aircraft).

Proposed Action

Grant County Airport

- The airfield has the capacity to accommodate the 8% increase in operations.
- The existing air traffic control procedures for the airspace surrounding and at the airfield would accommodate increased C-17 operations on the runways and the LZ.
- The risk is low that an aircraft involved in an accident or a bird/wildlife aircraft strike at or around the airport would strike a person or structure on the ground.

Travis AFB

- The airfield has the capacity to accommodate the 2% increase in operations.
- The existing air traffic control procedures for the airspace surrounding and at the airfield would accommodate increased C-17 operations on the runways and the LZ.
- The risk is low that an aircraft involved in an accident or a bird/wildlife aircraft strike at or around the airport would strike a person or structure on the ground.

Travis AFB Alternative

Travis AFB

- The airfield has the capacity to accommodate the 5% increase in operations.
- The existing air traffic control procedures for the airspace surrounding and at the airfield would accommodate increased C-17 operations on the runways and the LZ.
- The risk is low that an aircraft involved in an accident or a bird/wildlife aircraft strike at or around the airport would strike a person or structure on the ground.

Grant County Airport

- The airfield has the capacity to accommodate the 5% increase in operations.
- The existing air traffic control procedures for the airspace surrounding and at the airfield would accommodate increased C-17 operations on the runways and the LZ.
- The risk is low that an aircraft involved in an accident or a bird/wildlife aircraft strike at or around the airport would strike a person or structure on the ground.

Southern California Logistics Airport Alternative

SCLA

- The airfield has the capacity to accommodate the 6% increase in operations.
- The volumes of traffic in the airspaces at and surrounding the airport, in conjunction with the air traffic control procedures that would be developed to accommodate the C-17 operations, would not impair operations at SCLA.
- The risk is low that an aircraft involved in an accident or a bird/wildlife-aircraft strike at or around the airport would strike a person or structure on the ground.

Grant County Airport

- The airfield has the capacity to accommodate the 4% increase in operations.
- The existing air traffic control procedures for the airspace surrounding and at the airfield would accommodate increased C-17 operations on the runways and the LZ.
- The risk is low that an aircraft involved in an accident or a bird/wildlife aircraft strike at or around the airport would strike a person or structure on the ground.

Travis AFB

- The airfield has the capacity to accommodate the 1% increase in operations.
- The existing air traffic control procedures for the airspace surrounding and at the airfield would accommodate increased C-17 operations on the runways and the LZ.

The risk is low that an aircraft involved in an accident or a bird/wildlife aircraft strike at or around the airport would strike a person or structure on the ground.

Table 2.5-1 Summary of Environmental Impacts for Establishment and Operation of an Interim C-17 Landing Zone in the Western United States (*continued*)

Noise
No Action Alternative • The number of persons exposed to aircraft noise and potentially highly annoyed at Grant County Airport, Travis AFB, and SCLA, respectively, would remain at the current levels and would continue to be below the level at which risk to the general population may occur. • No structural damage would occur from aircraft noise at or around any of the three airfields. **Proposed Action** **Grant County Airport** • The 2,258 persons exposed to day-night average sound level (DNL) 65 decibels (dBA) and greater equate to about 18% of the persons who live within a 5-mile radius of the airfield, an increase of 1%. • Approximately 17 additional persons could be awakened by aircraft noise from operations occurring during the nighttime (10:00 p.m. to 7:00 a.m.). • Noise-induced hearing loss would not occur because individuals would not be exposed to noise for the duration at which loss could occur. • Noise from C-17 operations would remain below the level at which damage to structures occurs. Therefore, there would be no damage to structures from increased C-17 operations. **Travis AFB** • The 381 persons exposed to Community Noise Equivalent Level (CNEL) 60 dBA and greater equate to about 1% of the persons who live within a 5-mile radius of the airfield, which equates to no change from the baseline. • One additional person could be awakened by aircraft noise from operations occurring during the nighttime. • The summary for noise-induced hearing loss and structural damage for the Proposed Action at Grant County Airport applies. **Travis AFB Alternative** **Travis AFB** • The 380 persons exposed to CNEL 60 dBA and greater equate to about 1% of the persons who live within a 5-mile radius of the airfield, which equates to no change from the baseline. • One additional person could be awakened by aircraft noise from operations occurring during the nighttime. • The summary noise-induced hearing loss and structural damage for the Proposed Action at Travis AFB applies. **Grant County Airport** • The 2,147 persons exposed to DNL 65 dBA and greater equate to 17 percent of the persons who live within a 5-mile radius of the airfield, or no change when compared to the baseline. • Approximately six additional persons could be awakened by aircraft noise from operations occurring during the nighttime. • The summary for noise-induced hearing loss and structural damage for the Proposed Action at Grant County Airport applies. **Southern California Logistics Airport Alternative** **SCLA** o The six persons exposed to CNEL 60 dBA and greater equate to less than 1% of the persons who live within a 5-mile radius of the airfield. o One additional person could be awakened by aircraft noise from operations occurring during the nighttime. o The summary noise-induced hearing loss and structural damage for the Proposed Action at Grant County Airport applies. **Grant County Airport** • The ✓2,139 persons exposed to DNL 65 dBA and greater equate to 17 percent of the persons who live within a 5-mile radius of the airfield, or no change when compared to the baseline. • Approximately five additional persons could be awakened by aircraft noise from operations occurring during the nighttime. • The summary for speech intelligibility, noise-induced hearing loss, and structural damage for the Proposed Action at Grant County Airport applies. **Travis AFB** • The 393 persons exposed to CNEL 60 dBA and greater equate to about 1% of the persons who live within a 5-mile radius of the airfield, which equates to no change from the baseline. • Two additional persons could be awakened by aircraft noise from operations occurring during the nighttime. • The summary noise-induced hearing loss and structural damage for the Proposed Action Travis AFB applies.

Table 2.5-1 Summary of Environmental Impacts for Establishment and Operation of an Interim C-17 Landing Zone in the Western United States (*continued*)

Land Use
No Action Alternative • Activities associated with continuation of the current aircraft operations would be consistent with the land use in the area surrounding Grant County Airport, Travis AFB, and the SCLA, respectively. **Proposed Action** **Grant County Airport** • Land use plans for the area surrounding the airport would not be affected. • The airport would not have to update or revise its Airport Master Plan. **Travis AFB** • In accordance with AICUZ program guidance, Travis AFB may provide the noise contours and the land use sections of the attached environmental assessment and any other relative data to local planning agencies to serve as an interim AICUZ Report. A full update to the Travis AFB AICUZ Report would be provided to the community within one year of the completed mission change, funding and other constraints permitting. • The Proposed Action at Travis AFB would be consistent with county and community plans because the noise contours from the project activities would not extend as far from the airfield as the contours used in the plans. **Travis AFB Alternative** **Travis AFB** • The summary for the Proposed Action at Travis AFB applies. **Grant County Airport** • The summary for the Proposed Action at Grant County Airport applies. **Southern California Logistics Airport Alternative** **SCLA** • The increase in noise would not impact land uses and would be consistent with the Comprehensive Airport Land Use Plan. • The airport would not have to revise its Airport Master Plan. **Grant County Airport** • The summary for the Proposed Action at Grant County Airport applies. **Travis AFB** • The summary for the Proposed Action at Travis AFB applies.

Table 2.5-1 Summary of Environmental Impacts for Establishment and Operation of an Interim C-17 Landing Zone in the Western United States (*continued*)

Air Quality
No Action Alternative • Emissions from aircraft operations would continue at the current rates and would not exceed air quality standards at Grant County Airport, Travis AFB, and SCLA, respectively. **Proposed Action** **Grant County Airport** • The greatest increase in emissions from recurring aircraft operations for any of the six criteria pollutants, when compared to the baseline emissions inventory, would be 0.166% for nitrogen oxides (NO_x). These emissions would not cause a violation of federal standards. • A General Conformity Rule Conformity Determination would not be required. **Travis AFB** • The greatest increase in emissions from recurring aircraft operations for any of the six criteria pollutants, when compared to the baseline emissions inventory, would be 0.700% for NO_x. These emissions would not cause a violation of federal standards. • A General Conformity Rule Conformity Determination would not be required. **Travis AFB Alternative** **Travis AFB** • The greatest increase in emissions from recurring aircraft operations for any of the six criteria pollutants, when compared to the baseline emissions inventory, would be 0.719% for NO_x. These emissions would not cause a violation of federal standards. • A General Conformity Rule Conformity Determination would not be required. **Grant County Airport** • The greatest increase in emissions from recurring aircraft operations for any of the six criteria pollutants, when compared to the baseline emissions inventory, would be 1.252 percent for NO_x. These emissions would not cause a violation of federal standards. • A General Conformity Rule Conformity Determination would not be required. **Southern California Logistics Airport Alternative** **SCLA** • The greatest increase in emissions from recurring aircraft operations for any of the six criteria pollutants, when compared to the baseline emissions inventory, would be 0.060% for NO_x. These emissions would not cause a violation of federal standards. • A General Conformity Rule Conformity Determination would not be required. **Grant County Airport** • The greatest increase in emissions from recurring aircraft operations for any of the six criteria pollutants, when compared to the baseline emissions inventory, would be 1.242% for NO_x. These emissions would not cause a violation of federal standards. • A General Conformity Rule Conformity Determination would not be required. **Travis AFB** • The greatest increase in emissions from recurring aircraft operations for any of the six criteria pollutants, when compared to the baseline emissions inventory, would be 0.716% for NO_x. These emissions would not cause a violation of federal standards. • A General Conformity Rule Conformity Determination would not be required.

Table 2.5-1 Summary of Environmental Impacts for Establishment and Operation of an Interim C-17 Landing Zone in the Western United States (*continued*)

Cultural Resources
No Action Alternative • No NRHP-eligible cultural resources have been identified at the Grant County Airport or the SCLA. NRHP-eligible resources at Travis AFB would continue to be managed under existing regulations and in accordance with procedures outlined in the Travis AFB Integrated Cultural Resources Management Plan. **Proposed Action** **Grant County Airport** • No NRHP-eligible resources have been identified; therefore the Proposed Action would have no effect on cultural resources. **Travis AFB** • No NRHP-eligible resources were identified in the project area at Travis AFB; therefore the Proposed Action would have no effect on cultural resources. **Travis AFB Alternative** **Travis AFB** • No NRHP-eligible resources were identified in the project area at Travis AFB; therefore the Proposed Action would have no effect on cultural resources. **Grant County Airport** • No NRHP-eligible resources have been identified; therefore the Travis AFB Alternative at the Grant County Airport would have no effect on cultural resources. **Southern California Logistics Airport Alternative** **SCLA** • No NRHP-eligible resources have been identified. Therefore the SCLA Alternative would have no effect on cultural resources. **Grant County Airport** • No NRHP-eligible resources have been identified at the Grant County Airport; therefore, the SCLA Alternative at Grant County Airport would have no effect on cultural resources. **Travis AFB** • No NRHP-eligible resources were identified in the project area at Travis AFB; therefore the Proposed Action would have no effect on cultural resources.

CHAPTER 3
AFFECTED ENVIRONMENT

This chapter describes the existing environmental resources that could be affected by or could affect the No Action Alternative, Proposed Action, Travis AFB Alternative, and the SCLA Alternative. Only those specific resources relevant to potential impacts are described in detail. The baseline represents the current condition for the respective resource or conditions that may exist due to the No Action Alternative.

3.1 GRANT COUNTY AIRPORT

3.1.1 Aircraft Operations and Safety and Bird/Wildlife-Aircraft Strike Hazard

3.1.1.1 Aircraft Operations

Airspace is a finite resource defined vertically, horizontally, and temporally. As such, it must be managed and used in a manner that best serves commercial, general, and military aviation needs. The FAA is responsible for overall management of airspace and has established different airspace designations to protect aircraft while operating to or from an airport, transiting enroute between airports, or operating within "special use" areas identified for defense-related purposes. Rules of flight and air traffic control procedures have been established to govern how aircraft must operate within each type of designated airspace. The federal aviation regulations apply to both civil and military aircraft operations unless the FAA grants the military service an exemption or a regulation specifically excludes military operations. All aircraft operate under either instrument flight rule (IFR) or visual flight rule (VFR).

The airspace around the airport and up to 10,000 feet above mean sea level (MSL) is controlled by Grant County Terminal Radar Approach Control (TRACON), which provides radar vectoring, sequencing, and separation service for VFR and IFR aircraft operating within the airspace as well as into and out of the airport.

There is one private and five public use airports within or adjacent to the controlled airspace associated with the Grant County Airport. Seven low-altitude federal airways pass through the airspace surrounding the airport. The low-altitude federal airways, defined from ground-based navigation aids, are used by civilian and military air traffic extending from 1,200 feet above ground level (AGL) up to, but not including 18,000 feet above MSL. The Okanogan and Roosevelt military operations areas are located approximately 50 miles north of Grant County Airport, and the Yakima Training Center restricted area is located 35 miles to the southwest.

The airfield consists of two primary instrument runways (14Left/32Right [14L/32R] and 04/22), and two shorter runways (14R/32L and 18/36). Additionally, Runway 09/27, which is 3,500 feet long and 90 feet wide, is used as a LZ for C-17 training. Runway 04/22 is oriented northeast/southwest and is 9,999 feet long and 100 feet wide. Runway 14L/32R is oriented northwest/southeast and measures 13,502 feet long and 200 feet wide. The two shorter

runways are located to the west of the primary runways. Runway 14R/32L measures 3,025 feet long and 75 feet wide. Runway 18/36 is 3,263 feet long and 75 feet wide. Airport elevation is 1,185 feet MSL. The Grant County Airport air traffic control tower operates between 6:00 a.m. and 10:00 p.m. daily. Fourteen instrument approach procedures are available for arrivals to the Grant County Airport. Aircraft traffic pattern altitudes are 1,000 feet AGL for rectangular patterns and 1,500 feet AGL for overhead patterns.

Flight patterns at airports and military airfields such as those being considered in this EA result from several considerations, including:

- Routing aircraft flight tracks to avoid noise-sensitive areas as much as possible;
- The safe operating parameters (*i.e.*, speed, rate of climb/descent, altitude, and turning radius) for each type of aircraft;
- Compliance with standards concerning the vertical and horizontal distance by which an aircraft must avoid structures and people;
- The efforts to control and schedule missions consistent with operational and training requirements to keep noise levels low, especially at night; and
- Coordination with the FAA to minimize conflict with other airports and airspaces in the area of the airfield.

McChord AFB and the Grant County Airport have an agreement that allows Air Force tactical air traffic control personnel access to the airfield and airfield lighting when the tower is closed (*i.e.*, 10:00 p.m. to 7:00 a.m.). In accordance with FAA guidance, C-17 operations at the Grant County Airport during this period are accomplished as an uncontrolled airfield (Ryan 2007). When operating at an uncontrolled airfield, pilots of arriving and departing aircraft, and aircraft accomplishing closed patterns, are requested to advise other pilots who may be operating at the airport or within the airspace around the airport of their intentions via radio calls on a common frequency assigned to the airport. Under the agreement, McChord AFB limits the number of C-17 aircraft in the patterns at the Grant County Airport to a maximum of two aircraft when the air traffic control tower is closed. Additionally, under the agreement, C-17 aircraft will not operate between 2:00 a.m. and 7:00 a.m. at the Grant County Airport (Ryan 2007).

Aircraft operations at Grant County Airport are a mix of military, civil, air taxi, and general aviation activities. C-17 operations are accomplished on Runways 14L/32R, 04/22, and the LZ (Runway 09/27). Baseline C-17 operations on the LZ include tactical maneuvers such as spiral up departures, spiral down arrivals, high-speed-low altitude arrivals and departures, steep straight-in arrivals, and steeper than normal climb out on departure. Table 2.2-1 summarizes Grant County Airport aircraft operations. C-17s accomplish about 68 operations per day.

FAA Advisory Circular (AC) 50/5060-5, *Airport Capacity and Delay*, is used to calculate airfield operations capacities for civil airports. Capacity determination takes into account: runway configuration; the number of arrivals and departures; the number of touch and go operations; the number and configuration of taxiways intersecting the runways; airspace

limitations that could restrict aircraft operations at the airport; and air traffic control facilities and services. Using these factors, the annual service volume and hourly capacities of an airfield are calculated. The annual service volume is a reasonable estimate of an airport's annual capacity. Hourly capacity is the maximum number of aircraft operations that can be accommodated at the airport in one hour.

Based on information in the AC 50/5060-5, the Grant County Airport is estimated to have an annual service volume of 355,000 operations and an IFR hourly capacity of approximately 59 airfield operations. Assuming nearly all operations occur primarily between 6:00 a.m. and 2:00 a.m., there would be 20 hours of operations per day for hourly capacity purposes. The baseline annual 79,716 operations equate to about 22 percent of the annual airfield capacity. Based on a 20-hour day, the average hourly operations would be about 11 operations, or 19 percent of the hourly capacity.

3.1.1.2 Aircraft Safety

Areas around airports are exposed to the possibility of aircraft accidents, even with well-maintained aircraft and highly trained aircrews. Despite stringent maintenance requirements and countless hours of training, past history makes it clear that accidents are going to occur.

An aircraft accident, as defined by the National Transportation Safety Board, is an occurrence associated with the operation of an aircraft which takes place between the time any person boards the aircraft with the intention of flight and all such persons have disembarked, and in which any person suffers death or serious injury, or in which the aircraft receives substantial damage. Although "death" is easily understood, the rule provides specific definitions for the terms "serious injury" and "substantial damage." A "serious injury" is defined as "…any injury which: (1) requires hospitalization for more than 48 hours, commencing within 7 days from the date the injury was received; (2) results in a fracture of any bone (except simple fractures of fingers, toes, or nose); (3) causes severe hemorrhages, nerve, muscle, or tendon damage; (4) involves any internal organ; or (5) involves second- or third-degree burns, or any burns affecting more than 5 percent of the body surface."

Substantial damage means damage or failure that adversely affects the structural strength, performance, or flight characteristics of the aircraft, and that would normally require major repair or replacement of the affected component. Substantial damage does not include engine failure or damage limited to an engine if only one engine fails or is damaged, bent fairings or cowling, dented skin, small punctured holes in the skin or fabric, ground damage to rotor or propeller blades, and damage to landing gear, wheels, tires, flaps, engine accessories, brakes, or wingtips.

An "incident" is defined as an occurrence other than an accident, associated with the operation of an aircraft, which affects or could affect the safety of operations. An incident involving a small aircraft need not be reported except when it involves: (1) flight control system malfunction or failure; (2) inability of any required flight crewmember to perform normal flight duties as a result of injury or illness; (3) failure of structural components of a

turbine engine excluding compressor and turbine blades and vanes; (4) in-flight fire; or (5) aircraft collide in flight; (6) damage to property, other than the aircraft, estimated to exceed $25,000 for repair (including materials and labor) or fair market value in the event of total loss, whichever is less.

Incidents involving large, multi-engine aircraft (more than 12,500 pounds maximum certificated takeoff weight) must be reported if they involve: (1) in-flight failure of electrical systems which requires the sustained use of an emergency bus powered by a back-up source such as a battery, auxiliary power unit, or air-driven generator to retain flight control or essential instruments; (2) in-flight failure of hydraulic systems that results in sustained reliance on the sole remaining hydraulic or mechanical system for movement of flight control surfaces; (3) sustained loss of the power or thrust produced by two or more engines; and (4) an evacuation of an aircraft in which an emergency egress system is utilized.

Table 3.1-1 lists accident and incident data for the period 2002-2006 for the civil aircraft that operate at the civil airports (*i.e.*, Grant County Airport and the SCLA) analyzed in this EA. The estimated annual average accident/incident rate appears relatively high for certain general aviation aircraft because these models have lower reported airtime information. The Cessna 172, for example, has exhibited relatively high accident rates over the 5-year reporting period, but is also no longer used as frequently as during earlier years. From 2002 to 2006, airtime for the Cessna 172 has dropped by approximately 90 percent. Subchapter 3.2.1.2 discusses the Air Force aircraft safety program.

3.1.1.3 Bird/Wildlife-Aircraft Strike Hazard

Bird and wildlife strikes with aircraft constitute a safety concern because of the potential for damage to aircraft, injury to aircrews, or local residents if an aircraft strike and subsequent aircraft accident should occur in a populated area. Aircraft may encounter birds at altitudes of 30,000 feet MSL or higher; however, most birds fly close to the ground. Over 95 percent of reported bird strikes occur below 3,000 feet AGL. Approximately 49 percent of Air Force bird/wildlife-aircraft strikes occur in the airport environment, and 15 percent during low-level cruise (USAF 2003b). Historically, one-half of 1 percent of all reported bird/wildlife-aircraft strikes involving Air Force aircraft resulted in a serious mishap. Table 3.1-2 contains the distribution of Air Force bird/wildlife aircraft strikes by altitudes at airports. The data in the table would also apply to civil airports because the sizes and operating characteristics of civil aircraft are similar to Air Force aircraft.

Table 3.1-1 Civil Aircraft Accident and Incident Information

Type	Aircraft	Representative Model(s)	Accidents	Incidents	Average Annual Accident/Incident Rate (per 100,000 airtime hours)
Air Carrier	B-727	Boeing 727-100, 727-100c/Qc, 727-200/231a	6	0	0.803
	B-737	Boeing 737-700/700lr, 737-900, 737-800, 737-5/600lr, 737-5/600lr, 737-500, 737-400, 737-300, 737-100/200, 737-200c	26	22	0.031
	B-747	Boeing 747-100, 747-100, 747-200/300, 747-400, 747f	5	3	0.218
	B-767	Boeing 767-400, 767-200/Er/Em	3	2	0.016
	B-777	Boeing 777-200/200lr/233lr	5	1	0.208
	DC-9	McDonnell Douglas Dc-9-10, Dc-9-15f, Dc-9-30, Dc-9-40, Dc-9-50	13	5	0.102
	MD-83	McDonnell Douglas DC9 Super 80/Md81/2/3/7/8	1	1	0.003
Helicopter	Bell 21 2	Bell 212, Bell B-206a, Bell 212HP and Bell BH-212	5	1	14.534
General Aviation	C-210	Cessna 206/207/209/210 Stationair	207	1	6.994
	Beech Baron	Beech 55, 95-C55, B55, E-55, 95-55, BE-95-55, 95B55	47	1	378.685
		Beech 58, BE-58, 58P, BE-58, 58TC	36	2	nd
	Cessna Turboprop	Cessna 441	7	0	nd
	DHC-6	Dehavilland Twin Otter DHC-6	9	0	0.525
	Gulfstream II	Gulfstream Aerospace G-III	1	0	ND
	Gulfstream IV	Gulfstream Aerospace G-IV	4	0	ND
	Learjet 35	Gates Learjet Lear-25	11	0	ID
	Single Engine Fixed Pitch Propeller	Cessna 172, C-172N, C-172S, C-172G and C-172M	844	7	517.780
	Single Engine Variable Pitch Propeller	Beech 24, Beech 23 Musketeer	19	0	ID

Note: Accident/Incident data reflect records from January 1, 2002 through January 1, 2007 and 5 years of airtime data from 2002 through November 2006 (11 months only for 2006). Data excludes 2006 airtime information for the DC-9 aircraft.

ND = airtime data not available for aircraft type. ID=insufficient airtime to compute a valid accident rate.

Sources: National Transportation Safety Board 2007; Bureau of Transportation Statistics 2007.

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Table 3.1-2 Air Force Bird/Wildlife-Aircraft Strikes at Airports by Altitude

Altitude (feet AGL)	Percent of Total
0-49	28.90%
50-99	10.88%
100-199	6.71%
200-299	6.81%
300-399	5.40%
400-499	2.48%
500-599	5.85%
600-699	1.46%
700-799	1.34%
800-899	1.76%
900-999	0.64%
1,000-1,499	7.21%
1,500-1,999	6.78%
2,000-2,999	7.01%
3,000-3,999	4.58%
4,000-4,999	0.98%
5,000 and greater	1.22%

Source: Air Force Safety Center 2006.

3.1.2 Noise

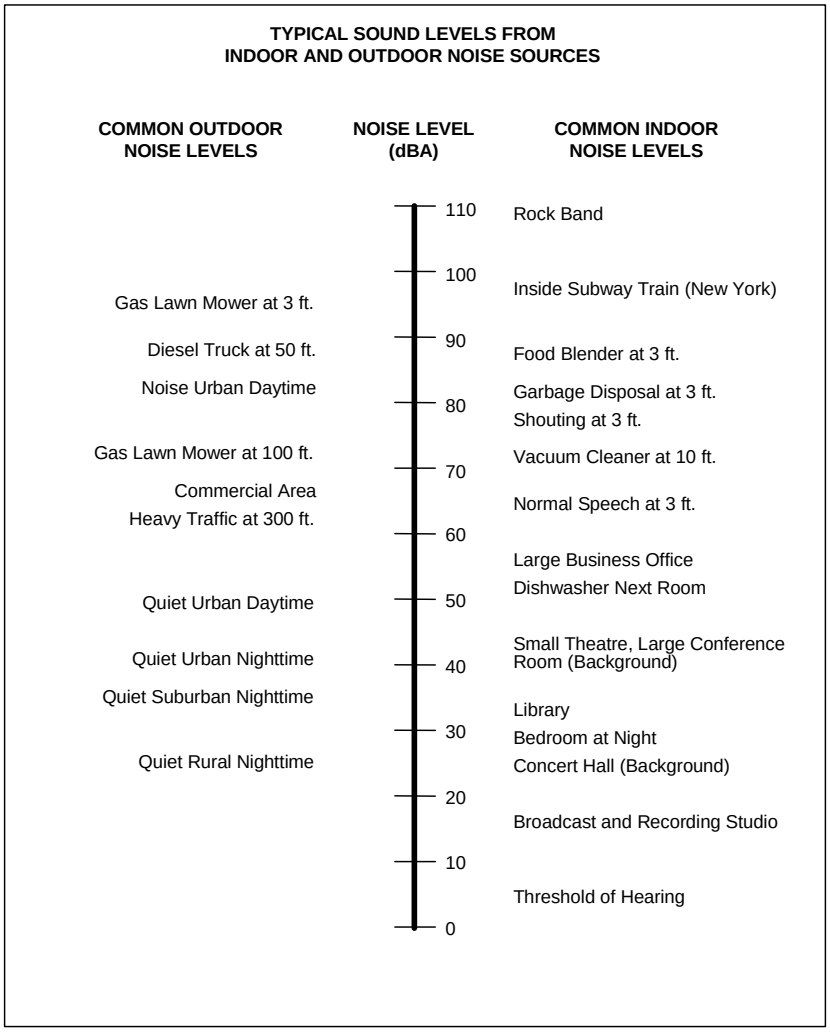
Aviation-related activities at Grant County Airport dominate the acoustic environment. Therefore, noise from aircraft operations is analyzed.

The characteristics of sound include parameters such as amplitude (loudness), frequency (pitch), and duration. Sound varies over an extremely large range of amplitudes. The decibel (dB) is the accepted standard unit for describing levels of sound. Decibels are expressed in logarithmic units to account for the variations in amplitude. On the dB scale, an increase of 3 dB represents a doubling of sound energy. A difference on the order of 10 dB represents a subjective doubling of loudness.

Different sounds have different frequency contents. Because the human ear is not equally sensitive to sound at all frequencies, a frequency-dependent adjustment, called A-weighting, was developed to measure sound similar to the way the human hearing system responds. The adjustments in amplitude, established by the American National Standards Institute (ANSI 1983), are applied to the frequency content of the sound. Figure 3-1 depicts typical A-weighted sound pressure levels (dBA) for various sources. As indicated in the figure, 65 dBA is equivalent to normal speech at a distance of 3 feet.

Noise is defined as sound that is undesirable because it interferes with speech and hearing, is intense enough to damage hearing, or is otherwise annoying. Noise levels change with time and the distance of the receptor from the noise source.

Figure 3-1 Typical A-Weighted Noise Levels



3.1.2.1 Noise Metrics and Analysis Methods

A variety of metrics may be used to assess the impacts of noise. Depending on the specific situation, appropriate analysis may include single event or averaged metrics. Single event metrics are used to assess the potential impacts of noise on structures and animals, and are sometimes used in the assessment of human effects. Sound exposure level (SEL), a single event metric, is commonly used to evaluate sleep disturbance. Averaged noise metrics are useful in characterizing the overall noise environment and are primarily used to analyze community (population) exposure to noise. Averaged sound exposure is expressed as the DNL metric or, in California, the Community Noise Equivalent Level (CNEL). The U.S. Environmental Protection Agency (USEPA) selected DNL as the uniform descriptor of averaged sound exposure. Subsequently, federal agencies, including the DoD, adopted DNL for expressing averaged sound. In practice, CNEL and DNL are often used interchangeably.

Single Event Sound Metrics

Although the highest dBA level measured during an event (*i.e.*, maximum sound level, L_{max}) is the most easily understood descriptor for a noise event, alone it provides little information. Specifically, it provides no information concerning either the duration of the event or the amount of sound energy. Thus, SEL, which is a measure of the physical energy of the noise event and accounts for both intensity and duration, is used for single event noise analysis. Subjective tests indicate that human response to noise is a function not only of the maximum level, but also of the duration of the event and its variation with respect to time. Evidence indicates that two noise events with equal sound energy will produce the same response. For example, noise at a constant level of 85 dBA lasting for 10 seconds would be judged to be equally as annoying as a noise event at a constant level of 82 dBA and duration of 20 seconds (*i.e.,* 3 dBA decrease equals one half the sound energy but lasting for twice the time period). This is known as the "equal energy principle." The SEL value represents the A-weighted level of a constant sound with a duration of 1 second, providing an amount of sound energy equal to the event under consideration.

By definition, SEL values are referenced to a duration of 1 second and should not be confused with either the average (L_{eq}) or L_{max} associated with a specific event. The L_{eq} is the constant level which has the same A-weighted sound energy as that contained in the time-varying sound. When an event lasts longer than 1 second, the SEL value will be higher than the L_{max} from the event. The L_{max} would typically be 5 to 10 dBA below the SEL value for aircraft overflight. Figure 3-2 presents the relationship of SEL, Lmax, and Leq to the time history for a noise event from aircraft overflight.

Noise from low-flying aircraft arriving at and departing from an airfield at night may cause sleep disturbance. DNL and CNEL incorporate consideration of sleep disturbance by assigning a 10 dBA penalty to the SELs of nighttime noise events (10:00 p.m. to 7:00 a.m.). Additionally, CNEL adds a 5-dB upward adjustment to each aircraft noise producing event in the 7:00 p.m. to 10:00 p.m. time period. However, single noise events, not average sound levels, correlate better with sleep disturbance.

Studies have estimated the percentage of awakenings that may be experienced by people exposed to different SELs. The Federal Interagency Committee on Aviation Noise (FICAN), formed in 1993 as recommended by the Federal Interagency Committee on Noise [FICON]), based on field studies, recommends a dose-response curve for predicting sleep awakening. Figure 3-3 compares the FICAN recommendation of 1997 to the 1992 Federal Interagency Committee on Noise (FICON) recommendation for predicting sleep awakening. FICAN takes the conservative position that, because the adopted curve represents the upper limit of the data presented, it should be interpreted as predicting the maximum percentage of the exposed population expected to be awakened. Based on this new position, it is estimated that outdoor SELs of 80 to 100 dBA could result in 4 to 10 percent awakenings in the exposed population. Noise must penetrate the residence to disturb sleep. Interior noise levels are lower than exterior levels due to the attenuation of the sound energy by the structure. The amount of attenuation provided by the building is dependent on the type of construction and

whether the windows are open or closed. The approximate national average attenuation factors are 15 dBs for open windows and 25 dBs for closed windows. Twenty dBA is conservatively used to estimate attenuation for a typical dwelling unit (USEPA 1974).

Averaged Noise Metrics

Single event analysis has a major shortcoming -- single event metrics do not describe the overall noise environment. DNL and CNEL are the measure of the total noise environment. As previously mentioned, DNL averages the sum of all aircraft noise producing events over a 24-hour period, with a 10-dBA upward adjustment added to the nighttime events (between 10:00 p.m. and 7:00 a.m.). Additionally, CNEL adds a 5-dB upward adjustment to each aircraft noise producing event in the 7:00 p.m. to 10:00 p.m. period.

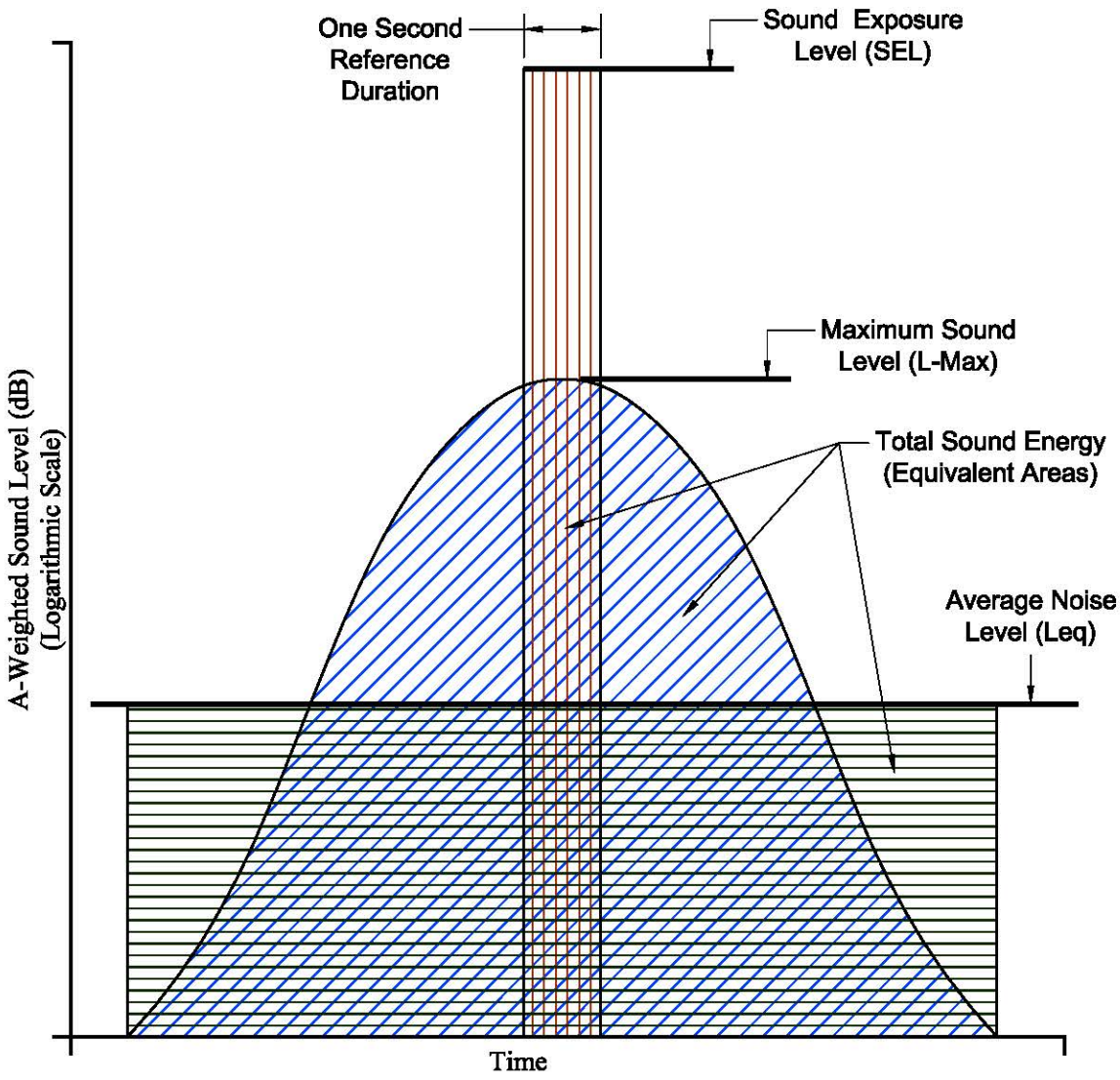
Figure 3-4 depicts the relationship of the single event, the number of events, the time of day, and DNL or CNEL. This adjustment is an effort to account for increased human sensitivity to nighttime noise events. The summing of sound during a 24-hour period does not ignore the louder single events, it actually tends to emphasize both the sound level and number of those events. The logarithmic nature of the dB unit causes sound levels of the loudest events to control the 24-hour average.

DNL and CNEL are the accepted unit for quantifying annoyance to humans from general environmental noise, including aircraft noise. The Federal Interagency Committee on Urban Noise (FICUN) developed land use compatibility guidelines for noise exposure areas (FICUN 1980). Based on these FICUN guidelines, the FAA developed recommended land uses in aircraft noise exposure areas. The Air Force uses DNL (except for California where CNEL is used) as the method to estimate the amount of exposure to aircraft noise and predict impacts. Land use compatibility and incompatibility are determined by comparing the predicted DNL or CNEL level at a site with the recommended land uses.

Noise Analysis Methods

NOISEMAP noise model, version 7.296, was used to develop the noise contours and DNL values from airfield operations for this EA. Maximum sound level noise used in this EA was calculated by using the Flyover Noise Calculator (USAF 2002).

NOISEMAP is a suite of computer programs developed by the Air Force to predict noise exposure in the vicinity of an airfield due to aircraft flight, maintenance, and ground run-up operations. Data describing flight tracks and flight profile use, power settings, ground run-up information by type of aircraft/engine, and meteorological variables are assembled and processed for input into NOISEMAP. The model uses this information to calculate SEL and DNL or CNEL values at points on a regularly spaced grid surrounding the airfield. A plotting program generates contour lines connecting points of equal DNL or CNEL values in a manner



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Sound Exposure Level, Maximum Sound Level, and Average Noise Level Comparison to Aircraft Noise Time History

Figure 3-2

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Figure 3-3 Recommended Sleep Disturbance Dose Response Relationship

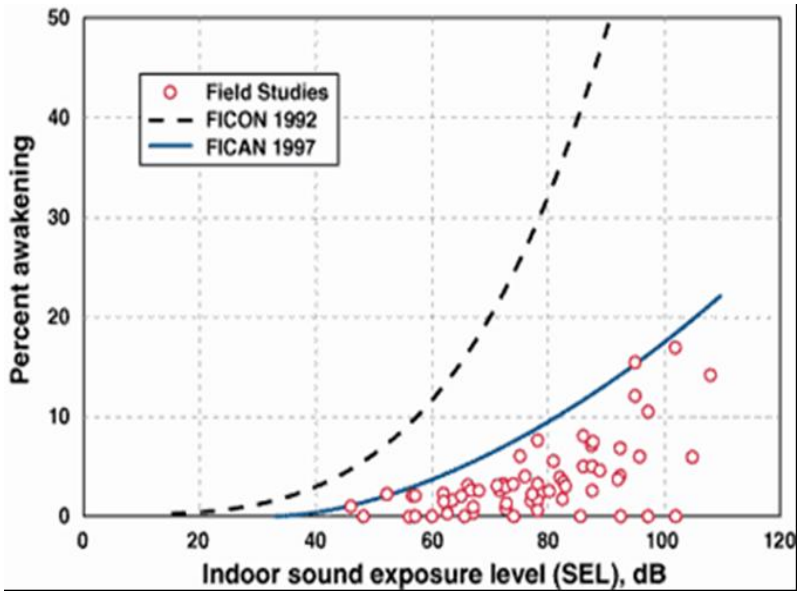
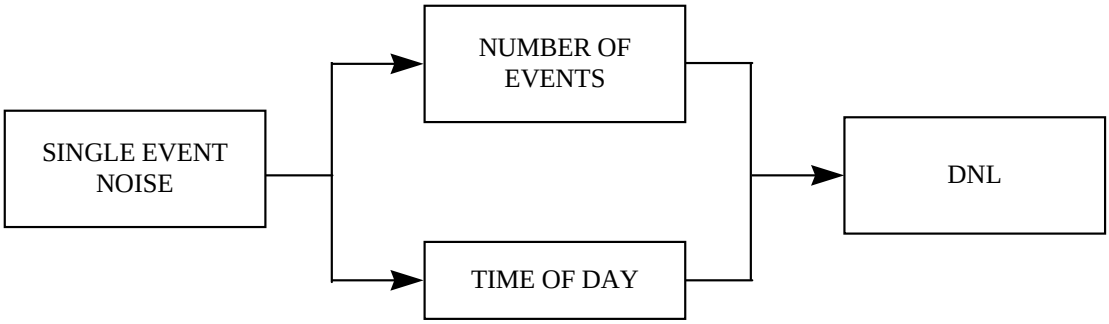


Figure 3-4 Day-Night Average A-Weighted Sound Level



similar to elevation contours shown on topographic maps. Contours are generated as 5 dB intervals beginning at DNL 65 dBA, the maximum level considered acceptable for unrestricted residential use. The contours produced by NOISEMAP are used in the averaged noise analysis sections in this EA. While there is no technical reason why a lower level cannot be measured or calculated for comparison purposes, DNL 65 dBA:

- has been adopted by the DoD, USEPA, FAA, and HUD as the threshold for comparing and assessing community noise effects; and
- represents a noise exposure level normally dominated by aircraft noise and not other community or nearby highway noise sources.

Although the number of military and civil aircraft operations at an installation usually varies from day to day, NOISEMAP requires input of the specific numbers of daily flight and

aircraft maintenance engine runup operations. The Air Force does not follow the FAA's use of the "average annual day" in which annual operations are averaged over an entire 365-day year. Neither does the Air Force use the "worst-case day" since it typically does not represent the typical noise exposure. Instead, the Air Force uses the "average busy day" concept in which annual operations for an aircraft type are averaged over the number of flying days per year by that aircraft type. Non-flying days (*e.g.*, weekends or holidays) are not used in computing the "average busy day" operations. The "average busy day" concept is used for noise modeling Air Force aircraft in this EA.

As discussed in the preceding paragraph, DNL 65 dBA is used in all states except California as the threshold for comparing and assessing community noise effects. In California, contours are generated beginning at CNEL 60 dBA, the level at which residential use is conditionally acceptable. The contours produced by NOISEMAP are used in the day-night average sound analysis sections in this EA.

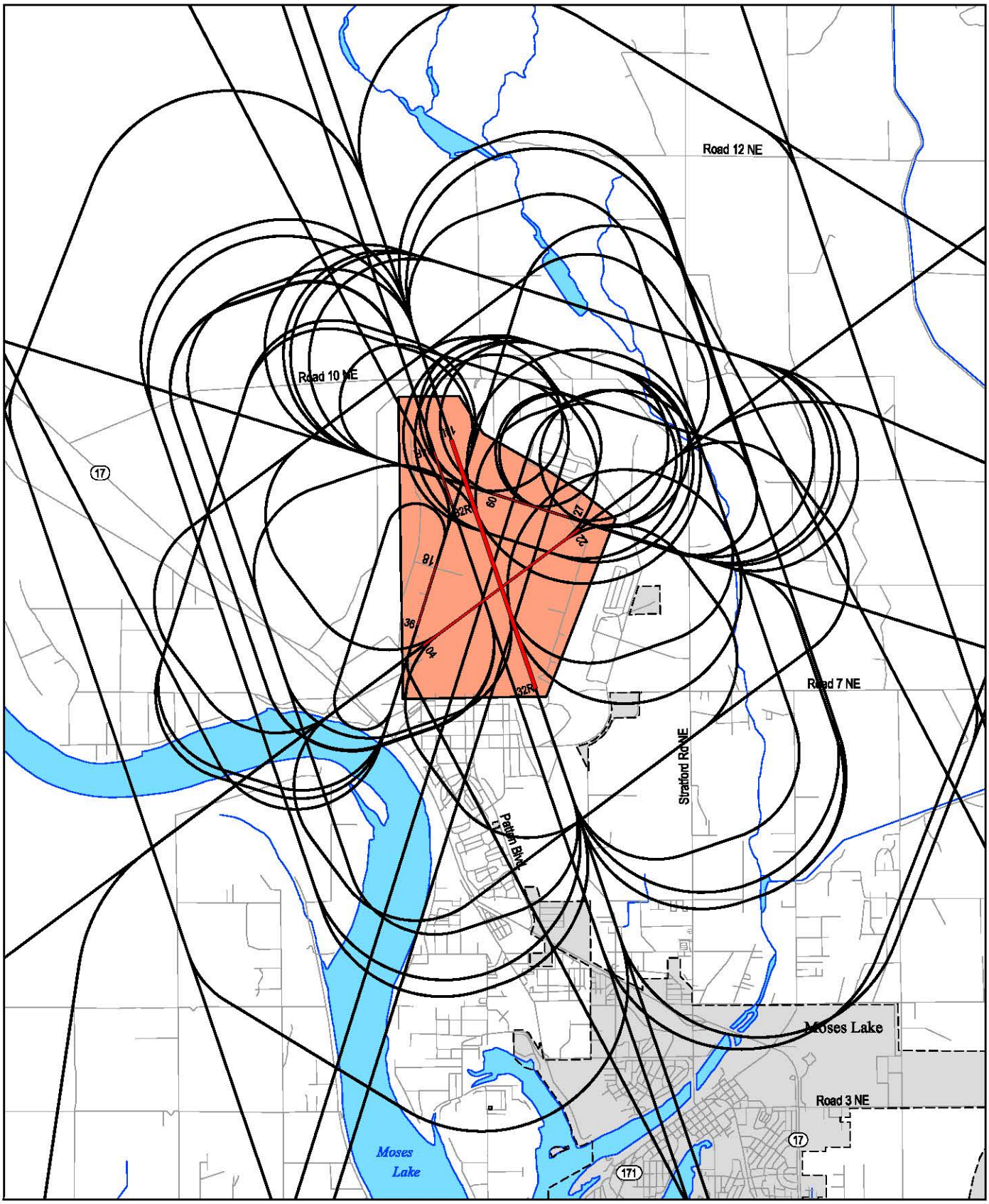
3.1.2.2 Baseline Noise Analysis

Single Event Noise Analysis

Table 3.1-3 lists the SEL and L_{max} values for the aircraft that operate at the Grant County Airport at takeoff power and at varying slant range distances from the aircraft.

Averaged Noise Analysis

The primary source of noise in the vicinity of Grant County Airport is airfield operations. Baseline noise conditions are based on the average daily airfield operations shown on Table 2.2-1 (No Action Alternative). About 218 average daily airfield operations occur at Grant County Airport under the baseline condition. The operations in Table 2.2-1 represent the 2006 condition at Grant County Airport. Figure 3-5 shows the baseline condition aircraft ground tracks, and Figure 3-6 depicts the noise exposure area for the baseline.



Grant County Airport

LEGEND

- Ground Track
- Runway
- Roadway
- City Limits
- Grant County International Airport

N

0 7,000

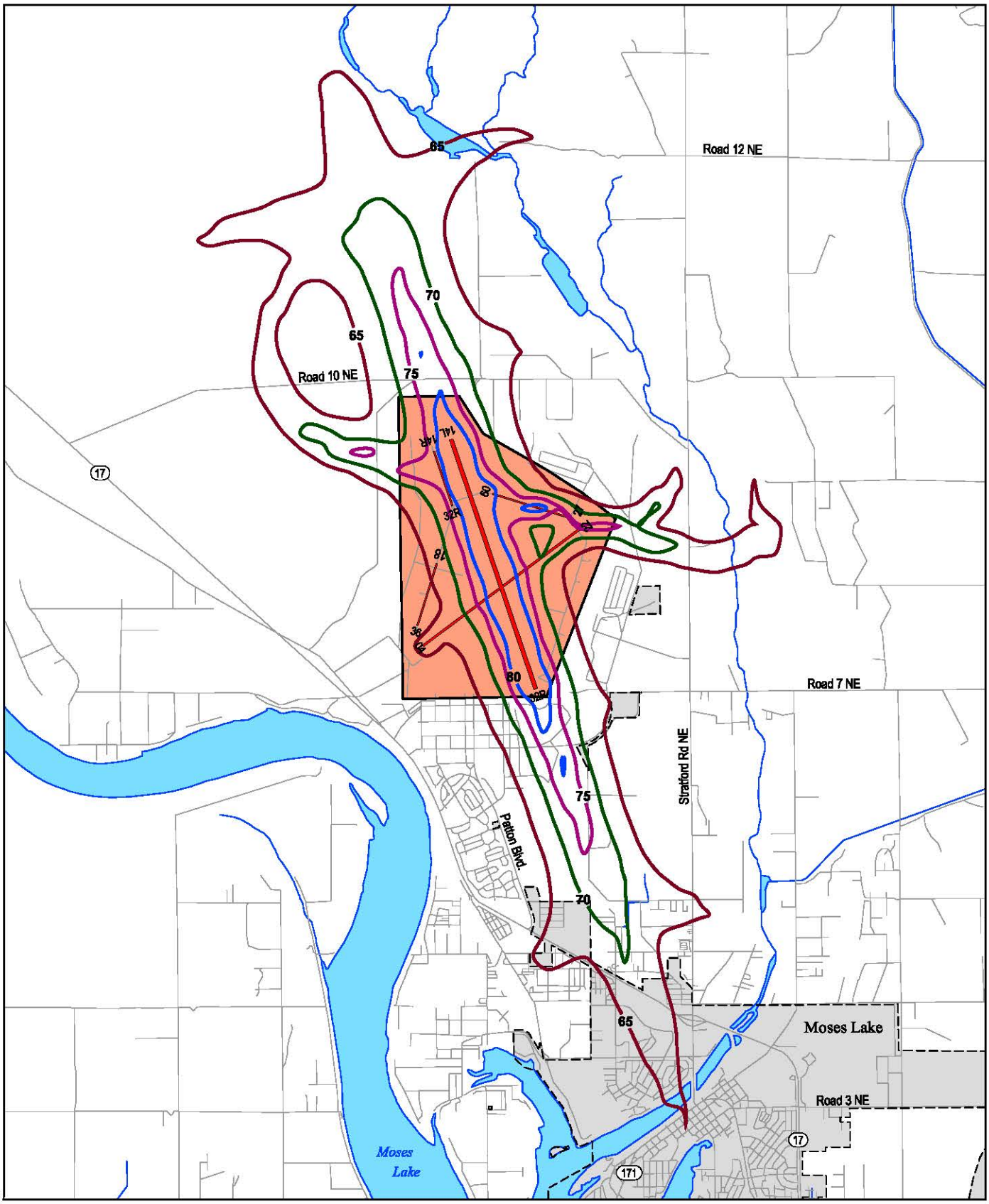
Feet

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Baseline Aircraft Ground Tracks, Grant County Airport

Figure 3-5

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Baseline Noise Contours, Grant County Airport

Figure 3-6

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Table 3.1-3 Aircraft Noise Levels in Sound Exposure Level and Maximum Sound Level as a Function of Slant Range Distance from Aircraft, Grant County Airport

Aircraft	200 Feet	300 Feet	500 Feet	1,000 Feet	2,000 Feet
SEL					
B-747-200	116	113	109	103	96
B-767 CF	109	106	102	97	91
B-737-300	105	103	99	94	88
DC-9-30QN9	121	118	115	110	105
C-172	88	86	82	76	73
C-17	115	112	108	102	96
P-3	106	103	100	94	88
EA-6B	126	123	119	114	107
Lmax					
B-747-200	114	110	104	96	88
B-767 CF	107	104	99	91	83
B-737-300	102	98	93	86	79
DC-9-30QN9	119	116	111	104	97
C-172	85	81	77	70	63
C-17	113	109	104	96	88
P-3	104	100	95	88	80
EA-6B	126	122	117	110	101

Note: Values reflect dBA. Data not listed for B-777, C-208, and C-210 because the Flyover Noise Calculator (USAF 2002) does not contain data for the aircraft. The T-41 was used to determine the noise values for the C-172 because the Flyover Noise Calculator does not contain data for the C-172. The T-41 is the military version of the C-172.

Table 3.1-4 presents the results of over a dozen studies on the relationship between noise and annoyance levels. This relationship was suggested by Schultz (1978) and was reevaluated for use in describing the reaction of people to environmental noise (Fidell, *et al.* 1988). These data provide a perspective on the level of annoyance that might occur. For example, 12 to 22 percent of people exposed on a long-term basis to DNL or CNEL of 65 to 70 dBA are expected to be potentially highly annoyed by noise events. The study results summarized in Table 3.1-4 are based on outdoor noise levels.

Figure 3-6 shows the DNL noise contours for the baseline average daily airfield operations condition at Grant County Airport. Table 3.1-5 lists the number of acres (land area off-airport), the number of people within the DNL 65 dBA and greater noise exposure area, and the estimated number of people who might be potentially highly annoyed by noise at those levels. People would be exposed to aircraft noise in three of the four noise zones (see Table 3.1-5), with the DNL 65-70 dBA noise zone containing 1,969 of the 2,085 persons exposed to DNL 65-dBA and greater. These 2,085 persons would equate to 17 percent of the estimated 12,373 persons (based on 2000 census data) who live within the approximate 5-mile radius area associated with airfield airspace environment. This area within the approximate 5-mile radius includes the airspace allocated to the air traffic control tower and is the area in which closed patterns and maneuvering for takeoffs and landings is accomplished.

Table 3.1-4 Theoretical Percentage of Population Potentially Highly Annoyed by Noise Exposure

DNL or CNEL Intervals in dBA	Percentage of Persons Highly Annoyed
<65	<12
65-70	12-22
70-75	22-37
75-80	37-54
>80	61

Note: Noise impacts on individuals vary as do individual reaction to noise. This is a general prediction of the percent of the community potentially highly annoyed based on environmental noise surveys conducted around the world.

Source: Adapted from NAS 1977

Effect of Aircraft Noise on Structures

Possible noise-related impacts on structures should be considered in the context of accepted research results. The recent development of larger commercial and military aircraft has prompted research into the effects of noise vibrations on both modern and historic structures.

Table 3.1-5 Baseline Noise Exposure, Grant County Airport

	DNL Interval (dBA)				
Category	**65-70**	**70-75**	**75-80**	**80+**	**Total**
Acres	4,446	1,354	427	35	6,262
People	1,969	114	2	0	2,085
People Potentially Highly Annoyed	433	42	1	0	475

Note: Acres reflect only off-Base land area. Population data used to determine the number of people within a noise zone were obtained from the United States Census Bureau 2000 census. It was assumed that population was equally distributed within a census tract area to estimate affected population. Using the noise contour information, the number of acres of land in each noise zone (e.g., DNL 65-70 dBA, 70-75 dBA, 75-80 dBA, and 80 dBA and greater) were divided by the number of acres of land in each census block to determine the portion of the census tract within each noise zone. The population total in each block-group was then multiplied by this ratio to estimate affected population within each zone. This process was used throughout the EA. People highly annoyed were determined by multiplying the total number of people in the noise zone times the higher percent number for the interval in Table 3.1-4

Some building materials are more sensitive than others to external pressures and induced vibrations. Windows with large panes of glass are most vulnerable. Plaster walls in frame buildings are susceptible to cracking. Components least likely to experience damage are masonry walls of stone, concrete block, adobe, or brick. Appropriate building design can also reduce the possibility of damage from vibration. Research has not proven categorically that old buildings are more vulnerable to vibration than newer buildings, but prudence dictates special consideration be given to unique structures of historical significance. Table 3.1-6 lists the effects of noise on structures and Table 3.1-3 presents the L_{max} for the aircraft operating at Grant County Airport. C-17 aircraft, which currently operate at the airport and which are also associated with the Proposed Action, produce a maximum sound level of 113 dBA when the aircraft is directly overhead at 200 feet AGL on takeoff. The aircraft producing the greatest

maximum sound level is the EA-6B, which produces 126 dBA at 200 feet AGL. These sound levels would be below the level at which damage to structures would be anticipated (*i.e.*, 127 dBA).

Table 3.1-6 Effects of Noise on Structures

dBA	psf[a]	Effects Summary	
0-127	0-1	Typical community exposures	No damage to structures No significant public reaction
127-131	1.0-1.5	(generally below 2 psf)	Rare minor damage Some public reaction
131-140	1.5-4.0	Window damage possible, increasing public reaction, particularly at night	
140-146	4.0-8.0[b]	Incipient damage to structures	
146-171	8.0-144.0	Measured booms at minimum altitudes experienced by humans; no injury	
185	720.0	Estimated threshold for eardrum rupture (maximum overpressure)	
194	2,160.0	Estimated threshold for lung damage (maximum overpressure)	

psf = pounds per square foot

With the exception of window glass breakage, booms less than 11 psf should not damage "building structures in good repair" (Clarkson and Mayes 1972).

Source: Speakman 1992.

3.1.3 Land Use

The Grant County Comprehensive Plan (1977) includes the Grant County Airport and the land surrounding it. Objectives of the Plan include preserving agricultural land, avoiding leapfrog development, preserving open space for recreational purposes, and locating industries on non-agricultural land a suitable distance from communities so as not to adversely affect existing residential development. The Comprehensive Plan of the City of Moses Lake (1981) addresses the area within the City's corporate limits and the fringe urban area, to include Grant County Airport (Grant County International Airport 2005).

The Grant County Airport is located northwest of Moses Lake in Grant County, Washington. The largest on-airport land use is air operations, and the second largest is open/agricultural. The on-airport aviation support land use area includes the terminal and fire fighting training area. Industrial land use is included in the aviation support land use category (Grant County International Airport 2005).

The major off-airport land use in the area around the airport is open/agricultural. Undeveloped areas occur on all sides of the airport. The lake is southwest of the airport, and ranchland occurs to the west and north. There are several houses north of the airport, but the density is less than 5 acres per house, and the land is classified as open/agricultural. Land southeast of the airport is cultivated farmland. The area south of the airport toward the City of Moses Lake is the most developed. However, there are many large open areas and vacant lots between the airport and the City of Moses Lake.

Unified Facilities Criteria (UFC) 3-260-01, *Airfield and Heliport Planning and Design*, establishes clear zones (CZ) at the ends of the runways for military airports. However, FAA guidance does not establish clear zones at civil airports. Instead, FAA AC 150/5300-13, *Airport Design*, establishes runway protection zones (RPZ) at civil airports. An RPZ is

comparable to a CZ and is established to enhance the protection of people and property. The dimensions for an RPZ for a precision instrument approach runway from which large aircraft operate are: 2,500 feet long; 1,000 feet wide at the inner end, which is 200 feet from the runway end; and 1,750 feet wide at the outer end. The total area of the RPZ is 78.914 acres.

The DoD Air Installation Compatible Use Zone program establishes the guidance for land use planning around Air Force installations. Land use incompatibility under the AICUZ program considers two factors: noise and safety. The FAA's Federal Aviation Regulation (FAR) Part 150, *Airport Noise Compatibility Planning*, is a land use compatibility planning program comparable to the DoD AICUZ program. Part 150 contains guidance for the FAA program and identifies land use compatibility based only on noise. FAA Advisory Circular 150/5300-13 contains the guidance for safety in land use planning (Section 4.1.3). Additionally, FAR Part 77, Subpart C, establishes airspace imaginary surfaces that control obstructions to air navigation, thereby influencing safety at and around civil airports.

Federal Aviation Regulation Part 150, *Airport Noise Compatibility Planning*, provides a means for civilian airports to reduce the number of people affected by noise, consistent with airport operations. The FAR Part 150 process provides airport operators with the procedures, standards, and methods governing the development, submission, and review of airport Noise Exposure Maps (typically referred to as noise contours) and airport Noise Compatibility Programs.

The FAR Part 150 process is voluntary, and the Grant County Airport has not prepared a FAR Part 150 study. The Airport, however, has prepared an airport master plan in accordance with FAA guidance (Grant County International Airport 2005). The airport master plan is the planner's concept of the long-term development of an airport. Master plans are prepared to support modernization of existing airports and creation of new airports. The goal of a master plan is to provide guidelines for future airport development that will satisfy aviation demand, while at the same time resolve the aviation, environmental, and socioeconomic issues existing in the community. The airport operator is encouraged to accomplish a noise compatibility planning program and noise exposure maps as part of the master planning process. Noise compatibility planning for an airport master plan is carried out following the guidelines in FAR Part 150.

3.1.4 Air Quality

3.1.4.1 Air Pollutants and Regulations

Air quality in any given region is measured by the concentration of various pollutants in the atmosphere, typically expressed in units of parts per million (ppm) or in units of micrograms per cubic meter ($\mu g/m^3$). Air quality is not only determined by the types and quantities of atmospheric pollutants, but also by surface topography, size of the air basin, and by prevailing meteorological conditions.

The CAA, as amended in 1977 and 1990, provides the basis for regulating air pollution to the atmosphere. Different provisions of the CAA apply depending on where the source is

located, which pollutants are being emitted, and in what amounts. The CAA required the USEPA to establish upper limits for certain criteria pollutants. These criteria pollutants are usually referred to as the pollutants for which the USEPA has established National Ambient Air Quality Standards (NAAQS). The ceilings were based on the latest scientific information regarding the effects a pollutant may have on public health or welfare. Subsequently, the USEPA promulgated regulations that established NAAQS. Two classes of standards were established: primary and secondary. Primary standards define levels of air quality necessary, with an adequate margin of safety, to protect public health, including the health of "sensitive" populations such as asthmatics, children, and the elderly. Secondary standards define levels of air quality necessary to protect public welfare (*e.g.,* decreased visibility, damage to animals, crops, vegetation, wildlife, and buildings) from any known or anticipated adverse effects of a pollutant.

Air quality standards are currently in place for six pollutants or "criteria" pollutants: carbon monoxide (CO), nitrogen dioxide (NO_2), ozone (O_3), sulfur oxides (SO_x, measured as sulfur dioxide [SO_2]), lead (Pb), and particulate matter with an aerodynamic diameter less than or equal to 10 micrometers (PM_{10}) and 2.5 micrometers ($PM_{2.5}$). There are many suspended particles in the atmosphere with aerodynamic diameters larger than 10 micrometers. The collective of all particle sizes is commonly referred to as total suspended particulates (TSP). TSP is defined as particulate matter as measured by the methods outlined in 40 CFR Part 50, Appendix B. The NAAQS are the cornerstone of the CAA. Although not directly enforceable, they are the benchmark for establishment of emission limitations by the states for the pollutants USEPA determines may endanger public health or welfare.

Ozone (ground-level ozone), which is a major component of "smog," is a secondary pollutant formed in the atmosphere by photochemical reactions involving previously emitted pollutants or precursors. Ozone precursors are mainly nitrogen oxides (NO_x) and volatile organic compounds (VOC). NO_x is the designation given to the group of all oxygenated nitrogen species, including nitric oxide (NO), NO_2, nitrous oxide (N_2O), and others. However, only NO, NO_2, and N_2O are found in appreciable quantities in the atmosphere. VOCs are organic compounds (containing at least carbon and hydrogen) that participate in photochemical reactions and include carbonaceous compounds except metallic carbonates, metallic carbides, ammonium carbonate, carbon dioxide (CO_2), and carbonic acid. Some VOCs are considered non-reactive under atmospheric conditions and include methane, ethane, and several other organic compounds.

As noted above, O_3 is a secondary pollutant and is not directly emitted from common emissions sources. Therefore, to control O_3 in the atmosphere, the effort is made to control NO_x and VOC emissions. For this reason, NO_x and VOCs emissions are calculated and reported in emission inventories.

The CAA does not make the NAAQS directly enforceable. However, the Act does require each state to promulgate a state implementation plan that provides for "implementation, maintenance, and enforcement" of the NAAQS in each Air Quality Control Region (AQCR) in the state. The CAA also allows states to adopt air quality standards more

stringent than the federal standards. The ambient air quality standards for Washington are defined in Chapter 43.21A, Department of Ecology, Revised Code of Washington. Table 3.1-7 lists the national, Washington, and California ambient air quality standards.

Based on the requirements outlined in USEPA's general conformity rule published in 58 Federal Register 63214 (November 30, 1993) and codified at 40 CFR Part 93, Subpart B (for federal agencies), a conformity analysis is required to analyze whether the applicable criteria air pollutant emissions associated with the project equal or exceed the threshold emission limits that trigger the need to conduct a formal conformity determination. The intent of the conformity rule is to encourage long range planning by evaluating the air quality impacts from federal actions before the projects are undertaken. This rule establishes an elaborate process for analyzing and determining whether a proposed project in a nonattainment area conforms to the SIP and federal standards. The General Conformity Rule applies to federal actions occurring in air basins designated as nonattainment for criteria pollutants or areas designated as maintenance areas. Federal actions occurring in air basins that are in attainment of the NAAQS are not subject to the Conformity Rule.

Table 3.1-7 National, Washington, and California Ambient Air Quality Standards

Criteria Pollutant	Averaging Time	Primary NAAQS[2,3,4]	Secondary NAAQS[3,5]	Washington Standards	California Standards[1]
Carbon Monoxide	8-hour 1-hour	9 ppm (10,000 μg/m3) 35 ppm (40,000 μg/m3)	No standard No standard	9 ppm (10,000 μg/m3) 35 ppm (40,000 μg/m3)	9 ppm (10,000 μg/m3) 20 ppm (20,000 μg/m3)
Lead	Quarterly 30 Day Ave	1.5 μg/m3 No Standard	1.5 μg/m3 No Standard	1.5 μg/m3 No Standard	No Standard 1.5 μg/m3
Nitrogen Oxides (measured as NO2)	Annual 1-Hour	0.053 ppm (100 μg/m3) No Standard	0.053 ppm (100 μg/m3) No Standard	0.05 ppm (100 μg/m3) No Standard	No Standard 0.25 ppm (470 μg/m3)
Ozone[e]	8-hour 1-hour	0.08 ppm (157 μg/m3)[6] No Standard	0.08 ppm (157 μg/m3) No Standard	0.08 ppm (157 μg/m3)[6] No Standard	0.07 ppm (137 μg/m3) 0.09 ppm (180 μg/m3)
Particulate Matter (measured as PM10)	Annual 24-hour	50 μg/m3[7] 150 μg/m3	50 μg/m3[7] 150 μg/m3	50 μg/m3 150 μg/m3	20 μg/m3 50 μg/m3
Particulate Matter (measured as PM2.5)[e]	Annual 24-hour	15 μg/m3 65 μg/m3	15 μg/m3 65 μg/m3	15 μg/m3 65 μg/m3	12 μg/m3 65 μg/m3
Sulfur Oxides (measured as SO2)	Annual 24-hour 3-hour 1-Hour	0.03 ppm (80 μg/m3) 0.14 ppm (365 μg/m3) No standard No Standard	No standard No standard 0.5 ppm (1,300 μg/m3) No Standard	0.02 ppm (52 μg/m3) 0.1 ppm (261 μg/m3) No standard 0.4 ppm (1,045 μg/m3)	No Standard 0.04 ppm (105 μg/m3) No Standard 0.25 ppm (655 μg/m3)

1 *California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, suspended particulate matter – PM10, PM2.5, are values not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.*

2 *National standards (other than ozone, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest eight hour concentration in a year, averaged over three years, is equal to or less than the standard. For PM_{10}, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration is above 150 $\mu g/m^3$ is equal to or less than one. For $PM_{2.5}$, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.*

3 *Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based on reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.*

4 National Primary Standards: The levels of air quality necessary to protect the public health with an adequate margin of safety. Each state must attain the primary standards no later than three years after the state implementation plan is approved by the USEPA

5 National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant. Each state must attain the secondary standards within a "reasonable time" after the state implementation plan is approved by the USEPA.

6 New federal 8-hour ozone and fine particulate matter standards were promulgated by USEPA on July 18, 1997. The federal 1-hour ozone standard continues to apply in areas that violated the standard.

7 Due to a lack of evidence linking health problems to long-term exposure to coarse particle pollution, the agency revoked the annual PM_{10} standard in 2006 (effective December 17, 2006).

Sources: CARB 2006 and USEPA 2007.

The NAAQS were revised in 2006 for the particulate matter (PM_{10} and $PM_{2.5}$) criterion to provide increased protection of public health and welfare. The previous annual PM_{10} standard of 50 $\mu g/m^3$ is being revoked because the available evidence does not suggest an association between long-term exposure to coarse particles at current ambient levels and health effects. The 24-hour standard of 150 $\mu g/m^3$ for PM_{10} remains in effect. The USEPA has revised the 24-hour $PM_{2.5}$ standard from 65 $\mu g/m^3$ to 35 $\mu g/m^3$. This reduction was enacted to provide increased protection against health effects associated with short-term exposure. The annual standard for $PM_{2.5}$ remains at 15 $\mu g/m^3$.

Threshold (*de minimis*) rates of emissions were established in the final Rule to focus conformity requirements on those federal actions with the potential to have significant air quality impacts. With the exception of lead, the *de minimis* levels are based on the CAA's major stationary source definitions for the criteria pollutants (and precursor criteria pollutants) and vary by the severity of the nonattainment area. A conformity determination is required when the annual total of direct and indirect emissions from a federal action occurring in a nonattainment or maintenance area equals or exceeds the annual *de minimis* levels.

The *de minimis* level for O_3 applies to each precursor, VOC, and NO_X. The *de minimis* level for $PM_{2.5}$ applies to each precursor (as deemed significant), SO_2, NO_X, and VOC or ammonia. Table 3.1-8 lists the *de minimis* levels by pollutant applicable for federal actions in nonattainment areas. Table 3.1-9 lists the *de minimis* levels by pollutant applicable for federal actions in maintenance areas.

Table 3.1-8 *De Minimis* Levels for Criteria Pollutants in Nonattainment Areas

Pollutant	Designation	Tons/Year
Ozone*	Serious Nonattainment	50
	Severe Nonattainment	25
	Extreme Nonattainment	10
	Other nonattainment areas outside of ozone transport region	100
	Marginal and moderate nonattainment areas inside ozone transport region	50/100
Carbon Monoxide	All nonattainment areas	100
Sulfur Dioxide**	All nonattainment areas	100
Lead	All nonattainment areas	25
Nitrogen Dioxide	All nonattainment areas	100
Particulate Matter	Moderate nonattainment (PM_{10})	100
	Serious Nonattainment (PM_{10})	70
	Nonattainment ($PM_{2.5}$)	100

** includes precursors: VOC or NO_X*
*** Sulfur dioxide is often reported as sulfur oxides (SO_X)*
Source: 40CFR51.853

Table 3.1-9 *De Minimis* Levels for Criteria Pollutants in Maintenance Areas

Pollutant	Designation	Tons/Year
Ozone (NOx)	All maintenance areas	100
Ozone (VOCs)	Maintenance areas inside an ozone transport region	50
	Maintenance areas outside of an ozone transport region	100
Carbon Monoxide	All maintenance areas	100
Sulfur Dioxide	All maintenance areas	100
Lead	All maintenance areas	25
Nitrogen Dioxide	All maintenance areas	100
Particulate Matter	All maintenance areas (PM_{10} and $PM_{2.5}$)	100

Source: 40CFR51.853

3.1.4.2 Regional Air Quality

The fundamental method by which the USEPA tracks compliance with the NAAQS is the designation of a particular region as "attainment" or "nonattainment." Based on the NAAQS, each state is divided into three types of areas for each of the criteria pollutants:

- Those in compliance with the NAAQS (attainment);
- Those that do not meet the ambient air quality standards (nonattainment); and
- Those areas where a determination of attainment/nonattainment cannot be made due to a lack of monitoring data (unclassifiable – treated as attainment until proven otherwise).

Generally, areas in violation of one or more of the NAAQS are designated nonattainment and must comply with stringent restrictions until all standards are met. In the case of O_3, CO, and PM_{10}, USEPA divides nonattainment areas into different categories, depending on the severity of the problem in each area. Each nonattainment category has a separate deadline for attainment and a different set of control requirements under the SIP.

The Grant County Airport is located in Grant County within the Eastern Washington-Northern Idaho Interstate AQCR 62. The AQCR includes the Idaho Counties of Benewah, Kootenai, Latah, Nez Perce, and Shoshone, and the Washington Counties of Adams, Asotin, Columbia, Garfield, Grant, Lincoln, Spokane, and Whitman. Grant County is within the jurisdiction of the Department of Ecology Eastern Region air pollution control district (APCD). Boundaries of the Eastern Region APCD include the Washington Counties of Adams, Asotin, Columbia, Ferry, Garfield, Grant, Lincoln, Pend Oreille, Stevens, Walla Walla, and Whitman. The USEPA designated the air quality within AQCR 62 as of July 2006 as better than national standards for SO_2; unclassified/attainment for CO, 8-hour O_3, and $PM_{2.5}$; nonattainment for PM_{10} (due to Shoshone County in Idaho, about 175 miles east of Grant County Airport); and cannot be classified as better than national standards for NO_2.

3.1.4.3 Baseline Air Emissions

An air emissions inventory is an estimate of total mass emissions of pollutants generated from a source or sources over a period of time, typically a year. Accurate air emissions inventories are needed for estimating the relationship between emissions sources and air quality. Quantities of air pollutants are generally measured in pounds per year or tons per year (tpy). All emission sources may be categorized as either mobile or stationary emission sources. Stationary emission sources may include boilers, generators, fueling operations, industrial processes, and burning activities, among others. Mobile emission sources typically include vehicle operations. Table 3.1-10 lists the baseline air emissions inventory for AQCR 62, and Table 3.1-11 presents the emissions from the baseline aircraft operations at the Grant County Airport. Emissions for aircraft operations throughout this EA were calculated by using Air Emissions Inventory Guidance Document for Mobile Sources at Air Force Installations, IERA-RS-BR-SR-2001-0010, January 2002 (Revised December 2003).

Table 3.1-10 Baseline Air Emissions Inventory, Air Quality Control Region 62

Criteria Air Pollutant	CO (tpy)	VOC (tpy)	NO_x (tpy)	SO_x (tpy)	PM_{10} (tpy)	$PM_{2.5}$ (tpy)
AQCR 2001 Total	394,296	69,253	56,620	9,077	134,609	38,987

Note: VOCs are not an air pollutant criterion. However, VOCs are reported because, as an O_3 precursor, it is a controlled pollutant. Data reflected as tpy.
Source: AirData 2007.

Table 3.1-11 Emissions from Baseline Aircraft Operations, Grant County Airport

Activity	CO (tpy)	VOC (tpy)	NO_x (tpy)	SO_x (tpy)	PM_{10} (tpy)	$PM_{2.5}$ (tpy)
Airfield Operations	543	213	652	36	125	124

Note: Emissions based on aircraft operations listed in Table 2.2-1.

3.1.5 Cultural Resources

Cultural resources include prehistoric and historical archaeological sites, buildings, structures, districts, artifacts, objects, or any other physical evidence of human activity considered important to a culture, subculture, or community for scientific, traditional, or religious purposes. Pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended, and its implementing regulations at 36 CFR 800, federal agencies must take into consideration the potential effect of an undertaking on "historic properties," which refers to cultural resources listed in, or eligible for inclusion in, the NRHP. Sites not yet evaluated are considered potentially eligible for inclusion in the NRHP and, as such, are afforded the same regulatory consideration as nominated properties.

Numerous laws and regulations require federal agencies consider the effects of a proposed action on cultural resources. These laws and regulations stipulate a process for compliance, define the responsibilities of the federal agency proposing the action, and prescribe the relationship between other involved agencies (*e.g.*, State Offices of Historic Preservation, the Advisory Council on Historic Preservation). Only those cultural resources determined to be significant under cultural resource legislation are subject to protection or consideration by a federal agency. The quality of significance is considered in terms of applicability of the NRHP criteria. Significant cultural resources, either prehistoric or historic in age, are referred to as "historic properties."

Cultural resources on Air Force installations are managed in accordance with environmental laws and regulations that include: AFI 32-7065, *Cultural Resources Management*; 32 CFR 989; EO 11593 of 1971; NHPA of 1966, as amended; Archaeological and Historic Preservation Act of 1974 (PL 93-291); the Archaeological Resources Protection Act of 1979 (PL 96-95); the American Indian Religious Freedom Act (AIRFA) of 1978 (PL 95-341); and, the Native American Graves Protection and Repatriation Act (NAGPRA) of 1990 (PL 101-601). In addition, any proposed undertaking must comply with the State Historic Preservation Office (SHPO) guidelines.

For this analysis, the Region of Influence (ROI) is synonymous with the Area of Potential Effect, as defined by the NHPA. The ROI for the analysis of cultural resources includes all areas subject to alteration and/or disturbance to accomplish support of the interim LZ at Grant County Airport as defined in Subchapter 2.2.2. The ROI for the Proposed Action on Grant County Airport is composed solely of the built environment (*i.e.*, the airfield). One hundred percent of the ROI on the Grant County Airport has been disturbed previously by some form of construction activity.

Identification of cultural resources potentially impacted by the proposed action at the Grant County Airport was accomplished by reviewing the 2005 Grant County International Airport Master Plan Update (URS Corporation 2005) and the National Register Information System (NRIS) (National Park Service [NPS] 2007a). Additional information was gathered from the internet on Moses Lake Army Air Base and Larson AFB, previous incarnations of the Grant County Airport.

3.1.5.1 Archaeological Resources

Archaeological resources are prehistoric or historic places where human activity has measurably altered the earth or left deposits of physical remains. Archaeological resources may include some surface deposits and below ground (subsurface) deposits. Prehistoric archaeological resources may include village sites, campsites, lithic scatters, burials, hearths (or hearth features), processing sites, caves, and rock shelters. Historical archaeological resources may include farmsteads, roads, privies, trash deposits, and/or middens.

Based on site files searches conducted at the Washington State Office of Archeological and Historic Preservation for the Master Plan Update (URS Corporation 2005), no cultural resources have been identified at the Grant County Airport; however, no archaeological surveys have ever been conducted. Three archaeological sites are listed on the NRHP for Grant County, although none are located near Moses Lake (NPS 2007a). The Grant County Airport project area was previously disturbed during original construction of the flightline in 1942.

3.1.5.2 Historical Resources

For purposes of this analysis, historical resources include buildings and structures and other physical remains of historic significance present above the ground. Historical resources date from the period of initial European contact in this area (*circa* A.D. 1775) and extend to the present. These may include houses, homesteads, farmsteads (and associated support structures or buildings), cabins, forts, schools, bridges, dams, logging sites, military facilities, structures, or buildings, and items of a similar nature.

Five buildings or structures are listed on the NRHP for Grant County, although none are located near Moses Lake (NPS 2007a). The Grant County Airport was established in 1942 as Moses Lake Army Air Depot, a temporary training center, and used to train P-38 pilots and B-17 Flying Fortress combat crews (Global Security 2007b). The facility was placed on standby status in 1945, but was used for the following 3 years as a test site for two of Boeing's aircraft, the B-47 Stratojet and the B-50 (USAF 1961). The facility reopened in 1948 under the Air Defense Command, and in 1950 was re-designated Larson AFB in honor of Major Donald A. Larson, a World War II pilot from Yakima, Washington, killed in action over Germany in 1944. Larson AFB was placed under the Tactical Air Command in 1952. The Air Materiel Command Flight Test Center at Larson AFB tested B-52s from 1955 through 1959 (URS Corporation 2005). During this time, Boeing built a $5.8 million hangar to accommodate eight B-52s or KC-135 tankers (Global Security 2007b); the hangar was built by the Seattle engineering firm Worthington & Skilling and was 1,068 feet by 372 feet (Building 5820) (Global Security 2007b). The Strategic Air Command assumed command of Larson AFB in 1960 and included B-52D, KC-135 and Titan I intercontinental ballistic missile missions (URS Corporation 2005). Larson AFB was declared surplus in 1964 and closed in 1966.

Family housing was sold to the Grant County Housing Authority and the other non-operational buildings (dormitories, commercial, and recreational facilities) and three hangars

were transferred to the Big Bend Community College. The flightline and industrial facilities were transferred to the Port of Lake Moses in 1966 (URS Corporation 2005).

Historic buildings at the Grant County Airport consist of twenty-nine World War II-era structures and Cold War buildings (Table 3.1-12) including hangars, warehouse, shops, administrative buildings, and the airport terminal. Most of these historic buildings are considered in poor to fair condition (URS Corporation 2005), unless renovated in the last 15 years. It is unlikely that any of these buildings would be considered NRHP-eligible due to their lack of physical integrity and the loss of historic context with the original layout of the first Moses Lake Army Air Depot, and later as Larson AFB.

Table 3.1-12 Larson AFB Era Historic Resources at Grant County Airport

Bldg.	Original Function	Year Built	Renovated
401	Hangar	1952	
408	Hangar	1942-1964	
425	Storage	1942-1964	
429	Administrative	1942-1964	
431	Storage	1942-1964	
1202	Terminal	1998	
2101	ARFF Department	1942-1964	Yes, 1992
2106	Hangar	1942-1964	
2107	Hangar	1942-1964	
2111	Hangar	1942-1964	
2113	Administrative	1942-1964	
2114	Shop	1942-1964	Yes
2203	Hangar	1942-1964	
2322	Shop	1942-1964	Yes
2521	Administrative	1942-1964	
2601	Storage	1942-1964	
2702	Shop	1942-1964	
2703	Warehouse/Shop	1942-1964	Yes
2805	Maintenance	1942-1964	Yes
2901	Warehouse/Shop	1942-1964	Yes
2903	Warehouse/Shop	1942-1964	Yes
3101	Warehouse/Shop	1942-1964	
3401	Hangar	1942-1964	Yes
4006	Hangar	1942-1964	
5820	Hangar	1942-1964	Yes, 1999
5825	Hangar	1942	Yes

Source: URS Corporation 2005: Appendix G

3.1.5.3 Native American Interests

Native American resources can include, but are not limited to, archaeological sites, burial sites, ceremonial areas, caves, mountains, water sources, trails, plant habitat or gathering areas, or any other natural area important to a culture for religious or heritage reasons. NRHP-eligible traditional sites are subject to the same regulations, and afforded the same protection, as other types of historic properties. The ROI for Native American traditional

resources consists of those areas associated with project activities at the Grant County Airport.

Early and effective participation of Native American tribes and groups is an integral component to the successful completion of the Section 106 process. Three federally recognized Native American groups that could be affected by the Proposed Action have been identified (Table 3.1-13). As lead federal agency, the Air Force initiated consultation with three federally recognized Native American tribes, pursuant to 36 CFR 800.2, to ensure that any sites of traditional cultural value are identified and adequately considered under the proposed action. The Air Force sent correspondence to the tribes announcing the action and requesting concerns regarding the proposed action (see Appendix C).

Table 3.1-13 Native American Groups Identified for Grant County Airport

State	Tribal Name
Washington	Colville Confederated Tribes
	Spokane Nation
	Yakama Tribal Council

3.2 TRAVIS AFB

3.2.1 Aircraft Operations and Safety and Bird/Wildlife-Aircraft Strike Hazard

3.2.1.1 Aircraft Operations

The background information in Subchapter 3.1.1.1 concerning airspace and flight pattern locations also applies to Travis AFB. The Travis AFB Radar Approach Control (RAPCON) provides radar vectoring, sequencing, and separation service between participating VFR and all IFR aircraft operating within the airspace around the Base as well as to aircraft arriving and departing the Base. The actual airspace allocated to RAPCON is governed by the direction of traffic flow in the primary San Francisco Bay area airports and wind direction/velocity at Travis AFB. The airspace beginning about 20 miles south of Travis AFB contains a high volume of operations associated with arrivals and departures in the San Francisco-Oakland area. There are seven public and private use airports within the controlled airspace associated with Travis AFB. Six low-altitude federal airways pass within 20 miles of the Base.

Travis AFB has two runways, 21Left/03Right and 21Right/03Left. Each runway is about 11,000 feet long and 300 feet wide. The airfield elevation is 62 feet MSL and the air traffic control tower is operational 24 hours a day, 7 days a week. There are seven instrument approaches available for arrivals to the airfield. Tower-controlled traffic patterns are flown on both sides of the runways at 1,000 feet AGL for rectangular patterns and 1,500 feet AGL for overhead patterns.

The majority of aircraft operations at Travis AFB are generated by based C-17, C-5, KC-10, Navy E-6, and C-130 aircraft. Baseline C-17 operations at Travis AFB include closed pattern tactical maneuvers in which the aircraft spirals up and then spirals down to land and

performs overhead patterns. Table 2.2-2 presents the average daily and total annual operations at Travis AFB. C-17s accomplish about 20 operations per day.

Air Force Handbook 32-1084, *Facility Requirements*, contains guidance for determining the type, size, and number of facilities a base needs to support its mission. Chapter 2 of the Handbook contains information for determining airfield requirements such as the number, width, and weight-bearing capacity of runways, as well as guidance for aircraft parking aprons. The Handbook's airfield requirements planning process includes information for calculating the practical hourly capacity and practical annual capacity for the airfield. Based in the information in the Handbook, it is estimated the Travis AFB airfield has an annual capacity of 280,000 operations and an IFR hourly capacity of approximately 54 airfield operations. Assuming nearly all operations occur primarily between 6:00 a.m. and 2:00 a.m., there would be 20 hours of operations per day for hourly capacity purposes. The baseline annual 70,279 operations equate to about 25 percent of the annual airfield capacity. Based on a 20-hour day, the average hourly operations would be about 11 operations, or 21 percent of the hourly capacity.

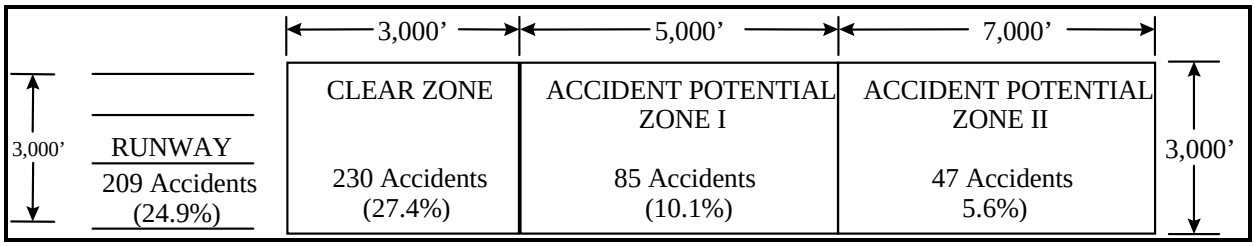
3.2.1.2 Aircraft Safety

The risk of people on the ground being killed or injured by aircraft accidents is miniscule. However, an aircraft accident is a high-consequence event and, when a crash does occur, the result is often catastrophic. Because of this, the Air Force does not attempt to base its safety standards on accident probabilities. Instead, the Air Force approaches safety from a land-use-planning perspective through its AICUZ program. Designation of safety zones around the airfield and restriction of incompatible land uses reduces the public's exposure to safety hazards.

The Air Force developed CZs and accident potential zones (APZ) at the ends of runways based on analysis of over 800 major Air Force accidents that occurred within 10 miles of Air Force installations between 1968 and 1995. The study found that 61 percent of the accidents were related to landing operations and 39 percent occurred during takeoff. Fighter and trainer aircraft accounted for 80 percent of the accidents, with large aircraft and helicopters accounting for the remaining 20 percent. Figure 3-7 depicts the three safety zones and summarizes the location of the accidents within a 10 nautical mile radius of the airfield. The following paragraphs define the CZ and APZs.

- Clear Zone Surface—The CZ width is 3,000 feet (1,500 feet to either side of runway centerline) and extends outward 3,000 feet. Some obstructions may occur within the CZ if permitted under AICUZ land use guidelines, or if appropriate authorities waive airfield planning guidance. Of the three zones (*i.e.*, CZ, APZ I and APZ II), the CZ is the area with the greatest potential for an accident (see Figure 3-7).
- Accident Potential Zone Surfaces - APZ I begins at the outer end of the CZ and is 5,000 feet long and 3,000 feet wide. APZ II begins at the outer end of APZ I and is 7,000 feet long and 3,000 feet wide. APZ I has less accident potential than the CZ and APZ II has less potential than APZ I.

Figure 3-7 Air Force Aircraft Accident Data (838 Accidents - 1968-1995)



Other Accidents Within 10 nautical miles: 267 Accidents, 32.0 percent

The Air Force defines five categories of aircraft flight mishaps: Classes A, B, C, E, and High Accident Potential. Class A mishaps result in loss of life, permanent total disability, a total cost in excess of $1 million, destruction of an aircraft, or damage to an aircraft beyond economical repair. Class B mishaps result in total costs ranging between $200,000 and $1 million or result in permanent partial disability, but do not involve fatalities. Class C mishaps result in more than $100,000 (but less than $200,000) in total costs, or a loss of worker productivity exceeding 8 hours. Class E mishaps represent minor incidents not meeting the criteria for Classes A through C. High Accident Potential events are significant occurrences with a high potential for causing injury, occupational illness, or damage if they occur and do not have a reportable mishap cost. Class C and Class E mishaps, the most common types of accidents, represent relatively unimportant incidents because they generally involve minor damages and injuries, and they rarely affect property or the public.

Class A mishaps are the most serious of aircraft-related accidents and represent the category of mishap most likely to result in a crash. Table 3.2-1 lists the 10-year Class A mishap rates for the C-17 aircraft. The table reflects the Air Force-wide data for all elements of all missions and sorties for each aircraft, to include tactical operations.

Table 3.2-1 C-17 Class A 10-Year Aircraft Mishap Information

Aircraft	Class A Mishap Rate
C-17	1.22

Note: The mishap rate is an annual average based on the total mishaps and 100,000 flying hours.

Source: USAF 2005.

3.2.1.3 Bird/Wildlife-Aircraft Strike Hazard

AFI 91-202 (*The U.S. Air Force Mishap Prevention Program*) requires that Air Force installations supporting a flying mission have a BASH plan for the base. The Travis AFB BASH plan provides guidance for reducing the incidents of bird/wildlife-aircraft strikes in and around areas where flying operations are being conducted. The BASH plan is reviewed annually and updated as needed. The altitude and percent of total data for bird/wildlife aircraft strikes in Table 3.1-2 in Subchapter 3.1.1.3 also apply to Travis AFB.

3.2.2 Noise

Aviation-related activities at Travis AFB dominate the acoustic environment. The noise definition information in Subchapter 3.1.2 also applies to Travis AFB.

3.2.2.1 Noise Metrics and Analysis Methods

The single event and averaged noise metrics and noise analysis methods information for Grant County Airport in Subchapter 3.1.2.1 also applies to Travis AFB. As explained in Subchapter 3.1.2.1, CNEL is used as the metric for averaged noise in California.

3.2.2.2 Baseline Noise Analysis

Single Event Noise Analysis

Table 3.2-2 lists the SEL and L_{max} values for the aircraft based at Travis AFB at takeoff power and at varying slant range distances from the aircraft.

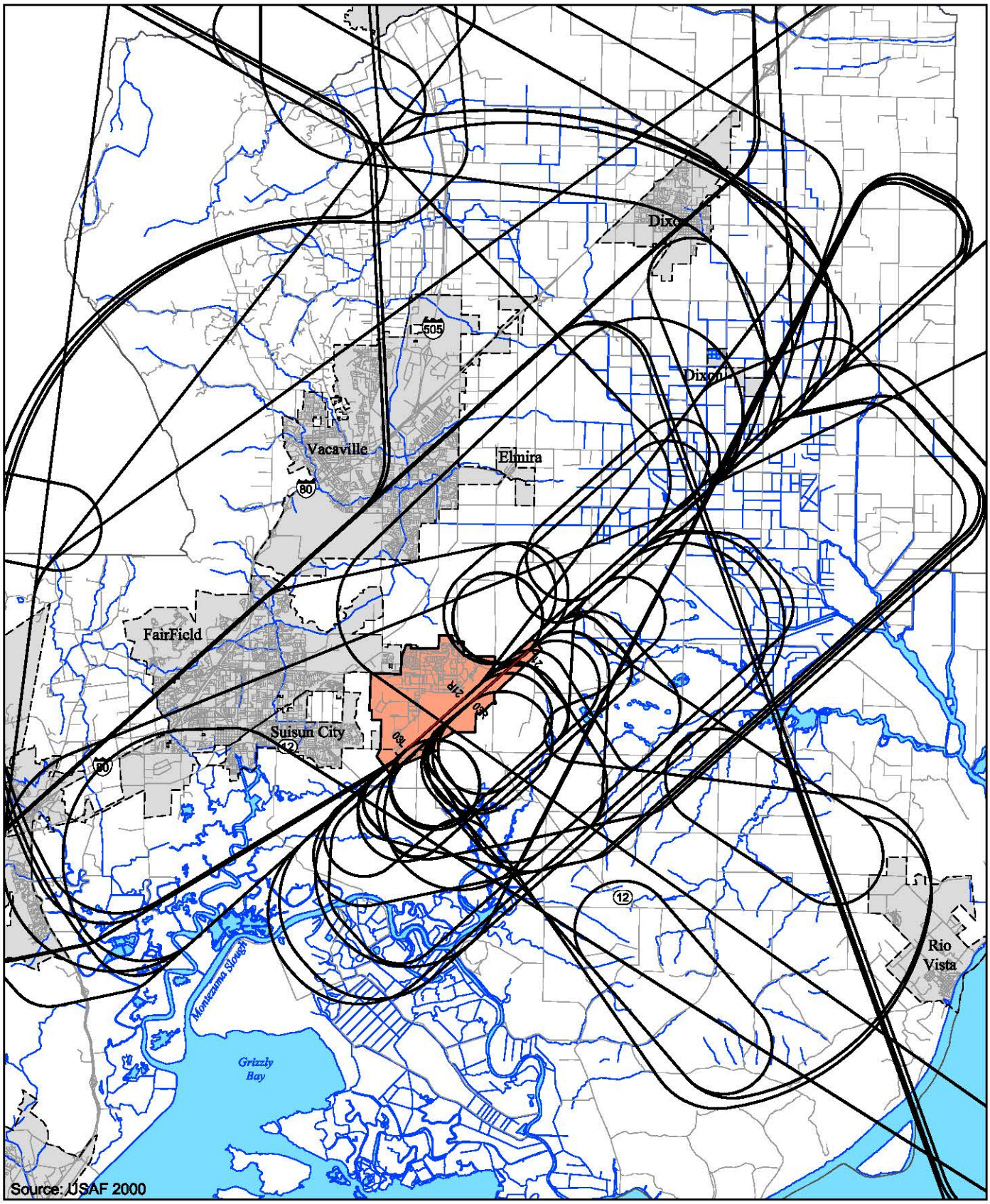
Table 3.2-2 Aircraft Noise Levels in Sound Exposure Level and Maximum Sound Level as a Function of Slant Range Distance from Aircraft, Travis AFB

Aircraft	200 Feet	300 Feet	500 Feet	1,000 Feet	2,000 Feet
SEL					
C-130	103	100	97	91	86
C-17	115	112	108	102	96
C-5	127	124	120	114	106
KC-10	112	109	105	99	93
Lmax					
C-130	100	96	92	85	77
C-17	113	109	104	96	88
C-5	124	120	114	106	97
KC-10	109	105	100	92	84

Note: Values reflect dBA.

Averaged Noise Analysis

The primary source of noise in the vicinity of Travis AFB is airfield operations. Baseline noise conditions are based on the average daily airfield operations shown on Table 2.2-2 (No Action Alternative). About 222 average daily airfield operations occur at Travis AFB under the baseline condition. These operations and the resultant baseline noise environment are based on the aircraft operations for the cumulative impact noise analysis at Travis AFB from the West Coast C-17 Basing EA. Figure 3-8 shows the baseline condition aircraft ground tracks, and Figure 3-9 depicts the noise exposure area for the baseline.



Travis AFB

LEGEND

- Ground Track
- Runway
- Roadway
- City Limits
- Travis AFB

N

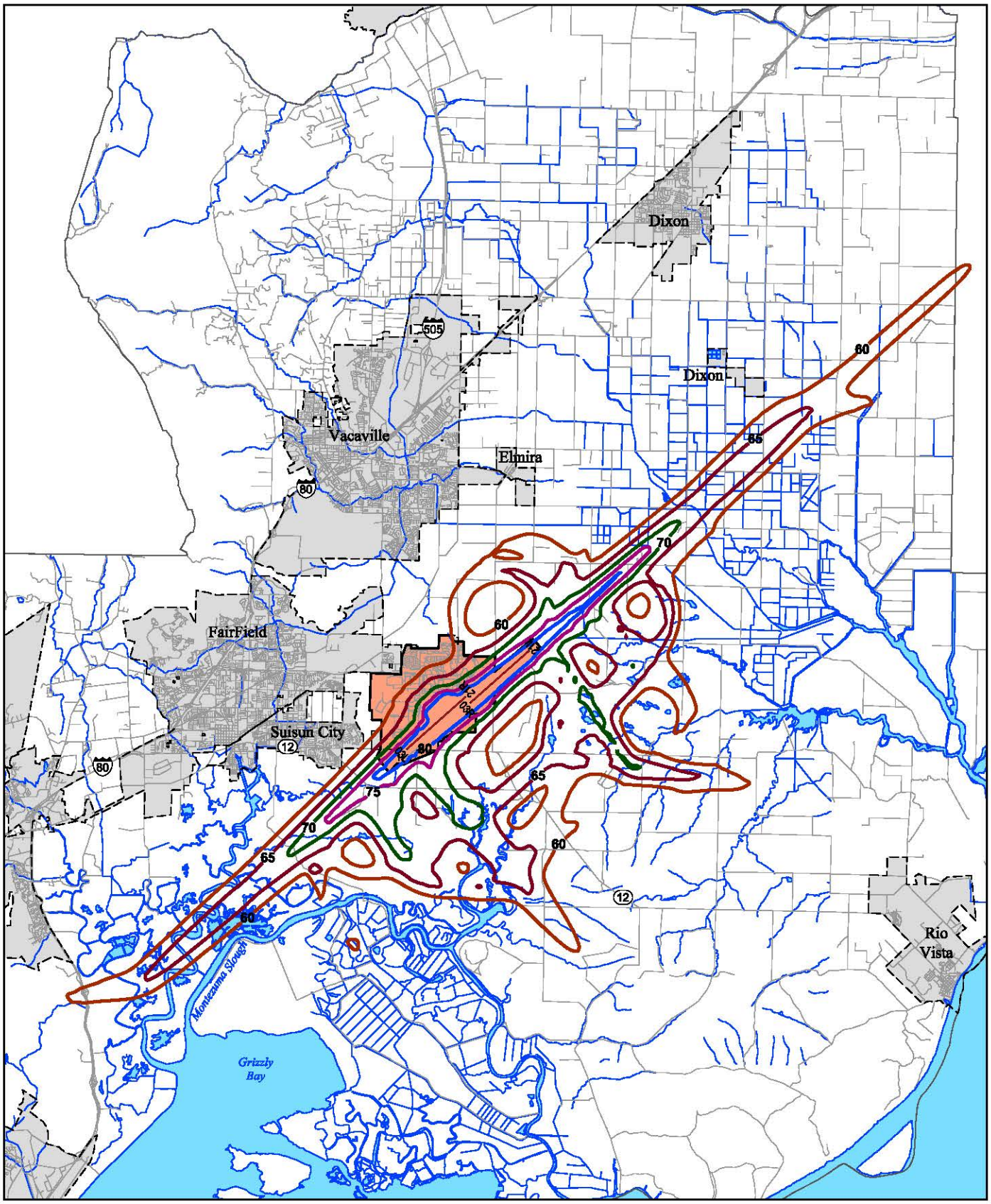
0 19,000 Feet

Baseline Aircraft Ground Tracks, Travis AFB

Figure 3-8

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Travis AFB

LEGEND

- CNEL 60 dBA Contour
- CNEL 65 dBA Contour
- CNEL 70 dBA Contour
- CNEL 75 dBA Contour
- CNEL 80 dBA Contour
- Runway
- Roadway
- City Limits
- Travis AFB

N

0 19,000 Feet

Baseline Noise Contours, Travis AFB

Figure 3-9

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Figure 3-10 depicts the noise contours for the cumulative impact noise analysis at Travis AFB from the West Coast C-17 Basing EA and are presented for informational purposes. Although the number of aircraft operations and the flight track and flight profile (*i.e.*, aircraft altitude, airspeed, and power setting at various points along the track) data are the same for the noise contours presented in Figures 3-9 and 3-10, there are slight differences in noise exposure when comparing the two figures. The baseline noise contours in Figure 3-9 were produced by NOISEMAP noise model, version 7.296, while the contours in Figure 3-10 were produced by NOISEMAP version 6.5. NOISEMAP version 7.296, the current version of the model, contains improved algorithms that calculate the noise and is more accurate than previous versions. For this reason, the baseline noise exposure in Figure 3-9 is used for impact analysis comparison purposes in Chapter 4.

Table 3.2-3 lists the number of acres (land area off-Base), the number of people off-Base within the CNEL 60 dBA and greater noise exposure area, and the estimated number of people who might be potentially highly annoyed by noise at those levels based on the contours in Figure 3-8. People would be exposed to aircraft noise in four of the five noise zones, with the CNEL 60-65 dBA noise zone containing 254 of the 375 persons exposed to CNEL 60-dBA and greater. These 375 persons would equate to 1 percent of the estimated 64,492 persons (based on 2000 census data) who live within the approximate 5-mile radius area associated with airfield airspace environment.

Table 3.2-3 Baseline Noise Exposure, Travis AFB

	CNEL Interval (dBA)					
Category	**60-65**	**65-70**	**70-75**	**75-80**	**80+**	**Total**
Acres	21,876	15,283	4,225	1,470	287	43,141
People	254	102	13	6	0	375
People Potentially Highly Annoyed	30	22	5	3	0	60

Note: Acres reflect only off-Base land area. Population data used to determine the number of people within a noise zone were obtained from the United States Census Bureau 2000 census. It was assumed that population was equally distributed within a census tract area to estimate affected population. Using the noise contour information, the number of acres of land in each noise zone (e.g., CNEL 60-65 dBA, 65-70 dBA, 70-75 dBA, 75-80 dBA, and 80 dBA and greater) were divided by the number of acres of land in each census block to determine the portion of the census tract within each noise zone. The population total in each block-group was then multiplied by this ratio to estimate affected population within each zone. This process was used throughout the EA. People highly annoyed were determined by multiplying the total number of people in the noise zone times the higher percent number for the interval in Table 3.1-4

Effect of Aircraft Noise on Structures

The discussion of the effects of noise on structures for Grant County Airport in Subchapter 3.1.2.2 also applies to Travis AFB. Table 3.2-2 presents the L_{max} for the aircraft based at Travis AFB. C-17 aircraft, which currently operate at the Base, produce maximum sound levels 113 dBA when the aircraft is directly overhead at 200 feet AGL on takeoff. The based aircraft producing the greatest maximum sound levels is the C-5, which produces 124 dBA at 200 feet AGL. These sound levels would be below the level at which damage to structures would be anticipated (*i.e.*, 127 dBA).

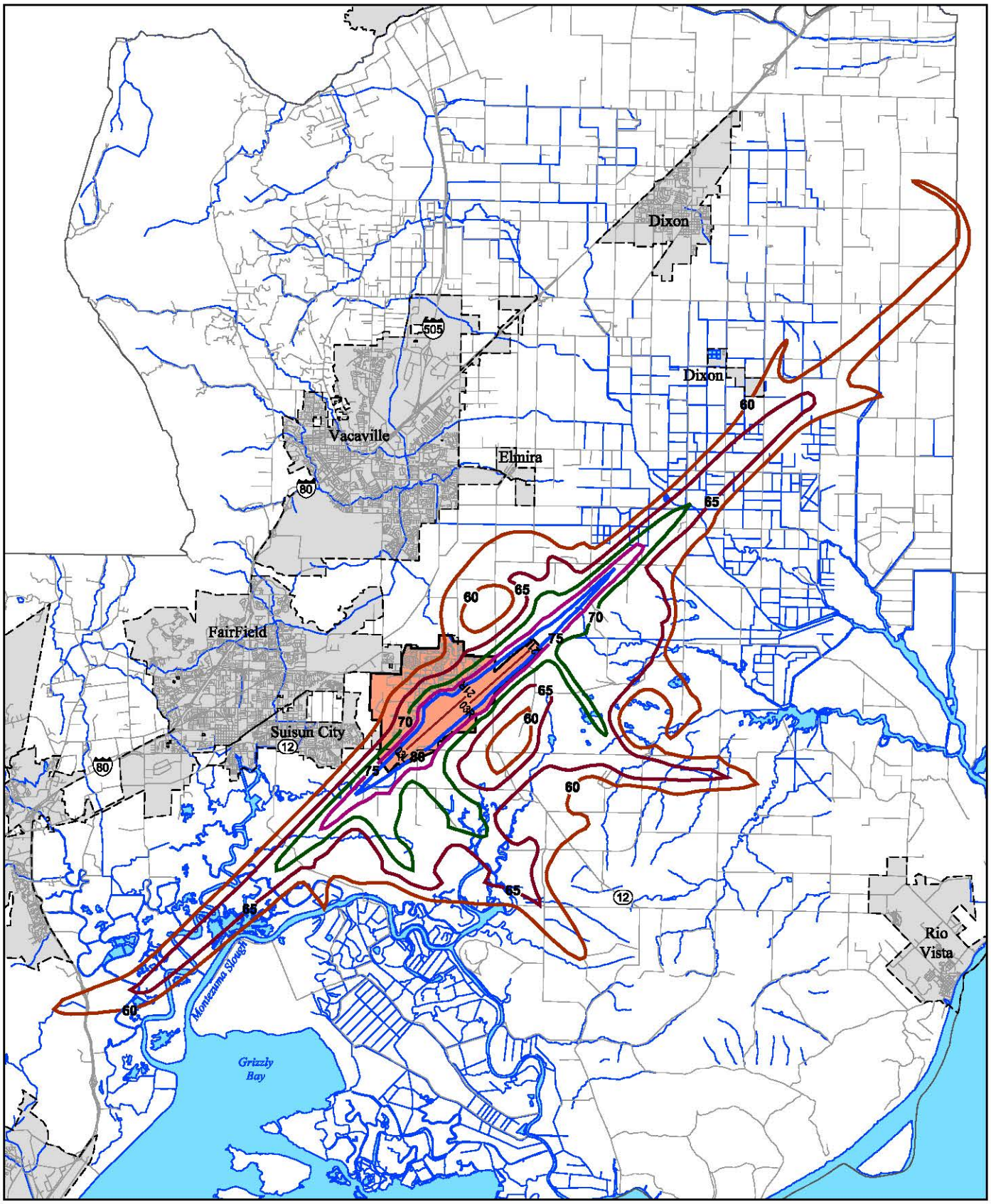
3.2.3 Land Use

Travis AFB

The Travis AFB General Plan provides guidance for land use and future development on the Base. Existing land use patterns on Travis AFB have evolved over the past 50 years based on the configuration of the two northeast-southwest runways. Facility development and supporting infrastructure have evolved over time as missions and requirements have changed or expanded. The General Plan identifies 10 land use categories for the Base, dependent on the function of the activity within each facility. Aircraft operations and maintenance uses are prevalent adjacent to the runways and aircraft parking ramps. Community and administrative uses are predominantly located in the center of the Base, with accompanied housing located in the extreme northern portion of the Base. Open space persists in the western and southern Base areas. The Travis AFB General Plan provides recommendations for the expansion and redevelopment of Aircraft Operations and Maintenance land use areas should mission growth or reorganization occur.

Land use in the immediate vicinity of Travis AFB is predominantly agricultural with interspersed rural residences, except to the west, where urban development is adjacent to the Base. North of Air Base Parkway in the City of Fairfield, there are areas of residential, industrial, commercial, and public uses extending from Cannon Drive to Peabody Road. To the north of the city limits and east of Peabody Road, similar uses occur in unincorporated Solano County. To the west of Peabody Road, industrial development is occurring within the City of Fairfield, with major urbanized portions of the City of Fairfield extending to a point approximately a half mile west of the Base. Residential development in Suisun City is located near the southwest corner of the Base along Walters Road, but is separated from the Base by safety clearance zone easements where no residential development is allowed. The Suisun City Lambrecht Sports Complex and Public Works Yard are located at the southwest corner of the Base.

The purpose of the long-standing AICUZ program is to promote compatible land development in areas subject to aircraft noise and accident potential around military airfields. The Air Force has no desire to recommend land use regulations that render property economically useless. An AICUZ Study reaffirms Air Force policy of assisting local, regional, state, and federal officials in the areas surrounding the military installation by promoting compatible development within the AICUZ area of influence; and protecting Air Force operational capability from the effects of land uses incompatible with aircraft operations. AICUZ studies make recommendations for local government agencies to plan, zone, and mitigate noise, and to help protect the integrity of the installation's flying mission.



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2003 Cumulative Impact Noise Contours, Travis AFB

Figure 3-10

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AICUZ land use guidelines (see Table 3.2-4) reflect land use recommendations for CZs, APZs I and II, and four noise exposure zones. Subchapter 3.2.1.2 describes the CZ and APZs. The land use guidelines in Table 3.2-4 were established on the basis of studies prepared and sponsored by several federal agencies, including HUD, USEPA, Air Force, and state and local agencies. The guidelines recommend land uses that are compatible with airfield operations while allowing maximum beneficial use of adjacent properties. The Air Force has an obligation to the inhabitants of the areas surrounding Travis AFB and to the citizens of the United States to point out ways to protect the people in adjacent areas, as well as the public investment in the installation itself.

Table 3.2-4 Recommended Land Use

	Clear Zones and Accident Potential Zones			Noise Zones			
Generalized Land Use	**CZ**	**APZ I**	**APZ II**	**65-69 dBA**	**70-74 dBA**	**75-79 dBA**	**80+ dBA**
Residential	No	No	Yes[1]	Not Recommended[4]	Not Recommended[4]	Not Recommended	Not Recommended
Commercial	No	No	Yes[2]	Recommended	Recommended	Recommended	Not Recommended
Industrial	No	Yes[2]	Yes[2]	Recommended	Recommended	Recommended	Recommended
Public/Quasi-Public	No	No	Yes[2]	Recommended	Not Recommended[4]	Not Recommended[4]	Not Recommended
Recreational	No	Yes[2]	Yes[2]	Recommended	Recommended	Not Recommended	Not Recommended
Open/Agriculture /Low Density	No[3]	Yes[2]	Yes[2]	Recommended	Recommended	Recommended	Recommended

1. Suggested maximum density one dwelling unit per acre.
2. Only limited low-density, low-intensity uses recommended.
3. Except for limited agricultural uses.
4. Unless sound attenuation materials are installed.
Source: Adapted from USAF 1999.

Land Use Plans and Zoning Regulations

The adopted Land Use Elements of the General Plans for Fairfield and Suisun City include proposed land uses within their respective city limits, and in proposed adjacent growth areas outside their city limits. These growth areas overlap the Solano County land use designations, but the Solano County designations control land use in these areas until annexed by the respective municipality.

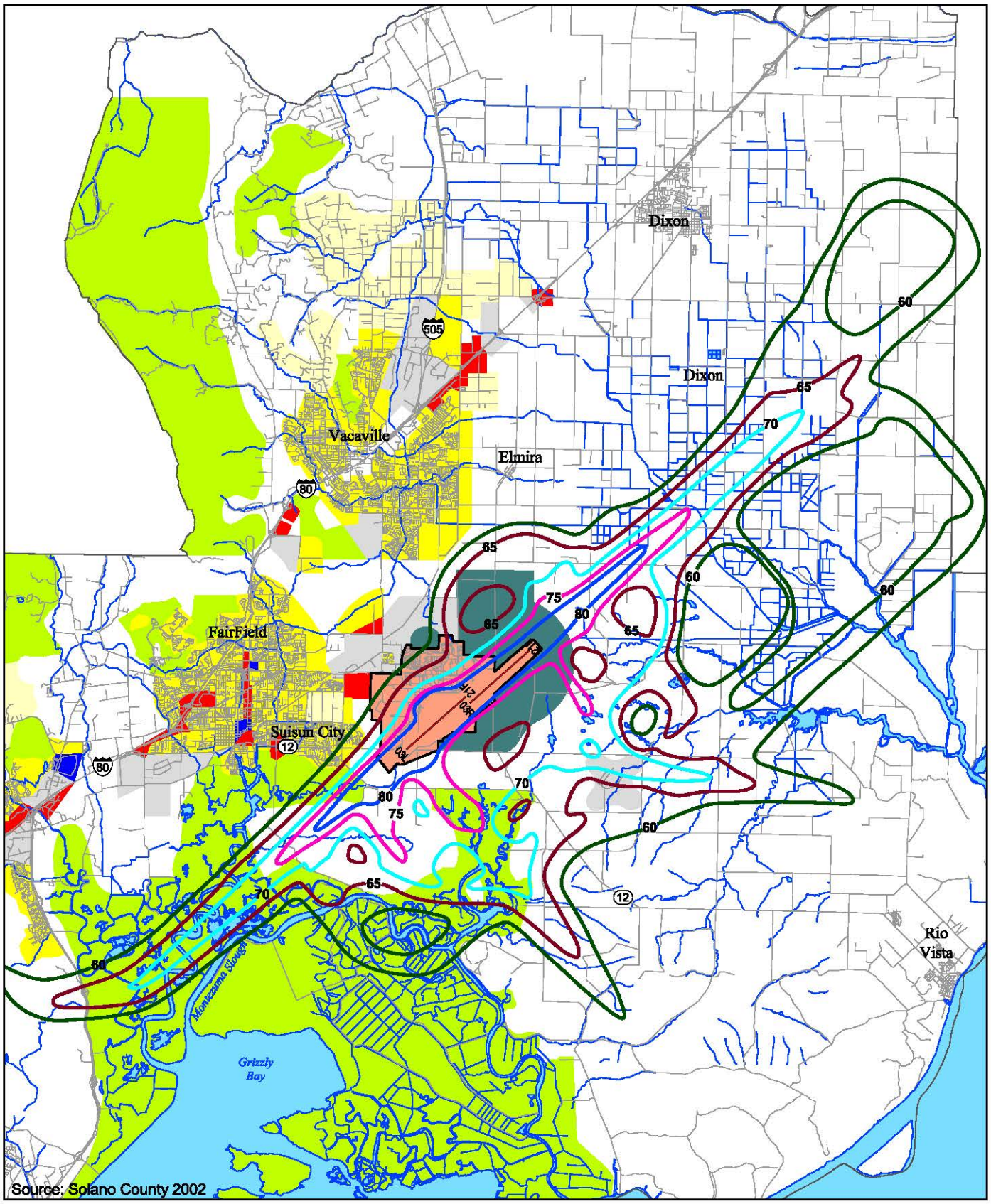
The Travis AFB Land Use Compatibility Plan (Solano County 2002), adopted by the Solano County ALUC provides direction for future use of lands in the vicinity of the Base. Land use issues of interest to the ALUC include those involving noise and overflight compatibility, obstruction clearances, and safety of persons on the ground. Noise contours were produced as part of the Travis AFB Land Use Compatibility Plan based on a "maximum mission" scenario. These contours are depicted on Figure 3-11. A determination of consistency with the Travis AFB Land Use Compatibility Plan is required of all new development proposals within the ALUC planning boundary, which includes all lands that

could be negatively impacted by aircraft operations from the Base. Standards for the ALUC determination of consistency are similar to the land use compatibility standards of the Travis AFB AICUZ program. If the ALUC finds that a proposed development is not consistent with the Travis AFB Land Use Compatibility Plan, the responsible local agency may amend the proposal to be consistent, or it may override the ALUC determination with a two-thirds vote of its governing body.

The Solano County ALUC, adopted in 1995, provides direction for the future use of lands in the unincorporated areas of the county. There are six city-centered growth areas, one of which is the Fairfield-Suisun Urban Area. It is estimated that almost all population growth will occur in and around these six urban areas. The urban growth line (see Figure 3-11) clearly defines the extent of urbanization around each city in the county and represents estimated urban expansion within the next 15 to 20 years. The ALUC designation for areas surrounding Travis AFB on the north, east, and south is agriculture or extensive agriculture, and these areas are currently zoned for agricultural use. The land south of Highway 12 is proposed as marsh. The remaining area west of the Base (west of Peabody Road) is within the urban growth line, and the proposed uses reflect the Fairfield Land Use Plan, with residential, commercial, and industrial growth.

The City of Fairfield updated its Land Use Element as part of a comprehensive update to the city's General Plan. The update also included the Travis Protection Element. The revised plan adopts a more stringent noise standard requiring that no new or additional residential zoning be adopted within the CNEL 60 dBA noise contours. Under the 2002 revisions, a significant portion of land located east of North Gate Road, as well as land adjacent to the Base west of North Gate Road, and land southeast of the Base, has a "Travis Reserve" land use designation. Land in the Travis Reserve is set aside for future expansion of Travis AFB only as long as the military mission of the Base remains. No residential uses will be permitted in the Travis Reserve and the City of Fairfield supports its continued use for agriculture and grazing. Approximately 800 acres west of North Gate Road and north of the proposed Travis Reserve is designated for a technology park. The unincorporated area on the east side of Peabody Road near the northwest corner of the Base between the city limits and the former Sacramento Northern Railroad is designated as a combination office commercial, community commercial, and medium- and high-density residential. Other areas west of the Base would remain predominantly non-residential with commercial, light industrial, and mixed-use light industrial/commercial. The only residential use in the vicinity of the Base would remain the area east of Peabody Road between Dobe Lane and Whitney Drive, while the public land use designation would remain for the Vanden High School and Golden West Intermediate school sites.

The Suisun City Land Use Element establishes a proposed land use pattern to the southwest of Travis AFB that is predominantly residential, extending along Walters Road from Tabor Avenue to Scandia Road. At the northern end of this area is the Peterson Ranch, approved by Suisun City for residential development, with smaller areas near the intersection



Travis AFB

LEGEND

- CNEL 60 dBA Contour
- CNEL 65 dBA Contour
- CNEL 70 dBA Contour
- CNEL 75 dBA Contour
- CNEL 80 dBA Contour
- Travis AFB
- Commercial
- Residential
- Rural Residential
- Industrial
- Agricultural
- Recreation/Open
- Public
- Travis Reserve

N

0 19,000 Feet

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Solano County-Travis AFB Land Use Compatibility Plan Noise Contours and Local Zoning

Figure 3-11

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of Scandia and Walters Roads designated for commercial development. The area south of Scandia Road to Highway 12 is designated as "Agriculture Open Space Reserve." All undeveloped lands south of Highway 12 are within the Suisun Marsh Protection District. The land use controls within the Suisun Marsh Protection District effectively prevent any further urban development south of Highway 12.

3.2.4 Air Quality

3.2.4.1 Air Pollutants and Regulations

The information on air pollutants and regulations for the Grant County Airport in Subchapter 3.1.4.1 also applies to Travis AFB. However, the ambient air quality standards for California are contained in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

3.2.4.2 Regional Air Quality

The information on the method by which the USEPA tracks compliance with the NAAQS and the description of attainment, nonattainment, and unclassifiable for the Grant County Airport in Subchapter 3.1.4.2 also apply to Travis AFB.

The California Air Resources Board (CARB) has regulatory authority for air pollution control in the State of California. Parts of nine counties comprise the San Francisco Bay Area Air Basin Air Quality Control Region (AQCR 30). According to federal regulations (40 CFR 81.305), all nine counties in the AQCR are better than national standards for SO_2, cannot be classified/better than national standards for NO_2, unclassifiable/attainment for PM_{10} and $PM_{2.5}$; maintenance for CO; and nonattainment (marginal) for O_3 (8-hour). Travis AFB is located in AQCR 30.

3.2.4.3 Baseline Air Emissions

The explanation of an air emissions inventory for the Grant County Airport in Subchapter 3.1.4.3 also apply to Travis AFB. Table 3.2-5 lists the baseline air emissions inventory for AQCR 30. Table 3.2-6 presents the emissions from the baseline aircraft operations at Travis AFB. The basing action assessed in the West Coast C-17 Basing EA included reducing the number of C-5s at Travis AFB from 37 to 16 aircraft as well as adding 13 C-17s. The number of KC-10 aircraft at Travis AFB was not affected by the C-17 basing action and the Base continues to operate 27 KC-10s. Table 3.2-6 presents the emissions from the C-17, C-5, and KC-10 operations identified for the end state aircraft operations condition at Travis AFB in the West Coast C-17 Basing EA. The table also includes emissions for Navy E-6 and Coast Guard C-130 aircraft based at Travis AFB and which were included in the West Coast C-17 Basing EA.

Table 3.2-5 Baseline Air Emissions Inventory, Air Quality Control Region 30

Criteria Air Pollutant	CO (tpy)	VOC (tpy)	NO_x (tpy)	SO_x (tpy)	PM_{10} (tpy)	$PM_{2.5}$ (tpy)
AQCR CY 05 Total	807,636	141,109	199,619	19,710	77,928	33,033

Note: VOC is not a criteria air pollutant. However, VOC is reported because, as an ozone precursor, it is a controlled pollutant. $PM_{2.5}$ included for information only. Data reflected as tons per year.

Source: CARB 2007a.

Table 3.2-6 Emissions from Aircraft Operations Associated with the C-17 Basing Action at Travis AFB

Activity	CO (tpy)	VOC (tpy)	NO_x (tpy)	SO_x (tpy)	PM_{10} (tpy)	$PM_{2.5}$ (tpy)
Airfield Operations	384	175	1,378	59	104	103

Source: USAF 2007.

The Bay Area Air Quality Management District (BAAQMD) has allocated a USEPA-approved 2006 emissions budget for Travis AFB in the SIP. Table 3.2-7 lists the Travis AFB SIP budget.

Table 3.2-7 Travis AFB State Implementation Plan Emissions Budget Levels

CO (tpy)	VOC (tpy)	NO_X (tpy)
4,216	2,383	1,734

Source: BAAQMD 2007.

3.2.5 Cultural Resources

Other than installation and/or state-specific information, the regulatory and ROI discussion in Subchapter 3.1.5 also applies to Travis AFB. The ROI for analysis of cultural resources includes all areas subject to alteration and/or disturbance to accomplish support of the interim LZ at Travis AFB as defined in Subchapter 2.2.3. The ROI at Travis AFB is composed solely of the built environment (*i.e.*, the airfield). One hundred percent of the ROI on Travis AFB has been previously disturbed by some form of construction activity.

Identification of cultural resources potentially impacted by the proposed action at Travis AFB was accomplished by reviewing the 2003 Travis AFB Integrated Cultural Resources Management Plan (ICRMP) (USAF 2003c) and the NRIS (NPS 2007b). A total of 19 cultural resource investigations have been conducted on or near Travis AFB since 1909. Three of these cultural resources investigations have been conducted within or adjacent to the ROI on Travis AFB, as identified on Table 3.2-8.

Table 3.2-8 Previous Cultural Resources Investigations Within or Adjacent to the Travis AFB Region of Influence

Year	Study
1980	North Bay Aqueduct Alignment Evaluation
1995	Section 110 Base-Wide Cultural Resources Inventory
1996	Travis Air Force Base, California: Inventory of Cold War Properties

Source: USAF 2003c.

3.2.5.1 Archaeological Resources

The 2003 Travis AFB ICRMP Update (USAF 2003c) identified ten archaeological sites on the Base, as shown on Table 3.2-9. The sites consisted of three prehistoric archaeological sites and seven historical archaeological sites. None of the seven historical archaeological sites are eligible for the NRHP, and none require further investigation.

Table 3.2-9 Archaeological Sites on Travis AFB

Site	Description	Occupation Date	Status
CA-Sol-313	Lithic site	Unknown	Considered disturbed; destroyed for construction of David Grant Medical Center
CA-Sol-314	Lithic site	Unknown	Data recovery conducted; destroyed for construction of David Grant Medical Center
CA-CCo-252	Shell midden	Unknown	Either destroyed or located off the Base
CA-Sol-383/H	Historic road	Early 20th century	Unknown
TAFB-H-02	Farmstead	Late 19th century	Not NRHP Eligible
TAFB-H-03	Farmstead	Late 19th century	Not NRHP Eligible
TAFB-H-05	Farmstead	Late 19th century	Not NRHP Eligible
TAFB-H-11	Farmstead	Disturbed/Unknown	Not NRHP Eligible
TAFB-H-18	Farmstead	Early 20th Century	Not NRHP Eligible
Golf Course	Farmstead	Early 20th Century	Not NRHP Eligible

Source: USAF 2003c.

3.2.5.2 Historical Resources

Travis AFB was originally established as Fairfield-Suisun Army Air Base in 1942 (Travis Air Museum 2007a). Fairfield-Suisun Army Air Base was assigned to the Air Tactical Command whose primary mission was to service and ferry tactical aircraft from California across the Pacific Ocean to the war zone. By 1945, the Base's primary mission was the airlift of troops and supplies to occupied Japan and Korea, and the processing of American troops headed home. In 1946, the Military Air Transport Service assumed jurisdiction. In 1949, the Strategic Air Command became the major command at the Base with a long-range reconnaissance and intercontinental bombing mission (Travis Air Museum 2007a). In 1950, Fairfield-Suisun Army Air Base was renamed Travis AFB in honor of Brigadier General Robert F. Travis who was killed in the crash of his B-29 (Travis Air Museum 2007b). The Military Air Transport Service resumed command at Travis AFB in 1958. Travis AFB became part of the Air Mobility Command in 1992 (Travis Air Museum 2007a).

Historic buildings on Travis AFB include military housing, World War II-era structures, and Cold War Era buildings, as described in the following paragraphs:

- A total of 546 Wherry-Capehart housing units constructed in 1958. These structures were evaluated for eligibility in the NRHP and are not considered properties of particular importance.
- A total of 39 World War II-era structures. The California SHPO concurred with the determination that none of these structures have strong association with significant events or persons, are architecturally significant, or retain sufficient integrity for inclusion in the NRHP (USAF 2003c).
- A total of 27 historic properties associated with the Cold War Era were determined to be potentially eligible for inclusion in the NRHP. Potentially eligible and non-eligible Cold War Era historic buildings are identified in Table 3.2-10. The preliminary findings for eligibility of Cold War Era historic buildings shown on Table 3.2-10 are pending Air Force concurrence and further study (USAF 2003c).

Table 3.2-10 Cold War Era Historic Resources on Travis AFB

Bldg.	Original Use	Year Built	NRHP Status
AFSWP Q Area			
902	Base Spares Office	1951-53	P
903	Storage, C Structure	1951-53	P
904	Base Spares Warehouse #1	1951-53	P
905	Base Spares Warehouse #2	1951-53	P
906	Base Spares Warehouse	1951-53	P
908	Supply and Issue Shop	1953-54	P
909	Special Weapons Readiness Crew Facility	1956-57	P
912	Base Communications Office	1956-57	P
915	Hazardous Substances Warehouses (2)	1956-57	P
916	Emergency Electrical Power Plant	1951-53	P
930	Readiness Crew & Operations Facility	1951-53	P
931	Heavy Equipment Shop	1951-53	P
932	Surveillance and Inspection Shop	1951-53	P
933	Surveillance and Inspection Shop	1951-53	P
934	Surveillance and Inspection Shop	1951-53	P
935	Surveillance and Inspection Shop	1951-53	P
936	Surveillance and Inspection Shop	1951-53	P
937	Power Station	1951-53	P
938	Base Spares Warehouse	1958-59	P
940	Paint Shop	1959-60	P
942	Surveillance and Inspection Shop	1955-56	P
943	Surveillance and Inspection Shop	1955-56	P

Table 3.2-10 Cold War Era Historic Resources on Travis AFB (*continued*)

Bldg.	Original Use	Year Built	NRHP Status
944	Base Spares Warehouse	1958-59	P
956	Special Weapons Storage Igloo	1951-52	NE
958	Special Weapons Storage Igloo	1951-52	NE
966	Special Weapons Storage Igloo	1951-52	NE
968	Special Weapons Storage Igloo	1951-52	NE
976	Special Weapons Storage Igloo	1951-52	NE
978	Special Weapons Storage Igloo	1951-52	NE
1944	Radioactive Waste Burial Site	1950s	NE
1947	Radioactive Waste Burial Site		NE
ADC Alert and Readiness Area			
369	ADC Flight Simulator Training	1955	P
1205	ADC Readiness/Maintenance Hangar	1953	P
1212	Unit A, Rocket Checkout/Assembly	1954-55	P
366	Liquid Fuel Pump Station	1953	NE
1202	Alert Hangar	1952-54	NE
1772	Liquid Fuel Storage Tank	ca. 1954	NE
Bldg 810			
810	Double-cantilever, B-36 Bomber Hangar	1952	P

Source: *USAF 2003c*
P *Potentially Eligible*
NE *Not Eligible*

Two Cold War historic resources located within or adjacent to the ROI for the proposed action on Travis AFB that retain integrity have been recommended as eligible for inclusion in the NRHP as National Register districts or on individual merit. These properties are located in the AFSWP Q Area, the ADC Alert and Readiness Area, and Building 810 (see Table 3.2-10) (USAF 2003c).

- Building 1212, the Unit A Rocket Checkout/Assembly building built between 1954 and 1955, is located within the ADC Alert and Readiness Area. Building 1212 is potentially eligible for listing on the NRHP and has been defined as a contributing building to the proposed ADC Readiness Area Historic District. The ADC Alert and Readiness Area is recommended as potentially eligible under Criterion C and Criteria Consideration G (as demonstrating exceptional significance for a property under 50 years in age). The proposed six-building ADC Alert and Readiness Area Historical District is an excellent example of the programmatic ADC areas built in a standardized configuration throughout the United States in the 1950s. The area is associated with the high tactical role that ADC Readiness Areas played in Air Force air defense during those years. The ADC Readiness Area at Travis AFB is a coherent cluster of buildings and structures with little exterior modification and with no site infill since 1960. The proposed historic district boundary is recommended to immediately circumscribe Buildings 369, 1205, and 1212 (USAF 2003c). Building 1212 was recently modified.

- Building 810, which was recommended as potentially eligible for the NRHP, is an oversized steel frame and open-truss aircraft hangar that formerly housed B-36 bombers beginning in 1951. The B-36 was the first intercontinental bomber with a 10,000-mile traveling range. Building 810 is one of the first double cantilever medium bomber hangars built in the United States and displays few exterior modifications (USAF 2003c).

3.2.5.3 Native American Interests

Early and effective participation of Native American tribes and groups is an integral component to the successful completion of the Section 106 process. As part of the preparation of the Travis AFB ICRMP, the Air Force contacted Native American groups in July 2002 to request background information regarding prehistoric, historic, and ethnographic land use, as well as information regarding contemporary Native American values or concerns at Travis AFB. No responses were received by the Base (USAF 2003c). There is no evidence that any Native American burial grounds or sacred areas are located on Travis AFB that would be subject to the provisions of AIRFA or NAGPRA (USAF 2003c).

Four Native American groups that could be affected by the proposed action at Travis AFB have been identified by the California Native American Heritage Commission and the Base (Table 3.2-11). As lead federal agency, the Air Force initiated consultation with four Native American groups pursuant to 36 CFR 800.2 to ensure that any sites of traditional cultural value are identified and adequately considered under the proposed action. The Air Force sent correspondence to the tribes announcing the action and requesting concerns regarding the proposed action (see Appendix C).

Table 3.2-11 Native American Groups Identified for Travis AFB

State	Tribal Name
California	Cortina Band of Indians
	Rumsey Rancheria
	Wintun Environmental Protection Agency
	Wintun/Patwin (Kesner Flores)

3.3 SOUTHERN CALIFORNIA LOGISTICS AIRPORT

3.3.1 Aircraft Operations and Safety and Bird/Wildlife-Aircraft Strike Hazard

3.3.1.1 Aircraft Operations

The background information in Subchapter 3.1.1.1 concerning airspace and flight pattern locations also applies to the SCLA. Radar vectoring, sequencing, and separation service between participating VFR and all IFR aircraft operating within the airspace around the SCLA and aircraft arriving and departing the airport is provided by High Desert TRACON. The TRACON controls the airspace up to 13,000 feet above MSL. The SCLA air traffic control tower controls the airspace to about 5.5 miles from the airport and up to 5,400 feet MSL (2,500 feet AGL). There are eight public and private use airports in the area around the SCLA. Five low-altitude federal airways pass within 20 miles of the airport.

The SCLA has two runways, 17/35 and 03/21. Runway 17/35 is 15,050 feet long and 150 feet wide and Runway 03/21 is 9,138 feet long and 150 feet wide. The airfield elevation is 2,885 feet MSL and the air traffic control tower operates from 6:00 a.m. to 10:00 p.m., 7 days a week. There are three instrument approaches available for arrivals to the airfield. Tower-controlled traffic patterns are flown on both sides of the runways at 1,000 feet AGL.

Of the 15 types of aircraft operating at the SCLA, the greatest number of operations are accomplished by single engine, small turboprop, helicopter, and business jet aircraft. C-17s accomplish about five operations per day. Table 2.2-3 presents the average daily and total annual operations at the SCLA.

Based in the information in the AC 50/5060-5, it is estimated the SCLA airfield has an annual service volume of 260,000 operations and an IFR hourly capacity of approximately 59 airfield operations. Assuming nearly all operations occur primarily between 6:00 a.m. and 10:00 p.m., there would be 15 hours of operations per day for hourly capacity purposes. The baseline annual 56,714 operations equate to about 22 percent of the annual airfield capacity. Based on a 15-hour day, the average hourly operations would be about 10 operations, or 18 percent of the hourly capacity.

3.3.1.2 Aircraft Safety

The aircraft safety information in Subchapter 3.1.1.2 also applies to the SCLA.

3.3.1.3 Bird/Wildlife-Aircraft Strike Hazard

The BASH information in Subchapter 3.1.1.3 also applies to the SCLA.

3.3.2 Noise

Aviation-related activities at SCLA dominate the acoustic environment. The noise definition information in Subchapter 3.1.2 also applies to the SCLA

3.3.2.1 Noise Metrics and Analysis Methods

The single event and averaged noise metrics and noise analysis methods information for Grant County Airport in Subchapter 3.1.2.1 also applies to the SCLA. As explained in Subchapter 3.2.2.1, CNEL is used as the metric for averaged noise in California.

3.3.2.2 Baseline Noise Analysis

Single Event Noise Analysis

Table 3.3-1 lists the SEL and L_{max} values for the noisier aircraft that operate at SCLA at takeoff power and at varying slant range distances from the aircraft.

Table 3.3-1 Aircraft Noise Levels in Sound Exposure Level and Maximum Sound Level as a Function of Slant Range Distance from Aircraft, Southern California Logistics Airport

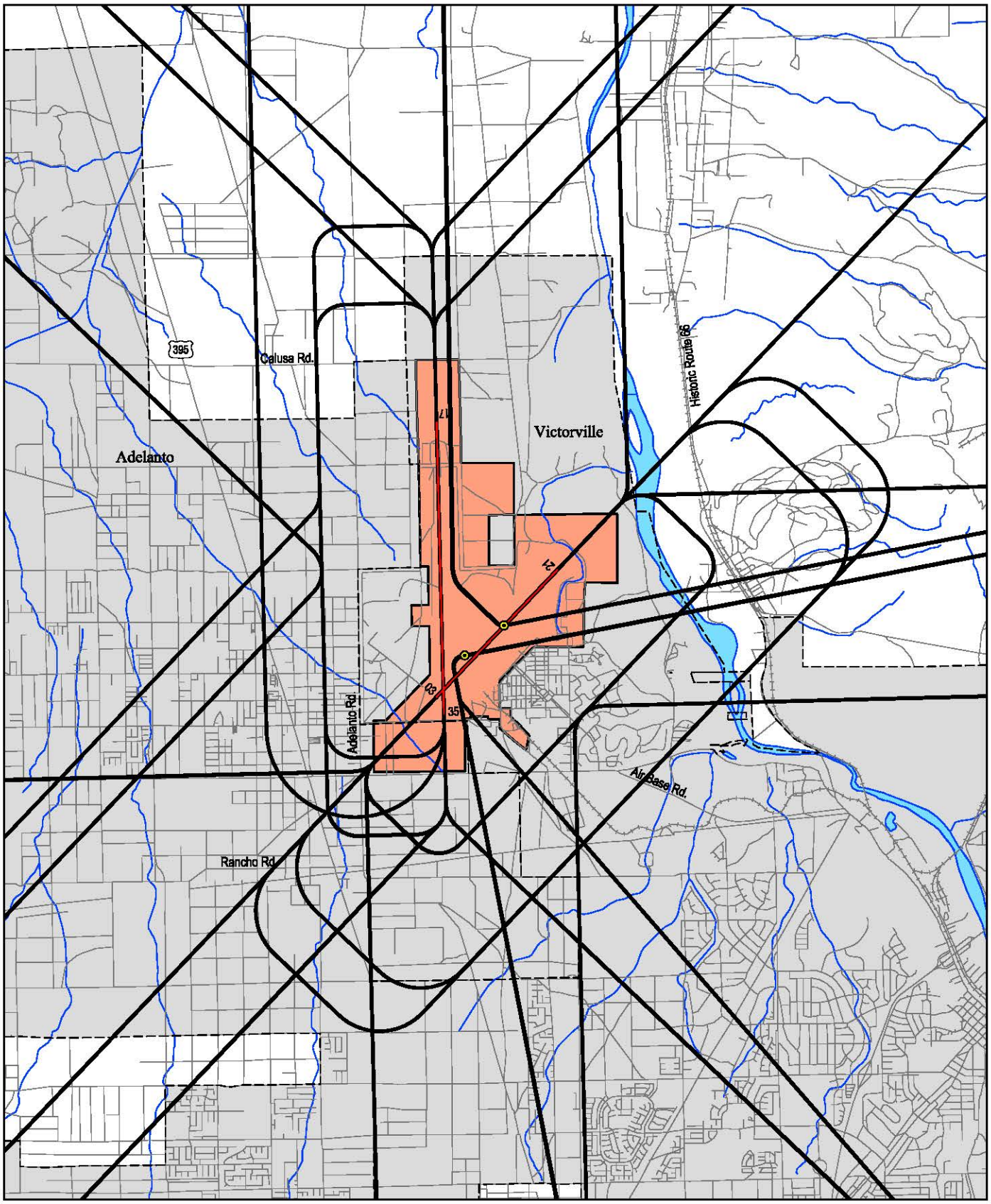
Aircraft	200 Feet	300 Feet	500 Feet	1,000 Feet	2,000 Feet
SEL					
B-727	118	115	111	106	93
B-737-300	105	103	99	94	88
B-747-200	116	113	109	103	96
MD-83	109	107	103	98	92
Lmax					
B-727	115	111	106	99	81
B-737-300	102	98	93	86	79
B-747-200	114	110	104	96	88
MD-83	107	104	99	92	84

Note: Values reflect dBA.

Averaged Noise Analysis

The primary source of noise in the vicinity of the SCLA is airfield operations. Baseline noise conditions are based on the average daily airfield operations shown on Table 2.2-3 (No Action Alternative). About 155 average daily airfield operations occur at SCLA under the baseline condition. Figure 3-12 shows the baseline condition aircraft ground tracks, and Figure 3-13 depicts the noise exposure area for the baseline. These two figures depicting the baseline condition were prepared using NOISEMAP version 7.296 with the flight track, profile, and aircraft operations data from the Integrated Noise Model file that was used to prepare noise contours for an update to the SCLA airport master plan (SCLA 2005). NOISEMAP and INM are the two USEPA-approved computer noise models. INM is used by the FAA for noise analysis at civil airports. The NOISEMAP and INM programs are similar; however, INM is specifically designed to model aircraft flight operations at civil airports.

Table 3.3-2 lists the number of acres (land area off-airport), the number of people within the CNEL 60 dBA and greater noise exposure area, and the estimated number of people who might be potentially highly annoyed by noise at those levels. People would be exposed to aircraft noise in one of the five noise zones, with the CNEL 60-65 dBA noise zone containing the one person exposed to CNEL 60-dBA and greater. This one person would equate to less than 1 percent of the estimated 12,436 persons (based on 2000 census data) who live within the approximate 5-mile radius area associated with airfield airspace environment.



Southern California Logistics Airport

LEGEND

- Ground Track
- Runway
- Roadway
- City Limits
- Drop Zone
- Southern California Logistics Airport

N

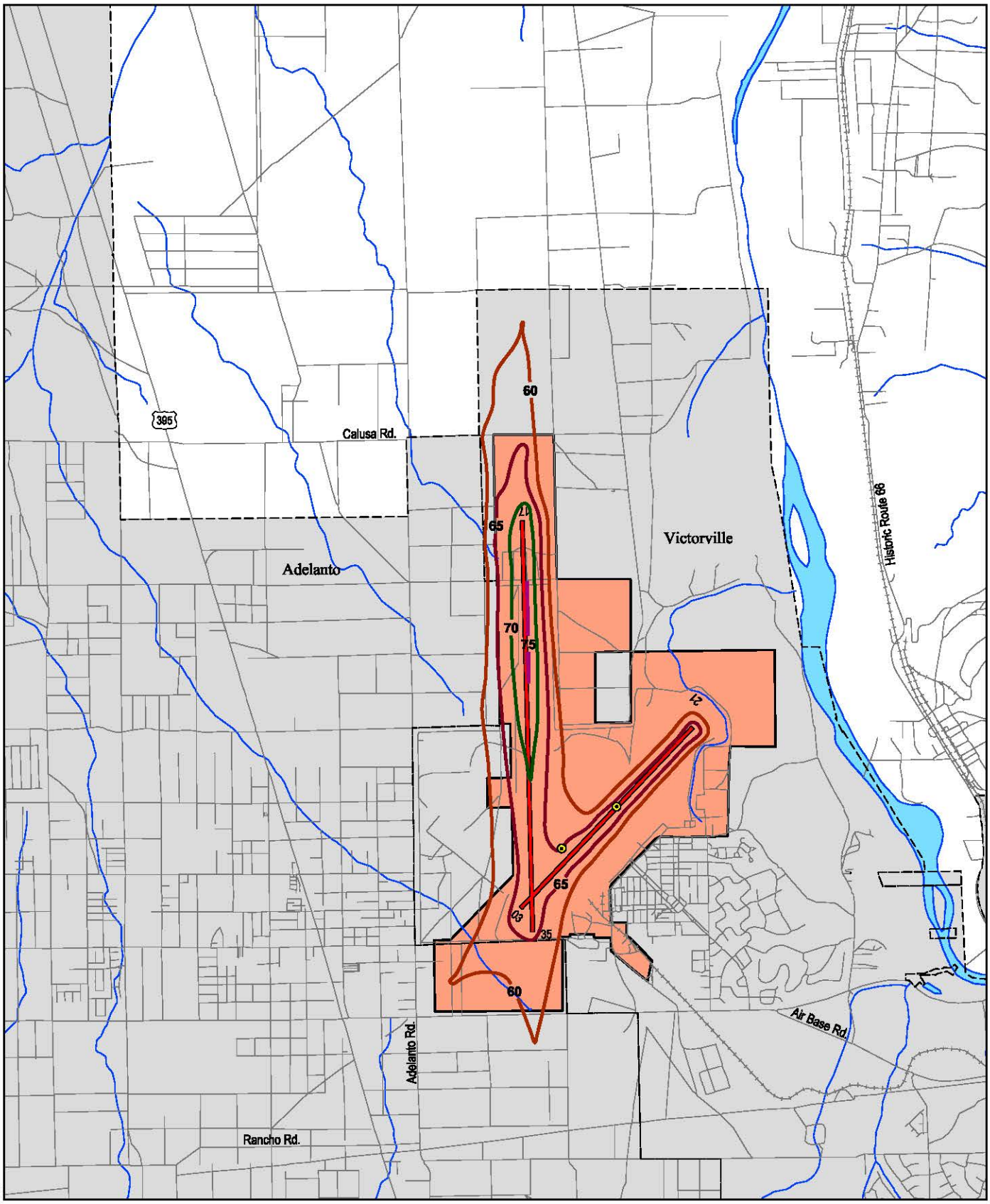
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Baseline Aircraft Ground Tracks, Southern California Logistics Airport

Figure 3-12

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Southern California Logistics Airport

LEGEND

- CNEL 60 dB Contour
- CNEL 65 dB Contour
- CNEL 70 dB Contour
- CNEL 75 dB Contour
- CNEL 80 dB Contour
- Runway
- Roadway
- City Limits
- Drop Zone
- Southern California Logistics Airport

N

0 5,000 Feet

Baseline Noise Contours, Southern California Logistics Airport

Figure 3-13

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Table 3.3-2 Baseline Noise Exposure, Southern California Logistics Airport

	CNEL Interval (dBA)					
Category	**60-65**	**65-70**	**70-75**	**75-80**	**80+**	**Total**
Acres	284	11	0	0	0	295
People	1	0	0	0	0	1
People Potentially Highly Annoyed	0	0	0	0	0	0

Note: Acres reflect only off-Base land area. Population data used to determine the number of people within a noise zone were obtained from the United States Census Bureau 2000 census. It was assumed that population was equally distributed within a census tract area to estimate affected population. Using the noise contour information, the number of acres of land in each noise zone (e.g., CNEL 60-65 dBA, 65-70 dBA, 70-75 dBA, 75-80 dBA, and 80 dBA and greater) were divided by the number of acres of land in each census block to determine the portion of the census tract within each noise zone. The population total in each block-group was then multiplied by this ratio to estimate affected population within each zone. This process was used throughout the EA. People highly annoyed were determined by multiplying the total number of people in the noise zone times the higher percent number for the interval in Table 3.1-4

Effect of Aircraft Noise on Structures

The discussion of the effects of noise on structures for Travis AFB in Subchapter 3.1.2.2 also applies to SCLA. Table 3.3-1 presents the L_{max} for the noisier aircraft operating at SCLA. The aircraft producing the greatest maximum sound levels is the B-727, which produces 115 dBA at 200 feet AGL. These sound levels would be below the level at which damage to structures would be anticipated (*i.e.*, 127 dBA).

3.3.3 Land Use

The City of Victorville, California prepared a *Southern California Logistics Airport Community Plan Element* (Community Plan Element) as a guide for the development and reuse of the deactivated George AFB for commercial aviation and other compatible uses. The purpose of the Community Plan Element is to promote development of compatible land uses in the area influenced by airport operation, to safeguard the general welfare of the inhabitants within the vicinity of the airport by minimizing exposure to excessive noise levels, and to safeguard the welfare of the inhabitants within the vicinity of the airport by imposing appropriate restrictions on new development for the protection of aircraft operations (City of Victorville undated a).

The Community Plan Element contains five on-airport land use designations: airport and support facility; business park; industrial; RPZ; and public/open space. The Community Plan Element also establishes safety review areas within 1 mile of the airport due to the potential for accidents to aircraft in the patterns. Land use compatibility within the safety review areas are based on FAR Part 77 guidelines (City of Victorville undated a).

Off-airport land use in the area surrounding the SCLA is primarily open except for the City of Adelanto, which is about half a mile from the southwest boundary of the airport.

The City of Victorville has prepared a Comprehensive Airport Land Use Plan. The intent of the Plan is to use land use control mechanisms such as zoning and subdivision ordinances

to reduce the potential for or affects of an aircraft accident. These mechanisms would minimize the number of fatalities on the ground if an accident does occur. The degree of risk or level of exposure is reflected by the creation of three safety review areas (City of Victorville undated b).

- **Safety Review Area 1.** This area is centered on each runway at a width of 1,000 feet and extends past each end of the runway, extending outward horizontally 1,700 feet and 2,500 feet. While it is desirable to clear all objects and land uses from this Safety Review Area, agricultural operations, provided they do not propose structures or attract birds are normally acceptable in the approach surface and RPZ.
- **Safety Review Area 3.** This area is centered over the runways, extending outward in all directions with a 10,000 foot arc from the center of each end of the primary surface of each runway and connecting the adjacent arcs of lines tangent to those arcs and excludes the areas within Safety Areas 1 and 2. Land use districts within this area include residential, various types of commercial, and small pockets of industrial, institutional, and open space.

The compatibility of land uses depends on their location within the Safety Review Area. Table 3.3-3 lists land use compatibility for the three Safety Review Areas and Figure 3-14 depicts the three areas.

The FAR Part 150 process is voluntary, and the SCLA has not prepared a FAR Part 150 study. The airport, however, prepared an airport master plan in accordance with FAA guidance. The background information in Subchapter 3.1.3 concerning the FAR Part 150 program and airport master plan also applies.

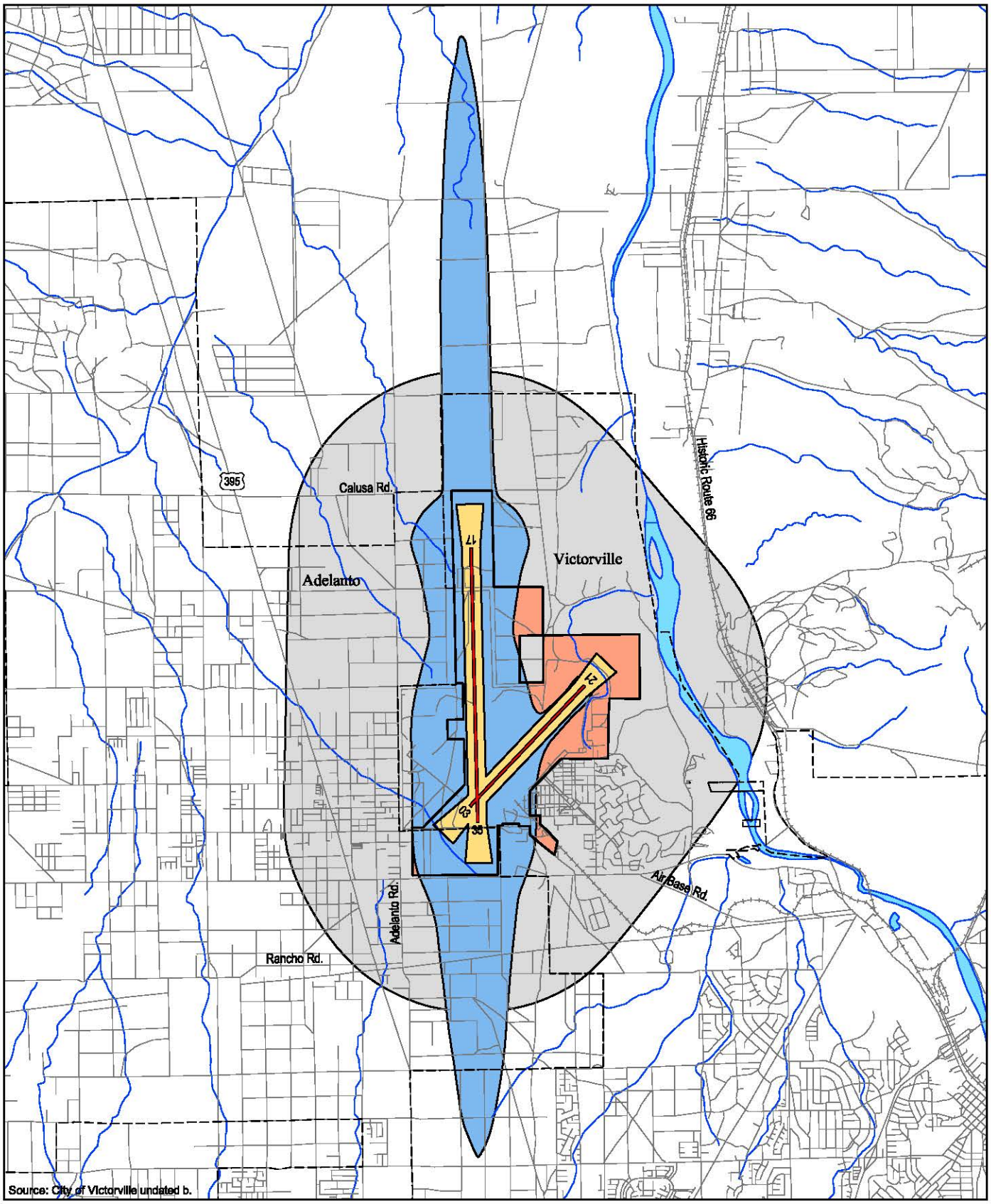
3.3.4 Air Quality

3.3.4.1 Air Pollutants and Regulations

The information on air pollutants and regulations for the Grant County Airport in Subchapter 3.1.4.1 also applies to the SCLA. The discussion on ambient air quality standards for California for Travis AFB in Subchapter 3.2.4.1 also applies to the SCLA.

3.3.4.2 Regional Air Quality

The information on the method by which the USEPA tracks compliance with the NAAQS and the description of attainment, nonattainment, and unclassifiable for the Grant County Airport in Subchapter 3.1.4.2 also applies to the SCLA.



Southern California Logistics Airport

LEGEND

- Safety Review Area 1
- Safety Review Area 2
- Safety Review Area 3
- Southern California Logistics Airport
- Runway
- Roadway
- City Limits

N

0 7,500 Feet

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Safety Review Areas, Southern California Logistics Airport

Figure 3-14

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Table 3.3-3 Land Use Compatibility-Airport Safety Review Areas

Land Use Category	Safety Review Area 1	Safety Review Area 2	Safety Review Area 3
Residential: Single Family, Duplex, Mobile Home	CLU	CA[1]	NA[3]
Residential: Multi-family	CLU	NU	NA[3]
Transient Lodging: Motels and Hotels	CLU	NU[4]	NA[2]
Schools, Libraries, Churches, Hospitals, and Nursing Homes	CLU	NU[2]	CA[2]
Auditoriums, Concert Halls, and Amphitheaters	CLU	CLU	NA[2]
Sports Arenas and Outdoor Spectator Sports	CLU	CLU	NA[2]
Playgrounds and Neighborhood Parks	CLU	CA[2,4]	NA[2]
Golf Courses, Riding Stables, Water Recreation, and Cemetery	CLU	CA[2,4]	CLA
Office Buildings, Business Commercial, and Professional	CLU	CA[2,4]	NA[2]
Manufacturing, Transportation Services, and Contract Construction	CLU	CA[2,4]	NA[2]
Wholesale/Warehouse Operations and Salvage Operations	CLU	CA[2,4]	NA[2]
Utilities	CLU	NU	NA[2]
Agriculture	NA[2]	NA[2]	CLA
Livestock and Animal Breeding	CLU	NA[2]	NA[2]
Retail Trade/Commercial Services	CLU	CA[2,4]	NA[2]
Density Criteria			
Maximum Gross Density (dwelling units/acre)	0	0.5	6
Maximum Assembly (persons per acre)	10	100	No Limit[5]

Clearly Unacceptable (CLU): New construction/development should not occur. Existing uses should be relocated.

Normally Unacceptable (NU): New construction/development should not occur.

Conditionally Acceptable (CA): New construction/development may be permitted. Community character and/or unique development patterns may justify approval. Uses subject to restrictions and mitigation for purposes of public safety.

Normally Acceptable (NA): New construction/development permitted. Uses subject to restrictions and mitigation for purposes of public safety.

Clearly Acceptable (CLA): New construction/development permitted. No public safety restrictions envisioned.

1— Residential development underneath VFR traffic patterns, including approach surfaces, shall be discouraged. If development occurs, maximum density shall be one dwelling unit per 2 acres, and noise attenuation at or below 45 dB shall be required within habitable structures.

2— Land uses are considered acceptable provided no structures are proposed/developed or if structures are in locations outside approach surfaces, and are conditionally acceptable if located within transitional surfaces. The development of schools, libraries, churches, hospitals, and nursing homes below the transitional surfaces is normally unacceptable.

3— Residential development outside approach surfaces shall not exceed six dwelling units per acre; residential development within approach surfaces shall not exceed 1 dwelling unit per two acres.

4— Land uses satisfying density criteria may be acceptable.

5— Non-residential land uses within approach surfaces shall not exceed 100 persons per acre.

Source: City of Victorville undated b.

The SCLA is located in the Southeast Desert Air Basin, which includes the County of Imperial, portions of Kern, Los Angeles, Riverside, and San Bernardino Counties; and consists of the combination of the Mojave Desert Air Basin and the Salton Sea Air Basin. These air basins are under the jurisdiction of the following APCDs and Air Quality Management Districts (AQMD): Antelope Valley APCD; Kern County APCD; Mojave

Desert AQMD; Imperial County APCD; and South Coast AQMD. This area is known as AQCR 33. According to federal regulations (40 CFR 81.305), AQCR 33 is designated as marginal nonattainment for 8-hour O_3; unclassifiable/attainment for $PM_{2.5}$ and CO; unclassifiable for PM_{10}; and cannot be classified or better than national standards for NO_2. Imperial County in AQCR 33 has been designated as better than national standards for SO_2, while the rest of the counties in AQCR 33 have been designated as cannot be classified for SO_2 and cannot be classified for Pb.

3.3.4.3 Baseline Air Emissions

The explanation of an air emissions inventory for the Grant County Airport in Subchapter 3.1.4.3 also applies to the SCLA. Table 3.3-4 lists the baseline air emissions inventory for AQCR 33, and Table 3.3-5 presents the emissions from the baseline aircraft operations at SCLA.

Table 3.3-4 Baseline Air Emissions Inventory, Air Quality Control Region 33

Criteria Air Pollutant	CO (tpy)	VOC (tpy)	NO_x (tpy)	SO_x (tpy)	PM_{10} (tpy)	$PM_{2.5}$ (tpy)
AQCR CY 05 Total	219,146	45,954	84,680	4,709	175,711	53,619

Note: VOC is not a criteria air pollutant. However, VOC is reported because, as an ozone precursor, it is a controlled pollutant. $PM_{2.5}$ included for information only. Data reflected as tons per year.

Source: CARB 2007b.

Table 3.3-5 Emissions from Baseline Aircraft Operations, Southern California Logistics Airport

Activity	CO (tpy)	VOC (tpy)	NO_x (tpy)	SO_x (tpy)	PM_{10} (tpy)	$PM_{2.5}$ (tpy)
Airfield Operations	134	104	76	6	18	18

Note: Emissions based on aircraft operations in Table 2.2-3.

3.3.5 Cultural Resources

Other than installation and/or state-specific information, the regulatory and ROI discussion in Subchapter 3.1.5 also applies to the SCLA. The ROI for analysis of cultural resources includes all areas subject to alteration and/or disturbance to establish the interim LZ at the SCLA as defined in Subchapter 2.2.3. The ROI for the SCLA Alternative is composed solely of the built environment (*i.e.*, the airfield). One hundred percent of the ROI on the SCLA has been previously disturbed by some form of construction activity.

Identification of cultural resources potentially impacted by the SCLA Alternative was accomplished by reviewing the 1992 George AFB EIS for base closure (USAF 1992) and the 2004 SCLA Specific Plan (City of Victorville Planning Department 2004). Numerous cultural resource surveys were conducted on George AFB and in its immediate vicinity. The most recent surveys were conducted in November 1990 in support of the closure of George AFB (Science Applications International Corporation [SAIC] 1990) and in June 2003 for the Program Environmental Impact Report for the most Specific Plan Amendment for the SCLA.

The original survey area encompassed approximately 3,500 acres and an additional 3,500 acres in the 2003 study, and covered all areas not subject to present development or major disturbance. In addition, an architectural survey of all World War II buildings and facilities was conducted in 1991 (SAIC and Hatheway Associates 1991). Three of these cultural resources investigations have been conducted within or adjacent to the ROI at the SCLA, as identified on Table 3.3-6.

Table 3.3-6 Previous Cultural Resources Investigations Within or Adjacent to the SCLA Region of Influence

Year	Study
1990	Archaeological Survey and Inventory of George AFB, California.
1991	George AFB World War II Buildings and Facilities
2003	Archaeological Survey of SCLA

Source: USAF 1992; City of Victorville Planning Department 2004

3.3.5.1 Archaeological Resources

During the 1990 survey, three archaeological sites (one prehistoric, one historic, and one of unknown temporal affiliation) and 13 isolated finds were recorded (see Table 3.3-7). No archaeological sites eligible for the NRHP were identified during the 1990 survey. The California SHPO concurred with these findings in a letter dated May 28, 1991.

Table 3.3-7 Archaeological Sites on the SCLA

Description	Occupation Date	Status
Lithic scatter	Prehistoric	Not NRHP Eligible
Rock Cairn	Unknown	Not NRHP Eligible
Trash Dump	Historic (1930s)	Not NRHP Eligible

Source: USAF 1992

During the 2003 survey, 32 additional archaeological sites (of which 28 were historic building locations) and several isolated finds were recorded (City of Victorville Planning Department 2004). These sites were not recommended as eligible for the NRHP because they contained limited research potential and were ubiquitous for those sites of archaeological sites in the Mojave River basin.

The potential for buried archeological deposits is high along the floodplain and first terrace of the Mojave River. Known NRHP-eligible resources are located immediately outside the former boundary of George AFB.

3.3.5.2 Historical Resources

The SCLA was formerly known as Victorville Army Airfield, a flight training school (Global Security 2007a) and then as George AFB. Initial construction of the base began July 1941 and was completed May 1943. From 1945 to 1950, the base was placed on standby status and used as storage for surplus aircraft. In September 1950, the base was renamed George Air Force Base in honor of the late Brigadier General Harold H. George. Flight training was the primary mission at George AFB and included bombers, gliders, single

engine, twin engine, and jet fighter aircraft (Global Security 2007a). George AFB was a major training facility for the F-4 Phantom fighter aircraft. On January 5, 1989, the Secretary of Defense announced the closure of George AFB pursuant to the Base Closure and Realignment Act (Public Law 100-526). The base was officially deactivated by the Department of the Air Force on December 15, 1992.

No evidence of pre-military historic sites or structures was identified on George AFB. The base, however, was established during World War II and reflects the historical development of that era, specifically as it relates to the training of military flight crews. World War II buildings were evaluated to determine their eligibility for inclusion on the NRHP (SAIC and Hatheway Associates 1991). Four historic structures were recommended as potentially NRHP eligible following the initial evaluation of George AFB facilities. Upon further investigation, however, the Air Force determined that these properties were not eligible for the NRHP. The SHPO concurred with this determination in a letter dated August 7, 1991. During the 2003 survey, an additional historical resource, a 1930-era highway bridge, was recorded (City of Victorville Planning Department 2004).

3.3.5.3 Native American Interests

Early and effective participation of Native American tribes and groups is an integral component to the successful completion of the Section 106 process. Eight Native American groups that could be affected by the SCLA Alternative were identified by the California Native American Heritage Commission (Table 3.3-8). As lead federal agency, the Air Force initiated consultation with eight Native American groups pursuant to 36 CFR 800.2, to ensure that any sites of traditional cultural value are identified and adequately considered under the SCLA Alternative. The Air Force sent correspondence to the tribes announcing the action and requesting concerns regarding the SCLA Alternative (see Appendix C).

Table 3.3-8 Native American Groups Identified for the SCLA

State	Tribal Name
Arizona	AhaMaKav Cultural Society, Fort Mojave Indian Tribe
California	Chemehuevi Reservation
	Morongo Band of Mission Indians
	San Fernando Band of Mission Indians
	San Manuel Band of Mission Indians
	Serrano Band of Indians
	Tehachapi Indian Tribe
	Tubatulabal/Kawaiisu/Koso/Yokuts (Ron Wermuth)

CHAPTER 4
ENVIRONMENTAL CONSEQUENCES

This chapter provides analysis of the environmental impacts of the No Action Alternative, Proposed Action, Travis AFB Alternative, and SCLA Alternative. The primary basis for the analysis is the amount of change in aircraft operations at interim LZ locations.

4.1 NO ACTION ALTERNATIVE

Under the No Action Alternative, HQ AMC would not establish and operate an interim LZ in the western United States. Airfield operations at Grant County Airport, Travis AFB, and the SCLA would continue at baseline levels (see Tables 2.2-1, 2.2-2, and 2.2-3, respectively).

4.1.1 Grant County Airport

Aircraft Operations and Safety and BASH

Airspace and airfield operations impacts would be considered significant if: (1) the airspace and/or airfield did not have the capacity to accommodate the change in aircraft operations associated with the action; or (2) the changes would conflict with the baseline operations condition. An aircraft safety impact would be significant if there would be a high probability that an aircraft involved in an accident would strike a person or structure on the ground. A BASH incident would be significant if it would likely result in an aircraft accident, involve injury either to aircrews or to the public, or damage to property (other than the aircraft). These significance criteria apply to airspace and airfield operations, aircraft safety, and BASH for the No Action Alternative, Proposed Action, Travis AFB Alternative, and the SCLA Alternative.

The types of aircraft operating at the Grant County Airport, as well as airspace and runway use, would remain the same as the baseline. The air traffic control procedures, to include McChord AFB operations when the air traffic control tower is closed and which accommodate the current level of activity, would continue to be used to control aircraft operations. The potential for aircraft accidents or BASH incidents would remain at the baseline conditions. The risk would continue to be low that an aircraft involved in an accident at or around the Grant County Airport would strike a person or structure on the ground. Likewise, it would continue to be unlikely that any of the BASH incidents would involve injury either to aircrews or to the public, or damage to property (other than the aircraft).

Noise

Several items were examined in evaluating potential noise impacts, including the degree to which noise levels generated by airfield operation activities would: (1) exceed HUD, FAA, or Air Force standards; (2) cause structural damage; (3) annoy people; and (4) cause hearing

loss. These significance criteria apply to noise for the No Action Alternative, Proposed Action, Travis AFB Alternative, and the SCLA Alternative.

Noise would continue to be generated by aircraft operations. The number of persons exposed to noise and potentially highly annoyed would remain at the current levels (see Table 3.1-5). The 2,085 persons exposed to DNL 65 dBA and greater would continue to equate to 17 percent of the persons who live within a 5-mile radius of the airfield. Noise-induced hearing loss would not occur because individuals would not be exposed to noise for the duration at which loss could occur. No damage would occur to structures in the area surrounding the airport from C-17 operations because the noise produced by the aircraft would not exceed the level at which structural damage occurs.

Land Use

An impact to land use would be considered significant if one or more of the following would occur as a result of the proposed action: (1) conflict with applicable ordinances and/or permit requirements; (2) not conform with applicable land use plans; (3) preclude adjacent or nearby properties from being used for existing activities; or (4) conflict with established uses of an area. These significance criteria apply to land use for the No Action Alternative, Proposed Action, Travis AFB Alternative, and the SCLA Alternative.

Continuation of the current activities would be consistent with the land use in the area surrounding the airport.

Air Quality

Impacts to air quality in attainment areas would be considered significant if pollutant emissions associated with implementation of the federal action caused or contributed to a violation of any national, state, or local ambient air quality standard, exposed sensitive receptors to substantially increased pollutant concentrations, represented an increase of 10 percent or more in the affected AQCR's emissions inventory, or exceeded any significance criteria established by the SIP. Impacts to air quality in nonattainment areas would be considered significant if the net change in proposed pollutant emissions caused or contributed to a violation of any national, state, or local ambient air quality standard; increased the frequency or severity of a violation of any ambient air quality standard; or delayed the attainment of any standard or other milestone contained in the SIP. With respect to the General Conformity Rule, impacts to air quality would be considered significant if emissions increased a nonattainment area's emissions inventory by 10 percent or more for individual nonattainment pollutants; or exceeded *de minimis* threshold levels established in 40 CFR 91.153 (b) for individual nonattainment pollutants or pollutants for which an area has been redesignated as a maintenance area. These significance criteria apply to air quality for the No Action Alternative, Proposed Action, Travis AFB Alternative, and the SCLA Alternative.

Emissions would continue to be generated by Grant County Airport activities such as aircraft operations and other aircraft maintenance activities, as well as vehicle, boiler, generator, and fueling operations, and industrial processes. It is anticipated that emissions

from these activities would continue at the baseline condition rates, which do not exceed the SIP thresholds for the Base.

Cultural Resources

A project is considered to have an effect on a historic property when the undertaking may alter characteristics of the property that may qualify the property for inclusion in the NRHP. An effect would be considered adverse when it diminishes the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Adverse effects on historic properties would include, but would not be limited to:

- physical destruction, damage, or alteration of all or part of the property;
- isolation of the property from or alteration of the character of the property's setting when that character contributes to the property's qualification for the NRHP;
- introduction of visual, audible, or atmospheric elements that are out of character with the property or alter its setting;
- neglect of a property resulting in its deterioration or destruction; and
- transfer, lease, or sale of the property (36 CFR 800.9[b]).

Any ground-disturbing action in the area of an NRHP-eligible or potentially eligible archaeological site, or modification to such a site, can affect the integrity of that cultural resource, resulting in alteration or destruction of those characteristics or qualities which make it significant and potentially eligible for inclusion in the NRHP. While archaeological sites or historic buildings or structures can be destroyed during a single event, more often it is the cumulative effect of recurrent disturbing actions that diminish the integrity of the cultural resource and its significant characteristics.

No supersonic flight or supersonic events would occur as a result of the No Action Alternative. Activities with potential to adversely affect cultural resources would be potential aircraft crashes and noise.

PL 100-91, passed in August 1987, directed the U.S. Forest Service and the NPS to conduct studies and make recommendations to Congress on aircraft overflight that may be affecting either visitors or resources of the National Forest System and National Parks. Completed in July 1992, this cooperative study (USDA 1992) concluded the following:

- Because many cultural resources are located in remote and uninhabited areas, documented observations of aircraft noise effects are rare; and
- Most of the available literature relates to research by the Air Force, National Aeronautics and Space Administration, and the FAA and focuses on the effects of sonic booms.

A recently developed prediction method places a definite risk of damage to prehistoric structures (*e.g.*, rock art [petroglyphs and pictographs], rock alignments, rock cairns) from

low overflight of heavy bombers and heavy helicopters; however, measurement programs have been conducted that conclude there is minimal risk of damage to structures from light, low-flying subsonic jet aircraft and light helicopters.

Some evidence exists that long-term effects of noise exposure could result in damage by initiating or accelerating the deterioration process, especially to already fragile resources. Long-term effects appear as (1) fatigue effects in walls and other structural elements after extensive exposure, (2) moisture damage initiated by cosmetic cracks in exterior surfaces, and (3) gradual erosion of surface materials (*e.g.,* adobe mud-plastered walls) from repeated events.

A study that examined noise effects of low-level B-52 overflights on Long House, a 1,000-year old Arizona adobe structure, concluded that noise from a B-52 aircraft would have no significant effects. Noise levels generated by the B-52 aircraft during this study were as high as 113 dBA. Noise-induced landslides and rockfalls are less probable (less than 0.001 percent probability), so by inference, rock art, rock alignments, and cairns are unlikely to be disturbed. Based on these data, noise impacts to archaeological and historic resources are not expected as a result of low-level subsonic aircraft overflight. In addition, the maximum sound pressure generated by the C-17 (109-dBA at 200-feet AGL) would be less than the 113-dBA generated by B-52 aircraft in the study (USAF 1997).

Effects of aircraft accidents on cultural resources are unpredictable. There are two potential ways for aircraft accidents to affect cultural resources. These are: (1) aircraft crashing onto or into and damaging sites; and (2) personnel and vehicles in the process of retrieving falling objects driving over or otherwise damaging cultural resources. However, the occurrence of aircraft accidents is statistically low. There is only a small probability that potential historic properties might be affected by aircraft accidents.

For this analysis, the ROI is synonymous with the area of potential effect, as defined by the NHPA. The ROI is the geographic area within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist.

LZ operations would remain at the baseline levels. The potential for impact on cultural resources would remain low due to routine airfield maintenance and aircraft operations activities. Cultural resources would continue to be managed in accordance with applicable federal and state procedures.

4.1.2 Travis AFB

Aircraft Operations and Safety and BASH

The types of aircraft operating at the Base, as well as airspace and runway use, would remain the same as the baseline. The air traffic control procedures, which accommodate the current level of activity, would continue to be used to control aircraft operations. The potential for aircraft accidents or bird/wildlife-aircraft strikes would remain at the baseline

conditions. The risk would continue to be low that an aircraft involved in an accident at or around the Travis AFB would strike a person or structure on the ground. Likewise, it would continue to be unlikely that any of the BASH incidents would involve injury either to aircrews or to the public, or damage to property (other than the aircraft).

Noise

Noise would continue to be generated by aircraft operations and construction and demolition activities associated with individually programmed facility actions and operation and maintenance activities. The number of persons exposed to noise and potentially highly annoyed would remain at the current levels (see Table 3.2-3). The 375 persons exposed to CNEL 60 dBA and greater would continue to equate to 1 percent of the persons who live within a 5-mile radius of the airfield. The discussion for noise-induced hearing loss and structural damage for Grant County Airport in Subchapter 4.1.1 also applies.

Land Use

Continuation of current activities would be consistent with the land use categories in the General Plan. Any facilities actions at Travis AFB would be accomplished in accordance with the Base's General Plan. Continuation of the current activities would be consistent with the land use in the area surrounding the Base.

Air Quality

Emissions would continue to be generated by Travis AFB activities such as aircraft operations and other aircraft maintenance activities, as well as vehicle, boiler, generator, and fueling operations, and industrial processes. It is anticipated that emissions from these activities would continue at the baseline condition rates and would not violate regulatory guidance.

Cultural Resources

There would be no LZ operation activities; however, aircraft operations would continue at baseline levels. The potential for impact on cultural resources would remain low due to routine airfield maintenance and aircraft operations activities. Cultural resources would continue to be managed in accordance with procedures outlined in the Travis AFB ICRMP.

4.1.3 Southern California Logistics Airport

Aircraft Operations and Safety and BASH

The types of aircraft operating at the SCLA, as well as airspace and runway use, would remain the same as the baseline. The air traffic control procedures, which accommodate the current level of activity, would continue to be used to control aircraft operations. The potential for aircraft accidents or bird/wildlife aircraft strikes would remain at baseline conditions. The risk would continue to be low that an aircraft involved in an accident at or around the SCLA would strike a person or structure on the ground. Likewise, it would

continue to be unlikely that any of the bird/wildlife-aircraft strike incidents would involve injury either to aircrews or to the public, or damage to property (other than the aircraft).

Noise

Noise would continue to be generated by aircraft operations. The number of persons exposed to noise and potentially highly annoyed would remain at the current levels (see Table 3.3-2). No persons would be exposed to CNEL 60 dBA and greater. The discussion for noise-induced hearing loss and structural damage for Grant County Airport in Subchapter 4.1.1 also apply.

Land Use

Continuation of the current activities would be consistent with the land use categories in the SCLA planning guidance.

Air Quality

Emissions would continue to be generated by aircraft operations and other aircraft maintenance activities, as well as vehicle, boiler, generator, and fueling operations, and industrial processes. It is anticipated that emissions from these activities would continue at the baseline condition rates and would not violate regulatory guidance.

Cultural Resources

There would be no LZ operation activities; however, aircraft operations would continue at baseline levels. The potential for impact on cultural resources would remain low due to routine airfield maintenance and aircraft operations activities. Cultural resources would continue to be managed in accordance with applicable federal and state procedures.

4.2 PROPOSED ACTION

The existing LZ at the Grant County Airport (see Figure 2-2) and the LZ that would be painted on Runway 21L/03R at Travis AFB would be used to support tactical arrival, departure, and landing training. Annually, approximately 6,419 (17.83 average daily) and one (3.78 average daily) operations would be accomplished, respectively, at the Grant County Airport and Travis AFB as a result of the Proposed Action.

4.2.1 Aircraft Operations and Safety and Bird/Wildlife-Aircraft Strike Hazard

4.2.1.1 Grant County Airport

Aircraft Operations

Under the Proposed Action, average daily airfield operations at Grant County Airport would increase by 17.83 operations from 218.42 to 236.25 operations (see Tables 2.2-1 and 2.2-4, respectively), an 8 percent increase. Approximately 86,100 annual operations would

occur under the Proposed Action at the Grant County Airport. The anticipated annual operations would equate to approximately 25 percent of the airfield capacity, an increase of 3 percent. Assuming nearly all operations would occur primarily between 6:00 a.m. and 2:00 a.m., there would be 20 hours of operations per day for hourly capacity purposes. Based on a 20-hour day, the average IFR hourly operations would be about 12 operations, approximately 20 percent of the hourly capacity (a 1% increase). The airfield has the capacity to accommodate the increase in operations.

Aircrews from Travis AFB would schedule operations at the Grant County Airport through McChord AFB. This would ensure compliance with the McChord AFB-Grant County Airport agreement that states the maximum number of C-17s operating at the airport would not exceed two aircraft and would not operate between 2:00 a.m. and 7:00 a.m. (Ryan 2007).

As mentioned in Subchapter 3.1.1.1, C-17 aircraft accomplish operations on Runways 14R/32L and 04/22 and tactical training operations on the LZ (Runway 09/27) under the baseline condition. No new tactical departure, arrival, and closed pattern events would be added and Travis AFB aircrews would use the existing tracks for operations at the airfield. The existing air traffic control procedures for the airspace surrounding the airfield and at the airfield would accommodate the proposed C-17 operations at the airfield.

Aircraft Safety

It is impossible to predict the precise location where an aircraft involved in an in-flight accident would impact the ground. However, aircraft flight tracks are developed to avoid overflying residences and built-up areas to the maximum extent practicable. The types of landing and takeoff operations the C-17s would accomplish at Grant County Airport would be consistent with those currently flown at the airport, and the C-17 Class A mishap rate listed in Table 3.2-1 also applies. For these reasons, the risk is low that an aircraft involved in an accident at or around the Grant County Airport would strike a person or structure on the ground.

Bird/Wildlife-Aircraft Strike Hazard

BASH incidents can be assessed using a combination of bird and wildlife distribution and behavior factors and aircraft operational factors. Some of these factors include:

- The size and behavior of the predominant bird species;
- The presence of specialized habitat or location that favors migration patterns or large concentrations of birds;
- The frequency and location of takeoffs and landings;
- The altitude of flight operations; and
- The flight characteristics of the aircraft, including size, airspeed, and number of engines.

Overall, aircraft operations at the Grant County Airport would increase approximately 8 percent. Thus, there would be a corresponding potential for an increase in BASH incidents at the airport. It is anticipated the altitude distribution of the additional strikes would follow the data in Table 3.1-2 because the types of operations by aircraft operating at the airfield would be consistent with the types of operations associated with data in the table.

The potential for BASH incidents could fluctuate as a result of the cyclical patterns of bird populations. Historically, one-half of 1 percent of all reported bird/wildlife-aircraft strikes involving Air Force aircraft resulted in a serious mishap. Therefore, it is unlikely that any of these bird/wildlife-aircraft strike incidents would involve injury either to aircrews or to the public, or damage to property (other than the aircraft).

4.2.1.2 Travis AFB

Aircraft Operations

Under the Proposed Action at Travis AFB, average daily airfield operations at the Base would increase by 3.78 operations, from 221.81 to 225.59 (see Tables 2.2-2 and 2.2-5, respectively), a 2 percent increase. Approximately 71,600 annual operations would occur under the Proposed Action at Travis AFB. The anticipated annual operations would equate to approximately 26 percent of the airfield capacity, an increase of 1 percent. Assuming nearly all operations occur primarily between 6:00 a.m. and 2:00 a.m., there would be 20 hours of operations per day for hourly capacity purposes. Based on a 20-hour day, the average IFR hourly operations would be about 11 operations, approximately 21 percent of the hourly capacity (no change from the baseline). The airfield has the capacity to accommodate the increase in operations.

Although C-17 new tactical departures, arrivals, and closed pattern events would be added to the flight track inventory for operations on the LZ, the track locations and aircraft profiles (*i.e.*, airspeed, altitude, and power settings) for the new tracks would be similar to those that occur under the baseline condition. The existing air traffic control procedures for the airspace surrounding the airfield and at the airfield would continue to accommodate the continued C-17 operations on Runways 21L/03R and 21R/03L as well as the existing and new aircraft ground tracks and increased operations on the LZ.

Aircraft Safety

It is impossible to predict the precise location where an aircraft involved in an in-flight accident would impact the ground. However, aircraft flight tracks are developed to avoid overflying residences and built-up areas to the maximum extent practicable. The types of landing and takeoff operations the C-17s would accomplish at Travis AFB would be consistent with those currently flown at the Base, and the C-17 Class A mishap rate listed in Table 3.2-1 also applies. For these reasons, the risk is low that an aircraft involved in an accident at or around the Travis AFB would strike a person or structure on the ground.

Bird/Wildlife-Aircraft Strike Hazard

The background information in Subchapter 4.2.1 concerning the behavior factors of birds and wildlife and aircraft operational factors also applies to the alternative. Overall, aircraft operations at Travis AFB would increase by about 2 percent. Thus, there would be potential for a corresponding increase in bird/wildlife-aircraft strikes at Travis AFB. It is anticipated the altitude distribution of the additional strikes would follow the data in Table 3.1-2 because the types of operations by aircraft operating at the airfield would be consistent with the types of operations associated with data in the table. The discussion and analysis concerning the number of bird/wildlife-aircraft strikes that result in serious mishap in Subchapter 4.2.1.1 also applies.

4.2.1.3 Mitigation

There would be no significant impacts. No mitigation is recommended.

4.2.2 Noise

4.2.2.1 Grant County Airport

Noise associated with the Proposed Action at the Grant County Airport would be generated by aircraft operations. There would be no change to the aircraft ground tracks depicted in Figure 3-5 as a result of the Proposed Action at the airport. Figure 4-1 depicts the noise exposure area at the Grant County Airport under the Proposed Action. Figure 4-2 compares the Proposed Action and the No Action Alternative noise contours. The aircraft operations modeled include the average busy day aircraft operations for the Proposed Action at the Grant County Airport (see Table 2.2-4).

Single Event Noise Analysis

Each aircraft overflight yields a single-event noise level, presented as SEL. C-17 aircraft, which currently operate at Grant County Airport, would continue to accomplish operations at the airport and on the LZ. Thus, Grant County Airport and surrounding areas would continue to be exposed to SELs from C-17s at the levels listed in Table 3.1-3. The greatest SEL values for the aircraft operating at Grant County Airport would continue to be produced by EA-6B aircraft, which are 11 dBA louder than the C-17.

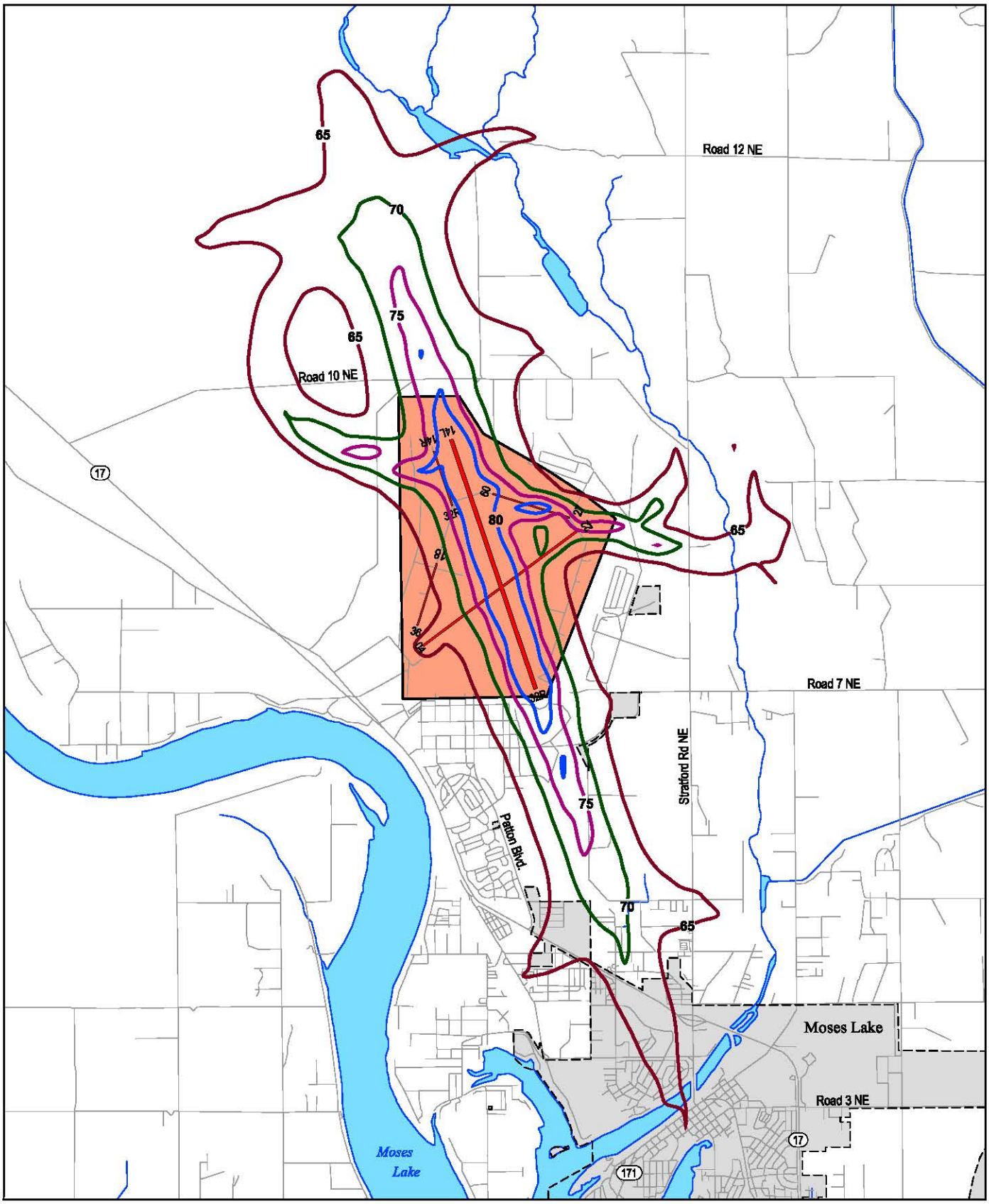
Based on FICAN recommendations, outdoor SELs of 80 to 100 dBA (60 to 80 dBA indoors) could result in 4 to 10 percent awakenings, respectively, in the exposed population. Over the course of sleeping, different individuals might be awakened by different events, and some individuals might be awakened more than once. Individuals in residences in the area around the Base would continue to be exposed to indoor SEL of 60 to 80 dBA during normal sleep periods (10:00 p.m. to 7:00 a.m.). There would be a combined total of 173 additional off-installation persons exposed to DNL 65 dBA and greater as a result of the Proposed Action at the Grant County Airport. Assuming the number of sleep awakenings would be proportional to the

increase in exposed population and that 10 percent of the persons would be awakened, about 17 additional persons potentially could be awakened when comparing the Proposed Action at the Grant County Airport to the baseline condition. Those individuals who sleep between 7:00 a.m. and 10:00 p.m. likely would be affected just as those persons who sleep during normal nighttime sleep periods.

Nearby schools would continue to be exposed to noise from aircraft operations. However, increased interference from Proposed Action at the Grant County Airport aircraft operations is unlikely because the change in the noise condition is minimal when comparing baseline and Proposed Action noise exposure (see Figure 4-2). Assuming schools conduct teaching for an approximate 8-hour period (8:00 a.m. through 4:00 p.m.), about 40 percent of the 20-hour flying day would occur when classroom activities occur. Thus, approximately 40 percent of the additional 17.83 average daily C-17 operations (*i.e.*, 7.1 operations) would occur during school time. Based on an 8-hour school day and 7.1 operations, there would be an average of less than one additional overflight per hour that could interfere with classroom activities in schools that would be overflown.

Research on the effects of aircraft noise on student learning suggests that aircraft noise can interfere with learning in the following areas: reading; motivation; language and speech acquisition; and memory (FICAN 2000). Research to date supports the following findings:

- "Reading. The strongest finding of a relationship between aircraft noise and learning is in the area of reading. More than 20 studies have found that children in noise impact zones are negatively affected by aircraft noise." (FICAN 2000).
- "Motivation. Approximately a dozen laboratory and field studies indicate reduced task persistence in relation to uncontrollable noise." (FICAN 2000).
- "Language and Speech. A small number of studies suggest delayed language acquisition and interference with speech perception in noisy areas." (FICAN 2000).
- "Memory. A few studies suggest deficits in short- and long-term memory recall in the presence of noise, particularly for more complex material under noise." (FICAN 2000).



Grant County Airport

LEGEND

- DNL 65 dBA Contour
- DNL 70 dBA Contour
- DNL 75 dBA Contour
- DNL 80 dBA Contour
- Runway
- Roadway
- City Limits
- Grant County International Airport

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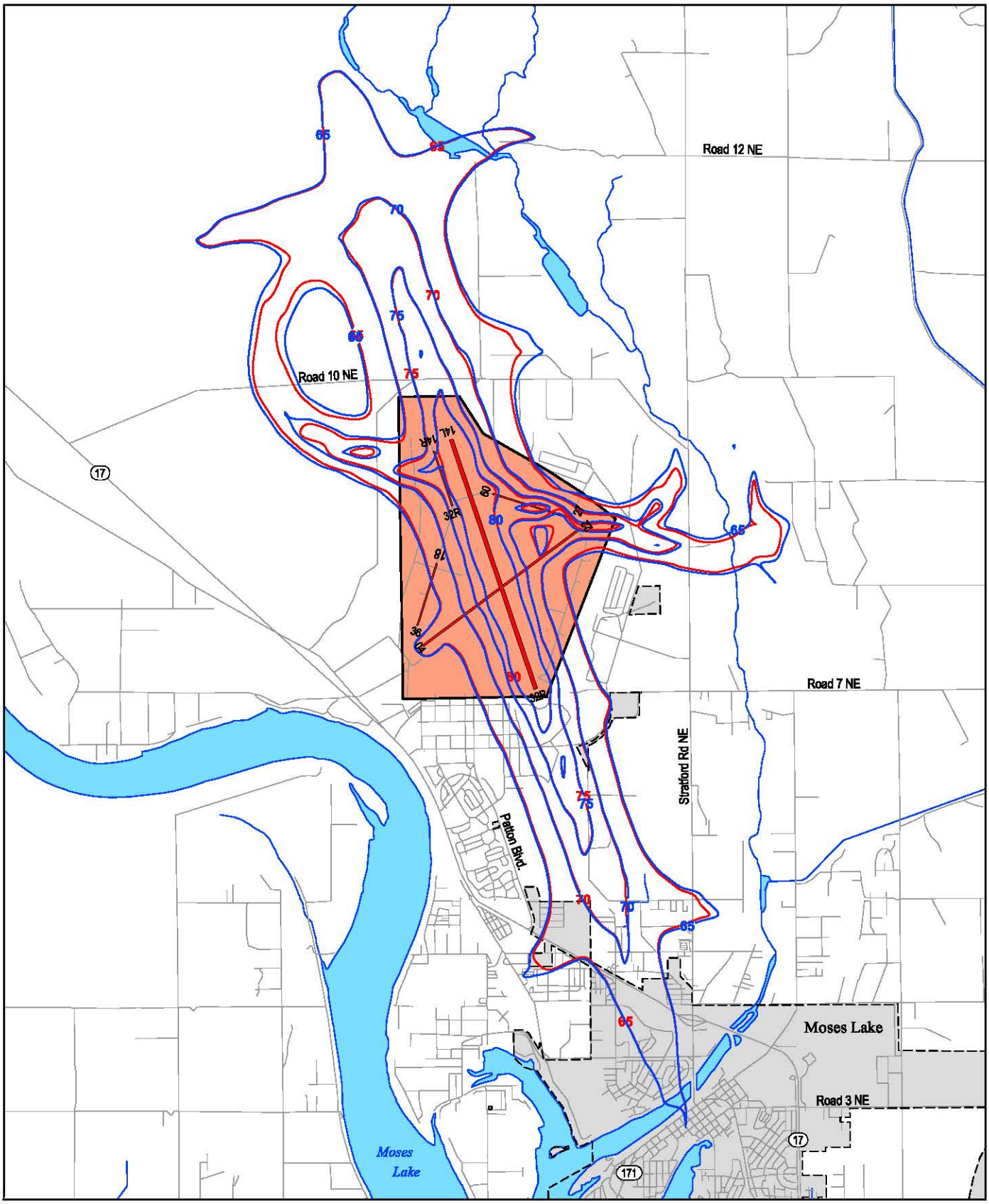
Feet

Proposed Action Noise Contours at Grant County Airport

Figure 4-1

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744211 WCLZ-GC-COMP.DWG

Comparison of No Action Alternative and Proposed Action Noise Contours at Grant County Airport

Figure 4-2

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In June 2002, the American National Standards Institute, Inc. (ANSI) released a new classroom acoustics standard. Compliance with the standard is voluntary; however, school boards and municipalities may reference the standard for new school projects. The goal is to achieve a learning space with low background sound levels and reverberation times in which people would be able to communicate effectively. The new standard establishes an hourly A-weighted average sound level of 40 dB that must not be exceeded for more than 10 percent of the hour (ANSI 2002). The ANSI standard should be incorporated into the design and construction of new schools and when existing schools are modernized. Interior noise at existing schools could be minimized by: installing additional insulation; adding a second window pane; sealing gaps or leaks in windows and doors; replacing windows and doors with windows and doors that offer better attenuation; installing baffles in vents; and improving the exterior roofing.

Table 4.2-1 contains at-ear noise exposure levels that produce negligible hearing loss of no more than 5 dB for both an 8-hour and 24-hour exposure on a yearly and working day basis. The 8-hour data assumes the remaining 16 hours of the day are spent in relative quiet (USEPA 1974). According to USEPA (1974), changes in hearing levels of 5 dB are generally not considered noticeable or significant. As shown in Figure 3-2, the average noise (L_{eq} in Table 4.2-1) from a noise producing event is less than the L_{max} or SEL from the event. Based on the level of noise exposure from the Proposed Action at the Grant County Airport aircraft operations, it is doubtful that an individual would be exposed to the noise levels and exposure conditions in Table 4.2-1 and at which hearing loss could occur.

Table 4.2-1 At-Ear Exposure Levels that Produce No More than 5 dB Noise-Induced Hearing Damage over a 40-Year Period

Exposure	Steady (continuous) Noise	Intermittent Noise	With Margin of Safety
L_{eq} 8-Hour			
250 days per year	73.0	78.0	--
365 days per year	71.4	76.4	75.0
L_{eq} 24-Hour			
250 days per year	68.0	73.0	--70.0
365 days per year	66.4	71.4	--

Source: USEPA 1974.

Averaged Noise Analysis

Table 4.2-2 compares the Proposed Action at the Grant County Airport with the No Action Alternative (*i.e.*, baseline) for the following: off-airport land area and population exposed to noise of DNL 65 dBA and greater, and the population potentially highly annoyed (*i.e.*, baseline).

Overall, the Proposed Action at Grant County Airport noise contours would be nearly identical to the No Action Alternative (*i.e.*, baseline) (see Figure 4-2), with the number of off-

airport acres in the DNL 65 dBA and greater exposure area increasing by 9 percent. People would continue to be exposed to aircraft noise in three of the four noise zones (see Table 4.2-2), with the DNL 65-70 dBA noise zone containing 2,132 of the 2,258 persons exposed to DNL 65-dBA and greater. These 2,258 persons would equate to 18 percent of the estimated 12,373 persons (based on 2000 census data) who live within the approximate 5-mile radius area associated with airfield airspace environment, an increase of 1 percent when compared to the No Action Alternative (*i.e.*, baseline).

Table 4.2-2 Summary of Off-Airport Land Area and Population Exposed to, and Population Potentially Highly Annoyed by DNL 65 dBA and Greater, Proposed Action at Grant County

Category	DNL Interval (dBA)				
	65-70	70-75	75-80	80+	Total
Acres					
No Action Alternative	4,446	1,354	427	35	6,262
Proposed Action at Grant County Airport	4,865	1,467	458	39	6,829
Change	+419	+113	+31	+4	+567
Percent Change	+9%	+8%	+7%	+12%	+9%
Population					
No Action Alternative	1,969	114	2	0	2,085
Proposed Action at Grant County Airport	2,132	124	2	0	2,258
Change	+163	+10	0	0	+173
Percent Change	+8%	+9%	0%	0%	+8%
Population Potentially Highly Annoyed					
No Action Alternative	433	42	1	0	476
Proposed Action at Grant County Airport	469	46	1	0	515
Change	+36	+4	0	0	+40
Percent Change	+8%	+10%	0%	0%	+8%

Note: The No Action Alternative is also the baseline. Acres reflect only off-Base land area. People highly annoyed determined by multiplying the total number of people in the noise zone times the higher percent number for the interval in Table 3.1-4.

The density of residences in the newly exposed area would be consistent with adjacent residential areas exposed to aircraft noise under the No Action Alternative (*i.e.*, baseline). The overall number of persons who could be potentially highly annoyed by noise exposure would be 515 people, or 40 additional persons when compared to the No Action Alternative (baseline).

The contribution of outdoor noise to indoor noise is usually small. The effect of an outdoor noise source inside a building depends on the intensity of the source and the noise level reduction of the building. Noise level reduction provided by a building can be categorized into those constructed in warm climates and those in cold climates. Additionally, the noise level reduction of a building also depends on whether the windows are open or closed (USEPA 1974). Table 4.2-3 presents typical noise level reduction for the two categories of buildings and the window open/closed condition and approximate national average noise level reduction. Based on Grant County Airport's location, the cold climate data would apply to buildings on and in the area surrounding the airport.

Table 4.2-3 Typical Noise Level Reductions of Buildings

Climate/National Average	Windows Open	Windows Closed
Warm Climate	12 dB	24 dB
Cold Climate	17 dB	27 dB
Approximate National Average	15 dB	25 dB

Source: USEPA 1974.

Nonauditory health effects of long-term noise exposure, where noise may act as a risk factor, have never been found to occur at levels below those protective against noise-induced hearing loss. Most studies attempting to clarify such health effects have found that noise exposure levels established for hearing protection will also protect against any potential nonauditory health effects, at least in workplace conditions. The best scientific summary of these findings is contained in the lead paper at the National Institute of Health Conference on Noise and Hearing Loss, held on 22-24 January 1990 in Washington, D.C.

"The nonauditory effects of chronic noise exposure, when noise is suspected to act as one of the risk factors in the development of hypertension, cardiovascular disease, and other nervous disorders, have never been proven to occur as chronic manifestations at levels below these criteria (an average of 75 dBA for complete protection against hearing loss for an 8-hour day). At the 1988 International Congress on Noise as a Public Health Problem, most studies attempting to clarify such health effects did not find them at levels below the criteria protective of noise-induced hearing loss, and even above these criteria, results regarding such health effects were ambiguous. Consequently, one comes to the conclusion that establishing and enforcing exposure levels protecting against noise-induced hearing loss would not only solve the noise-induced hearing loss problem but also any potential nonauditory health effects in the work place." (Von Gierke 1990).

Although these findings were directed specifically at noise effects in the work place, they are equally applicable to aircraft noise effects in the community environment. Research studies regarding the nonauditory health effects of aircraft noise are ambiguous, at best, and often contradictory. Yet, even those studies, which purport to find such health effects, use time-average noise levels of 75 dBA and higher for their research. It is unlikely that individuals would be exposed to aircraft noise at these levels for an 8-hour day. Thus, nonauditory health effects from chronic noise exposure would not occur due to the Proposed Action at the Grant County Airport.

Studies of aircraft noise and sonic booms, both in the United States and overseas, have addressed acute effects, including effects of startle responses (sheep, horses, cattle, fowl), and effects on reproduction and growth (sheep, cattle, fowl, swine); parental behaviors (fowl, mink); milk letdown (dairy cattle, dairy goats, swine); and egg production. High noise may trigger a startle response that raises the heart rate, but heart rate returns to normal in a very short time. There are good dose-response relationships describing the startle tendency to various levels of noise. However, studies have determined there would be no long-term behavioral or breeding effects. Thus, it is unlikely that noise from the additional aircraft operations at the Grant County Airport would cause long-term behavioral or breeding effects to domestic animals exposed to aircraft noise.

Effects of Noise on Structures

As discussed in Subchapter 3.1.2.2, L_{max} is used to determine the potential effects to structures from sound. The L_{max} is the highest instantaneous sound pressure during a single noise event, no matter how long the sound may persist. No damage would occur to structures in the area surrounding Grant County Airport from C-17 LZ operations because the L_{max} produced by the aircraft (*i.e.*, 113 dBA at 200 feet from the aircraft) would not exceed the level at which structural damage could occur.

4.2.2.2 Travis AFB

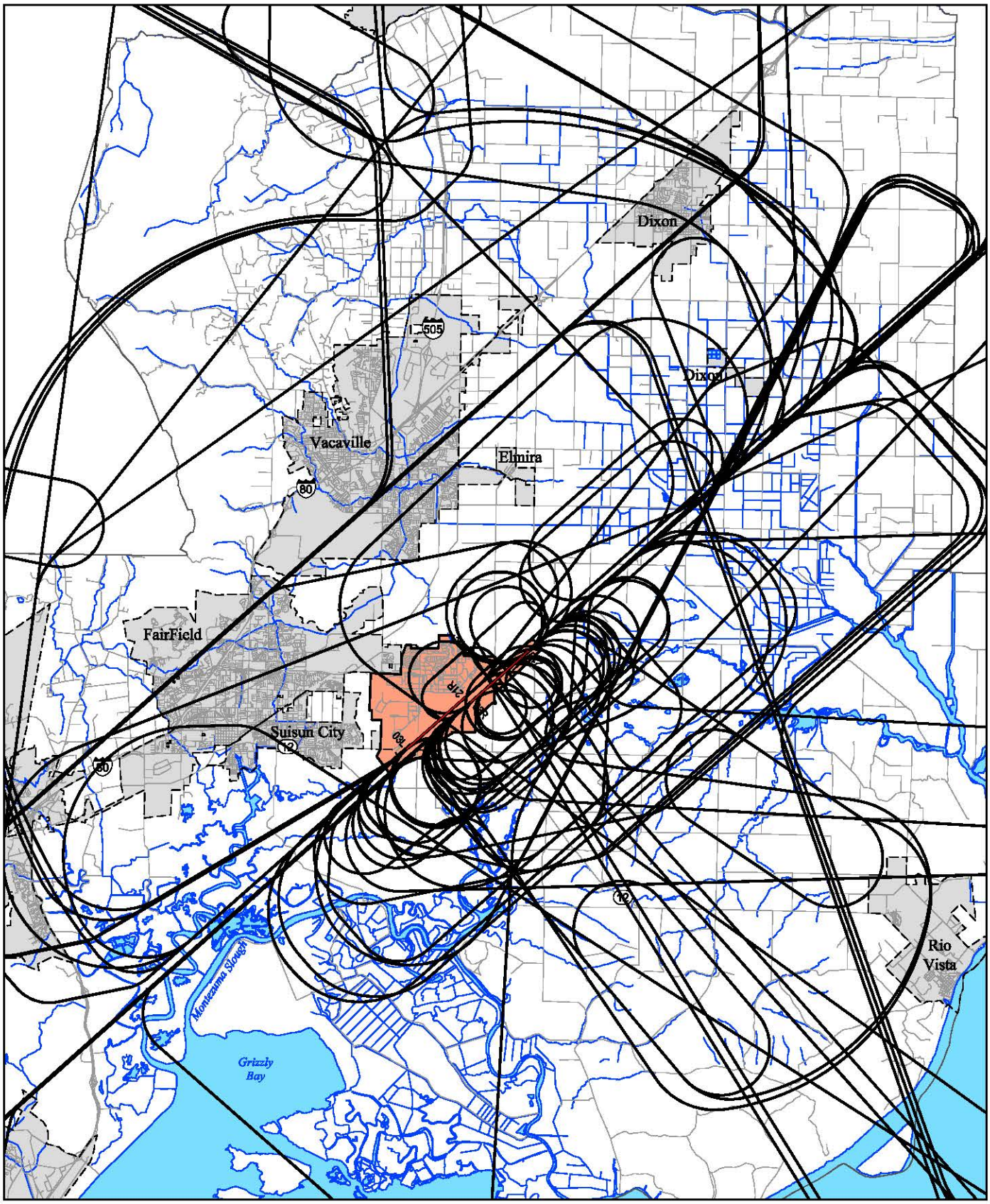
Noise associated with the Proposed Action at Travis AFB would be generated by aircraft operations. Figure 4-3 shows the aircraft ground tracks and Figure 4-4 depicts the noise exposure area at the Base after the LZ would be established and aircraft operations occur at the projected levels. Figure 4-5 compares the Proposed Action at Travis AFB and the No Action Alternative noise contours. The aircraft operations modeled include the average busy day aircraft operations (see Table 2.2-5).

Single Event Noise Analysis

Each aircraft overflight yields a single-event noise level, presented as SEL. C-17 and C-130 aircraft, which currently operate at Travis AFB, would also accomplish operations on the LZ after it is constructed. Thus, Travis AFB and surrounding areas would continue to be exposed to SELs from C-17s at the levels listed in Table 3.2-2. The greatest SEL values for the aircraft based at Travis AFB would continue to be produced by the C-5 aircraft, which are 12 dBA louder than the C-17 aircraft.

The induced hearing data in Table 4.2-1 and related discussion in Subchapter 4.2.2 for the Proposed Action at the Grant County Airport also apply. Based on the level of noise exposure from the Proposed Action at Travis AFB aircraft operations in areas where people live, it is doubtful that an individual would be exposed to noise that would produce hearing loss.

Nearby schools would continue to be exposed to noise from aircraft operations. However, increased interference from Proposed Action at Travis AFB aircraft operations is unlikely because the change in the noise condition is minimal when comparing baseline and proposed action noise exposure (see Figure 4-5). Assuming schools conduct teaching for an approximate 8-hour period (8:00 a.m. through 4:00 p.m.), about 40 percent of the 20-hour flying day would occur when classroom activities occur. Thus, approximately 40 percent of the additional 3.781 average daily C-17 operations (*i.e.*, 1.5 operations) would occur during The discussion and analyses for nonauditory health effects and the effects of aircraft noise on farm animals for the Proposed Action at the Grant County Airport in Subchapter 4.2.2 also apply.



Travis AFB

LEGEND

- Ground Track
- Runway
- Roadway
- City Limits
- Travis AFB

N

0 19,000

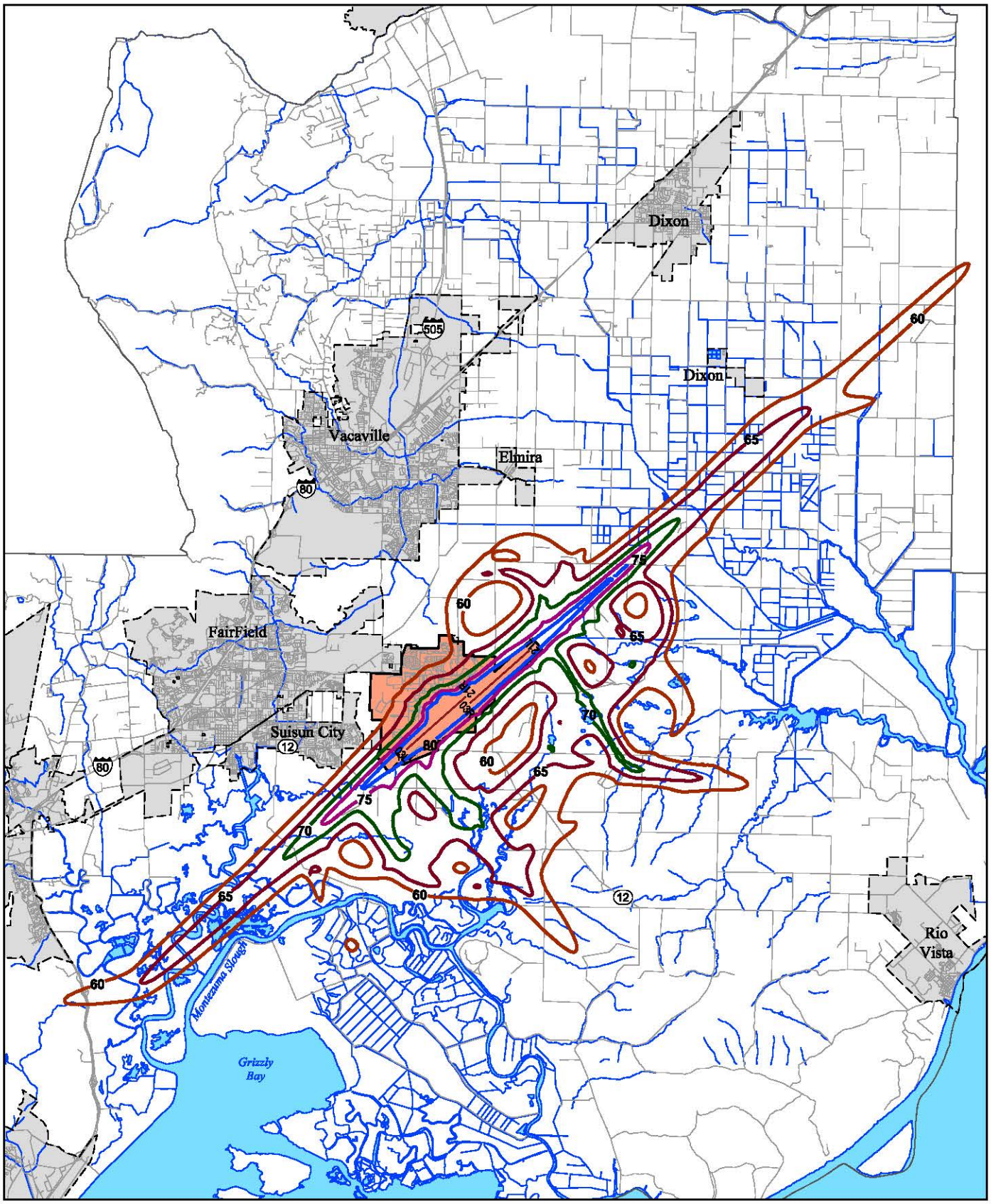
Feet

Proposed Action Aircraft Ground Tracks at Travis AFB

Figure 4-3

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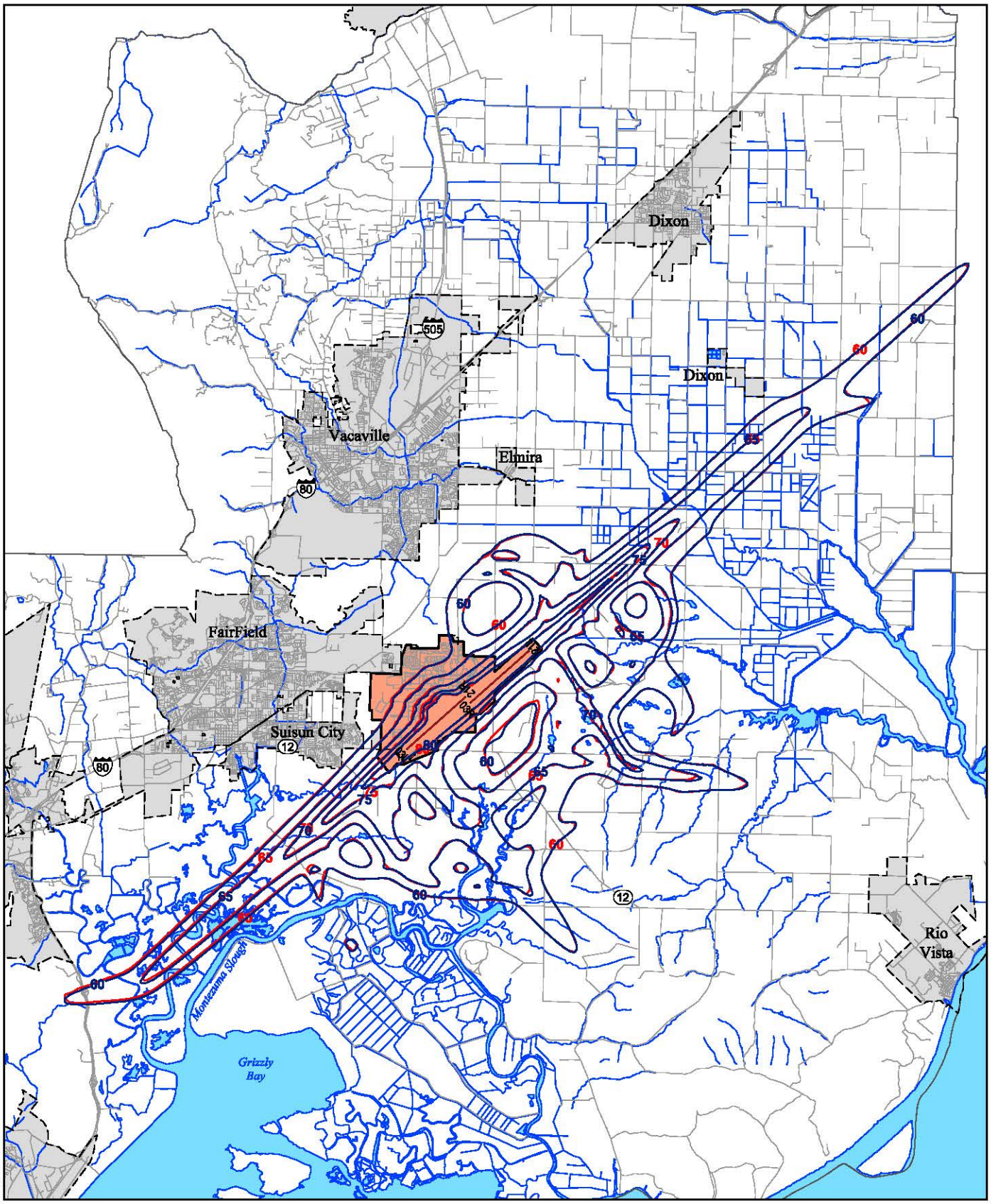


Proposed Action Noise Contours at Travis AFB

Figure 4-4

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Travis AFB

LEGEND

- No Action Alternative Noise Contours
- Proposed Action Noise Contours
- Runway
- Roadway
- City Limits
- Travis AFB

N

0 19,000 Feet

Comparison of No Action Alternative and Proposed Action Noise Contours at Travis AFB

Figure 4-5

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Based on FICAN recommendations, outdoor SELs of 80 to 100 dBA (60 to 80 dBA indoors) could result in 4 to 10 percent awakenings, respectively, in the exposed population. Over the course of sleeping, different individuals might be awakened by different events, and some individuals might be awakened more than once. Individuals in residences in the area around the Base would continue to be exposed to indoor SEL of 60 to 80 dBA during normal sleep periods (10:00 p.m. to 7:00 a.m.). There would be a combined total of six additional off-Base persons exposed to CNEL 65 dBA and greater as a result of the Proposed Action at Travis AFB. Assuming the number of sleep awakenings would be proportional to the increase in exposed population and that 10 percent of the persons would be awakened, one additional person potentially could be awakened when comparing the Proposed Action at Travis AFB to the baseline condition. Those individuals who sleep between 7:00 a.m. and 10:00 p.m. likely would be affected just as those persons who sleep during normal nighttime sleep periods.

Averaged Noise Analysis

Table 4.2-5 compares the Proposed Action at Travis AFB with the No Action Alternative (*i.e.*, baseline) for the following: off-Base land area and population exposed to noise of CNEL 60 dBA and greater, and the population potentially highly annoyed (*i.e.*, baseline).

Overall, the Proposed Action at Travis AFB noise contours would be nearly identical to the No Action Alternative (*i.e.*, baseline) contours (see Figure 4-5), with the number of off-Base acres in the CNEL 60 dBA and greater exposure area increasing by less than 1 percent.

People would continue to be exposed to aircraft noise in four of the five noise zones (see Table 4.2-4), with the CNEL 60-65 dBA noise zone containing 260 of the 381 persons exposed to CNEL 60-dBA and greater. These 381 persons would equate to about 1 percent of the estimated 64,492 persons (based on 2000 census data) who live within the approximate 5-mile radius area associated with airfield airspace environment, or no change when compared to the No Action Alternative (*i.e.*, baseline). The density of residences in the newly exposed area would be consistent with adjacent residential areas exposed to aircraft noise under the No Action Alternative (*i.e.*, baseline). The overall number of persons who could be potentially highly annoyed by noise exposure would be 61 people, or one additional person when compared to the No Action Alternative (baseline).

The data in Table 4.2-3 and related discussion and analysis for the contribution of outdoor noise to indoor noise for the Proposed Action at the Grant County Airport in Subchapter 4.2.2 also apply. Based on the location of Travis AFB, the warm climate data would also apply to buildings on and in the area surrounding the Base.

The discussion and analyses for nonauditory health effects and the effects of aircraft noise on farm animals for the Proposed Action at the Grant County Airport in Subchapter 4.2.2 also apply.

Table 4.2-4 Summary of Off-Base Land Area and Population Exposed to, and Population Potentially Highly Annoyed by CNEL 60 dBA and Greater, Proposed Action at Travis AFB

	CNEL Interval (dBA)					
Category	**60-65**	**65-70**	**70-75**	**75-80**	**80+**	**Total**
Acres						
No Action Alternative	21,876	15,283	4,225	1,470	287	43,141
Proposed Action at Travis AFB	21,989	15,251	4,399	1,349	345	43,242
Change	+22	-32	+174	-121	+58	+101
Percent Change	0%	0%	+4%	-8%	+20%	+0%
Population						
No Action Alternative	254	102	13	6	0	375
Proposed Action at Travis AFB	260	101	14	6	0	381
Change	+6	-1	+1	0	0	+6
Percent Change	+3%	-1%	+8%	0%	0%	+2%
Population Potentially Highly Annoyed						
No Action Alternative	30	22	5	3	0	60
Proposed Action at Travis AFB	31	22	5	3	0	61
Change	+1	0	0	0	0	+1
Percent Change	+3%	0%	0%	0%	0%	+2%

Note: The No Action Alternative also is the baseline. Acres reflect only off-Base land area. People highly annoyed determined by multiplying the total number of people in the noise zone times the higher percent number for the interval in Table 3.1-4.

Effects of Noise on Structures

As discussed in Subchapter 3.1.2.2, L_{max} is used to determine the potential affects to structures from sound. The L_{max} is the highest instantaneous sound pressure during a single noise event, no matter how long the sound may persist. No damage would occur to structures in the area surrounding Travis AFB from C-17 LZ operations because the L_{max} produced by the aircraft (*i.e.*, 113 dBA at 200 feet from the aircraft) would not exceed the level at which structural damage could occur.

4.2.2.3 Mitigation

There would be no significant impacts. No mitigation is recommended.

4.2.3 Land Use

4.2.3.1 Grant County Airport

As depicted in Figure 4-2, there is minimal difference between the Proposed Action at Grant County Airport noise contours and the No Action Alternative (baseline) noise contours. Therefore, land use plans for the local community would not be affected. The Proposed Action at Grant County Airport would not require the airport to update or revise its 2005 Airport Master Plan or affect the FAR Part 77 imaginary surfaces or RPZs.

4.2.3.2 Travis AFB

On-Base land use conflicts would not be expected from the establishment and operation of the LZ. Land uses would be compatible with the general character of existing and planned Base land use patterns. The Travis AFB General Plan incorporated mission scenarios such as the Proposed Action at Travis AFB in the future land use and future development components of the General Plan.

There would be no change in the location or the dimensions of CZs or APZs associated with Runways 21Left/03Right and 03Left/21Right. Air Force Engineering Technical Letter 04-7: *C-130 and C-17 Landing Zone (LZ) Dimensional, Marking, and Lighting Criteria*, March 29, 2004, establishes imaginary surfaces for LZs. However, it would not be necessary to establish a 1,000-foot exclusion area centered on the longitudinal axis of the LZ (500 feet to each side of the LZ centerline) because the exclusion area for the LZ would fall within the primary surface that currently exists for Runway 21Left/03Right. The primary surface for Runway 21Left/03Right is an imaginary surface symmetrically centered on the runway, extending 200 feet beyond each runway end that defines the limits of the obstruction clearance requirements in the vicinity of the landing area. The width of the primary surface is 2,000 feet, or 1,000 feet on each side of the runway centerline. It would not be necessary to establish CZs and APZs at the ends of the LZ because they would fall within the existing primary surface for Runway 21Left/03Right.

In accordance with AICUZ program guidance, Travis AFB may provide the Proposed Action at Travis AFB noise contours and the land use sections of NEPA documentation and any other relative data to local planning agencies to serve as an interim AICUZ report. A full update to the Travis AFB AICUZ Report would be provided to the community within 1 year after the completed mission change, funding and other constraints permitting.

As mentioned in Subchapter 4.2.2.2, the Proposed Action at Travis AFB noise contours would be nearly identical to the No Action Alternative (*i.e.*, baseline) contours (see Figure 4-5). Figure 4-6 compares the Proposed Action at Travis AFB noise contours with the ALUC noise contours. As shown in the figure, the Proposed Action at Travis AFB noise contours would not extend outward as far as the ALUC noise contours. Thus, the Proposed Action at Travis AFB would be consistent with the Solano County ALUC and City of Fairfield General Plan.

4.2.3.3 Mitigation

There would be no significant impacts. No mitigation is recommended.

4.2.4 Air Quality

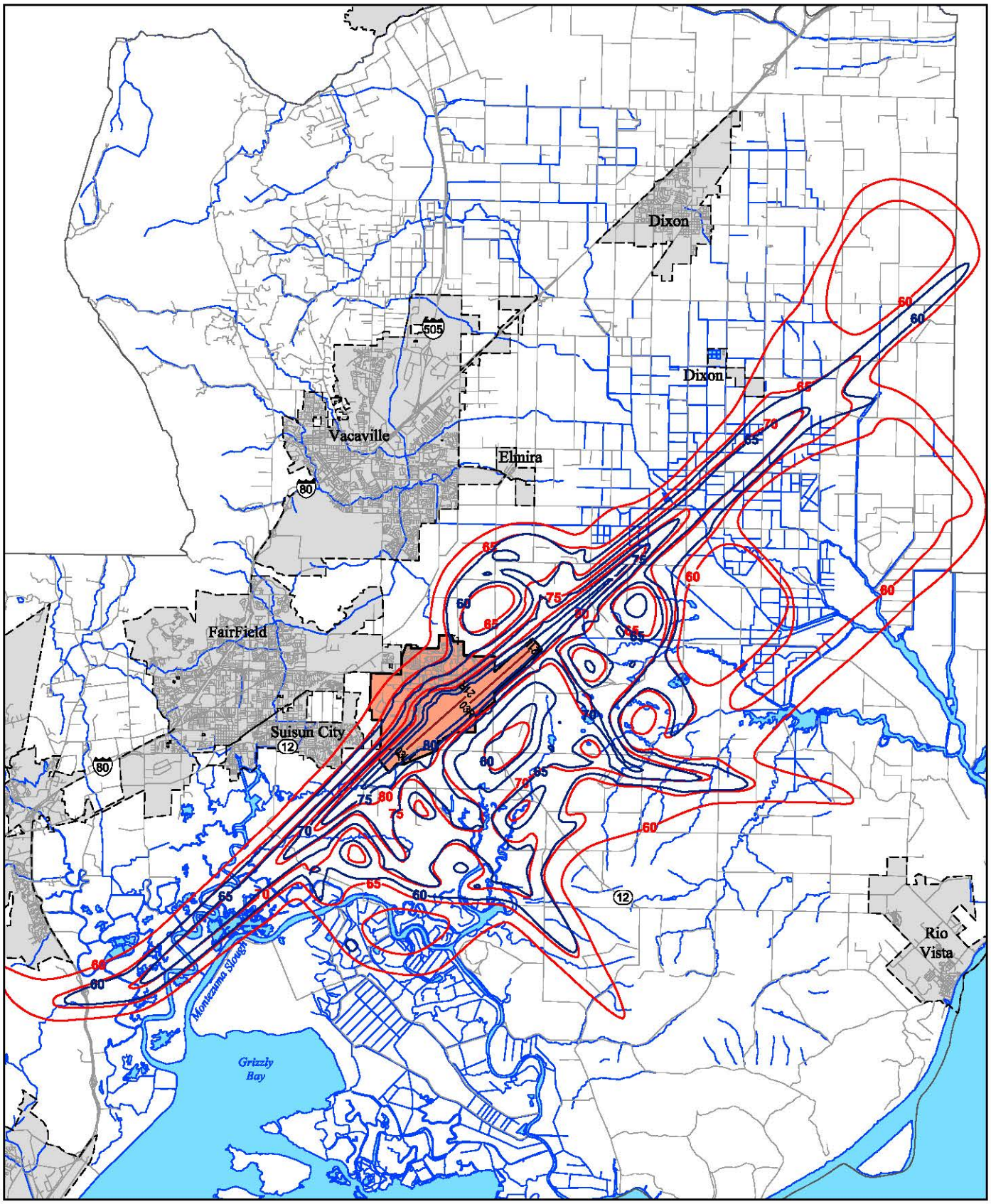
4.2.4.1 Grant County Airport

Table 4.2-5 shows the emissions that would occur from the Proposed Action aircraft operations that would be accomplished at Grant County Airport, the resultant total emissions for all aircraft operations at the airport, and compares the emissions (*i.e.*, net change and total emissions) with the baseline AQCR emissions inventory.

Table 4.2-5 Emissions from Proposed Action Aircraft Operations at Grant County Airport and Comparison to Conformity Significance and *de minimis* Thresholds

	Criteria Air Pollutant (tpy)					
	CO	**VOC**	**NO_x**	**SO_x**	**PM_{10}**	**$PM_{2.5}$**
Emissions Inventory	394,296	69,253	56,620	9,077	**134,609**	38,987
Proposed Action Emissions from Recurring Aircraft Operations at Grant County Airport (net change in emissions)	8	1	94	4	**19**	19
Emissions from Baseline Aircraft Operations	543	213	652	36	**125**	124
Total Emissions from Recurring Aircraft Operations	551	214	746	40	**144**	143
Net Change in Emissions from Recurring Aircraft Operations as Percent of Inventory	0.002%	0.001%	0.166%	0.044%	**0.014%**	0.049%
Total Emissions from Recurring Aircraft Operations as Percent of Inventory	0.140%	0.309%	1.318%	0.441%	**0.107%**	0.368%
de minimis Threshold	NA	NA	NA	NA	**100**	100
Net Change in Emissions from Recurring Aircraft Operations Exceed *de minimis* Threshold?	NA	NA	NA	NA	**No**	No
Net Change in Emissions from Recurring Aircraft Operations Regionally Significant? (>10%)	No	No	No	No	**No**	No

NA – Not Applicable. De minimis does not apply since AQCR is in attainment for pollutant.
***Bold** indicates pollutants of concern.*



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Travis AFB
LEGEND

- Land Use Compatibility Plan Noise Contours
- Proposed Action at Travis AFB Noise Contours
- Runway
- Roadway
- City Limits
- Travis AFB

N

0 19,000
Feet

Comparison of Land Use Compatibility Plan and Proposed Action at Travis AFB Noise Contours
Figure 4-6

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The total direct and indirect PM_{10} and $PM_{2.5}$ emissions from the Proposed Action aircraft operations at Grant County Airport (*i.e.*, the net change in emissions, which would be 19 tpy for both PM_{10} and $PM_{2.5}$) would be below the *de minimis* thresholds established for these pollutants within AQCR 62. As summarized in Table 4.2-5, the net change in emissions for the pollutant of concern (*i.e.*, PM_{10}), would not be regionally significant. A federal action would be considered regionally significant when the total emissions from the proposed action equal or exceed 10 percent of the nonattainment or maintenance area's emissions inventory for any criteria pollutant. However, the AQCR is in attainment for CO, NO_X, VOC, and SO_x. As summarized in Table 4.2-5, the emissions for these four pollutants would be less than 10 percent of the particular emissions inventory.

Based on the information in Table 4.2-5 and the preceding paragraph, it is determined that the Proposed Action at the Grant County Airport positively conforms to the SIP for the AQCR. The Air Force is supporting an activity demonstrated by USEPA standards not to cause or contribute to new violations of any NAAQS in the affected area, nor increase the frequency or severity of an existing violation. Implementation of the federal action would not delay timely attainment of pollutant standards in any area of the AQCR, and the action would be in compliance or would be consistent with all relevant requirements and milestones contained in the applicable SIP. This conclusion of a positive General Conformity determination for the Proposed Action at the Grant County Airport fulfills the Air Force's obligation and responsibility under 40 CFR Part 93, Subpart B. A Conformity Determination would not be required.

4.2.4.2 Travis AFB

Table 4.2-6 shows the emissions that would occur from the Proposed Action aircraft operations that would be accomplished at Travis AFB, the resultant total emissions for all aircraft operations at the Base, and compares the emissions (*i.e.*, net change and total emissions) with the baseline AQCR emissions inventory.

Table 4.2-6 Emissions from Proposed Action Aircraft Operations at Travis AFB and Comparison to Conformity Significance and *de minimis* Thresholds

	Criteria Air Pollutant (tpy)					
	CO	**VOC**	**NO_x**	**SO_x**	**PM_{10}**	**$PM_{2.5}$**
Emissions Inventory	**807,636**	**141,109**	**199,619**	19,710	77,928	33,033
Proposed Action Emissions from Recurring Aircraft Operations at Travis AFB (net change in emissions)	**2**	**1**	**20**	1	4	4
Emissions from Aircraft Operations Associated with the C-17 Basing Action	**384**	**175**	**1,378**	59	104	103
Total Emissions from Recurring Aircraft Operations	**386**	**176**	**1,398**	60	108	107
Net Change in Emissions from Recurring Aircraft Operations as Percent of Inventory	**0.000%**	**0.000%**	**0.010%**	0.005%	0.005%	0.012%

Table 4.2-6 Emissions from Proposed Action Aircraft Operations at Travis AFB and Comparison to Conformity Significance and *de minimis* Thresholds (*continued*)

	Criteria Air Pollutant (tpy)					
	CO	**VOC**	**NO_x**	**SO_x**	**PM_{10}**	**$PM_{2.5}$**
Total Emissions from Recurring Aircraft Operations as Percent of Inventory	**0.048%**	**0.125%**	**0.700%**	0.304%	0.139%	0.324%
de minimis Threshold	**100**	**100**	**100**	NA	NA	NA
Net Change in Emissions from Recurring Aircraft Operations Exceed *de minimis* Threshold?	**No**	**No**	**No**	NA	NA	NA
Net Change in Emissions from Recurring Aircraft Operations Regionally Significant? (>10%)	**No**	**No**	**No**	NA	NA	NA

NA – Not Applicable.
De minimis does not apply since AQCR is in attainment for pollutant.
***Bold** indicates pollutants of concern.*

The total direct and indirect CO, VOC, and NO_X emissions from the Proposed Action aircraft operations at Travis AFB (*i.e.*, the net change in emissions, which would be 2, 1, and 20 tpy, respectively for CO, VOC, and NO_X) would be below the *de minimis* thresholds established for these pollutants within AQCR 30. As summarized in Table 4.2-6, the net change in emissions for the pollutants of concern (*i.e.*, CO, VOC, and NO_X), would not be regionally significant. A federal action would be considered regionally significant when the total emissions from the proposed action equal or exceed 10 percent of the nonattainment or maintenance area's emissions inventory for any criteria pollutant. However, the AQCR is in attainment for SO_X, PM_{10} and $PM_{2.5}$. As summarized in Table 4.2-6, the emissions for these three pollutants would be less than 10 percent of the particular emissions inventory.

Table 4.2-7 lists the emissions from recurring aircraft operations for the completed C-17 basing action at Travis AFB (*i.e.*, basing action emissions plus LZ operations emissions) and compares the combined emissions with the USEPA-approved 2006 SIP budget emissions for Travis AFB.

Table 4.2-7 Comparison of Recurring Aircraft Emissions for Proposed Action at Travis AFB to Travis AFB SIP Budget Emissions Levels (tpy)

	CO	**VOC**	**NO_X**
Emissions from Basing Action Recurring Aircraft Operations	384	175	1,378
Emissions from Recurring LZ Operations	2	1	20
Combined Recurring Aircraft Operations Emissions	386	176	1,398
SIP Budget Emissions	4,216	2,383	1,734
Comparison of Combined Recurring Aircraft Emissions to SIP Budget	-3,830	-2,207	-336

Note: Negative numbers indicate a surplus when compared to SIP budget

Emissions from recurring aircraft operations for the completed C-17 basing action at Travis AFB (*i.e.*, basing action emissions plus LZ operations emissions) will not exceed the USEPA-approved SIP budget for the Base (see Table 4.2-7) . It is determined that the Proposed Action at Travis AFB positively conforms to the SIP for the Base. The Air Force is supporting an activity demonstrated by USEPA standards not to cause or contribute to new violations of any NAAQS in the affected area, nor increase the frequency or severity of an existing violation. Implementation of the federal action would not delay timely attainment of pollutant standards in any area of the AQCR, and the action would be in compliance or would be consistent with all relevant requirements and milestones contained in the applicable SIP. This conclusion of a positive General Conformity determination for the Proposed Action at Travis AFB fulfills the Air Force's obligation and responsibility under 40 CFR Part 93, Subpart B. A Conformity Determination would not be required.

4.2.4.3 Mitigation

There would be no significant impacts. No mitigation is recommended.

4.2.5 Cultural Resources

4.2.5.1 Grant County Airport

The Proposed Action at Grant County Airport would not involve any new construction or ground disturbing activities, or demolition or alteration of buildings or structures. No NRHP-eligible resources have been identified at the Grant County Airport; therefore the Proposed Action would have no effect on cultural resources.

4.2.5.2 Travis AFB

The Proposed Action at Travis AFB includes excavation adjacent to the existing runway for the installation of an IR lighting system (areas previously disturbed by construction activities) and does not involve any demolition or alteration of buildings or structures. No NRHP-eligible resources have been identified in the ROI at Travis AFB. One Native American group responded to the notification letter and the response indicated the group is not aware of any "historic properties" on the project site. The Proposed Action at Travis AFB would have no effect on cultural resources.

4.2.5.3 Mitigation

There would be no significant impacts. No mitigation is recommended.

4.3 TRAVIS AFB ALTERNATIVE

A 3,500 foot-long, 90-foot-wide LZ would be established by painting the LZ threshold and side boundaries in the middle of Runway 21Left/03Right (see Figure 2-3) to support tactical arrivals, departures, and landings. Additionally, the existing LZ at Grant County

Airport would be used. Annually, approximately 3,890 (10.81 average daily) and 3,890 (10.81 average daily) operations would be accomplished, respectively, at Travis AFB and the Grant County Airport as a result of the Travis AFB Alternative.

4.3.1 Aircraft Operations and Safety and Bird/Wildlife-Aircraft Strike Hazard

4.3.1.1 Travis AFB

Aircraft Operations

Under the alternative action at Travis AFB, average daily airfield operations at the Base would increase by 10.81 operations from 221.81 to 232.62 operations (see Tables 2.2-2 and 2.2-5, respectively), a 5 percent increase. Approximately 74,200 annual operations would occur under the alternative action at Travis AFB. The anticipated annual operations would equate to approximately 26 percent of the airfield capacity, an increase of 1 percent. Assuming nearly all operations occur primarily between 6:00 a.m. and 2:00 a.m., there would be 20 hours of operations per day for hourly capacity purposes. Based on a 20-hour day, the average IFR hourly operations would be about 12 operations, approximately 22 percent of the hourly capacity (a 1% increase). The airfield has the capacity to accommodate the increase in operations.

The discussion and analysis for the Proposed Action at Travis AFB in Subchapter 4.2.1.2 also applies. The existing air traffic control procedures for the airspace surrounding the airfield and at the airfield would accommodate the proposed C-17 operations at the Base.

Aircraft Safety

The discussion and analysis for the Proposed Action at Travis AFB in Subchapter 4.2.1.2 also applies. For these reasons, the risk is low that an aircraft involved in an accident at or around the Travis AFB would strike a person or structure on the ground.

Bird/Wildlife-Aircraft Strike Hazard

The background information in Subchapter 4.2.1 concerning the behavior factors of bird/wildlife and aircraft operational factors also applies to the alternative. Overall, aircraft operations at Travis AFB would increase by about 5 percent. Thus, there would be potential for a corresponding increase in bird/wildlife-aircraft strikes at Travis AFB. It is anticipated the altitude distribution of the additional strikes would follow the data in Table 3.1-2 because the types of operations by aircraft operating at the airfield would be consistent with the types of operations associated with data in the table. The discussion and analysis concerning the number of bird/wildlife-aircraft strikes that result in serious mishap in Subchapter 4.2.1.1 also applies.

4.3.1.2 Grant County Airport

Under the alternative, average daily airfield operations at Grant County Airport would increase by 10.81 operations from 218.42 to 229.23 operations (see Tables 2.2-1 and 2.2-7, respectively), a 5 percent increase. Approximately 83,600 annual operations would occur under the alternative at the Grant County Airport. The anticipated annual operations would equate to approximately 24 percent of the airfield capacity, an increase of 2 percent. Assuming nearly all operations would occur primarily between 6:00 a.m. and 2:00 a.m., there would be 20 hours of operations per day for hourly capacity purposes. Based on a 20-hour day, the average IFR hourly operations would be about 12 operations, approximately 20 percent of the hourly capacity (a 1% increase). The airfield has the capacity to accommodate the increase in operations.

The discussion and analysis for the Proposed Action at the Grant County Airport in Subchapter 4.2.1.1 also applies. The existing air traffic control procedures for the airspace surrounding the airfield and at the airfield would accommodate the proposed C-17 operations at the airfield.

Aircraft Safety

The discussion and analysis for the Proposed Action at Grant County Airport in Subchapter 4.2.1.1 also applies. For these reasons, the risk is low that an aircraft involved in an accident at or around the Grant County Airport would strike a person or structure on the ground.

Bird/Wildlife-Aircraft Strike Hazard

The background information in Subchapter 4.2.1 concerning the behavior factors of birds and wildlife and aircraft operational factors also applies to the alternative. Overall, aircraft operations at Grant County Airport would increase by about 5 percent. Thus, there would be potential for a corresponding increase in bird/wildlife-aircraft strikes at the airport. It is anticipated the altitude distribution of the additional strikes would follow the data in Table 3.1-2 because the types of operations by aircraft operating at the airfield would be consistent with the types of operations associated with data in the table. The discussion and analysis concerning the number of bird/wildlife-aircraft strikes that result in serious mishap in Subchapter 4.2.1.1 also applies.

4.3.1.3 Mitigation

There would be no significant impacts. No mitigation is recommended.

4.3.2 Noise

4.3.2.1 Travis AFB

Noise associated with the Travis AFB Alternative at Travis AFB would be generated by aircraft operations. Figure 4-3 shows the aircraft ground tracks and Figure 4-7 depicts the noise exposure area at the Base after the LZ would be established and aircraft operations occur at the projected levels. Figure 4-8 compares the Travis AFB Alternative at Travis AFB and the No Action Alternative noise contours. The aircraft operations modeled include the average busy day aircraft operations for the alternative (see Table 2.2-6).

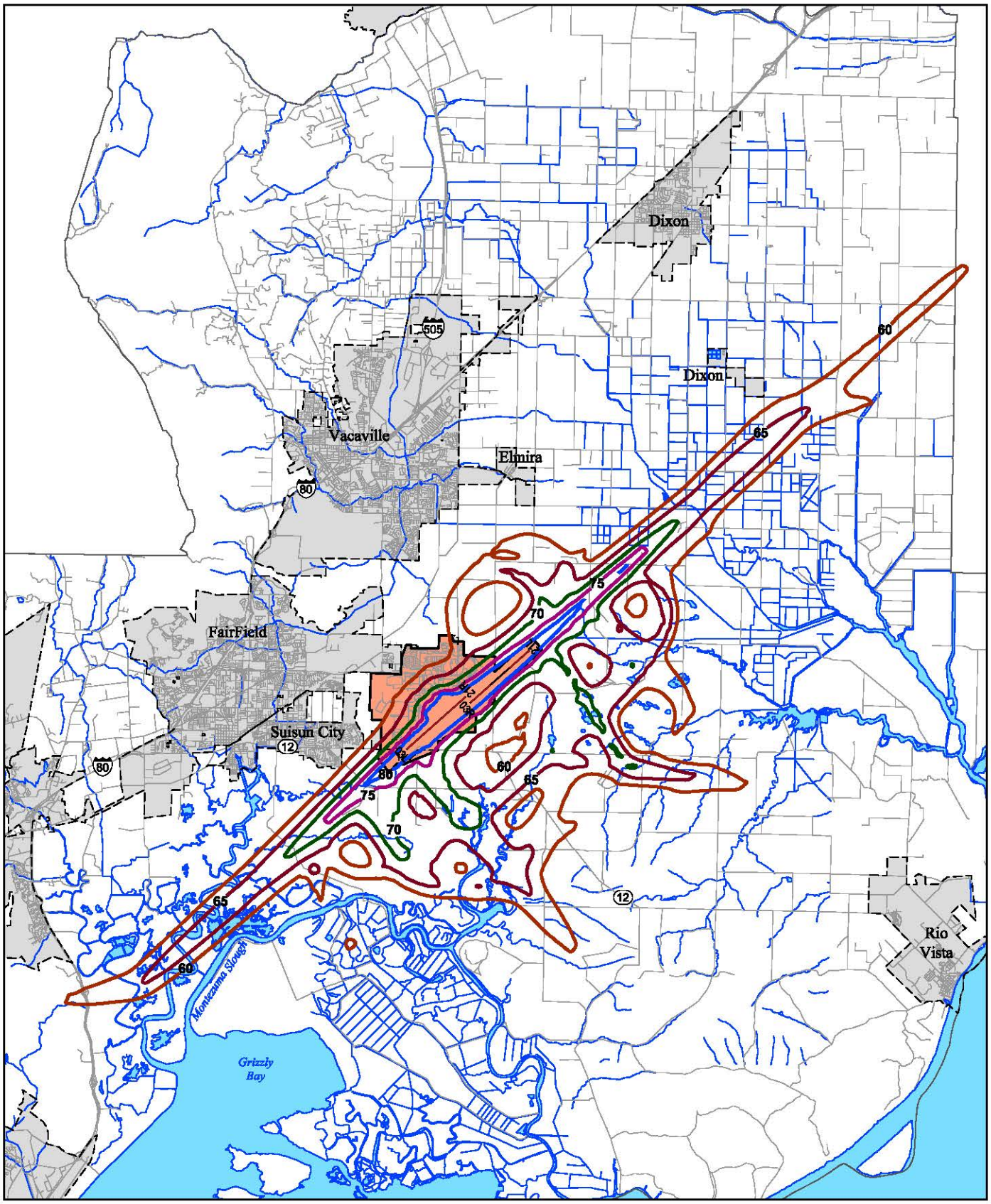
Single Event Noise Analysis

Each aircraft overflight yields a single-event noise level, presented as SEL. C-17 and C-130 aircraft, which currently operate at Travis AFB, would also accomplish operations on the LZ after it is constructed. Thus, Travis AFB and surrounding areas would continue to be exposed to SELs from C-17s at the levels listed in Table 3.2-2. The greatest SEL values for the aircraft based at Travis AFB would continue to be produced by the C-5 aircraft, which are 12 dBA louder than the C-17 aircraft.

The induced hearing data in Table 4.2-1 and related discussion in Subchapter 4.2.2 for the Proposed Action at the Grant County Airport also apply. Based on the level of noise exposure from the Travis AFB Alternative at Travis AFB aircraft operations in areas where people live, it is doubtful that an individual would be exposed to noise that would produce hearing loss.

Nearby schools would continue to be exposed to noise from aircraft operations. However, increased interference from Travis AFB Alternative at Travis AFB aircraft operations is unlikely because the change in the noise condition is minimal when comparing baseline and proposed action noise exposure (see Figure 4-8). Assuming schools conduct teaching for an approximate 8-hour period (8:00 a.m. through 4:00 p.m.), about 40 percent of the 20-hour flying day would occur when classroom activities occur. Thus, approximately 40 percent of the additional 10.81 average daily C-17 operations (*i.e.*, 4.3 operations) would occur during school time. Based on an 8-hour school day and 4.3 operations, there would be an average of less than one additional overflight per hour that could interfere with classroom activities in schools that would be overflown. The ANSI classroom acoustics information in Subchapter 4.2.2.1 also applies.

Based on FICAN recommendations, outdoor SELs of 80 to 100 dBA (60 to 80 dBA indoors) could result in 4 to 10 percent awakenings, respectively, in the exposed population. Over the course of sleeping, different individuals might be awakened by different events, and some individuals might be awakened more than once. Individuals in residences in the area around the Base would continue to be exposed to indoor SEL of 60 to 80 dBA during normal sleep periods (10:00 p.m. to 7:00 a.m.). There would be a combined total of five additional off-Base persons



Travis AFB

LEGEND

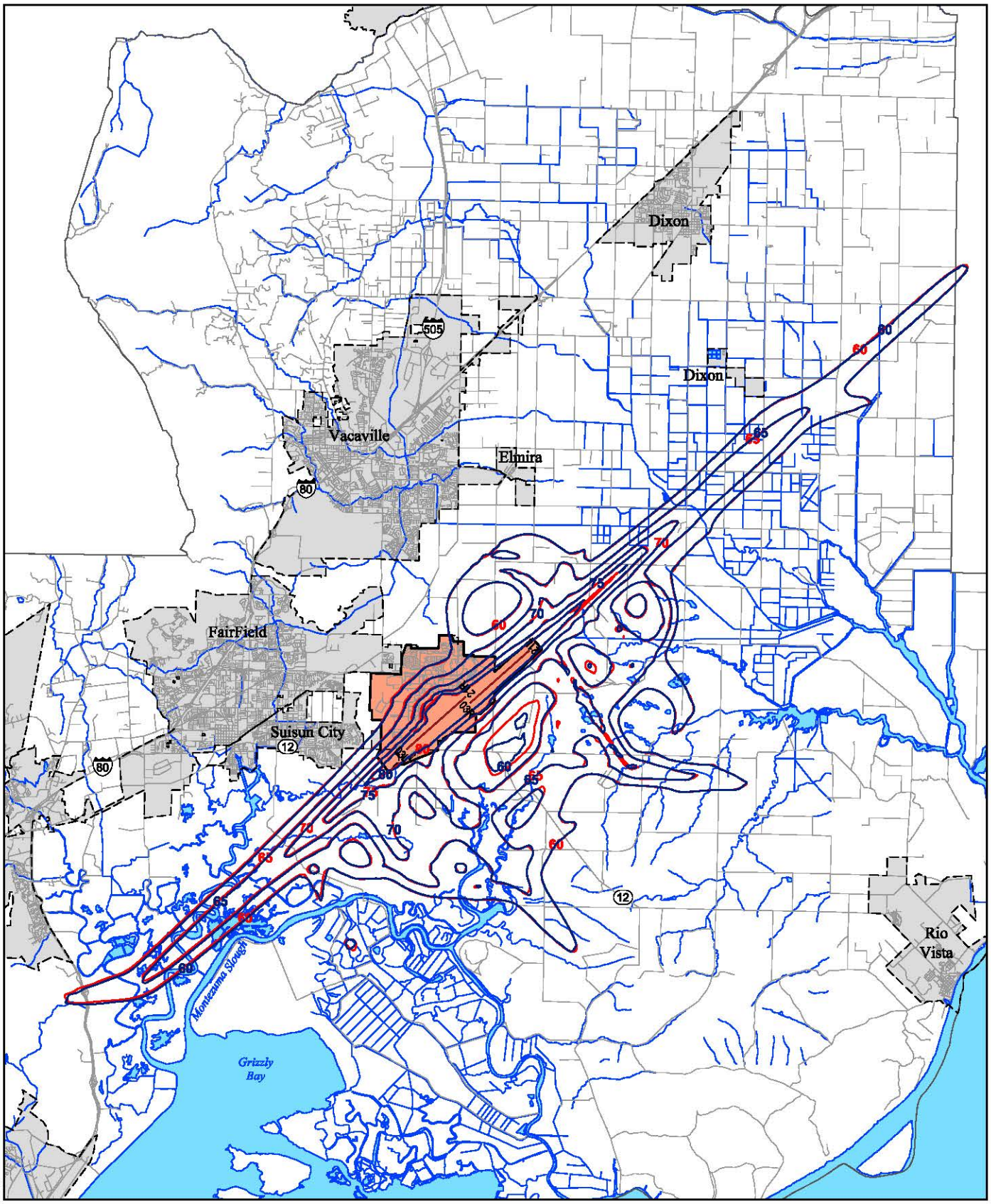
- CNEL 60 dB Contour
- CNEL 65 dB Contour
- CNEL 70 dB Contour
- CNEL 75 dB Contour
- CNEL 80 dB Contour
- Runway
- Roadway
- City Limits
- Travis AFB

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Travis AFB Alternative Noise Contours at Travis AFB

Figure 4-7

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Comparison of No Action Alternative and Travis AFB Alternative Noise Contours at Travis AFB

Figure 4-8

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exposed to CNEL 65 dBA and greater as a result of the Travis AFB Alternative at Travis AFB. Assuming the number of sleep awakenings would be proportional to the increase in exposed population and that 10 percent of the persons would be awakened, one additional person potentially could be awakened when comparing the Travis AFB Alternative at Travis AFB to the baseline condition. Those individuals who sleep between 7:00 a.m. and 10:00 p.m. likely would be affected just as those persons who sleep during normal nighttime sleep periods.

Averaged Noise Analysis

Table 4.3-1 compares the Travis AFB Alternative at Travis AFB with the No Action Alternative (*i.e.*, baseline) for the following: off-Base land area and population exposed to noise of CNEL 60 dBA and greater, and the population potentially highly annoyed (*i.e.*, baseline).

Overall, the Travis AFB Alternative at Travis AFB noise contours would be nearly identical to the No Action Alternative (*i.e.*, baseline) contours (see Figure 4-8), with the number of off-Base acres in the CNEL 60 dBA and greater exposure area increasing by 1 percent.

People would continue to be exposed to aircraft noise in four of the five noise zones (see Table 4.3-1), with the CNEL 60-65 dBA noise zone containing 260 of the 380 persons exposed to CNEL 60-dBA and greater. These 380 persons would equate to about 1 percent of the estimated 64,492 persons (based on 2000 census data) who live within the approximate 5-mile radius area associated with airfield airspace environment, or no change when compared to the No Action Alternative (*i.e.*, baseline). The density of residences in the newly exposed area would be consistent with adjacent residential areas exposed to aircraft noise under the No Action Alternative (*i.e.*, baseline). The overall number of persons who could be potentially highly annoyed by noise exposure would be 61 people, or one additional person when compared to the No Action Alternative (baseline).

Table 4.3-1 Summary of Off-Base Land Area and Population Exposed to, and Population Potentially Highly Annoyed by CNEL 60 dBA and Greater, Travis AFB Alternative at Travis AFB

	CNEL Interval (dBA)					
Category	**60-65**	**65-70**	**70-75**	**75-80**	**80+**	**Total**
Acres						
No Action Alternative	21,876	15,283	4,225	1,470	287	43,141
Travis AFB Alternative at Travis AFB	22,266	15,455	4,286	1,430	274	43,711
Change	+390	+172	+61	-40	-13	+570
Percent Change	+2%	+1%	+1%	-3%	-5%	+1%
Population						
No Action Alternative	254	102	13	6	0	375
Travis AFB Alternative at Travis AFB	260	100	14	6	0	380
Change	+6	-2	+1	0	0	+5
Percent Change	+2%	+2%	+8%	%	%	+1%

Table 4.3-1 Summary of Off-Base Land Area and Population Exposed to, and Population Potentially Highly Annoyed by CNEL 60 dBA and Greater, Travis AFB Alternative at Travis AFB (*continued*)

	CNEL Interval (dBA)					
Category	**60-65**	**65-70**	**70-75**	**75-80**	**80+**	**Total**
Population Potentially Highly Annoyed						
No Action Alternative	30	22	5	3	0	60
Travis AFB Alternative at Travis AFB	31	22	5	3	0	61
Change	+1	0	0	0	0	+1
Percent Change	+3%	0%	0%	0%	0%	+2%

Note: The No Action Alternative also is the baseline. Acres reflect only off-Base land area. People highly annoyed determined by multiplying the total number of people in the noise zone times the higher percent number for the interval in Table 3.1-4.

The data in Table 4.2-3 and related discussion and analysis for the contribution of outdoor noise to indoor noise for the Proposed Action at the Grant County Airport in Subchapter 4.2.2 also apply. Based on the location of Travis AFB, the warm climate data would also apply to buildings on and in the area surrounding the Base.

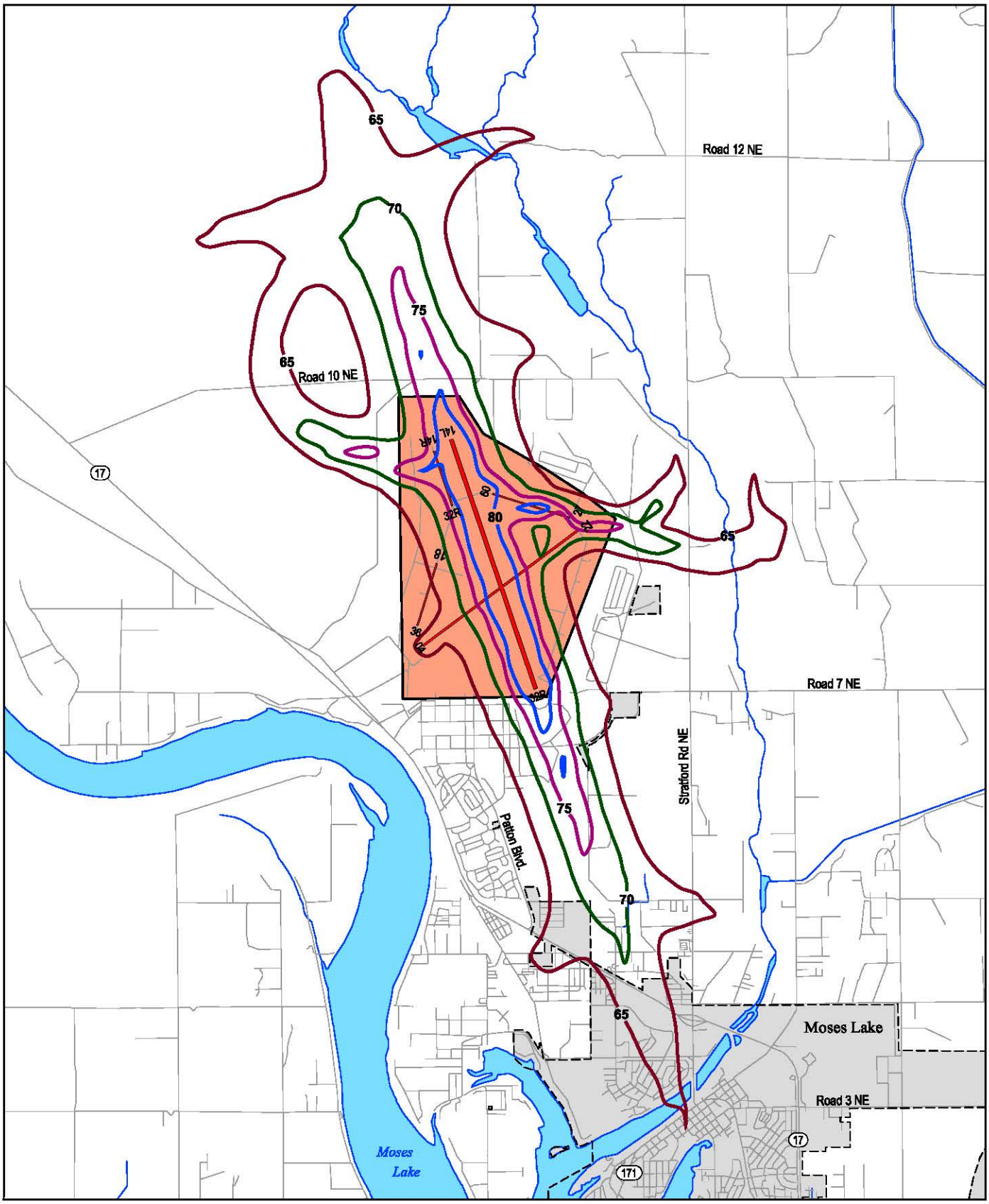
The discussion and analyses for nonauditory health effects and the effects of aircraft noise on farm animals for the Proposed Action at the Grant County Airport in Subchapter 4.2.2 also apply.

Effects of Noise on Structures

As discussed in Subchapter 3.1.2.2, L_{max} is used to determine the potential affects to structures from sound. The L_{max} is the highest instantaneous sound pressure during a single noise event, no matter how long the sound may persist. No damage would occur to structures in the area surrounding Travis AFB from C-17 LZ operations because the L_{max} produced by the aircraft (*i.e.*, 113 dBA at 200 feet from the aircraft) would not exceed the level at which structural damage could occur.

4.3.2.2 Grant County Airport

Noise associated with the Travis AFB Alternative at the Grant County Airport would be generated by aircraft operations. There would be no change to the aircraft ground tracks depicted in Figure 3-5 as a result of the Travis AFB Alternative at the Grant County Airport. Figure 4-9 depicts the noise exposure area at the airport under the Travis AFB Alternative at the Grant County Airport. Figure 4-10 compares the Travis AFB Alternative at the Grant County Airport and the No Action Alternative noise contours. The aircraft operations modeled include the average busy day aircraft operations for the Travis AFB Alternative at the Grant County Airport (see Table 2.2-7).



Grant County Airport

LEGEND

- DNL 65 dBA Contour
- DNL 70 dBA Contour
- DNL 75 dBA Contour
- DNL 80 dBA Contour
- Runway
- Roadway
- City Limits
- Grant County International Airport

N

0 7,000

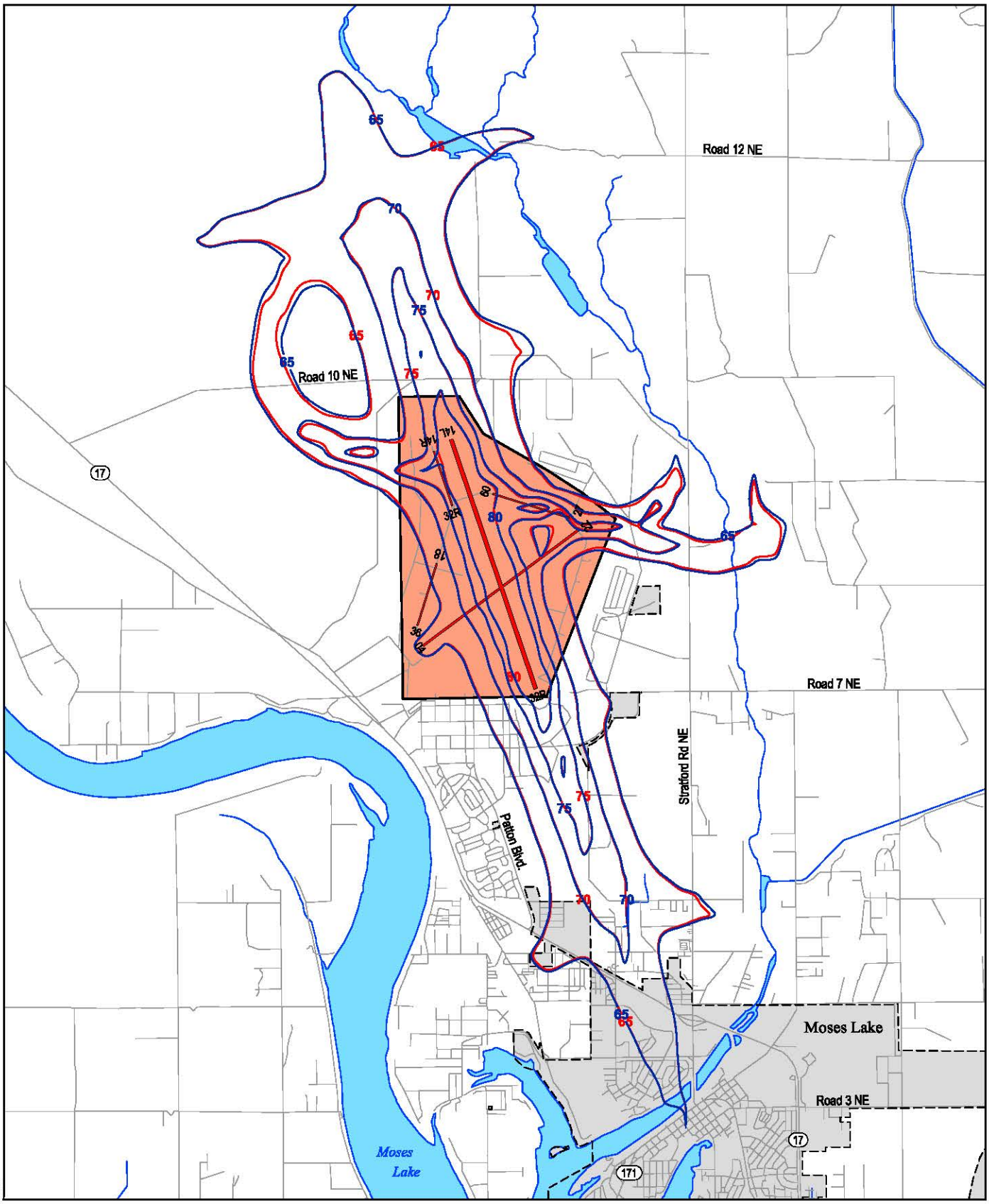
Feet

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Travis AFB Alternative Noise Contours at Grant County Airport

Figure 4-9

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Grant County Airport

LEGEND

- No Action Alternative Noise Contours
- Travis AFB Alternative Noise Contours
- Runway
- Roadway
- City Limits
- Grant County International Airport

N

0 7,000 Feet

Comparison of No Action Alternative and Travis AFB Alternative Noise Contours at Grant County Airport

Figure 4-10

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Single Event Noise Analysis

Each aircraft overflight yields a single-event noise level, presented as SEL. C-17 aircraft, which currently operate at the Grant County Airport, would continue to accomplish operations at the airport and on the LZ. Thus, Grant County Airport and surrounding areas would continue to be exposed to SELs from C-17s at the levels listed in Table 3.1-3. The greatest SEL values for the aircraft operating at Grant County Airport would continue to be produced by EA-6B aircraft, which are 11 dBA louder than the C-17.

The induced hearing data in Table 4.2-1 and related discussion in Subchapter 4.2.2 for the Proposed Action at the Grant County Airport also apply. Based on the level of noise exposure from the Travis AFB Alternative at Grant County Airport aircraft operations in areas where people live, it is doubtful an individual would be exposed to noise that would produce hearing loss.

Nearby schools would continue to be exposed to noise from aircraft operations. However, increased interference from Travis AFB Alternative at the Grant County Airport aircraft operations is unlikely because the change in the noise condition is minimal when comparing baseline and proposed action noise exposure (see Figure 4-10). Assuming schools conduct teaching for an approximate 8-hour period (8:00 a.m. through 4:00 p.m.), about 40 percent of the 20-hour flying day would occur when classroom activities occur. Thus, approximately 40 percent of the additional 10.81 average daily C-17 operations (*i.e.*, 4.3 operations) would occur during school time. Based on an 8-hour school day and 4.3 operations, there would be an average of less than one additional overflight per hour that could interfere with classroom activities in schools that would be overflown. The ANSI classroom acoustics information in Subchapter 4.2.2.1 also applies.

Based on FICAN recommendations, outdoor SELs of 80 to 100 dBA (60 to 80 dBA indoors) could result in 4 to 10 percent awakenings, respectively, in the exposed population. Over the course of sleeping, different individuals might be awakened by different events, and some individuals might be awakened more than once. Individuals in residences in the area around the Base would continue to be exposed to indoor SEL of 60 to 80 dBA during normal sleep periods (10:00 p.m. to 7:00 a.m.). There would be a combined total of 62 additional and off-installation persons exposed to DNL 65 dBA and greater as a result of the Travis AFB Alternative at Grant County Airport. Assuming the number of sleep awakenings would be proportional to the increase in exposed population and that 10 percent of the persons would be awakened, about six additional persons potentially could be awakened when comparing the Travis AFB Alternative at Grant County Airport to the baseline condition. Those individuals who sleep between 7:00 a.m. and 10:00 p.m. likely would be affected just as those persons who sleep during normal nighttime sleep periods.

The induced hearing data in Table 4.2-1 and related discussion in Subchapter 4.2.2 for the Proposed Action at the Grant County Airport also apply. Based on the level of noise exposure from the Travis AFB Alternative at the Grant County Airport aircraft operations in areas where people live, it is doubtful an individual would be exposed to noise that would produce hearing loss.

Averaged Noise Analysis

Table 4.3-2 compares Travis AFB Alternative at the Grant County Airport with the No Action Alternative (*i.e.*, baseline) for the following: off-airport land area and population exposed to noise of DNL 65 dBA and greater, and the population potentially highly annoyed (*i.e.*, baseline).

Overall, the Travis AFB Alternative at the Grant County Airport noise contours would be nearly identical to the No Action Alternative (*i.e.*, baseline) (see Figure 4-10), with the number of off-airport acres in the DNL 65 dBA and greater exposure area increasing by 8 percent. People would continue to be exposed to aircraft noise in three of the four noise zones (see Table 4.3-2), with the DNL 65-70 dBA noise zone containing 2,025 of the 2,147 persons exposed to DNL 65-dBA and greater. These 2,147 persons would equate to 17 percent of the estimated 12,373 persons (based on 2000 census data) who live within the approximate 5-mile radius area associated with airfield airspace environment, or no change when compared to the No Action Alternative (*i.e.*, baseline).

The density of residences in the newly exposed area would be consistent with adjacent residential areas exposed to aircraft noise under the No Action Alternative (*i.e.*, baseline). The overall number of persons who could be potentially highly annoyed by noise exposure would be 491 people, or 15 additional persons when compared to the No Action Alternative (baseline).

The data in Table 4.2-3 and related discussion and analysis for the contribution of outdoor noise to indoor noise for the Proposed Action at the Grant County Airport in Subchapter 4.2.2 also apply. Based on the location of the Grant County Airport, the cold climate data would also apply to buildings on and in the area surrounding the airport.

Table 4.3-2 Summary of Off-Airport Land Area and Population Exposed to, and Population Potentially Highly Annoyed by DNL 65 dBA and Greater, Travis AFB Alternative at Grant County Airport

	DNL Interval (dBA)				
Category	**65-70**	**70-75**	**75-80**	**80+**	**Total**
Acres					
No Action Alternative	4,446	1,354	427	35	6,262
Travis AFB Alternative at Grant County Airport	4,886	1,418	446	37	6,787
Change	+440	+64	+19	+2	+525
Percent Change	+10%	+5%	+4%	+6%	+8%

Table 4.3-2 Summary of Off-Airport Land Area and Population Exposed to, and Population Potentially Highly Annoyed by DNL 65 dBA and Greater, Travis AFB Alternative at Grant County Airport (*continued*)

	DNL Interval (dBA)				
Category	**65-70**	**70-75**	**75-80**	**80+**	**Total**
Population					
No Action Alternative	1,969	114	2	0	2,085
Travis AFB Alternative at Grant County Airport	2,025	120	2	0	2,147
Change	+56	+6	0	0	+62
Percent Change	+3%	+5%	0%	0%	+3%
Population Potentially Highly Annoyed					
No Action Alternative	433	42	1	0	476
Travis AFB Alternative at Grant County Airport	446	44	1	0	491
Change	+13	+2	0	0	+15
Percent Change	+3%	+5%	0%	0%	+3%

Note: The No Action Alternative is also the baseline. Acres reflect only off-Base land area. People highly annoyed determined by multiplying the total number of people in the noise zone times the higher percent number for the interval in Table 3.1-4.

The discussion and analyses for nonauditory health effects and the effects of aircraft noise on farm animals for the Proposed Action at the Grant County Airport in Subchapter 4.2.2 also apply.

Effects of Noise on Structures

As discussed in Subchapter 3.1.2.2, L_{max} is used to determine the potential affects to structures from sound. The L_{max} is the highest instantaneous sound pressure during a single noise event, no matter how long the sound may persist. No damage would occur to structures in the area surrounding Grant County Airport from C-17 LZ operations because the L_{max} produced by the aircraft (*i.e.*, 113 dBA at 200 feet from the aircraft) would not exceed the level at which structural damage could occur.

4.3.2.3 Mitigation

There would be no significant impacts. No mitigation is recommended.

4.3.3 Land Use

4.3.3.1 Travis AFB

On-Base land use conflicts would not be expected from the establishment and operation of the LZ. Land uses would be compatible with the general character of existing and planned Base land use patterns. The Travis AFB General Plan incorporated mission scenarios such as the Travis AFB Alternative in the future land use and future development components of the General Plan. The discussion and analysis concerning the establishment of imaginary surfaces for the LZ and the interim AICUZ update in Subchapter 4.2.3.2 also apply.

As mentioned in Subchapter 4.3.2.1, the Travis AFB Alternative noise contours would be nearly identical to the No Action Alternative (*i.e.*, baseline) contours (see Figure 4-8). Figure 4-11 compares the Travis AFB Alternative at Travis AFB noise contours with the ALUC noise contours. As shown in the figure, the Travis AFB Alternative at Travis AFB noise contours would not extend outward as far as the ALUC noise contours. Thus, the Travis AFB Alternative at Travis AFB would be consistent with the Solano County ALUC and City of Fairfield General Plan.

4.3.3.2 Grant County Airport

As depicted in Figure 4-10, the Travis AFB Alternative at Grant County Airport and the No Action Alternative (baseline) noise contours are nearly identical. Therefore, land use plans for the local community would not be affected. The Travis AFB Alternative at Grant County Airport would not require the Airport to update or revise its 2005 Airport Master Plan or affect the FAR Part 77 imaginary surfaces or RPZs.

4.3.3.3 Mitigation

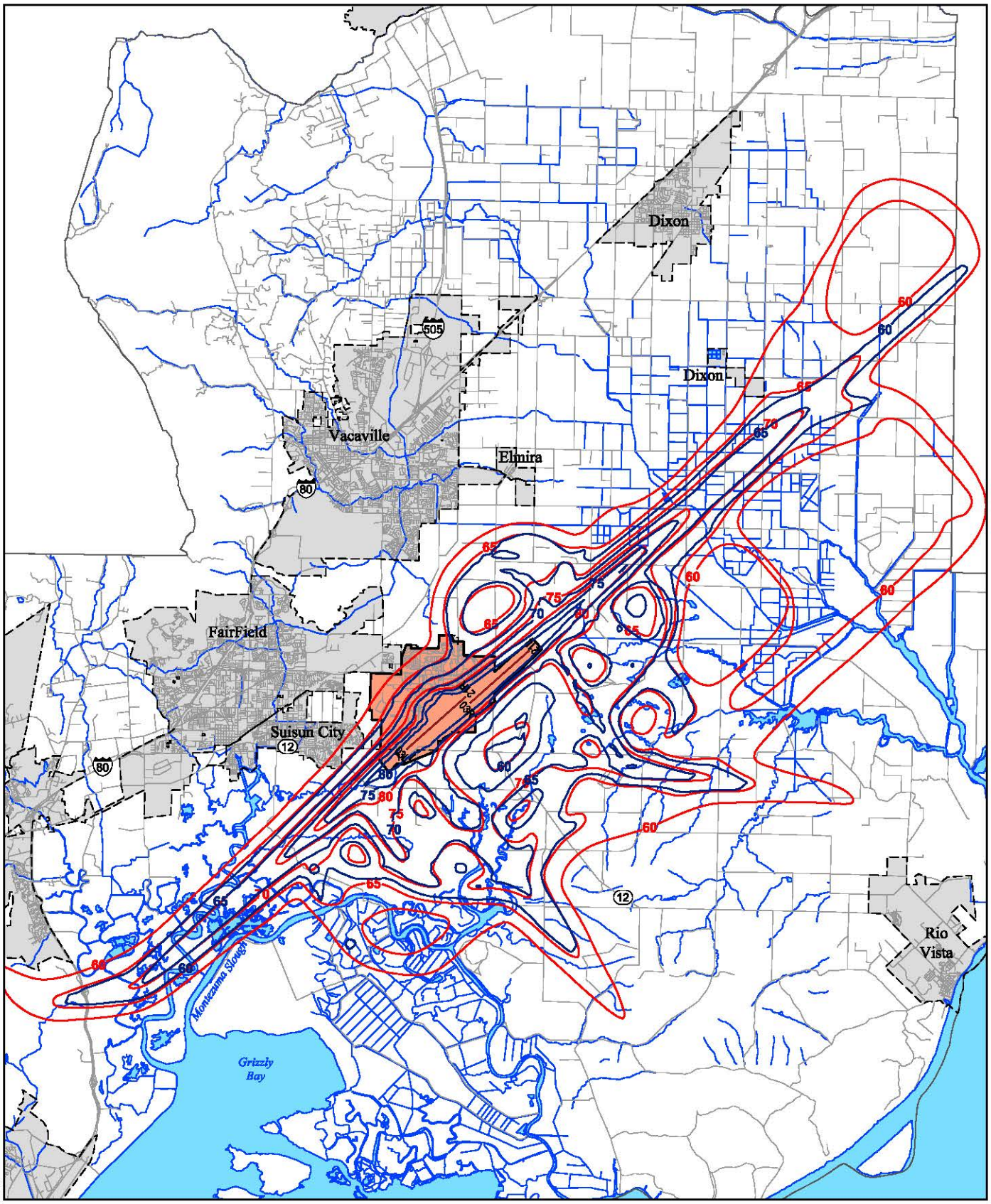
There would be no significant impacts. No mitigation is recommended.

4.3.4 Air Quality

4.3.4.1 Travis AFB

Table 4.3-3 shows the emissions that would occur from the Travis AFB Alternative aircraft operations that would be accomplished at Travis AFB, the resultant total emissions for all aircraft operations at the Base, and compares the emissions (*i.e.*, net change and total emissions) with the baseline AQCR emissions.

The total direct and indirect CO, VOC, and NO_X emissions from the Travis AFB Alternative aircraft operations at Travis AFB (*i.e.*, the net change in emissions, which would be 5, 1, and 57 tpy, respectively for CO, VOC, and NO_X) would be below the *de minimis* thresholds established for these pollutants within AQCR 30. As summarized in Table 4.3-3, the net change in emissions for the pollutants of concern (*i.e.*, CO, VOC, and NO_X), would not be regionally significant. A federal action would be considered regionally significant when the total emissions from the proposed action equal or exceed 10 percent of the nonattainment or maintenance area's emissions inventory for any criteria pollutant. However, the AQCR is in attainment for SO_X, PM_{10} and $PM_{2.5}$. As summarized in Table 4.3-3, the emissions for these three pollutants would be less than 10 percent of the particular emissions inventory.



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Travis AFB
LEGEND

- Land Use Compatibility Plan Noise Contours
- Travis AFB Alternative Action Noise Contours
- Runway
- Roadway
- City Limits
- Travis AFB

N

0 19,000
Feet

Comparison of Land Use Compatibility Plan and Travis AFB Alternative Noise Contours at Travis AFB

Figure 4-11

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Table 4.3-3 Emissions from Travis AFB Alternative Aircraft Operations at Travis AFB and Comparison to Conformity Significance and *de minimis* Thresholds

	Criteria Air Pollutant (tpy)					
	CO	**VOC**	**NO_x**	**SO_x**	**PM_{10}**	**$PM_{2.5}$**
Emissions Inventory	**807,636**	**141,109**	**199,619**	19,710	77,928	33,033
Alternative Action Emissions from Recurring Aircraft Operations at Travis AFB (net change in emissions)	**5**	**1**	**57**	3	12	12
Emissions from Aircraft Operations Associated with the C-17 Basing Action	384	175	1,378	59	104	103
Total Emissions from Recurring Aircraft Operations	**389**	**176**	**1,435**	62	116	115
Net Change in Emissions from Recurring Aircraft Operations as Percent of Inventory	**0.000%**	**0.000%**	**0.029%**	0.015%	0.015%	0.036%
Total Emissions from Recurring Aircraft Operations as Percent of Inventory	**0.048%**	**0.125%**	**0.719%**	0.315%	0.149%	.0.348%
de minimis Threshold	**100**	**100**	**100**	NA	NA	NA
Net Change in Emissions from Recurring Aircraft Operations Exceed *de minimis* Threshold?	**No**	**No**	**No**	NA	NA	NA
Net Change in Emissions from Recurring Aircraft Operations Regionally Significant? (>10%)	**No**	**No**	**No**	NA	NA	NA

NA – Not Applicable.
De minimis does not apply since AQCR is in attainment for pollutant.
***Bold** indicates pollutants of concern.*

Table 4.3-4 lists the emissions from recurring aircraft operations for the completed C-17 basing action at Travis AFB (*i.e.*, basing action emissions plus LZ operations emissions) and compares the combined emissions with the USEPA-approved 2006 SIP budget emissions for Travis AFB.

Table 4.3-4 Comparison of Recurring Aircraft Emissions for Travis AFB Alternative at Travis AFB to Travis AFB SIP Budget Emissions Levels (tpy)

	CO	**VOC**	**NO_X**
Emissions from Basing Action Recurring Aircraft Operations	384	175	1,378
Emissions from Recurring LZ Operations	5	1	57
Combined Recurring Aircraft Operations Emissions	389	176	1,435
SIP Budget Emissions	4,216	2,383	1,734
Comparison of Combined Recurring Aircraft Emissions to SIP Budget	--3,827	-2,207	-299

Note: Negative numbers indicate a surplus when compared to SIP budget

Emissions from recurring aircraft operations for the completed C-17 basing action at Travis AFB (*i.e.*, basing action emissions plus LZ operations emissions) would not exceed the USEPA-approved SIP budget for the Base (see Table 4.3-4) . It is determined that the Travis AFB Alternative at Travis AFB positively conforms to the SIP for the Base. The Air Force is supporting an activity demonstrated by USEPA standards not to cause or contribute to new violations of any NAAQS in the affected area, nor increase the frequency or severity of an existing violation. Implementation of the federal action would not delay timely attainment of pollutant standards in any area of the AQCR, and the action would be in compliance or would be consistent with all relevant requirements and milestones contained in the applicable SIP. This conclusion of a positive General Conformity determination for the Travis AFB Alternative at Travis AFB fulfills the Air Force's obligation and responsibility under 40 CFR Part 93, Subpart B. A Conformity Determination would not be required.

4.3.4.2 Grant County Airport

Table 4.3-5 shows the emissions that would occur from the Travis AFB Alternative aircraft operations that would be accomplished at the Grant County Airport, the resultant total emissions for all aircraft operations at the airport, and compares the emissions (*i.e.*, net change and total emissions) with the baseline AQCR emissions inventory.

Table 4.3-5 Emissions from Travis AFB Alternative Aircraft Operations at Grant County Airport and Comparison to Conformity Significance and *de minimis* Thresholds

	Criteria Air Pollutant (tpy)					
	CO	**VOC**	**NO_x**	**SO_x**	**PM_{10}**	**$PM_{2.5}$**
Emissions Inventory	394,296	69,253	56,620	9,077	**134,609**	38,987
Alternative Action Emissions from Recurring Aircraft Operations at Grant County Airport (net change in emissions)	5	1	57	3	**12**	12
Emissions from Baseline Aircraft Operations	543	213	652	36	**125**	124
Total Emissions from Recurring Aircraft Operations	548	214	709	39	**137**	136
Net Change in Emissions from Recurring Aircraft Operations as Percent of Inventory	0.001%	0.001%	0.101%	0.033%	**0.009%**	0.031%
Total Emissions from Recurring Aircraft Operations as Percent of Inventory	0.139%	0.309%	1.252%	0.430%	**0.102%**	0.349%
de minimis Threshold	NA	NA	NA	NA	**100**	100

Table 4.3-5 Emissions from Travis AFB Alternative Aircraft Operations at Grant County Airport and Comparison to Conformity Significance and *de minimis* Thresholds (*continued*)

	Criteria Air Pollutant (tpy)					
	CO	**VOC**	**NO_x**	**SO_x**	**PM_{10}**	**$PM_{2.5}$**
Net Change in Emissions from Recurring Aircraft Operations Exceed *de minimis* Threshold?	NA	NA	NA	NA	**No**	No
Net Change in Emissions from Recurring Aircraft Operations Regionally Significant? (>10%)	No	No	No	No	**No**	No

NA – Not Applicable. De minimis does not apply since AQCR is in attainment for pollutant.
***Bold** indicates pollutants of concern.*

The total direct and indirect PM_{10} and $PM_{2.5}$ emissions from the Travis AFB Alternative aircraft operations at Grant County Airport (*i.e.*, the net change in emissions, which would be 12 tpy for both PM_{10} and $PM_{2.5}$) would be below the *de minimis* thresholds established for these pollutants within AQCR 62. As summarized in Table 4.3-5, the net change in emissions for the pollutant of concern (*i.e.*, PM_{10}), would not be regionally significant. A federal action would be considered regionally significant when the total emissions from the proposed action equal or exceed 10 percent of the nonattainment or maintenance area's emissions inventory for any criteria pollutant. However, the AQCR is in attainment for CO, NO_X, VOC, and SO_x. As summarized in Table 4.3-5, the emissions for these four pollutants would be less than 10 percent of the particular emissions inventory.

Based on information in Table 4.3-5 and the preceding paragraph, it is determined that the Travis AFB Alternative at the Grant County Airport positively conforms to the SIP for the AQCR. The Air Force is supporting an activity demonstrated by USEPA standards not to cause or contribute to new violations of any NAAQS in the affected area, nor increase the frequency or severity of an existing violation. Implementation of the federal action would not delay timely attainment of pollutant standards in any area of the AQCR, and the action would be in compliance or would be consistent with all relevant requirements and milestones contained in the applicable SIP. This conclusion of a positive General Conformity determination for the Travis AFB Alternative at Grant County Airport fulfills the Air Force's obligation and responsibility under 40 CFR Part 93, Subpart B. A Conformity Determination would not be required.

4.3.4.3 Mitigation

There would be no significant impacts. No mitigation is recommended.

4.3.5 Cultural Resources

4.3.5.1 Travis AFB

The Travis AFB Alternative at Travis AFB includes excavation adjacent to the existing runway for the installation of an IR lighting system (areas previously disturbed by construction activities) and does not involve any demolition or alteration of buildings or structures. No NRHP-eligible resources have been identified in the ROI at Travis AFB. One Native American group responded to the notification letter and the response indicated the group is not aware of any "historic properties" on the project site. The Travis AFB Alternative at Travis AFB would have no effect on cultural resources.

4.3.5.2 Grant County Airport

The Travis AFB Alternative at Grant County Airport would not involve any new construction or ground disturbing activities, or demolition or alteration of buildings or structures. No NRHP-eligible resources have been identified at the Grant County Airport; therefore the Travis AFB Alternative at Grant County Airport would have no effect on cultural resources.

4.3.5.3 Mitigation

There would be no significant impacts. No mitigation is recommended.

4.4 SOUTHERN CALIFORNIA LOGISTICS AIRPORT ALTERNATIVE

A 3,500 foot-long, 90-foot-wide LZ would be established by painting the LZ threshold and side boundaries about 3,000 feet from the northern end of Runway 17/35 (see Figure 2-4) to support tactical arrivals, departures, and landings. Additionally, operations would be accomplished at the Grant County Airport and Travis AFB. Annually, approximately 3,501(9.73 average daily), 3,501(9.73 average daily), and 778 (2.16 average daily) operations would be accomplished, respectively, at the SCLA, Grant County Airport, and Travis AFB as a result of the SCLA Alternative.

4.4.1 Aircraft Operations and Safety and Bird/Wildlife-Aircraft Strike Hazard

4.4.1.1 Southern California Logistics Airport

Aircraft Operations

Under the alternative, average daily airfield operations at the SCLA would increase by 9.73 operations from 155.38 to 165.11 operations (see Tables 2.2-3 and 2.2-8, respectively), a 6 percent increase. Approximately 60,200 annual operations would occur under the alternative at the SCLA. The anticipated annual operations would equate to approximately 23 percent of the airfield capacity, an increase of 1 percent. Assuming nearly all operations

would occur primarily between 6:00 a.m. and 2:00 a.m., there would be 20 hours of operations per day for hourly capacity purposes. Based on a 20-hour day, the average IFR hourly operations would be about eight operations, approximately 14 percent of the hourly capacity (a 4% decrease). Although there would be an overall increase in operations, the average hourly operations would decrease because the average operations per day would increase from 15 to 20 because C-17 operations would occur until approximately 2:00 a.m. instead of 10:00 p.m. under the baseline. The airfield has the capacity to accommodate the increase in operations.

Tactical C-17 maneuvers such as spiral up departures, spiral down arrivals, high-speed-low altitude arrivals and departures, steep straight-in arrivals, and steeper than normal climb out on departure would be added to the flight track inventory at the SCLA. The location for the tracks associated with these maneuvers would not coincide with existing tracks at the SCLA. Additionally, these tactical maneuvers would be initiated in High Desert TRACON airspace and transition to the SCLA air traffic control tower airspace, or vice versa. The two air traffic control agencies would develop and implement procedures to coordinate the transition of C-17s from one airspace unit to the other. Although there may be instances where both the C-17 and the other aircraft would need to adjust patterns, the volumes of traffic in the airspaces, in conjunction with the air traffic control procedures developed to accommodate the C-17 tactical maneuvers, would not impair operations at the SCLA.

Aircraft Safety

The additional C-17 operations at the SCLA would include tactical arrivals, departures, and closed patterns. Although these operations are not accomplished at the airport under the baseline, the Class A mishap rates for the C-17 in Table 3.2-1 include the flying hours associated with all Air Force C-17 operations, to include tactical events. Thus, the C-17 operations at the SCLA would be consistent with the operations accounted for in the Air Force-wide C-17 Class A mishap rate. For this reason, the risk is low that an aircraft involved in an accident at or around the SCLA would strike a person or structure on the ground.

Bird/Wildlife-Aircraft Strike Hazard

The background information in Subchapter 4.2.1 concerning the behavior factors of birds and wildlife and aircraft operational factors also applies to the alternative. Overall, aircraft operations at the SCLA would increase by about 6 percent. Thus, there would be potential for a corresponding increase in bird/wildlife-aircraft strikes at the SCLA. It is anticipated the altitude distribution of the additional strikes would follow the data in Table 3.1-2 because the types of operations by aircraft operating at the airfield would be consistent with the types of operations associated with data in the table. The discussion and analysis concerning the number of bird/wildlife-aircraft strikes that result in serious mishap in Subchapter 4.2.1.1 also applies.

4.4.1.2 Grant County Airport

Under the alternative, average daily airfield operations at Grant County Airport would increase by 9.73 operations from 218.42 to 228.15 operations (see Tables 2.2-1 and 2.2-9, respectively), a 4 percent increase. Approximately 83,200 annual operations would occur under the alternative at the Grant County Airport. The anticipated annual operations would equate to approximately 23 percent of the airfield capacity, an increase of 1 percent. Assuming nearly all operations would occur primarily between 6:00 a.m. and 2:00 a.m., there would be 20 hours of operations per day for hourly capacity purposes. Based on a 20-hour day, the average IFR hourly operations would be about 11 operations, approximately 19 percent of the hourly capacity (no change when compared to baseline). The airfield has the capacity to accommodate the increase in operations.

The discussion and analysis for the Proposed Action at the Grant County Airport in Subchapter 4.2.1.1 also applies. The existing air traffic control procedures for the airspace surrounding the airfield and at the airfield would accommodate the proposed C-17 operations at the airfield.

Aircraft Safety

The discussion and analysis for the Proposed Action at Grant County Airport in Subchapter 4.2.1.1 also applies. For these reasons, the risk is low that an aircraft involved in an accident at or around the Grant County Airport would strike a person or structure on the ground.

Bird/Wildlife-Aircraft Strike Hazard

The background information in Subchapter 4.2.1 concerning the behavior factors of bird/wildlife and aircraft operational factors also applies to the alternative. Overall, aircraft operations at Grant County Airport would increase by about 4 percent. Thus, there would be potential for a corresponding increase in BASH incidents at the airport. It is anticipated the altitude distribution of the additional strikes would follow the data in Table 3.1-2 because the types of operations by aircraft operating at the airfield would be consistent with the types of operations associated with data in the table. The discussion and analysis concerning the number of bird/wildlife-aircraft strikes that result in serious mishap in Subchapter 4.2.1.1 also applies.

4.4.1.3 Travis AFB

Aircraft Operations

Under the alternative action at Travis AFB, average daily airfield operations at the Base would increase by 2.16 operations from 221.81 to 223.97 operations (see Tables 2.2-2 and 2.2-5, respectively), a 1 percent increase. Approximately 71,100 annual operations would occur under the alternative action at Travis AFB. The anticipated annual operations would

equate to approximately 25 percent of the airfield capacity, or no change when compared to the baseline. Assuming nearly all operations occur primarily between 6:00 a.m. and 2:00 a.m., there would be 20 hours of operations per day for hourly capacity purposes. Based on a 20-hour day, the average IFR hourly operations would be about 11 operations, approximately 21 percent of the hourly capacity (no change from the baseline). The airfield has the capacity to accommodate the increase in operations.

The discussion and analysis for the Proposed Action at Travis AFB in Subchapter 4.2.1.2 also applies. The existing air traffic control procedures for the airspace surrounding the airfield and at the airfield would accommodate the proposed C-17 operations at the Base.

Aircraft Safety

The discussion and analysis for the Proposed Action at Travis AFB in Subchapter 4.2.1.2 also applies. For these reasons, the risk is low that an aircraft involved in an accident at or around the Travis AFB would strike a person or structure on the ground.

Bird/Wildlife-Aircraft Strike Hazard

The background information in Subchapter 4.2.1 concerning the behavior factors of birds and wildlife and aircraft operational factors also applies to the alternative. Overall, aircraft operations at Travis AFB would increase by about 1 percent. Thus, there would be potential for a corresponding increase in BASH incidents at Travis AFB. It is anticipated the altitude distribution of the additional strikes would follow the data in Table 3.1-2 because the types of operations by aircraft operating at the airfield would be consistent with the types of operations associated with data in the table. The discussion and analysis concerning the number of bird/wildlife-aircraft strikes that result in serious mishap in Subchapter 4.2.1.1 also applies.

4.4.1.4 Mitigation

There would be no significant impacts. No mitigation is recommended.

4.4.2 Noise

4.4.2.1 Southern California Logistics Airport

Noise associated with the SCLA Alternative would be generated by aircraft operations.

Figure 4-12 shows the aircraft ground tracks and Figure 4-13 depicts the noise exposure area at the airport after the LZ would be constructed and aircraft operations occur at the projected levels. Figure 4-14 compares the SCLA Alternative at the SCLA and the No Action Alternative noise contours. The aircraft operations modeled include the average busy day aircraft operations for the SCLA Alternative at the SCLA (see Table 2.2-8).

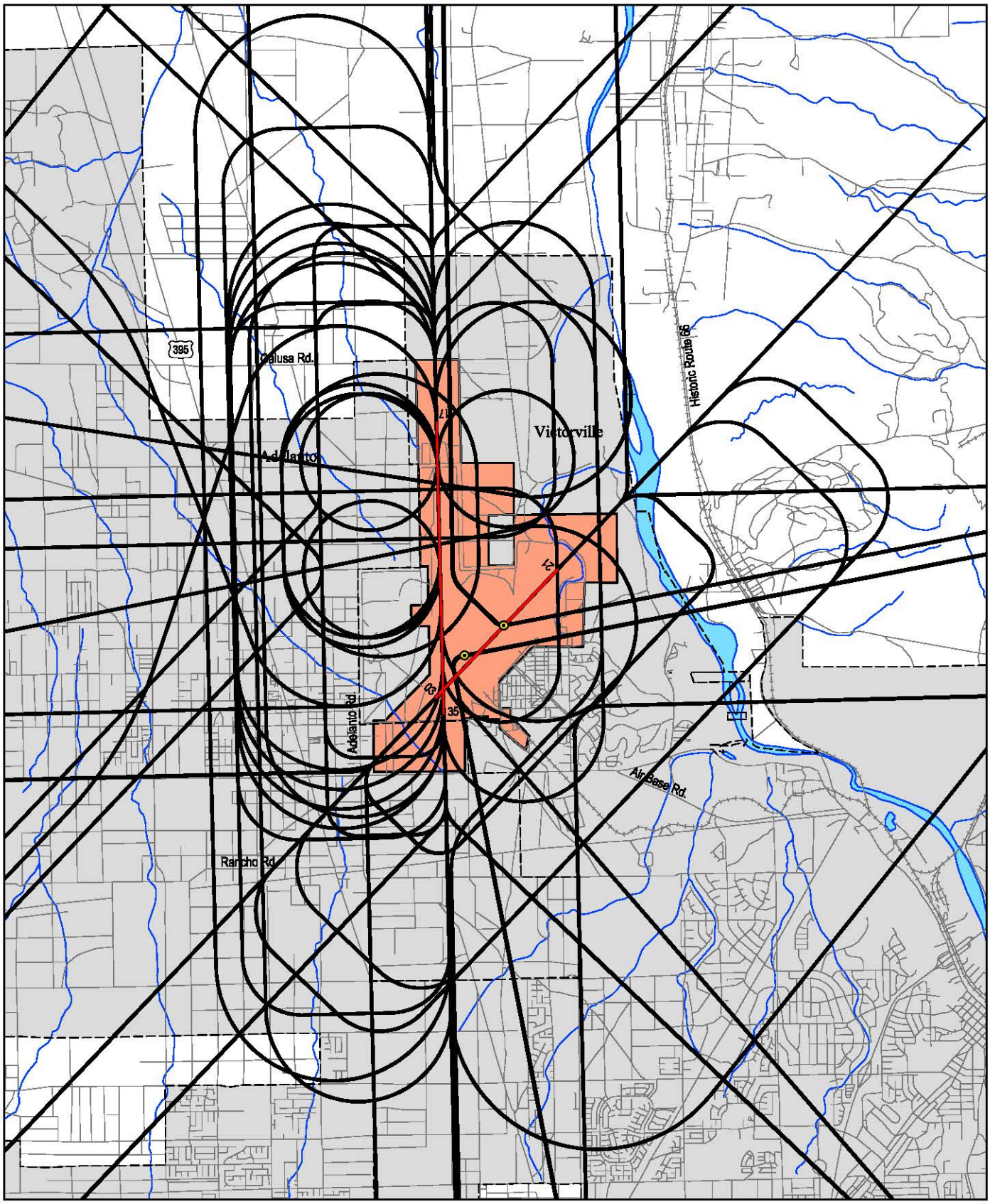
Single Event Noise Analysis

Each aircraft overflight yields a single-event noise level, presented as SEL. C-17 aircraft would accomplish operations on the LZ after it is constructed. Thus, the SCLA and surrounding areas would be exposed to SELs from C-17s at the levels listed in Table 3.1-3. The greatest SEL values for the aircraft based at SCLA would continue to be 118 dBA produced by the B-727 aircraft (see Table 3.3-1), which is 3 dBA louder than the C-17.

The induced hearing data in Table 4.2-1 and related discussion in Subchapter 4.2.2 for the Proposed Action at the Grant County Airport also apply. Based on the level of noise exposure from the SCLA Alternative at the SCLA aircraft operations in areas where people live, it is doubtful that an individual would be exposed to noise that would produce hearing loss.

Nearby schools would continue to be exposed to noise from aircraft operations associated with the SCLA Alternative at the SCLA. Assuming schools conduct teaching for an approximate 8-hour period (8:00 a.m. through 4:00 p.m.), about 40 percent of the 20-hour flying day would occur when classroom activities occur. Thus, approximately 40 percent of the additional 9.73 average daily C-17 operations (*i.e.*, 3.9 operations) would occur during school time. Based on an 8-hour school day and 3.9 operations, there would be an average of less than one additional overflight per hour that could interfere with classroom activities in schools that would be overflown. The ANSI classroom acoustics information in Subchapter 4.2.2.1 also applies.

Based on FICAN recommendations, outdoor SELs of 80 to 100 dBA (60 to 80 dBA indoors) could result in 4 to 10 percent awakenings, respectively, in the exposed population. Over the course of sleeping, different individuals might be awakened by different events, and some individuals might be awakened more than once. Individuals in residences in the area around the Base would continue to be exposed to indoor SEL of 60 to 80 dBA during normal sleep periods (10:00 p.m. to 7:00 a.m.). There would be a combined total of six additional persons exposed to CNEL 65 dBA and greater as a result of the SCLA Alternative at the SCLA. Assuming the number of sleep awakenings would be proportional to the increase in exposed population and that 10 percent of the persons would be awakened, one additional person potentially could be awakened when comparing the SCLA Alternative at the SCLA to the baseline condition. Those individuals who sleep between 7:00 a.m. and 10:00 p.m. likely would be affected just as those persons who sleep during normal nighttime sleep periods.



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Southern California Logistics Airport

LEGEND

- Ground Track
- Runway
- Roadway
- City Limits
- Drop Zone
- Southern California Logistics Airport

N

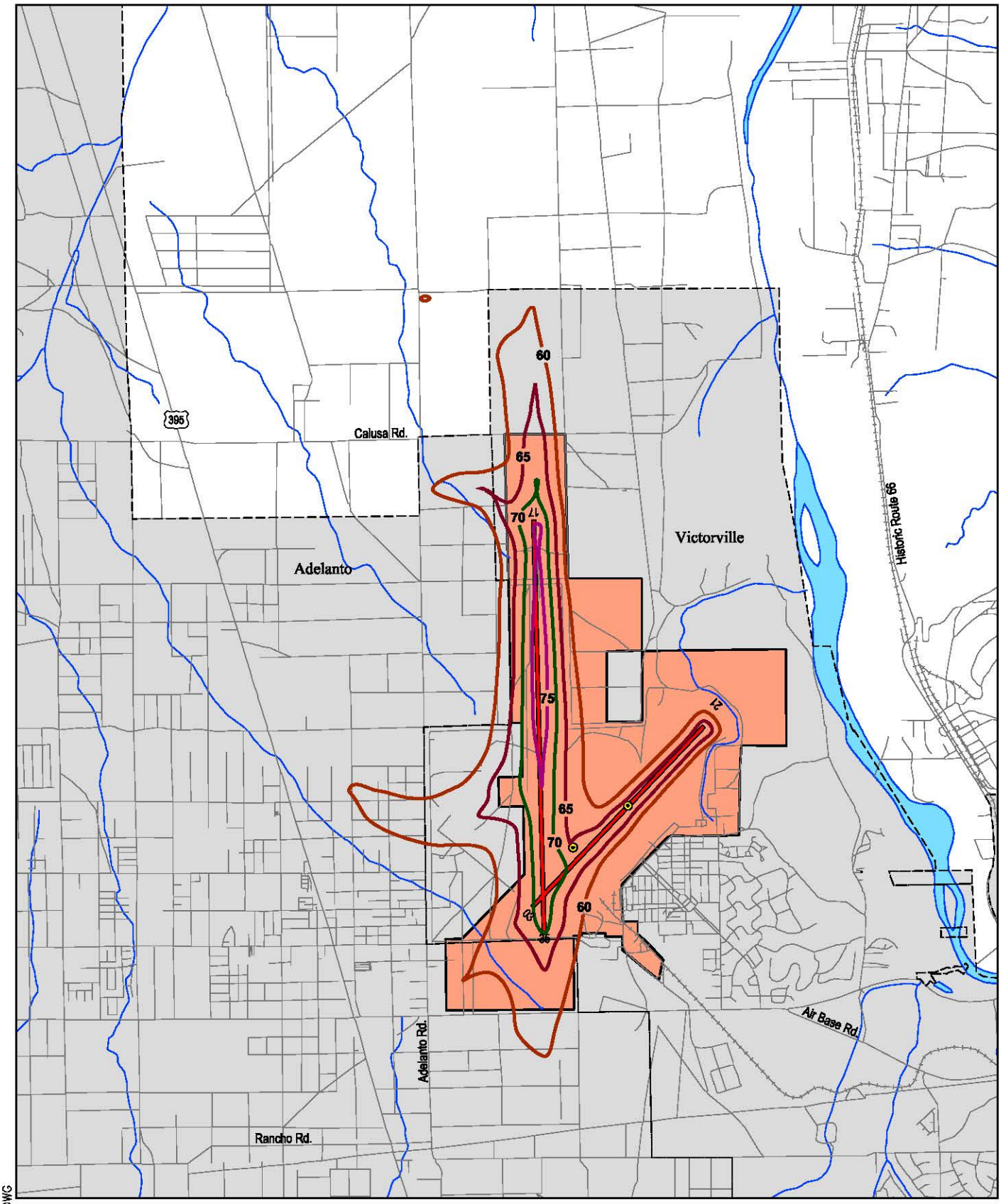
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Southern California Logistics Airport Alternative Aircraft Ground Tracks at Southern California Logistics Airport

Figure 4-12

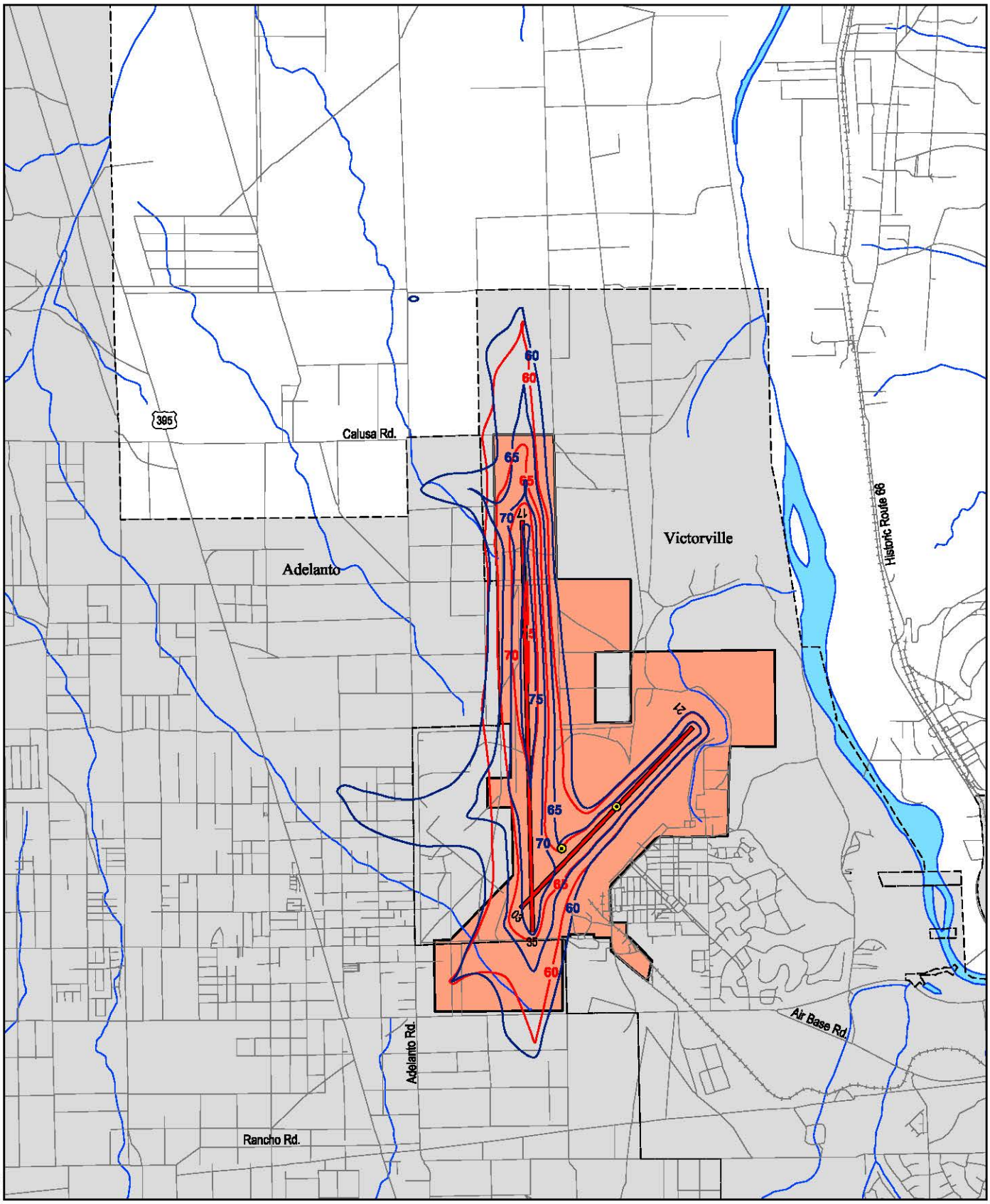
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Southern California Logistics Airport Alternative Noise Contours at Southern California Logistics Airport

Figure 4-13

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Southern California Logistics Airport

LEGEND

- No Action Alternative Noise Contours
- SCLA Alternative Noise Contours
- Runway
- Roadway
- City Limits
- Drop Zone
- Southern California Logistics Airport

N

0 5,000 Feet

Comparison of No Action and Alternative and Southern California Logistics Airport Alternative Noise Contours at Southern California Logistics Airport

Figure 4-14

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Averaged Noise Analysis

Table 4.4-1 compares SCLA Alternative at the SCLA with the No Action Alternative (*i.e.*, baseline) for the following: off-airport land area and population exposed to noise of CNEL 60 dBA and greater, and the population potentially highly annoyed (*i.e.*, baseline).

Table 4.4-1 Summary of Off-Airport Land Area and Population Exposed to, and Population Potentially Highly Annoyed by CNEL 60 dBA and Greater, Southern California Logistics Airport Alternative at Southern California Logistics Airport

	CNEL Interval (dBA)					
Category	**60-65**	**65-70**	**70-75**	**75-80**	**80+**	**Total**
Acres						
No Action Alternative	284	11	0	0	0	295
SCLA Alternative at SCLA	615	84	1	0	0	700
Change	+331	+73	+1	0	0	+405
Percent Change	+117%	+664%	--	0%	0%	+137%
Population						
No Action Alternative	0	0	0	0	0	0
SCLA Alternative at SCLA	6	0	0	0	0	6
Change	+6	0	0	0	0	+6
Percent Change	--	0%	0%	0%	0%	--
Population Potentially Highly Annoyed						
No Action Alternative	34	2	0	0	0	36
SCLA Alternative at SCLA	1	0	0	0	0	1
Change	+	0	0	0	0	+
Percent Change	--	0%	0%	0%	0%	--

Note: The No Action Alternative is also the baseline. Acres reflect only off-Base land area. People highly annoyed determined by multiplying the total number of people in the noise zone times the higher percent number for the interval in Table 3.1-4.

The SCLA Alternative at the SCLA CNEL 60 dBA and greater noise contours along and east of Runway 17/35 would be very similar to the No Action Alternative (see Figure 4-14). However, an additional 405 acres would be exposed to CNEL 60 dBA and greater, with the increases occurring primarily to the west and south along the extend Runway 17/35 centerline. The reason for the increased noise exposure is the addition of LZ-related C-17 aircraft ground tracks that overfly the areas, especially to the west.

People would be exposed to aircraft noise in one of the five noise zones (see Table 4.4-1), with the CNEL 60-65 dBA noise zone containing all the persons exposed to CNEL 60-dBA and greater. These six persons would equate to less than 1 percent of the estimated 12,436 persons (based on 2000 census data) who live within the approximate 5-mile radius area associated with airfield airspace environment, essentially no change when compared to the No Action Alternative (*i.e.*, baseline) because no persons were in the noise zones. No persons who would b expected to be potentially highly annoyed by noise exposure.

The data in Table 4.2-3 and related discussion and analysis for the contribution of outdoor noise to indoor noise for the Proposed Action at the Grant County Airport in Subchapter 4.2.2 also applies. Based on SCLA's location, the warm climate data would also apply to buildings on and in the area surrounding the airport.

The discussion and analyses for nonauditory health effects and the effects of aircraft noise on farm animals for the Proposed Action at the Grant County Airport in Subchapter 4.2.2 also apply.

Effects of Noise on Structures

As discussed in Subchapter 3.1.2.2, L_{max} is used to determine the potential affects to structures from sound. The L_{max} is the highest instantaneous sound pressure during a single noise event, no matter how long the sound may persist. No damage would occur to structures in the area surrounding SCLA from C-17 LZ operations because the L_{max} produced by the aircraft (*i.e.*, 113 dBA at 200 feet from the aircraft) would not exceed the level at which structural damage could occur.

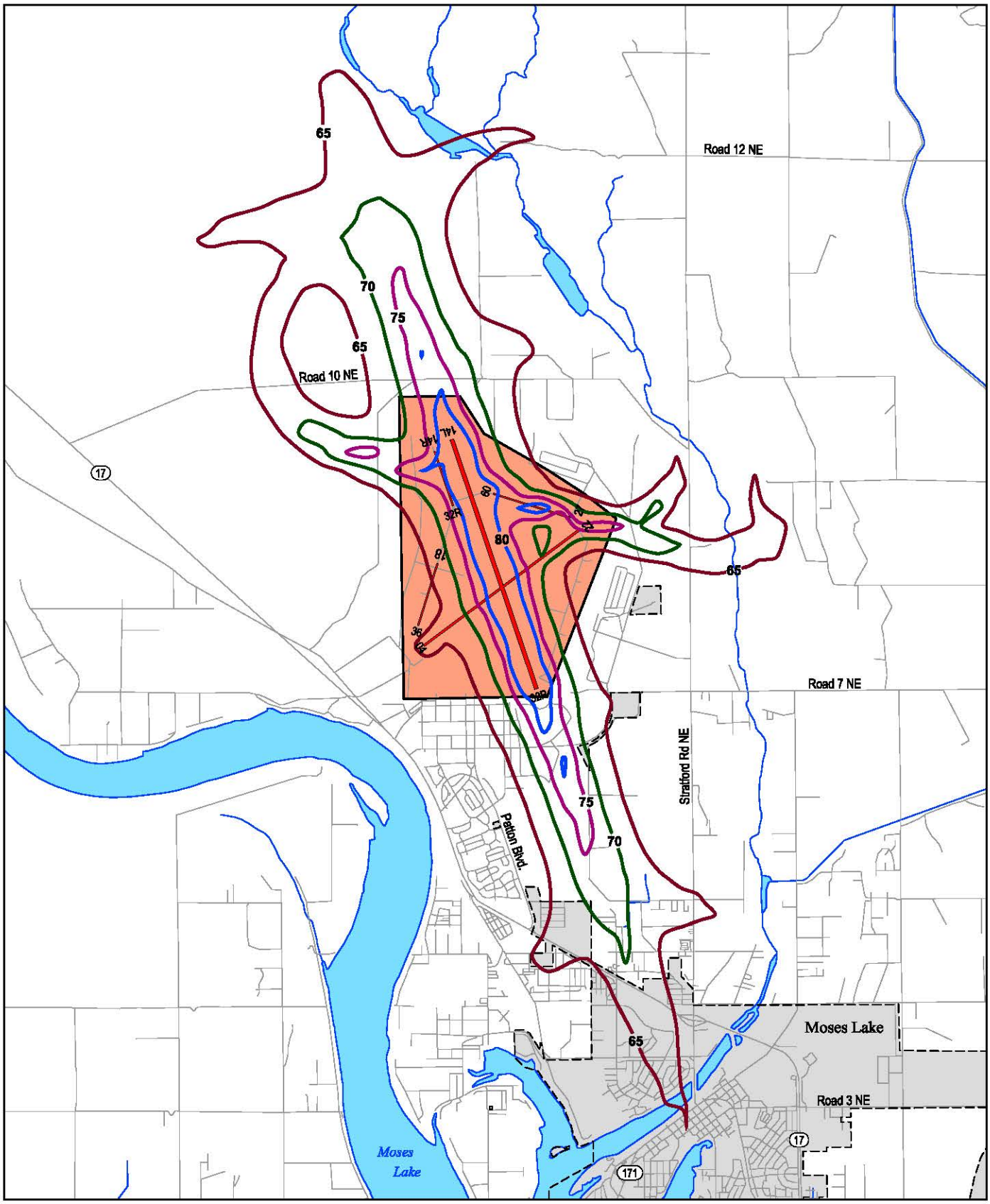
4.4.2.2 Grant County Airport

Noise associated with the SCLA Alternative at the Grant County Airport would be generated by aircraft operations. There would be no change to the aircraft ground tracks depicted in Figure 3-5 as a result of the SCLA Alternative at the Grant County Airport. Figure 4-15 depicts the noise exposure area at the airport under the Proposed Action. Figure 4-16 compares the SCLA Alternative at the Grant County Airport and the No Action Alternative noise contours. The aircraft operations modeled include the average busy day aircraft operations for the SCLA Alternative at the Grant County Airport (see Table 2.2-9).

Single Event Noise Analysis

Each aircraft overflight yields a single-event noise level, presented as SEL. C-17 aircraft, which currently operate at Grant County Airport, would continue to accomplish operations at the airport and on the LZ. Thus, Grant County Airport and surrounding areas would continue to be exposed to SELs from C-17s at the levels listed in Table 3.1-3. The greatest SEL values for the aircraft operating at Grant County Airport would continue to be produced by EA-6B aircraft, which are 11 dBA louder than the C-17.

The induced hearing data in Table 4.2-1 and related discussion in Subchapter 4.2.2 for the Proposed Action at the Grant County Airport also apply. Based on the level of noise exposure from the SCLA Alternative at Grant County Airport aircraft operations in areas where people live, it is doubtful that an individual would be exposed to noise that would produce hearing loss.



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Grant County Airport

LEGEND

- DNL 65 dBA Contour
- DNL 70 dBA Contour
- DNL 75 dBA Contour
- DNL 80 dBA Contour
- Runway
- Roadway
- City Limits
- Grant County International Airport

N

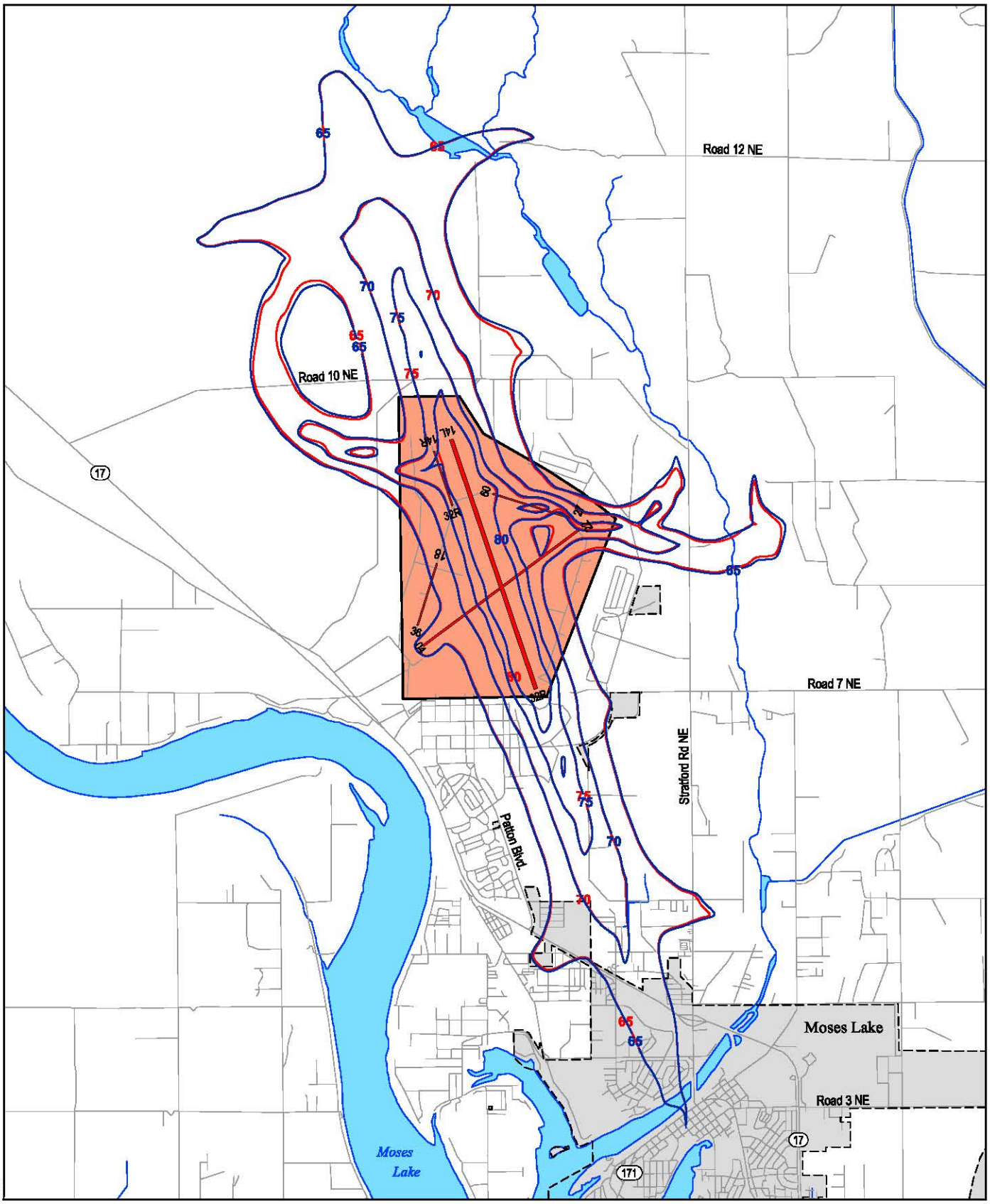
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Southern California Logistics Airport Alternative Noise Contours at Grant County Airport

Figure 4-15

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Grant County Airport

LEGEND

- No Action Alternative Noise Contours
- SCLA Alternative Noise Contours
- Runway
- Roadway
- City Limits
- Grant County International Airport

N

0 7,000 Feet

Comparison of No Action Alternative and Southern Cailfornia Logistics Airport Alternative Noise Contours at Grant County Airport

Figure 4-16

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Nearby schools would continue to be exposed to noise from aircraft operations. However, increased interference from SCLA Alternative at the Grant County Airport aircraft operations is unlikely because the change in the noise condition is minimal when comparing baseline and proposed action noise exposure (see Figure 4-16). Assuming schools conduct teaching for an approximate 8-hour period (8:00 a.m. through 4:00 p.m.), about 40 percent of the 20-hour flying day would occur when classroom activities occur. Thus, approximately 40 percent of the additional 9.73 average daily C-17 operations (*i.e.*, 3.9 operations) would occur during school time. Based on an 8-hour school day and 3.9 operations, there would be an average of less than one additional overflight per hour that could interfere with classroom activities in schools that would be overflown. The ANSI classroom acoustics information in Subchapter 4.2.2.1 also applies.

Based on FICAN recommendations, outdoor SELs of 80 to 100 dBA (60 to 80 dBA indoors) could result in 4 to 10 percent awakenings, respectively, in the exposed population. Over the course of sleeping, different individuals might be awakened by different events, and some individuals might be awakened more than once. Individuals in residences in the area around the Base would continue to be exposed to indoor SEL of 60 to 80 dBA during normal sleep periods (10:00 p.m. to 7:00 a.m.). There would be a combined total of 54 additional persons exposed to DNL 65 dBA and greater as a result of the SCLA Alternative at Grant County Airport. Assuming the number of sleep awakenings would be proportional to the increase in exposed population and that 10 percent of the persons would be awakened, about five additional persons potentially could be awakened when comparing the SCLA Alternative at Grant County Airport to the baseline condition. Those individuals who sleep between 7:00 a.m. and 10:00 p.m. likely would be affected just as those persons who sleep during normal nighttime sleep periods.

The induced hearing data in Table 4.2-1 and related discussion in Subchapter 4.2.2 for the Proposed Action at the Grant County Airport also apply. Based on the level of noise exposure from the SCLA Alternative at the Grant County Airport aircraft operations in areas where people live, it is doubtful that an individual would be exposed to noise that would produce hearing loss.

Averaged Noise Analysis

Table 4.2-2 compares the SCLA Alternative at the Grant County Airport with the No Action Alternative (*i.e.*, baseline) for the following: off-airport land area and population exposed to noise of DNL 65 dBA and greater, and the population potentially highly annoyed (*i.e.*, baseline).

Overall, the SCLA Alternative at the Grant County Airport noise contours would be nearly identical to the No Action Alternative (*i.e.*, baseline) (see Figure 4-16), with the number of off-airport acres in the DNL 65 dBA and greater exposure area increasing by 5 percent. People would to be exposed to aircraft noise in three of the four noise zones (see Table 4.4-2), with the DNL 65-70 dBA noise zone containing 2,018 of the 2,139 persons exposed to DNL 65-dBA and greater. These 2,139 persons would equate to 17 percent of the estimated 12,373 persons (based on 2000 census data) who live within the approximate

5-mile radius area associated with airfield airspace environment, or no change when compared to the No Action Alternative (*i.e.*, baseline).

The density of residences in the newly exposed area would be consistent with adjacent residential areas exposed to aircraft noise under the No Action Alternative (*i.e.*, baseline). The overall number of persons who could be potentially highly annoyed by noise exposure would be 489 people, or 13 additional persons when compared to the No Action Alternative (baseline).

Table 4.4-2 Summary of Off-Airport Land Area and Population Exposed to, and Population Potentially Highly Annoyed by DNL 65 dBA and Greater, Southern California Logistics Airport Alternative at Grant County Airport

	DNL Interval (dBA)				
Category	**65-70**	**70-75**	**75-80**	**80+**	**Total**
Acres					
No Action Alternative	4,446	1,354	427	35	6,262
SCLA Alternative at Grant County Airport	4,687	1,411	444	37	6,579
Change	+241	+57	+17	+2	+317
Percent Change	+5%	+4%	+4%	+6%	+5%
Population					
No Action Alternative	1,969	114	2	0	2,085
SCLA Alternative at Grant County Airport	2,018	119	2	0	2,139
Change	+49	+5	0	0	+54
Percent Change	+2%	+4%	0%	0%	+3%
Population Potentially Highly Annoyed					
No Action Alternative	433	42	1	0	476
SCLA Alternative at Grant County Airport	444	44	1	0	489
Change	+11	+2	0	0	+13
Percent Change	+3%	+5%	0%	0%	+3%

Note: The No Action Alternative is also the baseline. Acres reflect only off-Base land area. People highly annoyed determined by multiplying the total number of people in the noise zone times the higher percent number for the interval in Table 3.1-4.

The data in Table 4.2-3 and related discussion and analysis for the contribution of outdoor noise to indoor noise for the Proposed Action at the Grant County Airport in Subchapter 4.2.2 also apply. Based on the location of the Grant County Airport, the cold climate data would apply to buildings on and in the area surrounding the airport.

The discussion and analyses for nonauditory health effects and the effects of aircraft noise on farm animals for the Proposed Action at the Grant County Airport in Subchapter 4.2.2 also apply.

Effects of Noise on Structures

As discussed in Subchapter 3.1.2.2, L_{max} is used to determine the potential affects to structures from sound. The L_{max} is the highest instantaneous sound pressure during a single noise event, no matter how long the sound may persist. No damage would occur to structures in the area surrounding Grant County Airport from C-17 LZ operations because the L_{max}

produced by the aircraft (*i.e.*, 113 dBA at 200 feet from the aircraft) would not exceed the level at which structural damage could occur.

4.4.2.3 Travis AFB

Noise associated with the SCLA Alternative at Travis AFB would be generated by aircraft operations. Figure 4-3 shows the aircraft ground tracks and Figure 4-17 depicts the noise exposure area at the Base after the LZ would be established and aircraft operations occur at the projected levels. Figure 4-18 compares the SCLA Alternative at Travis AFB and the No Action Alternative noise contours. The aircraft operations modeled include the average busy day aircraft operations for the alternative (see Table 2.2-10).

Single Event Noise Analysis

Each aircraft overflight yields a single-event noise level, presented as SEL. C-17 and C-130 aircraft, which currently operate at Travis AFB, would also accomplish operations on the LZ after it is constructed. Thus, Travis AFB and surrounding areas would continue to be exposed to SELs from C-17s at the levels listed in Table 3.2-2. The greatest SEL values for the aircraft based at Travis AFB would continue to be produced by the C-5 aircraft, which are 12 dBA louder than the C-17 aircraft.

The induced hearing data in Table 4.2-1 and related discussion in Subchapter 4.2.2 for the Proposed Action at the Grant County Airport also apply. Based on the level of noise exposure from the SCLA Alternative at Travis AFB aircraft operations in areas where people live, it is doubtful that an individual would be exposed to noise that would produce hearing loss.

Nearby schools would continue to be exposed to noise from aircraft operations. However, increased interference from SCLA Alternative at Travis AFB aircraft operations is unlikely because the change in the noise condition is minimal when comparing baseline and proposed action noise exposure (see Figure 4-18). Assuming schools conduct teaching for an approximate 8-hour period (8:00 a.m. through 4:00 p.m.), about 40 percent of the 20-hour flying day would occur when classroom activities occur. Thus, approximately 40 percent of the additional 2.16 average daily C-17 operations (*i.e.*, 0.9 operations) would occur during school time. Based on an 8-hour school day and 0.9 operations, there would be an average of less than one additional overflight per hour that could interfere with classroom activities in schools that would be overflown. The ANSI classroom acoustics information in Subchapter 4.2.2.1 also applies.

Based on FICAN recommendations, outdoor SELs of 80 to 100 dBA (60 to 80 dBA indoors) could result in 4 to 10 percent awakenings, respectively, in the exposed population. Over the course of sleeping, different individuals might be awakened by different events, and some individuals might be awakened more than once. Individuals in residences in the area around the Base would continue to be exposed to indoor SEL of 60 to 80 dBA during normal sleep periods (10:00 p.m. to 7:00 a.m.). There would be a combined total of 18 additional off-Base persons exposed to CNEL 65 dBA and greater as a result of the SCLA Alternative at Travis AFB.

Assuming the number of sleep awakenings would be proportional to the increase in exposed population and that 10 percent of the persons would be awakened, two additional persons potentially could be awakened when comparing the SCLA Alternative at Travis AFB to the baseline condition. Those individuals who sleep between 7:00 a.m. and 10:00 p.m. likely would be affected just as those persons who sleep during normal nighttime sleep periods.

Averaged Noise Analysis

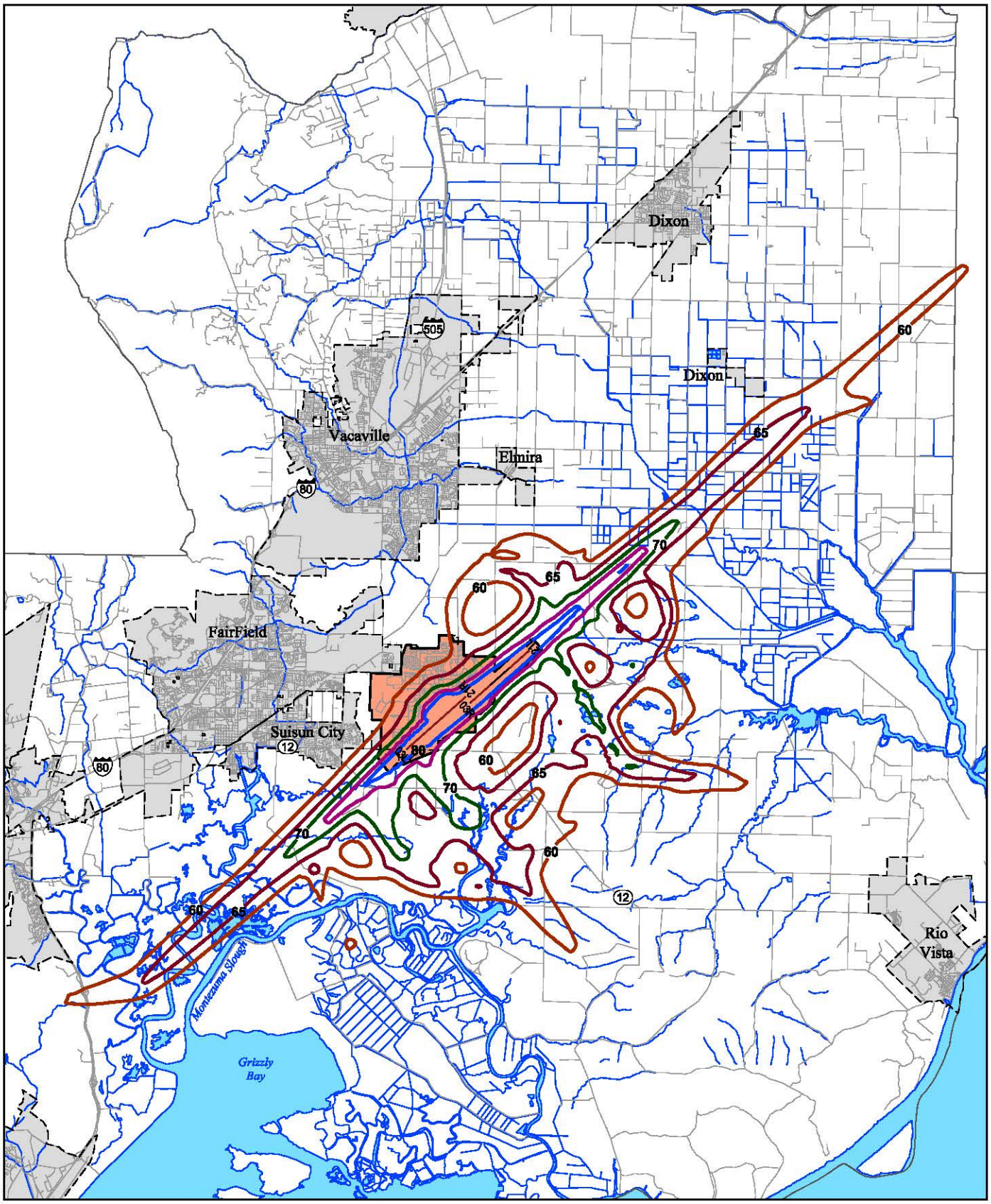
Table 4.4-3 compares the SCLA Alternative at Travis AFB with the No Action Alternative (*i.e.*, baseline) for the following: off-Base land area and population exposed to noise of CNEL 60 dBA and greater, and the population potentially highly annoyed (*i.e.*, baseline).

Overall, the SCLA Alternative at Travis AFB noise contours would be very similar to the No Action Alternative (*i.e.*, baseline) contours (see Figure 4-18), with the number of off-Base acres in the CNEL 60 dBA and greater exposure area increasing by 3 percent.

Table 4.4-3 Summary of Off-Base Land Area and Population Exposed to, and Population Potentially Highly Annoyed by CNEL 60 dBA and Greater, Southern California Logistics Airport Alternative at Travis AFB

	CNEL Interval (dBA)					
Category	**60-65**	**65-70**	**70-75**	**75-80**	**80+**	**Total**
Acres						
No Action Alternative	21,876	15,283	4,225	1,470	287	43,141
SCLA Alternative at Travis AFB	23,083	15,350	4,231	1,426	268	44,358
Change	+1,207	+67	+6	-44	-19	+1,217
Percent Change	+6%	0%	0%	-3%	-7%	+3%
Population						
No Action Alternative	254	102	13	6	0	375
SCLA Alternative at Travis AFB	273	100	14	6	0	393
Change	+19	-2	+1	0	0	+18
Percent Change	+7%	+2%	+8%	0%	0%	+5%
Population Potentially Highly Annoyed						
No Action Alternative	30	22	5	3	0	60
SCLA Alternative at Travis AFB	33	22	5	3	0	63
Change	+3	0	0	0	0	+3
Percent Change	+10%	0%	0%	0%	0%	+5%

Note: The No Action Alternative also is the baseline. Acres reflect only off-Base land area. People highly annoyed determined by multiplying the total number of people in the noise zone times the higher percent number for the interval in Table 3.1-4.



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Travis AFB

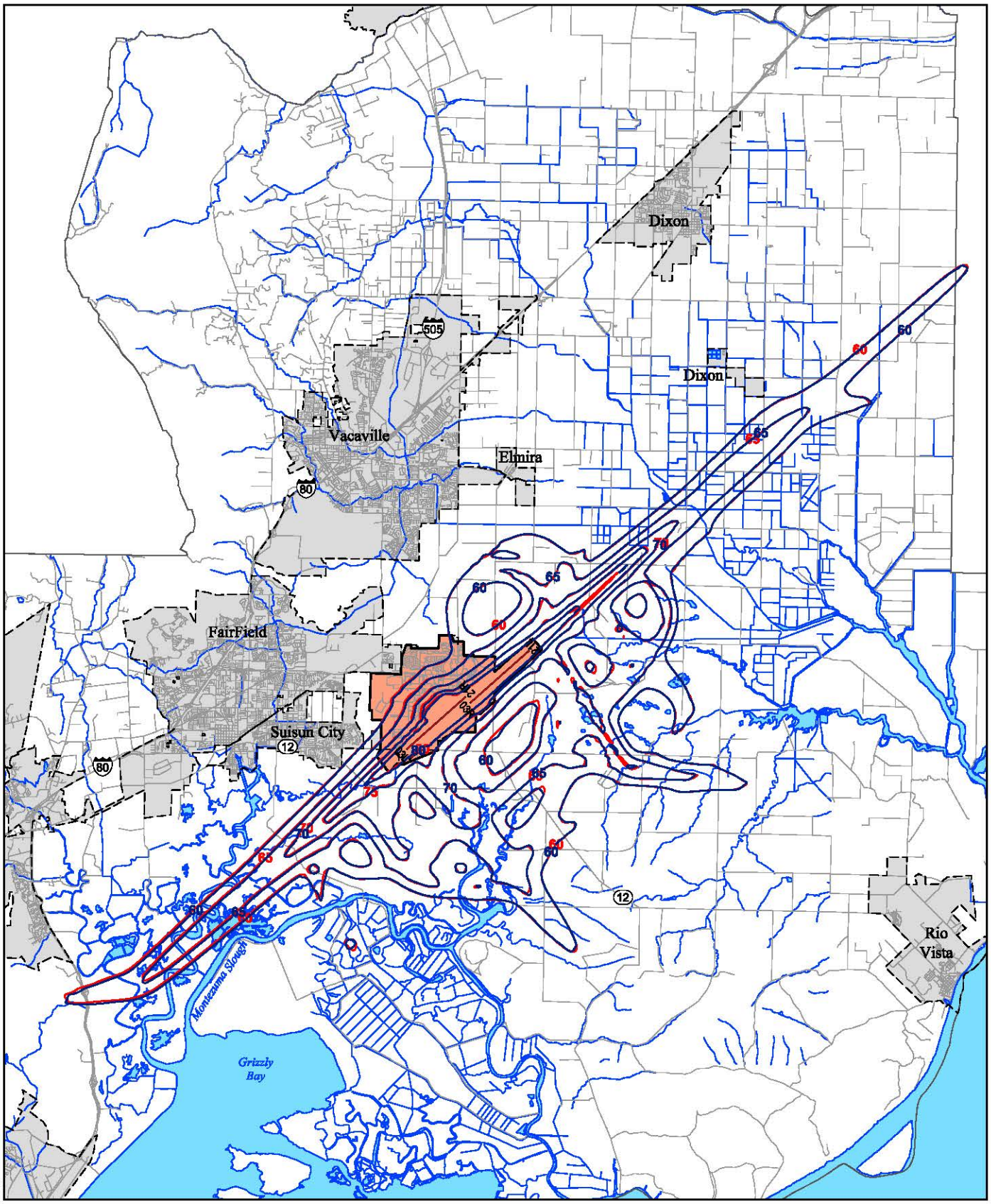
LEGEND

- CNEL 60 dB Contour
- CNEL 65 dB Contour
- CNEL 70 dB Contour
- CNEL 75 dB Contour
- CNEL 80 dB Contour
- Runway
- Roadway
- City Limits
- Travis AFB

Southern California Logistics Airport Alternative Noise Contours at Travis AFB

Figure 4-17

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Travis AFB

LEGEND

- No Action Alternative Noise Contours
- SCLA Alternative Noise Contours
- Runway
- Roadway
- City Limits
- Travis AFB

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Comparison of No Action Alternative and Southern California Logistics Aiport Alternative Noise Contours at Travis AFB

Figure 4-18

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People would be exposed to aircraft noise in four of the five noise zones (see Table 4.4-3), with the CNEL 60-65 dBA noise zone containing 273 of the 393 persons exposed to CNEL 60-dBA and greater. These 393 persons would equate to less than 1 percent of the estimated 64,492 persons (based on 2000 census data) who live within the approximate 5-mile radius area associated with airfield airspace environment, or no change when compared to the No Action Alternative (*i.e.*, baseline). The overall number of persons who could be potentially highly annoyed by noise exposure would be 63 people, or five additional persons when compared to the No Action Alternative (baseline).

The data in Table 4.2-3 and related discussion and analysis for the contribution of outdoor noise to indoor noise for the Proposed Action at the Grant County Airport in Subchapter 4.2.2 also apply. Based on the location of Travis AFB, the warm climate data would apply to buildings on and in the area surrounding the Base.

The discussion and analyses for nonauditory health effects and the effects of aircraft noise on farm animals for the Proposed Action at the Grant County Airport in Subchapter 4.2.2 also apply.

Effects of Noise on Structures

As discussed in Subchapter 3.1.2.2, L_{max} is used to determine the potential affects to structures from sound. The L_{max} is the highest instantaneous sound pressure during a single noise event, no matter how long the sound may persist. No damage would occur to structures in the area surrounding Travis AFB from C-17 LZ operations because the L_{max} produced by the aircraft (*i.e.*, 113 dBA at 200 feet from the aircraft) would not exceed the level at which structural damage could occur.

4.4.2.4 Mitigation

There would be no significant impacts. No mitigation is recommended.

4.4.3 Land Use

4.4.3.1 Southern California Logistics Airport

Implementation of the SCLA Alternative at the SCLA would increase noise contours when compared to the No Action Alternative (baseline) conditions (see Figure 4-14). The areas of increased noise exposure occur primarily to the west and south along the extend Runway 17/35 centerline over open land. The increase in noise would not impact land uses and would be consistent with the three safety review areas of the Comprehensive Airport Land Use Plan. The SCLA Alternative at the SCLA would not require the Airport to update or revise its Airport Master Plan or affect the FAR Part 77 imaginary surfaces or RPZs.

4.4.3.2 Grant County Airport

As depicted in Figure 4-16, the SCLA Alternative at Grant County Airport and the No Action Alternative (baseline) noise contours are nearly identical. Therefore, land use plans for the local community would not be affected. The SCLA Alternative at Grant County Airport would not require the Airport to update or revise its 2005 Airport Master Plan or affect the FAR Part 77 imaginary surfaces or RPZs.

4.4.3.3 Travis AFB

On-Base land use conflicts would not be expected from the establishment and operation of the LZ. Land uses would be compatible with the general character of existing and planned Base land use patterns. The Travis AFB General Plan incorporated mission scenarios such as the SCLA Alternative at Travis AFB in the future land use and future development components of the General Plan. The discussion and analysis concerning the establishment of imaginary surfaces for the LZ and the interim AICUZ update in Subchapter 4.2.3.2 also apply.

As mentioned in Subchapter 4.4.2.3, the SCLA Alternative noise contours would be nearly identical to the No Action Alternative (*i.e.*, baseline) contours (see Figure 4-18). Figure 4-19 compares the SCLA Alternative at Travis AFB noise contours with the ALUC noise contours. As shown in the figure, SCLA Alternative at Travis AFB noise contours would not extend outward as far as the ALUC noise contours. Thus, the SCLA Alternative at Travis AFB would be consistent with the Solano County ALUC and City of Fairfield General Plan.

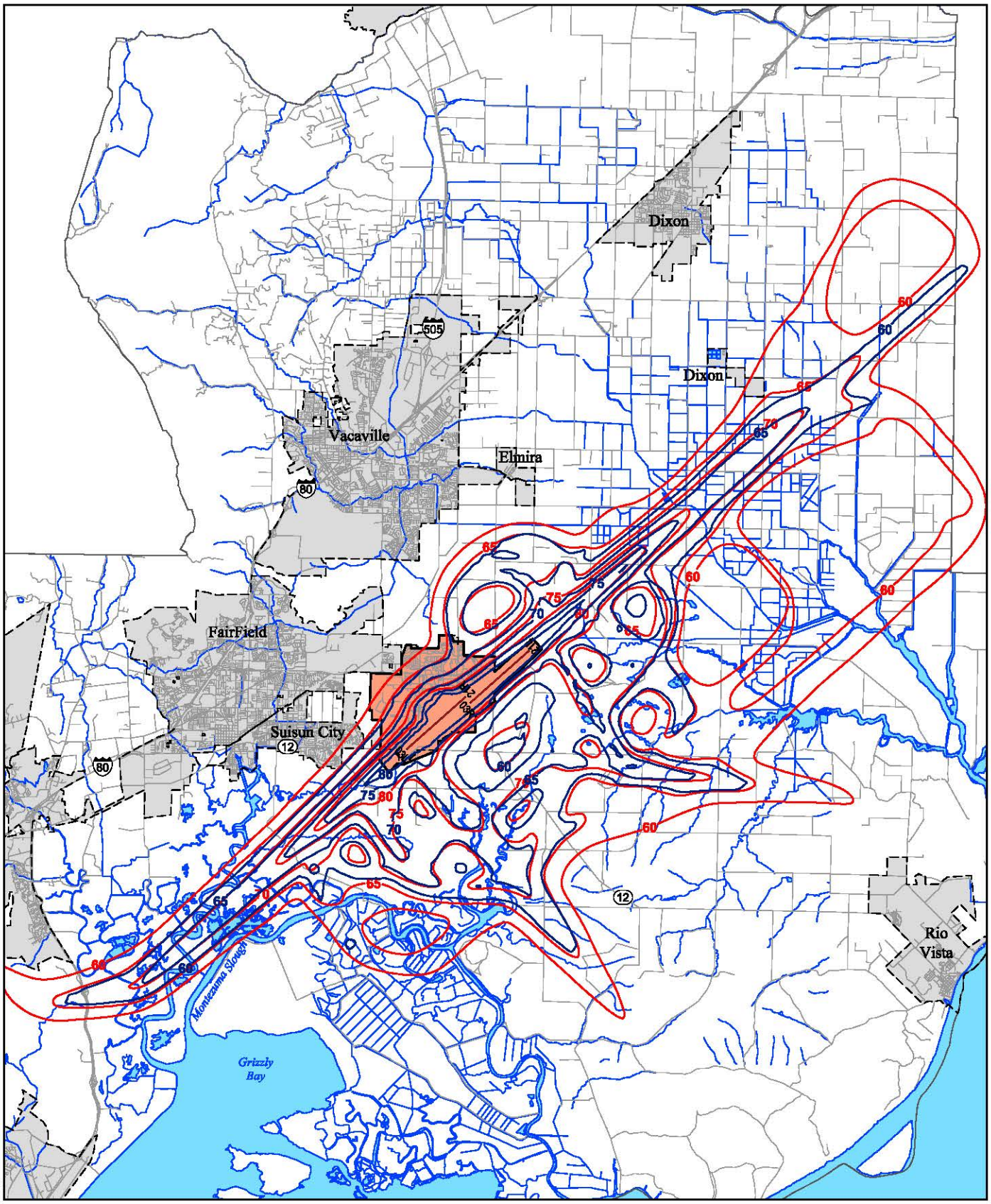
4.4.3.4 Mitigation

There would be no significant impacts. No mitigation is recommended.

4.4.4 Air Quality

4.4.4.1 Southern California Logistics Airport

Table 4.4-4 shows the emissions that would occur from the SCLA Alternative aircraft operations that would be accomplished at the SCLA, the resultant total emissions for all aircraft operations at the airport, and compares the alternative action emissions (*i.e.*, net change and total emissions) with the baseline AQCR emissions inventory.



Travis AFB
LEGEND

- Land Use Compatibility Plan Noise Contours
- SCLA Alternative Noise Contours
- Runway
- Roadway
- City Limits
- Travis AFB

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Feet

Comparison of Land Use Compatibility Plan and Southern California Logistics Airport Alternative Noise Contours at Travis AFB
Figure 4-19

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Table 4.4-4 Emissions from Southern California Logistics Airport Alternative Aircraft Operations at Southern California Logistics Airport and Comparison to Conformity Significance and *de minimis* Thresholds

	Criteria Air Pollutant (tpy)					
	CO	**VOC**	**NO_x**	**SO_x**	**PM_{10}**	**$PM_{2.5}$**
Emissions Inventory	219,146	**45,954**	**84,680**	4,709	175,711	53,619
SCLA Emissions from Recurring Aircraft Operations (net change in emissions)	4	**1**	**51**	2	11	11
Emissions from Baseline Aircraft Operations	134	**104**	**76**	6	18	18
Total Emissions from Recurring Aircraft Operations	138	**105**	**127**	8	29	29
Net Change in Emissions from Recurring Aircraft Operations as Percent of Inventory	0.002%	**0.002%**	**0.060%**	0.043%	0.006%	0.013%
Total Emissions from Recurring Aircraft Operations as Percent of Inventory	0.063%	**0.228%**	**0.150%**	0.170%	0.017%	0.054%
de minimis Threshold	NA	**50**	**100**	NA	NA	NA
Net Change in Emissions from Recurring Aircraft Operations Exceed *de minimis* Threshold?	NA	**No**	**No**	NA	NA	NA
Net Change in Emissions from Recurring Aircraft Operations Regionally Significant? (>10%)	NA	**No**	**No**	NA	NA	NA

NA – Not Applicable. De minimis does not apply since AQCR is in attainment for pollutant.
Bold indicates pollutants of concern.

The total direct and indirect VOC and NO_X emissions from the SCLA Alternative aircraft operations at the SCLA (*i.e.*, the net change in emissions, which would be 1 tpy and 51 tpy, respectively for VOC and NO_X) would be below the *de minimis* thresholds established for these pollutants within AQCR 33. As summarized in Table 4.4-4, the net change in emissions for the pollutants of concern (*i.e.*, VOC and NO_X), would not be regionally significant. A federal action would be considered regionally significant when the total emissions from the proposed action equal or exceed 10 percent of the nonattainment or maintenance area's emissions inventory for any criteria pollutant. However, the AQCR is in attainment for SO_X, PM_{10} and $PM_{2.5}$. As summarized in Table 4.4-4, the emissions for these three pollutants would be less than 10 percent of the particular emissions inventory.

Based on the information in Table 4.4-4 and the preceding paragraph, it is determined that the SCLA Alternative at the SCLA positively conforms to the SIP for the AQCR. The Air Force is supporting an activity demonstrated by USEPA standards not to cause or contribute to new violations of any NAAQS in the affected area, nor increase the frequency or severity of an existing violation. Implementation of the federal action would not delay timely attainment of pollutant standards in any area of the AQCR, and the action would be in compliance or would be consistent with all relevant requirements and milestones contained in the applicable SIP. This conclusion of a positive General Conformity determination for the SCLA Alternative at the SCLA fulfills the Air Force's obligation and responsibility under 40 CFR Part 93, Subpart B. A Conformity Determination would not be required.

4.4.4.2 Grant County Airport

Table 4.4-5 shows the emissions that would occur from the SCLA Alternative aircraft operations that would be accomplished at the Grant County Airport, the resultant total emissions for all aircraft operations at the airport, and compares the emissions (*i.e.*, net change and total emissions) with the baseline AQCR emissions inventory.

Table 4.4-5 Emissions from Southern California Logistics Airport Alternative Aircraft Operations at the Grant County Airport and Comparison to Conformity Significance and *de minimis* Thresholds

	Criteria Air Pollutant (tpy)					
	CO	**VOC**	**NO_x**	**SO_x**	**PM_{10}**	**$PM_{2.5}$**
Emissions Inventory	394,296	69,253	56,620	9,077	**134,609**	38,987
Alternative Action Emissions from Recurring Aircraft Operations at Grant County Airport (net change in emissions)	4	1	51	2	**11**	11
Emissions from Baseline Aircraft Operations	543	213	652	36	**125**	124
Total Emissions from Recurring Aircraft Operations	547	214	703	38	**136**	135
Net Change in Emissions from Recurring Aircraft Operations as Percent of Inventory	0.001%	0.001%	0.090%	0.022%	**0.008%**	0.028%
Total Emissions from Recurring Aircraft Operations as Percent of Inventory	0.139%	0.310%	1.242%	0.068%	**0.101%**	0.346%
de minimis Threshold	NA	NA	NA	NA	**100**	100
Net Change in Emissions from Recurring Aircraft Operations Exceed *de minimis* Threshold?	NA	NA	NA	NA	**No**	No
Net Change in Emissions from Recurring Aircraft Operations Regionally Significant? (>10%)	No	No	No	No	**No**	No

NA – Not Applicable. De minimis does not apply since AQCR is in attainment for pollutant.
***Bold** indicates pollutants of concern.*

The total direct and indirect PM_{10} and $PM_{2.5}$ emissions from the SCLA Alternative aircraft operations at Grant County Airport (*i.e.*, the net change in emissions, which would be 11 tpy for both PM_{10} and $PM_{2.5}$) would be below the *de minimis* thresholds established for these pollutants within AQCR 62. As summarized in Table 4.4-5, the net change in emissions for the pollutant of concern (*i.e.*, PM_{10}), would not be regionally significant. A federal action would be considered regionally significant when the total emissions from the proposed action equal or exceed 10 percent of the nonattainment or maintenance area's emissions inventory for any criteria pollutant. However, the AQCR is in attainment for CO, NO_X, VOC, and SO_x. As summarized in Table 4.4-5, the emissions for these four pollutants would be less than 10 percent of the particular emissions inventory.

Based on the information in Table 4.4-5 and the preceding paragraph, it is determined that the SCLA Alternative at the Grant County Airport positively conforms to the SIP for the AQCR. The Air Force is supporting an activity demonstrated by USEPA standards not to cause or contribute to new violations of any NAAQS in the affected area, nor increase the frequency or severity of an existing violation. Implementation of the federal action would not delay timely attainment of pollutant standards in any area of the AQCR, and the action would be in compliance or would be consistent with all relevant requirements and milestones contained in the applicable SIP. This conclusion of a positive General Conformity determination for the SCLA Alternative at the Grant County Airport fulfills the Air Force's obligation and responsibility under 40 CFR Part 93, Subpart B. A Conformity Determination would not be required.

4.4.4.3 Travis AFB

Table 4.4-6 shows the emissions that would occur from the SCLA Alternative aircraft operations that would be accomplished at Travis AFB, the resultant total emissions for all aircraft operations at the Base, and compares the alternative action emissions (*i.e.* net change and total emissions) with the baseline AQCR emissions inventory.

Table 4.4-6 Emissions from Southern California Logistics Airport Alternative Aircraft Operations at Travis AFB and Comparison to Conformity Significance and *de minimis* Thresholds

	Criteria Air Pollutant (tpy)					
	CO	**VOC**	**NO_x**	**SO_x**	**PM_{10}**	**$PM_{2.5}$**
Emissions Inventory	**807,636**	**141,109**	**199,619**	19,710	77,928	33,033
Alternative Action Emissions from Recurring Aircraft Operations at Travis AFB (net change in emissions)	**4**	**1**	**51**	2	11	11
Emissions from Aircraft Operations Associated with the C-17 Basing Action	384	175	1,378	59	104	103
Total Emissions from Recurring Aircraft Operations	**388**	**176**	**1,429**	61	115	114
Net Change in Emissions from Recurring Aircraft Operations as Percent of Inventory	**0.000%**	**0.000%**	**0.026%**	0.010%	0.139%	0.033%
Total Emissions from Recurring Aircraft Operations as Percent of Inventory	**0.048%**	**0.125%**	**0.716%**	0.309%	0.148%	0.345%
de minimis Threshold	**100**	**100**	**100**	NA	NA	NA

Table 4.4-6 Emissions from Southern California Logistics Airport Alternative Aircraft Operations at Travis AFB and Comparison to Conformity Significance and *de minimis* Thresholds (*continued*)

	Criteria Air Pollutant (tpy)					
	CO	**VOC**	**NO_x**	**SO_x**	**PM_{10}**	**$PM_{2.5}$**
Net Change in Emissions from Recurring Aircraft Operations Exceed *de minimis* Threshold?	**No**	**No**	**No**	NA	NA	NA
Net Change in Emissions from Recurring Aircraft Operations Regionally Significant? (>10%)	**No**	**No**	**No**	NA	NA	NA

NA – Not Applicable
De minimis does not apply since AQCR is in attainment for pollutant.
***Bold** indicates pollutants of concern.*

The total direct and indirect CO, VOC, and NO_X emissions from the SCLA Alternative aircraft operations at Travis AFB (*i.e.*, the net change in emissions, which would be 2 tpy, 1 tpy, and 51 tpy, respectively for CO, VOC, and NO_X) would be below the *de minimis* thresholds established for these pollutants within AQCR 30. As summarized in Table 4.4-6, the net change in emissions for the pollutants of concern (*i.e.*, CO, VOC, and NO_X), would not be regionally significant. A federal action would be considered regionally significant when the total emissions from the proposed action equal or exceed 10 percent of the nonattainment or maintenance area's emissions inventory for any criteria pollutant. However, the AQCR is in attainment for SO_X, PM_{10} and $PM_{2.5}$. As summarized in Table 4.4-6, the emissions for these three pollutants would be less than 10 percent of the particular emissions inventory.

Table 4.4-7 lists the emissions from recurring aircraft operations for the completed C-17 basing action at Travis AFB (*i.e.*, basing action emissions plus LZ operations emissions) and compares the combined emissions with the USEPA-approved 2006 SIP budget emissions for Travis AFB.

Table 4.4-7 Comparison of Recurring Aircraft Emissions for Southern California Logistics Airport Alternative at Travis AFB to Travis AFB SIP Budget Emissions Levels (tpy)

	CO	**VOC**	**NO_X**
Emissions from Basing Action Recurring Aircraft Operations	384	175	1,378
Emissions from Recurring LZ Operations	4	1	51
Combined Recurring Aircraft Operations Emissions	388	176	1,429
SIP Budget Emissions	4,216	2,383	1,734
Comparison of Combined Recurring Aircraft Emissions to SIP Budget	-3,828	-2,207	-305

Note: Negative numbers indicate a surplus when compared to SIP budget

Emissions from recurring aircraft operations for the completed C-17 basing action at Travis AFB (*i.e.*, basing action emissions plus LZ operations emissions) would not exceed the USEPA-approved SIP budget for the Base (see Table 4.4-7). It is determined that the SCLA Alternative at Travis AFB positively conforms to the SIP for the Base. The Air Force is supporting an activity demonstrated by USEPA standards not to cause or contribute to new violations of any NAAQS in the affected area, nor increase the frequency or severity of an existing violation. Implementation of the federal action would not delay timely attainment of pollutant standards in any area of the AQCR, and the action would be in compliance or would be consistent with all relevant requirements and milestones contained in the applicable SIP. This conclusion of a positive General Conformity determination for the SCLA Alternative at Travis AFB fulfills the Air Force's obligation and responsibility under 40 CFR Part 93, Subpart B. A Conformity Determination would not be required.

4.4.4.4 Mitigation

There would be no significant impacts. No mitigation is recommended.

4.4.5 Cultural Resources

4.4.5.1 Southern California Logistics Airport

The SCLA Alternative at the SCLA includes excavation adjacent to the existing runway for installation of an IR lighting system (areas previously disturbed by construction activities) and does not involve any demolition or alteration of buildings or structures. No NRHP-eligible resources have been identified at the SCLA; therefore, the SCLA Alternative would have no effect on cultural resources.

4.4.5.2 Grant County Airport

The SCLA Alternative at Grant County Airport would not involve any new construction or ground-disturbing activities, or demolition or alteration of buildings or structures. No NRHP-eligible resources have been identified at the Grant County Airport; therefore, the SCLA Alternative at Grant County Airport would have no effect on cultural resources.

4.4.5.3 Travis AFB

The SCLA Alternative at Travis AFB includes excavation adjacent to the existing runway for installation of an IR lighting system (areas previously disturbed by construction activities) and does not involve any demolition or alteration of buildings or structures. No NRHP-eligible resources have been identified in the ROI at Travis AFB. One Native American group responded to the notification letter and the response indicated the group is not aware of any "historic properties" on the project site. The SCLA Alternative at Travis AFB would have no effect on cultural resources.

4.4.5.4 Mitigation

There would be no significant impacts. No mitigation is recommended.

4.5 UNAVOIDABLE ADVERSE IMPACTS

Unavoidable adverse impacts would result from implementation of the proposed action.

Air Quality

The emission of air pollutants from aircraft operation is an unavoidable condition, but would not be considered significant.

Noise

Noise resulting from anticipated aircraft operations is an unavoidable condition. However, the effects of aircraft noise would not be considered significant.

Safety

The potential for aircraft mishaps is an unavoidable condition associated with the Proposed Action. Although the potential for this unavoidable situation would increase when compared to the baseline condition, the increase would not be considered significant.

4.6 RELATIONSHIP BETWEEN SHORT-TERM USES AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

The proposed action would not result in intensification of land use within the areas surrounding the respective airfield. Implementation of the Proposed Action, the Travis AFB Alternative, the SCLA Alternative, or the No Action Alternative would not represent a loss of open space. Therefore, it is not anticipated that the Proposed Action, alternative actions, or No Action Alternative would result in any cumulative land use or aesthetic impacts. Long-term productivity of land within the area around the respective airfield would not be affected by implementation of the Proposed Action.

Irreversible and Irretrievable Commitment of Resources

The irreversible environmental changes that would result from implementation of the Proposed Action, the Travis AFB Alternative, the SCLA Alternative, or the No Action Alternative involve consumption of energy resources. The use of this resource is considered to be permanent.

Energy Resources

Jet fuel would be used for aircraft operations and would be irretrievably lost. Jet fuel consumption would not place a significant demand on their supply systems or within the region.

Land

Implementation of neither the Proposed Action, alternative actions, nor the No Action Alternative would result in construction of new facilities. Thus, no land would be lost to other uses.

Human Resources

No additional personnel would be added to a result of the Proposed Action, alternative actions, or No Action Alternative. Thus, there would be no impact to human resources.

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CHAPTER 6
PERSONS AND AGENCIES CONSULTED

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CHAPTER 7
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USDA 1992. United States Department of Agriculture, Potential Impacts of Aircraft Overflight of National Forest System Wilderness, July 1992.

USEPA 1974. United States Environmental Protection Agency, Office of Noise Abatement and Control, *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety*, EPA-550/9-74-004, Washington, D.C.

USEPA 2007. United States Environmental Protection Agency, http://epa.gov/air/criteria.html#2 accessed on May 16, 2007.

USFWS 2007.

Von Gierke 1990. H.R. Von Gierke, "The Noise-Induced Hearing Loss Problem," NIH Consensus Development Conference on Noise and Hearing Loss, Washington D.C., 22-24 January 1990.

APPENDIX A
INTERAGENCY AND INTERGOVERNMENTAL CORRESPONDENCE FOR ENVIRONMENTAL PLANNING

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INTERAGENCY AND INTERGOVERNMENTAL COORDINATION FOR ENVIRONMENTAL PLANNING

Air Force Instruction 32-7060, *Interagency and Intergovernmental Coordination for Environmental Planning*, provides the procedures to comply with applicable federal, state, and local directives for Interagency and Intergovernmental Coordination for Environmental Planning (IICEP). The AFI implements the following:

- Air Force Planning Document 32-70, *Environmental Quality*;
- Department of Defense (DoD) Directive 4165.61, *Intergovernmental coordination of DoD Federal Development Programs and Activities*;
- Executive Order 12372, *Intergovernmental Review of Federal Programs*;
- Title IV of the *Intergovernmental Coordination Act (ICA) of 1968*; and
- Section 204 of the *Demonstration Cities and Metropolitan Development Act of 1966*.

Section 401(b) of the ICA states that, "All viewpoints-national, regional, state, and local…will be fully considered…when planning Federal or federally assisted development programs and projects."

To comply with the IICEP, the Air Force notified numerous agencies in California of the intent to prepare an EA for the establishment and operation of an interim western United States landing zone. A California Form A was included with the notification letter sent to the California Clearinghouse. The letter to the agencies, the distribution list, and the California Form A are contained in this appendix.

The Air Force sent the first draft final environmental assessment (EA) to federal, state, and local agencies for review. The letter transmitting the first draft EA to the agencies are included in this appendix. A California Form A was included with the first draft EA sent to the California Clearinghouse. One comment was received and is included in Appendix B.

The second draft EA was sent to federal, state, and local agencies for review. The letter transmitting the second draft EA to the agencies are included in this appendix. A California Form A was included with the second draft EA sent to the California Clearinghouse. No substantive comments were received from agencies after review of the second draft EA.

The final EA with signed FONSI was was sent to federal, state, and local agencies. The letter transmitting the final EA to the agencies are included in this appendix. A California Form A was included with the final EA sent to the California Clearinghouse.

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DEPARTMENT OF THE AIR FORCE
HEADQUARTERS AIR MOBILITY COMMAND

MAR 22 2007

MEMORANDUM FOR SEE DISTRIBUTION

FROM: HQ AMC/A7P
507 Symington Drive
Scott AFB IL 62225-5022

SUBJECT: Environmental Assessment for an Interim Western United States C-17 Landing Zone

The U.S. Air Force is preparing an Environmental Assessment (EA) for an Interim Western United States C-17 Landing Zone. A permanent C-17 landing zone (LZ) is proposed for completion by Fiscal Year 2010 at Travis Air Force Base, California, to serve as the primary southwest training airfield. This proposed LZ allows C-17 aircraft predominantly from California to conduct required tactical day and night training. In the interim, there is a need to establish temporary LZ capabilities for C-17 aircraft located in the Southwest.

Under the Proposed Action, C-17 aircraft from Travis AFB and March ARB would use an existing LZ at the Grant County International Airport (Moses Lake, Washington) for interim training. Under the Travis AFB Alternative, a 3,500 foot-long, 90-foot-wide LZ would be established by painting the LZ threshold and side boundaries in the middle of Runway 21Left/03Right. Under the Alternative involving the Southern California Logistics Airport (SCLA), formerly George AFB, the LZ would be established by painting the LZ threshold and side boundaries about 3,000 feet from the northern end of Runway 17/35. SCLA is located near Victorville, California. The Description of Proposed Action and Alternatives (DOPAA) at Attachment 1 illustrates the proposed LZ locations for the Proposed Action and the two alternative actions. Under the No Action Alternative, an interim C-17 LZ would not be established in the western United States.

In accordance with Executive Order 12372, *Intergovernmental Review of Federal Programs*, we request your participation and solicit comments on the attached DOPAA for this EA. Comments may include any issues related to this EA. Please provide any comments no later than 30 days from the date of this letter directly to Mr. Doug Allbright, HQ AMC/A7PC, 507 Symington Drive, Scott AFB, Illinois 62225-5022.

Additionally, we solicit your assistance to identify any resources within your agency's purview that may be impacted. We also request any point-of-contact information, relevant documentation available that would assist in preparing the EA, or identification of any other major projects that you are aware of that may contribute to cumulative effects and would facilitate cumulative impact analysis for this EA.

If members of your staff have any questions on this EA, our point of contact is Mr. Doug Allbright, (618) 229-0846. For local issues, our POC at Travis AFB is Mr. Rudy Pontemayor, (707) 424-7517.

Efren V. M. Garcia

EFREN V. M. GARCIA, Colonel, USAF
Chief, Plans & Programs Division
Directorate of Installations & Mission Support

Attachments:
1. DOPAA for an Interim Western United States C-17 Landing Zone
2. Distribution List

Distribution List

Federal Aviation Administration Planning and Programming San Francisco Airports Division Attn: Mr. Joe Rodriguez 831 Mitten Road, Room 210 Burlingame, CA 94010	
Department of the Interior Office of Environmental Policy and Compliance Attn: Ms. Patricia Port 1111 Jackson Street, Suite 520 Oakland, CA 94607	U.S. Department of Interior Fish and Wildlife Service Federal Building 2800 Cottage, Room W-2605 Sacramento, CA 95825-1846
U.S. Environmental Protection Agency Region 9 75 Hawthorne Street San Francisco, CA 94105	AFF AWP-910 1500 Aviation Blvd. Hawthorne, CA 90250
Governor's Office of Planning and Research State Clearinghouse P.O. Box 3044 Sacramento, CA 95814	State Historic Preservation Officer Department of Parks and Recreation P.O. Box 942896 Sacramento, CA 94296-0001
Air Force Western Regional Environmental Office Attn: Mr. Gary Munsterman AFCEE/CCR-S 333 Market Street., Suite 600 San Francisco, CA 94105	California Department of Fish and Game P.O. Box 944209 Sacramento, CA 94299-2090
California Air Resources Board Air Quality and Transportation Division 1001 "I" Street P.O. Box 2815 Sacramento, CA 95812	Bay Area AQMD 939 Ellis Street San Francisco, CA 94109-7799
Yolo-Solano AQMD 1947 Galileo Ct., Ste 103 Davis, CA 95616-4882	Department of Resource Management Solano County 675 Texas Street, Suite 5500 Fairfield, CA 94533
Antelope Valley AQMD 43301 Division Street, Suite 206 Lancaster CA 93535	Kern County APCD 2700 "M" Street, Suite 302 Bakersfield, California 93301-2370

Mojave Desert AQMD 14306 Park Ave. Victorville, CA 92392	Imperial County APCD 150 South 9th Street El Centro, CA 92243-2801
South Coast AQMD 21865 Copley Dr. Diamond Bar, CA 91765	Federal Aviation Administration Northwest Mountain Region 1601 Lind Ave. SW Renton, WA 98055
State of Washington Environmental Review Washington Department of Ecology P.O. Box 47600 Olympia, WA 98504	Washington Department of Natural Resources P.O. Box 190 Colville, WA 99114
Executive Manager Port of Moses Lake 7810 Andrews St. N. E., Suite 200 Moses Lake, WA 98837	Washington State Department of Ecology Eastern Regional Office – Air Quality N. 4601 Monroe St, Suite 100 Spokane, WA 99205-1295

Form A

Notice of Completion & Environmental Document Transmittal

Mail to: State Clearinghouse, P. O. Box 3044, Sacramento, CA 95812-3044 (916) 445-0613
For Hand Delivery/Street Address: 1400 Tenth Street, Sacramento, CA 95814

SCH # _____

Project Title: ENVIRONMENTAL ASSESSMENT INTERIM WESTERN UNITED STATES C-17 LANDING ZONE
Lead Agency: U.S. AIR FORCE / 60TH AIR MOBILITY WING Contact Person: MR. RUDY PONTEMAYOR
Mailing Address: 60 CES/CEV 411 AIRMEN DR Phone: 707 / 424-7517
City: TRAVIS AFB, CA Zip: 94535 County:

Project Location:
County: SOLANO / SAN BERNARDINO COUNTIES City/Nearest Community: _____ Total Acres: _____
Cross Streets: _____ Zip Code: _____
Assessor's Parcel No. _____ Section: _____ Twp. _____ Range: _____ Base: _____
Within 2 Miles: State Hwy #: _____ Waterways: _____
Airports: _____ Railways: _____ Schools: _____

Document Type:

CEQA: ☐ NOP ☐ Draft EIR NEPA: ☐ NOI Other: ☐ Joint Document
☐ Early Cons ☐ Supplement to EIR (Note prior SCH # below) ☐ EA ☐ Final Document
☐ Neg Dec ☐ Subsequent EIR (Note prior SCH # below) ☐ Draft EIS ☐ Other _____
☐ Mit Neg Dec ☐ Other _____ ☐ FONSI

Local Action Type:

☐ General Plan Update ☐ Specific Plan ☐ Rezone ☐ Annexation
☐ General Plan Amendment ☐ Master Plan ☐ Prezone ☐ Redevelopment
☐ General Plan Element ☐ Planned Unit Development ☐ Use Permit ☐ Coastal Permit
☐ Community Plan ☐ Site Plan ☐ Land Division (Subdivision, etc.) ☒ Other NEPA DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

Development Type:

☐ Residential: Units_____ Acres_____
☐ Office: Sq.ft._____ Acres_____ Employees_____
☐ Commercial: Sq.ft._____ Acres_____ Employees_____
☐ Industrial: Sq.ft._____ Acres_____ Employees_____
☐ Educational _____
☐ Recreational _____

☐ Water Facilities: Type_____ MGD_____
☐ Transportation: Type_____
☐ Mining: Mineral _____
☐ Power: Type_____ MW _____
☐ Waste Treatment: Type_____ MGD_____
☐ Hazardous Waste: Type_____
☒ Other: N/A

Project Issues Discussed in Document:

☐ Aesthetic/Visual ☐ Fiscal ☐ Recreation/Parks ☐ Vegetation
☐ Agricultural Land ☐ Flood Plain/Flooding ☐ Schools/Universities ☐ Water Quality
☐ Air Quality ☐ Forest Land/Fire Hazard ☐ Septic Systems ☐ Water Supply/Groundwater
☐ Archeological/Historical ☐ Geologic/Seismic ☐ Sewer Capacity ☐ Wetland/Riparian
☐ Biological Resources ☐ Minerals ☐ Soil Erosion/Compaction/Grading ☐ Growth Inducement
☐ Coastal Zone ☐ Noise ☐ Solid Waste ☐ Land Use
☐ Drainage/Absorption ☐ Population/Housing Balance ☐ Toxic/Hazardous ☐ Cumulative Effects
☐ Economic/Jobs ☐ Public Services/Facilities ☐ Traffic/Circulation ☒ Other N/A THIS DOCUMENT

Present Land Use/Zoning/General Plan Designation:

N/A

Project Description: *(please use a separate page if necessary)*

ESTABLISH AND OPERATE A C-17 LANDING ZONE ON AN INTERIM BASIS (SEE LETTER TRANSMITTING THIS FORM FOR PROJECT DESCRIPTION)

Note: The State Clearinghouse will assign identification numbers for all new projects. If a SCH number already exists for a project (e.g. Notice of Preparation or previous draft document) please fill in.

September 2005

Reviewing Agencies Checklist

continued

Lead Agencies may recommend State Clearinghouse distribution by marking agencies below with and "X". If you have already sent your document to the agency please denote that with an "S".

_____Air Resources Board
_____Boating & Waterways, Department of
_____California Highway Patrol
_____Caltrans District #_____
_____Caltrans Division of Aeronautics
_____Caltrans Planning
_____Coachella Valley Mountains Conservancy
_____Coastal Commission
_____Colorado River Board Commission
_____Conservation, Department of
_____Corrections, Department of
_____Delta Protection Commission
_____Education, Department of
_____Office of Public School Construction
_____Energy Commission
_____Fish & Game Region # _____
_____Food & Agriculture, Department of
_____Forestry & Fire Protection
_____General Services, Department of
_____Health Services, Department of
_____Housing & Community Development
_____Integrated Waste Management Board
_____Native American Heritage Commission
_____Office of Emergency Services
_____Office of Historic Preservation
_____Parks & Recreation
_____Pesticide Regulation, Department of
_____Public Utilities Commission
_____Reclamation Board
_____Regional WQCB #_____
_____Resources Agency
_____S.F. Bay Conservation & Development Commission
_____San Gabriel & Lower Los Angeles Rivers & Mountains Conservancy
_____San Joaquin River Conservancy
_____Santa Monica Mountains Conservancy
_____State Lands Commission
_____SWRCB: Clean Water Grants
_____SWRCB: Water Quality
_____SWRCB: Water Rights
_____Tahoe Regional Planning Agency
_____Toxic Substances Control, Department of
_____Water Resources, Department of

_____Other _____
_____Other _____

Local Public Review Period (to be filled in by lead agency)

Starting Date N/A FOR THIS DOCUMENT Ending Date _____

Lead Agency (Complete if applicable):

Consulting Firm: PARSONS
Address: 8000 CENTRE PARK DR
City/State/Zip: AUSTIN, TX 78754
Contact: JOHN WALLIN
Phone: (512) 719-6010

Applicant: 60 CES/CEV
Address: 411 AIRMEN DR
City/State/Zip: TRAVIS AFB, CA 94535
Phone: (707) 424-7517

Signature of Lead Agency Representative JM Wall Date 1/3/07

Authority cited: Section 21083 and 21087, Public Resources Code. Reference: Section 21161, Public Resources Code.

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
4601 N Monroe Street • Spokane, Washington 99205-1295 • (509)329-3400

April 18, 2007

Mr. Doug Allbright
HQ AMC/A7PC
507 Symington Drive
Scott AFB, Illinois 62225-5022

Dear Mr. Allbright:

Thank you for the opportunity to comment on the NEPA Environmental Assessment regarding the Interim Western United States C-17 Landing Zone proposal (Proponent – United States Air Force). The Department of Ecology has reviewed the documents and has the following comments:

Water Quality Program

Any operation which would generate a waste discharge or have the potential to impact the quality of state waters, must receive specific prior authorization from the Department of Ecology as provided under Chapter 90.48 RCW, Chapter 173-216 WAC, Chapter 173-220 WAC, Chapter 173-200 WAC and Chapter 173-201A WAC.

State Environmental Policy Act (SEPA)

Ecology's comments are based upon the information provided with the SEPA checklist. As such, they do not constitute an exhaustive list of the various authorizations that must be obtained or legal requirements that must be fulfilled in order to carry out the proposed action.

Sincerely,

Terri Costello
SEPA Coordinator
Department of Ecology
Eastern Regional Office
4601 N. Monroe Street
Spokane, WA 99205-1295
Phone: (509) 329-3550
Email: temi461@ecy.wa.gov

2007-2335

Form A

Notice of Completion & Environmental Document Transmittal

SCH # _____

Mail to: State Clearinghouse, P. O. Box 3044, Sacramento, CA 95812-3044 (916) 445-0613
For Hand Delivery/Street Address: 1400 Tenth Street, Sacramento, CA 95814

Project Title: ENVIRONMENTAL ASSESSMENT, INTERIM WESTERN UNITED STATES C-17 LANDING ZONE
Lead Agency: U.S. AIR FORCE / HEADQUARTERS AIR MOBILITY COMMAND Contact Person: MR. DOUG ALLBRIGHT
Mailing Address: HQ AMC/A7CP, 507 SYMINGTON DRIVE Phone: 618-229-0846
City: SCOTT AFB, IL Zip: 62225 County: _____

Project Location:
County: SOLANO / SAN BERNARDINO City/Nearest Community: _____ Total Acres: _____
Cross Streets: _____ Zip Code: _____
Assessor's Parcel No. _____ Section: _____ Twp. _____ Range: _____ Base: _____
Within 2 Miles: State Hwy #: _____ Waterways: _____
Airports: _____ Railways: _____ Schools: _____

Document Type:

CEQA: ☐ NOP ☐ Draft EIR NEPA: ☐ NOI Other: ☐ Joint Document
☐ Early Cons ☐ Supplement to EIR (Note prior SCH # below) ☐ EA ☐ Final Document
☐ Neg Dec ☐ Subsequent EIR (Note prior SCH # below) ☒ Draft EIS ☐ Other _____
☐ Mit Neg Dec ☐ Other _____ ☒ FONSI DRAFT

Local Action Type:

☐ General Plan Update ☐ Specific Plan ☐ Rezone ☐ Annexation
☐ General Plan Amendment ☐ Master Plan ☐ Prezone ☐ Redevelopment
☐ General Plan Element ☐ Planned Unit Development ☐ Use Permit ☐ Coastal Permit
☐ Community Plan ☐ Site Plan ☐ Land Division (Subdivision, etc.) ☒ Other ESTABLISH LANDING ZONE

Development Type:

☐ Residential: Units_____ Acres_____
☐ Office: Sq.ft._____ Acres_____ Employees_____
☐ Commercial: Sq.ft._____ Acres_____ Employees_____
☐ Industrial: Sq.ft._____ Acres_____ Employees_____
☐ Educational _____
☐ Recreational _____

☐ Water Facilities: Type_____ MGD_____
☐ Transportation: Type_____
☐ Mining: Mineral _____
☐ Power: Type_____ MW _____
☐ Waste Treatment: Type_____ MGD_____
☐ Hazardous Waste: Type_____
☒ Other: ESTABLISH LANDING ZONE

Project Issues Discussed in Document:

☐ Aesthetic/Visual ☐ Fiscal ☐ Recreation/Parks ☐ Vegetation
☐ Agricultural Land ☐ Flood Plain/Flooding ☐ Schools/Universities ☐ Water Quality
☒ Air Quality ☐ Forest Land/Fire Hazard ☐ Septic Systems ☐ Water Supply/Groundwater
☐ Archeological/Historical ☐ Geologic/Seismic ☐ Sewer Capacity ☐ Wetland/Riparian
☐ Biological Resources ☐ Minerals ☐ Soil Erosion/Compaction/Grading ☐ Growth Inducement
☐ Coastal Zone ☒ Noise ☐ Solid Waste ☐ Land Use
☐ Drainage/Absorption ☐ Population/Housing Balance ☐ Toxic/Hazardous ☐ Cumulative Effects
☐ Economic/Jobs ☐ Public Services/Facilities ☐ Traffic/Circulation ☒ Other AIRSPACE, LAND USE

Present Land Use/Zoning/General Plan Designation:

Project Description: *(please use a separate page if necessary)*

ESTABLISH A C-17 LANDING ZONE AND CONDUCT AIRCRAFT OPERATIONS ON AN INTERIM BASIS

Note: The State Clearinghouse will assign identification numbers for all new projects. If a SCH number already exists for a project (e.g. Notice of Preparation or previous draft document) please fill in.

Reviewing Agencies Checklist

continued

Lead Agencies may recommend State Clearinghouse distribution by marking agencies below with and "X". If you have already sent your document to the agency please denote that with an "S".

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_____California Highway Patrol
_____Caltrans District #_____
_____Caltrans Division of Aeronautics
_____Caltrans Planning
_____Coachella Valley Mountains Conservancy
_____Coastal Commission
_____Colorado River Board Commission
_____Conservation, Department of
_____Corrections, Department of
_____Delta Protection Commission
_____Education, Department of
_____Office of Public School Construction
_____Energy Commission
_____Fish & Game Region # _____
_____Food & Agriculture, Department of
_____Forestry & Fire Protection
_____General Services, Department of
_____Health Services, Department of
_____Housing & Community Development
_____Integrated Waste Management Board
_____Native American Heritage Commission
_____Office of Emergency Services
_____Office of Historic Preservation
_____Parks & Recreation
_____Pesticide Regulation, Department of
_____Public Utilities Commission
_____Reclamation Board
_____Regional WQCB #_____
_____Resources Agency
_____S.F. Bay Conservation & Development Commission
_____San Gabriel & Lower Los Angeles Rivers & Mountains Conservancy
_____San Joaquin River Conservancy
_____Santa Monica Mountains Conservancy
_____State Lands Commission
_____SWRCB: Clean Water Grants
_____SWRCB: Water Quality
_____SWRCB: Water Rights
_____Tahoe Regional Planning Agency
_____Toxic Substances Control, Department of
_____Water Resources, Department of

_____Other _____
_____Other _____

Local Public Review Period (to be filled in by lead agency)

Starting Date 1 JUN 2007 Ending Date 30 JUN 2007

Lead Agency (Complete if applicable):

Consulting Firm: PARSONS
Address: 8000 CENTRE PARK DR
City/State/Zip: AUSTIN, TX 78754
Contact: JOHN WALLIN
Phone: (512) 719-6010

Applicant: HQ AMC/A7CP
Address: 507 SYMINGTON DR.
City/State/Zip: SCOTT AFB, IL 62225
Phone: (618) 229-0846

Signature of Lead Agency Representative JM Wall Date 5/17/07

Authority cited: Section 21083 and 21087, Public Resources Code. Reference: Section 21161, Public Resources Code.

PARSONS

8000 Centre Park Drive, Suite 200• Austin, Texas 78754• (512) 719-6000 • Fax: (512) 719-6099 • www.parsons.com

June 25, 2007

Re: Draft Final Environmental Assessment
Interim Western United States C-17 Landing Zone

To Whom It May Concern:

The United States Air Force, with Parsons assistance, has prepared a Draft Environmental Assessment (EA) for the proposed establishment of a C-17 Landing Zone (LZ) for aircraft operations on an interim basis in the western United States. The proposed LZ allows C-17 aircraft predominantly from California (Travis Air Force Base (AFB) and March Air Reserve Base) to conduct required day and night training until a permanent LZ can be constructed. The Draft EA describes and analyzes alternative plans to implement the Proposed Action, the Travis AFB Alternative, the Southern California Logistics Airport Alternative, and the No Action Alternative.

According to the National Environmental Policy Act, the Air Force must assess the potential environmental impacts of the proposed and alternative actions. In accordance with Executive Order 12372, *Intergovernmental Review of Federal Programs*, the Air Force is requesting input from other federal, state, and local agencies on the Draft Final EA, which is attached along with a Draft Final Finding of No Significant Impact. Please identify any resources within your agency's purview that may be potentially impacted.

Please review the Final Draft EA and provide any comments or concerns you may have by July 29, 2007 to Mr. Doug Allbright, (618) 229-0846. Our point of contact for local issues at Travis AFB is Mr. Rudy Pontemayor, (707) 424-7517.

Sincerely,

PARSONS

Maria Hage for

John Wallin

Attachments: 1. Distribution List
2. Draft EA

Distribution List

Federal Aviation Administration Planning and Programming San Francisco Airports Division Attn: Mr. Joe Rodriguez 831 Mitten Road, Room 210 Burlingame, CA 94010	Federal Aviation Administration Northwest Mountain Region 1601 Lind Ave. SW Renton, WA 98055
Department of the Interior Office of Environmental Policy and Compliance Attn: Ms. Patricia Port 1111 Jackson Street, Suite 520 Oakland, CA 94607	U.S. Department of Interior Fish and Wildlife Service Federal Building 2800 Cottage, Room W-2605 Sacramento, CA 95825-1846
U.S. Environmental Protection Agency Region 9 75 Hawthorne Street San Francisco, CA 94105	California Department of Fish and Game P.O. Box 944209 Sacramento, CA 94299-2090
Governor's Office of Planning and Research State Clearinghouse P.O. Box 3044 Sacramento, CA 95814	State Historic Preservation Officer Department of Parks and Recreation P.O. Box 942896 Sacramento, CA 94296-0001
Air Force Western Regional Environmental Office Attn: Mr. Gary Munsterman AFCEE/CCR-S 333 Market Street., Suite 600 San Francisco, CA 94105	Department of Resource Management Solano County 675 Texas Street, Suite 5500 Fairfield, CA 94533
California Air Resources Board Air Quality and Transportation Division 1001 "I" Street P.O. Box 2815 Sacramento, CA 95812	Bay Area AQMD 939 Ellis Street San Francisco, CA 94109-7799
Yolo-Solano AQMD 1947 Galileo Ct., Ste 103 Davis, CA 95616-4882	Kern County APCD 2700 "M" Street, Suite 302 Bakersfield, California 93301-2370
Antelope Valley AQMD 43301 Division Street, Suite 206 Lancaster CA 93535	South Coast AQMD 21865 Copley Dr. Diamond Bar, CA 91765

Mojave Desert AQMD 14306 Park Ave. Victorville, CA 92392	Imperial County APCD 150 South 9th Street El Centro, CA 92243-2801
Washington Department of Natural Resources P.O. Box 190 Colville, WA 99114	Washington State Department of Ecology Eastern Regional Office – Air Quality N. 4601 Monroe St, Suite 100 Spokane, WA 99205-1295
State of Washington Environmental Review Washington Department of Ecology P.O. Box 47600 Olympia, WA 98504	Southern California Logistics Airport Mr. Peter Soderquist, Airport Director 18374 Phantom Victorville, CA 92394
Executive Manager Port of Moses Lake 7810 Andrews St. N. E., Suite 200 Moses Lake, WA 98837	Mr. Frank J. Andrews 1107 Kentucky Street Fairfield, CA 94533
Mr. Richard C. Jacobs Howard Rice Nemerovski Canady Falk & Rabkin Three Embarcadero Center Seventh Floor San Francisco, CA 94111-4024	

PARSONS

8000 Centre Park Drive, Suite 200• Austin, Texas 78754• (512) 719-6000 • Fax: (512) 719-6099 • www.parsons.com

November 27, 2007

Re: Second Draft Final Environmental Assessment
Interim Western United States C-17 Landing Zone

To Whom It May Concern:

The United States Air Force, with Parsons assistance, has prepared a second Draft Environmental Assessment (EA) for the proposed establishment of a C-17 Landing Zone (LZ) for aircraft operations on an interim basis in the western United States. The proposed LZ allows C-17 aircraft from Travis Air Force Base (AFB), California to conduct required day and night training until a permanent LZ can be constructed. The Draft EA describes and analyzes alternative plans to implement the Proposed Action, the Travis AFB Alternative, the Southern California Logistics Airport Alternative, and the No Action Alternative.

The Air Force prepared the second draft EA because of changes to the Proposed Action and Alternatives that occurred after the first draft EA was made available to governmental agencies and citizens and interested parties. Differences include: a reduction in the number of C-17 LZ operations; the addition of an additional airfield to the Proposed Action; and operations at additional airfields under the alternative actions.

Please review the enclosed Draft EA and provide any comments or concerns you may have by January 5, 2008 to Mr. Doug Allbright, (618) 229-0846. Our point of contact for local issues at Travis AFB is Mr. Rudy Pontemayor, (707) 424-7517.

Sincerely,

PARSONS

John Wallin

Attachments: 1. Distribution List
2. Draft EA

Distribution List

Federal Aviation Administration Planning and Programming San Francisco Airports Division Attn: Mr. Joe Rodriguez 831 Mitten Road, Room 210 Burlingame, CA 94010	Federal Aviation Administration Northwest Mountain Region 1601 Lind Ave. SW Renton, WA 98055
Department of the Interior Office of Environmental Policy and Compliance Attn: Ms. Patricia Port 1111 Jackson Street, Suite 520 Oakland, CA 94607	U.S. Department of Interior Fish and Wildlife Service Federal Building 2800 Cottage, Room W-2605 Sacramento, CA 95825-1846
U.S. Environmental Protection Agency Region 9 75 Hawthorne Street San Francisco, CA 94105	California Department of Fish and Game P.O. Box 944209 Sacramento, CA 94299-2090
Governor's Office of Planning and Research State Clearinghouse P.O. Box 3044 Sacramento, CA 95814	State Historic Preservation Officer Department of Parks and Recreation P.O. Box 942896 Sacramento, CA 94296-0001
Air Force Western Regional Environmental Office Attn: Mr. Gary Munsterman AFCEE/CCR-S 333 Market Street., Suite 600 San Francisco, CA 94105	Department of Resource Management Solano County 675 Texas Street, Suite 5500 Fairfield, CA 94533
California Air Resources Board Air Quality and Transportation Division 1001 "I" Street P.O. Box 2815 Sacramento, CA 95812	Bay Area AQMD 939 Ellis Street San Francisco, CA 94109-7799
Yolo-Solano AQMD 1947 Galileo Ct., Ste 103 Davis, CA 95616-4882	Kern County APCD 2700 "M" Street, Suite 302 Bakersfield, California 93301-2370
Antelope Valley AQMD 43301 Division Street, Suite 206 Lancaster CA 93535	South Coast AQMD 21865 Copley Dr. Diamond Bar, CA 91765

Mojave Desert AQMD 14306 Park Ave. Victorville, CA 92392	Imperial County APCD 150 South 9th Street El Centro, CA 92243-2801
Washington Department of Natural Resources P.O. Box 190 Colville, WA 99114	Washington State Department of Ecology Eastern Regional Office – Air Quality N. 4601 Monroe St, Suite 100 Spokane, WA 99205-1295
State of Washington Environmental Review Washington Department of Ecology P.O. Box 47600 Olympia, WA 98504	Southern California Logistics Airport Mr. Peter Soderquist, Airport Director 18374 Phantom Victorville, CA 92394
Executive Manager Port of Moses Lake 7810 Andrews St. N. E., Suite 200 Moses Lake, WA 98837	Mr. Frank J. Andrews 1107 Kentucky Street Fairfield, CA 94533
Mr. Richard C. Jacobs Howard Rice Nemerovski Canady Falk & Rabkin Three Embarcadero Center Seventh Floor San Francisco, CA 94111-4024	Mike Marchand, Chairman Colville Business Council P.O. Box 150 Nespelem, WA 99155-0150
Richard L. Sherwood, Chairman Spokane Business Council P.O. Box 100 Wellpinit, WA 99040-0100	Lavina Washines, Chairwoman Yakama Tribal Council P.O. Box 151 Toppenish, Wa 98948-0151
Linda Otero, Director AhaMaKav Cultural Society Fort Mojave Indian Tribe P.O. Box 5990 Mohave Valley, AZ 86440	Elaine Patterson, Chairperson Cortina Band of Indians P.O. Box 1630 Williams, CA 95987
Charles Wood, Chairperson Chemehuevi Reservation P.O. Box 1976 Chemehuevi Valley, CA 92363	Britt W. Wilson, Cultural Resources-Project Manager Morongo Band of Mission Indians 49750 Seminole Drive Cabazon, CA 92230
Marshall McKay, Chairperson Rumsey Rancheria P.O. Box 18 Brooks, CA 95606	John Valenzuela, Chairperson San Fernando Band of Mission Indians P.O. Box 221838 Newhall, CA 91322
Henry Duro, Chairperson San Manuel Band of Mission Indians 26569 Community Center Drive Highland, CA 92346	Ann Brierty, Environmental Department San Manuel Band of Mission Indians 101 Pure Water Lane Highland, CA 92346
Goldie Walker Serrano Band of Indians 6588 Valeria Drive Highland, CA 92346	Wintun Environmental Protection Agency P.O. Box 1839 Williams, CA 95987
Charlie Cooke Tehachapi Indian Tribe 32835 Santiago Road Acton, CA 993510	Kesner Flores P.O. Box 1047 Wheatland, CA 95692
Ron Wermuth P.O. Box 168 Kernville, CA 93238	Muzzy Farms 1107 Kentucky Street Fairfield, CA 94533
Weintraub genshlea chediak Attn: Mr. Michael A. Kvarme 400 Capitol Mall, Eleventh Floor Sacramento, CA 95814	

Form A

Notice of Completion & Environmental Document Transmittal

Mail to: State Clearinghouse, P. O. Box 3044, Sacramento, CA 95812-3044 (916) 445-0613
For Hand Delivery/Street Address: 1400 Tenth Street, Sacramento, CA 95814

SCH # _____

Project Title: ENVIRONMENTAL ASSESSMENT, INTERIM WESTERN UNITED STATES C-17 LANDING ZONE

Lead Agency: U.S. AIR FORCE HEADQUARTERS AIR MOBILITY COMMAND Contact Person: MR. DOUG ALDRIGHT

Mailing Address: HQ AMC/A7CP, 507 SYMINGTON DRIVE Phone: 618-229-0846

City: SCOTT AFB, IL Zip: 62225 County: _____

Project Location:

County: SOLANO / SAN BERNARDINO City/Nearest Community: _____ Total Acres: _____

Cross Streets: _____ Zip Code: _____

Assessor's Parcel No. _____ Section: _____ Twp. _____ Range: _____ Base: _____

Within 2 Miles: State Hwy #: _____ Waterways: _____

Airports: _____ Railways: _____ Schools: _____

Document Type:

CEQA: ☐ NOP ☐ Draft EIR NEPA: ☐ NOI Other: ☐ Joint Document
☐ Early Cons ☐ Supplement to EIR (Note prior SCH # below) ☒ EA (DRAFT) ☐ Final Document
☐ Neg Dec ☐ Subsequent EIR (Note prior SCH # below) ☐ Draft EIS ☐ Other _____
☐ Mit Neg Dec ☐ Other _____ ☐ FONSI (DRAFT)

Local Action Type:

☐ General Plan Update ☐ Specific Plan ☐ Rezone ☐ Annexation
☐ General Plan Amendment ☐ Master Plan ☐ Prezone ☐ Redevelopment
☐ General Plan Element ☐ Planned Unit Development ☐ Use Permit ☐ Coastal Permit
☐ Community Plan ☐ Site Plan ☐ Land Division (Subdivision, etc.) ☒ Other ESTABLISH LANDING ZONE

Development Type:

☐ Residential: Units_____ Acres_____
☐ Office: Sq.ft._____ Acres_____ Employees_____
☐ Commercial: Sq.ft._____ Acres_____ Employees_____
☐ Industrial: Sq.ft._____ Acres_____ Employees_____
☐ Educational _____
☐ Recreational _____

☐ Water Facilities: Type_____ MGD_____
☐ Transportation: Type_____
☐ Mining: Mineral _____
☐ Power: Type_____ MW _____
☐ Waste Treatment: Type_____ MGD_____
☐ Hazardous Waste: Type_____
☒ Other: ESTABLISH LANDING ZONE

Project Issues Discussed in Document:

☐ Aesthetic/Visual ☐ Fiscal ☐ Recreation/Parks ☐ Vegetation
☐ Agricultural Land ☐ Flood Plain/Flooding ☐ Schools/Universities ☐ Water Quality
☒ Air Quality ☐ Forest Land/Fire Hazard ☐ Septic Systems ☐ Water Supply/Groundwater
☐ Archeological/Historical ☐ Geologic/Seismic ☐ Sewer Capacity ☐ Wetland/Riparian
☐ Biological Resources ☐ Minerals ☐ Soil Erosion/Compaction/Grading ☐ Growth Inducement
☐ Coastal Zone ☒ Noise ☐ Solid Waste ☒ Land Use
☐ Drainage/Absorption ☐ Population/Housing Balance ☐ Toxic/Hazardous ☐ Cumulative Effects
☐ Economic/Jobs ☐ Public Services/Facilities ☐ Traffic/Circulation ☒ Other AIRSPACE/AIRFIELD OPERATIONS

Present Land Use/Zoning/General Plan Designation:

Project Description: *(please use a separate page if necessary)*

ESTABLISH A C-17 LANDING ZONE AND CONDUCT AIRCRAFT OPERATIONS ON AN INTERIM BASIS

Note: The State Clearinghouse will assign identification numbers for all new projects. If a SCH number already exists for a project (e.g. Notice of Preparation or previous draft document) please fill in.

September 2005

Reviewing Agencies Checklist

continued

Lead Agencies may recommend State Clearinghouse distribution by marking agencies below with and "X". If you have already sent your document to the agency please denote that with an "S".

_____Air Resources Board
_____Boating & Waterways, Department of
_____California Highway Patrol
_____Caltrans District #_____
_____Caltrans Division of Aeronautics
_____Caltrans Planning
_____Coachella Valley Mountains Conservancy
_____Coastal Commission
_____Colorado River Board Commission
_____Conservation, Department of
_____Corrections, Department of
_____Delta Protection Commission
_____Education, Department of
_____Office of Public School Construction
_____Energy Commission
_____Fish & Game Region # _____
_____Food & Agriculture, Department of
_____Forestry & Fire Protection
_____General Services, Department of
_____Health Services, Department of
_____Housing & Community Development
_____Integrated Waste Management Board
_____Native American Heritage Commission
_____Office of Emergency Services
_____Office of Historic Preservation
_____Parks & Recreation
_____Pesticide Regulation, Department of
_____Public Utilities Commission
_____Reclamation Board
_____Regional WQCB #_____
_____Resources Agency
_____S.F. Bay Conservation & Development Commission
_____San Gabriel & Lower Los Angeles Rivers & Mountains Conservancy
_____San Joaquin River Conservancy
_____Santa Monica Mountains Conservancy
_____State Lands Commission
_____SWRCB: Clean Water Grants
_____SWRCB: Water Quality
_____SWRCB: Water Rights
_____Tahoe Regional Planning Agency
_____Toxic Substances Control, Department of
_____Water Resources, Department of

_____Other _____
_____Other _____

Local Public Review Period (to be filled in by lead agency)

Starting Date 5 Dec 07 Ending Date 5 JAN 08

Lead Agency (Complete if applicable):

Consulting Firm: PARSONS
Address: 8000 CENTRE PARK DR
City/State/Zip: AUSTIN, TX 78754
Contact: JOHN WALLIN
Phone: (512) 719-6010

Applicant: HQ AMC / A7CP
Address: 507 SYMINGTON DRIVE
City/State/Zip: SCOTT AFB, IL 62225
Phone: (618) 229-0846

Signature of Lead Agency Representative JM Wall Date 11/26/07

Authority cited: Section 21083 and 21087, Public Resources Code. Reference: Section 21161, Public Resources Code.

Wallin, John

From: Wallin, John
Sent: Thursday, January 03, 2008 8:37 AM
To: 'Pontemayor, Rodolfo M CIV 60 CES/CECP'; Allbright, Doug Civ AMC/A7PI
Subject: RE: Interim Western US C-17 Landing Zone EA

Doug and Rudy,

Please see below my thoughts on Mr. Moses' comments. Please let me know if you have questions. None of my responses require revision of the document.

-----Original Message-----
From: Pontemayor, Rodolfo M CIV 60 CES/CECP [mailto:Rodolfo.Pontemayor@travis.af.mil]
Sent: Monday, December 17, 2007 11:27 AM
To: Allbright, Doug Civ AMC/A7PI; Wallin, John
Subject: FW: Interim Western US C-17 Landing Zone EA

Doug/John,

FYI. Received this email comments from the FAA (Seattle) today.

Rudy M. Pontemayor, P.E.
Environmental Planning
60 CES/CECP
411 Airmen Dr., Travis AFB, CA 94535-2001
VOICE: DSN 837-7517 COM (707) 424-7517
FAX: DSN 837-0894 COM (707) 424-0894

-----Original Message-----
From: augustin.moses@faa.gov [mailto:augustin.moses@faa.gov]
Sent: Monday, December 17, 2007 9:13 AM
To: Pontemayor, Rodolfo M CIV 60 CES/CECP
Subject: Interim Western US C-17 Landing Zone EA

Dear Mr. Pontemayor:

Per our talk today, the following are our comments for environmental adequacy.

1. Page 2-4, Table 2.2-1 - Total Avg. Daily Operations in Grant County Airport baseline shows 67.67. These could create additional noise impacts.
Response: Table 2.2-1 lists the baseline condition operations at Grant County and the comment refers to the C-17 operations that are included in the baseline. The noise condition for all the aircraft operations (to include the 67.67 C-17 operations identified in the comment) for the the baseline is presented in Figure 3.6. The additional C-17 operations associated with the Proposed Action (17.83 C-17 operations) and each Alternative Action (10.81 and 9.73 C-17 operations, respectively) are added to the baseline operations for all aircraft (to include the 67.67 baseline C-17 operations) in the noise files prepared and used to produce the noise contours for the Proposed Action and both Alternative Actions. Thus, the 67.67 operations identified in the comment, and the noise these operations contribute to the overall noise condition, are included the Proposed Action and each Alternative Action. The noise from the Proposed Action and Alternatives is compared with the baseline to determine the amount of increase/additional noise from the Proposed Action and each Alternative Action.

2. The increase effect may be seen on bird strike in Page 4-1 Section 4.1.1 Para two, and Section 4.2.1, Page 4-6 Para 2; and safety in Sections 4.2.1, the risk may be high. In Page 4-2 Para describing the noise the impact may be high rather than impact may be low.

Response: The potential for bird strike discussion in Section 4.1.1 relates to the No Action Alternative, which is the same as the baseline because there would be no change in operations associated with the No Action Alternative. Thus, the bird strike potential for the No Action Alternative would remain at baseline levels. Section 4.2.1 relates to the Proposed Action. The summary for BASH reflects the potential for an 8 percent increase in bird-aircraft strikes. The text also presents information onf the cyclical patterns of bird populations and the low percent of bird-aircraft strikes that result in serious mishap. Although there could be an 8 percent increase in strikes, the amount of increase, coupled with the low percentage of strikes that result in serious mishap, does not equate to a high risk. The same rationale applies to the conclusion that the risk is low that an aircraft involved in an accident would strike a person or structure on the ground. The comment on Page 4-2 regarding noise refers to the No Action Alternative, which is the same as the baseline condition. The analysis for the No Action Alternative on Page 4-2 reflects no change in the persons exposed to DNL 65 dBA and greater noise and other noise issues (e.g., noise induced hearing loss). Thus, the impact from continuation of the baseline would not cause high impact.

3. Address separately for Travis AFB and Southern California Logistics Airport in Sections 4.1.2 and 4.1.3 in Pages 4-3 and 4-4, espectively as the operations are not same as for the Grant County. These need to be addressed in the EA.
Response: The text for Travis AFB and SCLA in these sections (which are the No Action Alternative/baseline analysis) can, for most resources, be identical/similar to that for Grant County Airport because there would be no change in the number of operations at either airport under the No Action Alternative.

Call me back for any other clarifications.

Thanks,

Augustin Moses, P.E.
Environmental Protection Specialist
AJO2-W2
Western Service Area
Phone: (425) 917-6723
Fax: (425) 917-6746

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
4601 N Monroe Street • Spokane, Washington 99205-1295 • (509)329-3400

January 7, 2008

Mr. Doug Allbright
HQ AMC/A7PC
507 Symington Drive
Scott AFB, Illinois 62225-5022

Dear Mr. Allbright:

Thank you for the opportunity to comment on the second draft NEPA Environmental Assessment regarding the Interim Western United States C-17 Landing Zone proposal (Proponent – United States Air Force). The Department of Ecology has reviewed the documents and has the following comments:

Water Quality Program

Proper erosion and sediment control practices must be used on the construction site and adjacent areas to prevent upland sediments from entering surface water. Local stormwater ordinances will provide specific requirements. Also refer to the Stormwater Management Manual for Eastern Washington (http://www.ecy.wa.gov/programs/wq/stormwater/eastern_manual/manual.html). All ground disturbed by construction activities must be stabilized. When appropriate, use native vegetation typical of the site.

All new dry wells and other injection wells must be registered with the Underground Injection Control program (UIC) at Department of Ecology prior to use and the discharge from the well(s) must comply with the ground water quality requirement (nonendangerment standard) at the top of the ground water table. Contact the UIC staff at UIC Program, Department of Ecology, P.O. Box 47600, Olympia, WA 98504-7600, (360) 407-6143 or go to http://www.ecy.wa.gov/programs/wq/grndwtr/uic/registration/reg_info.html for registration forms and further information.

Stormwater runoff may contain increased levels of grease, oils, sediment, and other debris. Stormwater Best Management Practices (BMPs) should be installed and maintained so that any discharge will be appropriately treated to remove these substances.

Dumpsters and refuse collection containers shall be durable, corrosion resistant, nonabsorbent, nonleaking, and have close fitting covers. If spillage or leakage does occur, the waste shall be picked up immediately and returned to the container and the area properly cleaned.

Routine inspections and maintenance of all erosion and sediment control Best Management Practices (BMPs) are recommended both during and after development of the site.

State Environmental Policy Act (SEPA)

Ecology's comments are based upon the information provided with the SEPA checklist. As such, they do not constitute an exhaustive list of the various authorizations that must be obtained or legal requirements that must be fulfilled in order to carry out the proposed action.

Sincerely,

Terri Costello
SEPA Coordinator
WA State Department of Ecology
Eastern Regional Office
4601 N. Monroe Street
Spokane, WA 99205-1295
Phone: (509) 329-3550
Email: temi461@ecy.wa.gov

E07-797

STATE OF CALIFORNIA

GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH

STATE CLEARINGHOUSE AND PLANNING UNIT

ARNOLD SCHWARZENEGGER
GOVERNOR

CYNTHIA BRYANT
DIRECTOR

January 7, 2008

Doug Allbright
U.S. Air Force
Headquarters Air Mobility Command
HQAMC/A7CP, 507 Symington Drive
Scott AFB, IL 62225

Subject: Interim Western United States C-17 Landing Zone
SCH#: 2007034006

Dear Doug Allbright:

The State Clearinghouse submitted the above named Environmental Assessment to selected state agencies for review. The review period closed on January 3, 2008, and no state agencies submitted comments by that date. This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act.

Please call the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process. If you have a question about the above-named project, please refer to the ten-digit State Clearinghouse number when contacting this office.

Sincerely,

Terry Roberts

Terry Roberts
Director, State Clearinghouse

1400 10th Street P.O. Box 3044 Sacramento, California 95812-3044
(916) 445-0613 FAX (916) 323-3018 www.opr.ca.gov

Document Details Report
State Clearinghouse Data Base

SCH# 2007034006
Project Title Interim Western United States C-17 Landing Zone
Lead Agency U.S. Air Force

Type EA Environmental Assessment
Description Establish and operate a C-17 landing zone and conduct aircraft operations on an interim basis.

Lead Agency Contact

Name Doug Allbright
Agency U.S. Air Force
Phone (618) 229-0846 **Fax**
email
Address Headquarters Air Mobility Command
HQAMC/A7CP, 507 Symington Drive
City Scott AFB **State** IL **Zip** 62225

Project Location

County Solano, San Bernardino
City
Region
Cross Streets
Parcel No.
Township **Range** **Section** **Base**

Proximity to:

Highways
Airports
Railways
Waterways
Schools
Land Use

Project Issues Air Quality; Noise; Landuse; Other Issues

Reviewing Agencies Resources Agency; Department of Fish and Game, Region 3; Department of Fish and Game, Region 6; Department of Parks and Recreation; Department of Water Resources; Office of Emergency Services; Caltrans, Division of Aeronautics; Caltrans, District 4; Caltrans, District 8; Air Resources Board, Airport Projects; State Water Resources Control Board, Division of Water Quality; Department of Toxic Substances Control; Native American Heritage Commission

Date Received 12/04/2007 **Start of Review** 12/05/2007 **End of Review** 01/03/2008

Note: Blanks in data fields result from insufficient information provided by lead agency.

PORT OF MOSES LAKE
GRANT COUNTY INTERNATIONAL AIRPORT
Foreign Trade Zone #203

7810 Andrews St. N.E., Suite 200
Moses Lake, WA, USA 98837-3204
PHONE 509-762-5363
FAX 509-762-2713
E-MAIL info@portofmoseslake.com
WEB SITE www.portofmoseslake.com

January 2, 2008

Mr. Doug Allbright
PARSONS
8000 Centre Park Drive, Suite 200
Austin, TX 78754

Ref: Draft Environmental Assessment – Interim Western United States C-17 Landing Zone

Dear Mr. Allbright:

Thank you for the opportunity to review the second draft of the final environmental assessment, dated November of 2007. The Port of Moses Lake has reviewed the document, more specifically where it pertains to C-17 operations at the Grant County International Airport.

I did want to point out one item in particular, located on page 3-1, line 37. In this line it indicates that Runway 09/27 is 4,500 feet long and 90 feet wide. The Runway is actually only 3,500 feet long.

On Page 3-31, there is a table listing the facilities at the Port. I'm not sure if you were only listing specific buildings, or all buildings, so I am providing the following for that list.

Bldg 425 – Should be changed from "unknown" to "Storage"

Bldg 1202 – Terminal – change year built to 1998 and delete renovated.

Bldg 2101 – Change Maintenance to read ARFF Department

Bldg 2102 – Should be deleted in its entirety

Bldg 5103 – Should be deleted in its entirety

Bldg 5104 – Should be deleted in its entirety

Bldg 5820 – This building was renovated in 1999

Also please add the following Buildings:

Bldg	Original Function	Year Built	Renovated
2110	Administration	1997	
2112	Storage	1942-1964	
2204	Shop	1942-1964	
2205	Maintenance	1999	
2206	Equipment Storage	2002	
2301	Warehouse/Administration	1942-1964	
2501	Warehouse/Shop	1996	
2602	Warehouse/Shop	1942-1964	Yes 1981
2701	Warehouse/Shop	1942-1964	
2801	Warehouse/Shop	1942-1964	
2902	Warehouse/Shop	1942-1964	
3303	Warehouse/Administration	2000	
Tracon	FAA Maintenance	1998	

With these additions and deletions, the number of buildings on line 27 of page 3-30 will need to be amended.

Thank you again for the opportunity to review the document. Should you have any questions or require additional clarification, please do not hesitate to contact me.

Sincerely,

PORT OF MOSES LAKE

Craig L. Baldwin, C.M.
Executive Manager

CLB

F:\MS Word\Bonnie\C17 Draft Environmental Assessment.doc

PARSONS

8000 Centre Park Drive, Suite 200• Austin, Texas 78754• (512) 719-6000 • Fax: (512) 719-6099 • www.parsons.com

May 14, 2008

Re: Final Environmental Assessment
Interim Western United States C-17 Landing Zone

To Whom It May Concern:

The United States Air Force, with Parsons assistance, has prepared a Final Environmental Assessment (EA) for the establishment of a C-17 Landing Zone (LZ) for aircraft operations on an interim basis in the western United States. The LZ allows C-17 aircraft from Travis Air Force Base (AFB), California to conduct required day and night training until a permanent LZ can be constructed. The EA describes and analyzes alternative plans to implement the Proposed Action, the Travis AFB Alternative, the Southern California Logistics Airport Alternative, and the No Action Alternative.

Mr. Doug Allbright, Headquarters Air Mobility Command (618) 229-0846, is the primary point of contact for preparation of the EA. The point of contact for local issues at Travis AFB is Mr. Rudy Pontemayor, (707) 424-7517.

Sincerely,

PARSONS

John Wallin

Attachments: 1. Distribution List
2. Final Interim Western United States C-17 LZ EA

Distribution List
Final Environmental Assessment
Interim Western United States C-17 Landing Zone

Federal Aviation Administration Planning and Programming San Francisco Airports Division Attn: Mr. Joe Rodriguez 831 Mitten Road, Room 210 Burlingame, CA 94010	Federal Aviation Administration Northwest Mountain Region 1601 Lind Ave. SW Renton, WA 98055
Department of the Interior Office of Environmental Policy and Compliance Attn: Ms. Patricia Port 1111 Jackson Street, Suite 520 Oakland, CA 94607	U.S. Department of Interior Fish and Wildlife Service Federal Building 2800 Cottage, Room W-2605 Sacramento, CA 95825-1846
U.S. Environmental Protection Agency Region 9 75 Hawthorne Street San Francisco, CA 94105	California Department of Fish and Game P.O. Box 944209 Sacramento, CA 94299-2090
Governor's Office of Planning and Research State Clearinghouse P.O. Box 3044 Sacramento, CA 95814	State Historic Preservation Officer Department of Parks and Recreation P.O. Box 942896 Sacramento, CA 94296-0001
Air Force Western Regional Environmental Office Attn: Mr. Gary Munsterman AFCEE/CCR-S 333 Market Street., Suite 600 San Francisco, CA 94105	Department of Resource Management Solano County 675 Texas Street, Suite 5500 Fairfield, CA 94533
California Air Resources Board Air Quality and Transportation Division 1001 "I" Street P.O. Box 2815 Sacramento, CA 95812	Bay Area AQMD 939 Ellis Street San Francisco, CA 94109-7799
Yolo-Solano AQMD 1947 Galileo Ct., Ste 103 Davis, CA 95616-4882	Kern County APCD 2700 "M" Street, Suite 302 Bakersfield, California 93301-2370
Antelope Valley AQMD 43301 Division Street, Suite 206 Lancaster CA 93535	South Coast AQMD 21865 Copley Dr. Diamond Bar, CA 91765

Mojave Desert AQMD 14306 Park Ave. Victorville, CA 92392	Imperial County APCD 150 South 9th Street El Centro, CA 92243-2801
Washington Department of Natural Resources P.O. Box 190 Colville, WA 99114	Washington State Department of Ecology Eastern Regional Office – Air Quality N. 4601 Monroe St, Suite 100 Spokane, WA 99205-1295
State of Washington Environmental Review Washington Department of Ecology P.O. Box 47600 Olympia, WA 98504	Southern California Logistics Airport Mr. Peter Soderquist, Airport Director 18374 Phantom Victorville, CA 92394
Executive Manager Port of Moses Lake 7810 Andrews St. N. E., Suite 200 Moses Lake, WA 98837	Mr. Frank J. Andrews 1107 Kentucky Street Fairfield, CA 94533
Mr. Richard C. Jacobs Howard Rice Nemerovski Canady Falk & Rabkin Three Embarcadero Center Seventh Floor San Francisco, CA 94111-4024	Mike Marchand, Chairman Colville Business Council P.O. Box 150 Nespelem, WA 99155-0150
Richard L. Sherwood, Chairman Spokane Business Council P.O. Box 100 Wellpinit, WA 99040-0100	Lavina Washines, Chairwoman Yakama Tribal Council P.O. Box 151 Toppenish, Wa 98948-0151
Linda Otero, Director AhaMaKav Cultural Society Fort Mojave Indian Tribe P.O. Box 5990 Mohave Valley, AZ 86440	Elaine Patterson, Chairperson Cortina Band of Indians P.O. Box 1630 Williams, CA 95987
Charles Wood, Chairperson Chemehuevi Reservation P.O. Box 1976 Chemehuevi Valley, CA 92363	Britt W. Wilson, Cultural Resources-Project Manager Morongo Band of Mission Indians 49750 Seminole Drive Cabazon, CA 92230
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Goldie Walker Serrano Band of Indians 6588 Valeria Drive Highland, CA 92346	Wintun Environmental Protection Agency P.O. Box 1839 Williams, CA 95987
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Ron Wermuth P.O. Box 168 Kernville, CA 93238	Muzzy Farms 1107 Kentucky Street Fairfield, CA 94533
Weintraub genshlea chediak Attn: Mr. Michael A. Kvarme 400 Capitol Mall, Eleventh Floor Sacramento, CA 95814	

Form A

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Mail to: State Clearinghouse, P. O. Box 3044, Sacramento, CA 95812-3044 (916) 445-0613
For Hand Delivery/Street Address: 1400 Tenth Street, Sacramento, CA 95814

SCH # _____

Project Title: ENVIRONMENTAL ASSESSMENT, INTERIM WESTERN UNITED STATES C-17 LANDING ZONE
Lead Agency: U.S. AIR FORCE / HEADQUARTERS AIR MOBILITY COMMAND Contact Person: MR. DOUG ALLBRIGHT
Mailing Address: HQ AMC / A7PI, 507 SYMINGTON DR Phone: 618. 229. 0846
City: SCOTT AFB, IL Zip: 62225 County: _____

Project Location:
County: SOLANO, SAN BERNARDINO City/Nearest Community: _____ Total Acres: _____
Cross Streets: _____ Zip Code: _____
Assessor's Parcel No. _____ Section: _____ Twp. _____ Range: _____ Base: _____
Within 2 Miles: State Hwy #: _____ Waterways: _____
Airports: _____ Railways: _____ Schools: _____

Document Type:
CEQA: ☐ NOP ☐ Draft EIR NEPA: ☐ NOI Other: ☐ Joint Document
☐ Early Cons ☐ Supplement to EIR (Note prior SCH # below) ☐ EA ☐ Final Document
☐ Neg Dec ☐ Subsequent EIR (Note prior SCH # below) ☐ Draft EIS ☒ Other FINAL EA
☐ Mit Neg Dec ☐ Other _____ ☒ FONSI

Local Action Type:
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☐ General Plan Amendment ☐ Master Plan ☐ Prezone ☐ Redevelopment
☐ General Plan Element ☐ Planned Unit Development ☐ Use Permit ☐ Coastal Permit
☐ Community Plan ☐ Site Plan ☐ Land Division (Subdivision, etc.) ☒ Other ESTABLISH LANDING ZONE

Development Type:
☐ Residential: Units _____ Acres _____
☐ Office: Sq.ft. _____ Acres _____ Employees _____
☐ Commercial: Sq.ft. _____ Acres _____ Employees _____
☐ Industrial: Sq.ft. _____ Acres _____ Employees _____
☐ Educational _____
☐ Recreational _____
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☐ Transportation: Type _____
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☐ Archeological/Historical ☐ Geologic/Seismic ☐ Sewer Capacity ☐ Wetland/Riparian
☐ Biological Resources ☐ Minerals ☐ Soil Erosion/Compaction/Grading ☐ Growth Inducement
☐ Coastal Zone ☒ Noise ☐ Solid Waste ☐ Land Use
☐ Drainage/Absorption ☐ Population/Housing Balance ☐ Toxic/Hazardous ☐ Cumulative Effects
☐ Economic/Jobs ☐ Public Services/Facilities ☐ Traffic/Circulation ☒ Other LAND USE, AIRSPACE

Present Land Use/Zoning/General Plan Designation:

Project Description: *(please use a separate page if necessary)*
ESTABLISH A C-17 LANDING ZONE AND CONDUCT AIRCRAFT OPERATIONS ON AN INTERIM BASIS

Note: The State Clearinghouse will assign identification numbers for all new projects. If a SCH number already exists for a project (e.g. Notice of Preparation or previous draft document) please fill in.

September 2005

Reviewing Agencies Checklist

continued

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_____Boating & Waterways, Department of
_____California Highway Patrol
_____Caltrans District #_____
_____Caltrans Division of Aeronautics
_____Caltrans Planning
_____Coachella Valley Mountains Conservancy
_____Coastal Commission
_____Colorado River Board Commission
_____Conservation, Department of
_____Corrections, Department of
_____Delta Protection Commission
_____Education, Department of
_____Office of Public School Construction
_____Energy Commission
_____Fish & Game Region # _____
_____Food & Agriculture, Department of
_____Forestry & Fire Protection
_____General Services, Department of
_____Health Services, Department of
_____Housing & Community Development
_____Integrated Waste Management Board
_____Native American Heritage Commission
_____Office of Emergency Services
_____Office of Historic Preservation
_____Parks & Recreation
_____Pesticide Regulation, Department of
_____Public Utilities Commission
_____Reclamation Board
_____Regional WQCB #_____
_____Resources Agency
_____S.F. Bay Conservation & Development Commission
_____San Gabriel & Lower Los Angeles Rivers & Mountains Conservancy
_____San Joaquin River Conservancy
_____Santa Monica Mountains Conservancy
_____State Lands Commission
_____SWRCB: Clean Water Grants
_____SWRCB: Water Quality
_____SWRCB: Water Rights
_____Tahoe Regional Planning Agency
_____Toxic Substances Control, Department of
_____Water Resources, Department of

_____Other _____
_____Other _____

Local Public Review Period (to be filled in by lead agency)

NOT REQUIRED: DRAFT EA WAS DISTRIBUTED FOR 30-DAY REVIEW; 5 DEC 07 - 5 JAN 08

Starting Date _____ Ending Date _____

Lead Agency (Complete if applicable):

Consulting Firm: PARSONS
Address: 8000 CENTRE PARK DR
City/State/Zip: AUSTIN, TX 78754
Contact: JOHN WALLIN
Phone: (512) 417-9152

Applicant: HQ AMC/A7PI
Address: 507 SYMINGTON DR
City/State/Zip: SCOTT AFB, IL 62225
Phone: (618) 229-0846

Signature of Lead Agency Representative _____ Date _____

Authority cited: Section 21083 and 21087, Public Resources Code. Reference: Section 21161, Public Resources Code.

APPENDIX B
PUBLIC INVOLVEMENT

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PUBLIC INVOLVEMENT

The *Air Force Environmental Impact Analysis Process* (32 CFR 989), 15 Jul 99, and amended 28 Mar 01, states that the environmental assessment and Finding of No Significant Impact should be made available to agencies under the IICEP (see Appendix A) and the public for comment.

A notice announcing the 30-day public comment period and the availability of the first draft EA was published in newspapers. Additionally, a copy of the first draft EA was placed in libraries for public review. The names of the newspapers and the libraries are listed below. The notice of availability of the first draft EA was published in the respective papers on June 29, 2007. Copies of the notices are contained in this appendix.

Columbia Basin Herald (Moses Lake, Washington)
Daily Republic (Fairfield, California)
Tailwind (Travis AFB newspaper)
Victorville Daily Press (Victorville, California)

Moses Lake Library 418 E 5th Avenue Moses Lake, WA 98837-1797
Fairfield-Suisum Community Library 1150 Kentucky Street Fairfield, CA 94533
Victorville City Library 15011 Circle Dr. Victorville, CA 92395
Vacaville Public Library 1020 Ulatis Drive Vacaville, CA 95688
Adelanto Branch Library 11497 Bartlett Ave. Adelanto, CA 92301
Mitchell Memorial Library 510 Travis Boulevard Travis AFB, CA 64535

Comments from the public to the first draft EA are contained in this appendix. The Air Force sent letters to those individuals who provided comments on the first draft EA.

A notice announcing the 30-day public comment period and the availability of the second draft EA was published on December 5, 2007 in the same newspapers in which the notices for the first draft EA were published. Additionally, a copy of the second draft EA was distributed to the same libraries to which copies of the first draft EA were distributed. Copies of the second draft EA were sent to interested individuals (see Appendix A). No substantive comments were received from the public after review of the second draft EA.

Copies of the final EA were sent to interested individuals (see Appendix A).

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PARSONS

8000 Centre Park Drive, Suite 200• Austin, Texas 78754• (512) 719-6000 • Fax: (512) 719-6099 • www.parsons.com

May25, 2007

Reference Librarian - Adult Reference Desk
Vacaville Public Library
1020 Ulatis Drive
Vacaville, CA 95688

Subject: Draft Environmental Assessment
Interim Western United States C-17 Landing Zone

Dear Reference Librarian:

On behalf of the U.S. Air Force, Headquarters Air Mobility Command at Scott Air Force Base, Illinois, Parsons is pleased to provide you with this copy of the Draft Environmental Assessment for the proposed establishment and operation of a C-17 landing zone in the western United States. This document should be made available to the public upon request. This document is also available on line at http://public.travis.amc.af.mil/. Additional printed copies of this document are also available upon request from (618) 229-0846.

We request that your receipt of this document be confirmed. Please fill in and sign the bottom portion of this letter and fax it back to (512) 719-6099 attn: John Wallin. The confirmation can also be mailed to the above address, attn: John Wallin. You may also confirm via an email message to john.wallin@parsons.com.

Should you have any questions, please call the undersigned at (512) 719-6010. Thank you for your assistance.

Sincerely,
PARSONS

John Wallin

Attachment: Draft Final EA

CONFIRMATION OF RECEIPT:

_____ _____
Signature Date

_____ _____
Printed Name For Vacaville Public Library

PARSONS

8000 Centre Park Drive, Suite 200• Austin, Texas 78754• (512) 719-6000 • Fax: (512) 719-6099 • www.parsons.com

May 25, 2007

Reference Librarian - Adult Reference Desk
Fairfield-Suisun Community Library
1150 Kentucky Street
Fairfield, CA 94533

Subject: Draft Environmental Assessment
Interim Western United States C-17 Landing Zone

Dear Reference Librarian:

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Sincerely,

PARSONS

John Wallin

Attachment: Draft Final EA

CONFIRMATION OF RECEIPT:

_____ _____
Signature Date

_____ _____
Printed Name For Fairfield-Suisun Community Library

PARSONS

8000 Centre Park Drive, Suite 200• Austin, Texas 78754• (512) 719-6000 • Fax: (512) 719-6099 • www.parsons.com

May 25, 2007

Reference Librarian - Adult Reference Desk
Mitchell Memorial Library
510 Travis Boulevard
Travis AFB, CA 94535

Subject: Draft Environmental Assessment
Interim Western United States C-17 Landing Zone

Dear Reference Librarian:

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Should you have any questions, please call the undersigned at (512) 719-6010. Thank you for your assistance.

Sincerely,

PARSONS

John Wallin

Attachment: Draft Final EA

CONFIRMATION OF RECEIPT:

Signature _____ Date _____

Printed Name _____ For Mitchell Memorial Library

PARSONS

8000 Centre Park Drive, Suite 200• Austin, Texas 78754• (512) 719-6000 • Fax: (512) 719-6099 • www.parsons.com

May 25, 2007

Reference Librarian - Adult Reference Desk
Moses Lake Library
418 E 5th Avenue
Moses Lake, WA 98837-1797

Subject: Draft Environmental Assessment
Interim Western United States C-17 Landing Zone

Dear Reference Librarian:

On behalf of the U.S. Air Force, Headquarters Air Mobility Command at Scott Air Force Base, Illinois, Parsons is pleased to provide you with this copy of the Draft Environmental Assessment for the proposed establishment and operation of a C-17 landing zone in the western United States. This document should be made available to the public upon request. This document is also available on line at http://public.travis.amc.af.mil/. Additional printed copies of this document are also available upon request from (618) 229-0846.

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Should you have any questions, please call the undersigned at (512) 719-6010. Thank you for your assistance.

Sincerely,
PARSONS

John Wallin

Attachment: Draft Final EA

CONFIRMATION OF RECEIPT:

_____ _____
Signature Date

_____ _____
Printed Name For South Lake Tahoe Public Library

PARSONS

8000 Centre Park Drive, Suite 200• Austin, Texas 78754• (512) 719-6000 • Fax: (512) 719-6099 • www.parsons.com

May 25, 2007

Reference Librarian - Adult Reference Desk
Victorville City Library
15011 Circle Dr.
Victorville, CA 92395

Subject: Draft Environmental Assessment
Interim Western United States C-17 Landing Zone

Dear Reference Librarian:

On behalf of the U.S. Air Force, Headquarters Air Mobility Command at Scott Air Force Base, Illinois, Parsons is pleased to provide you with this copy of the Draft Environmental Assessment for the proposed establishment and operation of a C-17 landing zone in the western United States. This document should be made available to the public upon request. This document is also available on line at http://public.travis.amc.af.mil/. Additional printed copies of this document are also available upon request from (618) 229-0846.

We request that your receipt of this document be confirmed. Please fill in and sign the bottom portion of this letter and fax it back to (512) 719-6099 attn: John Wallin. The confirmation can also be mailed to the above address, attn: John Wallin. You may also confirm via an email message to john.wallin@parsons.com.

Should you have any questions, please call the undersigned at (512) 719-6010. Thank you for your assistance.

Sincerely,

PARSONS

John Wallin

Attachment: Draft Final EA

CONFIRMATION OF RECEIPT:

_____ _____
Signature Date

_____ _____
Printed Name For Shasta Lake Gateway Library

PARSONS

8000 Centre Park Drive, Suite 200• Austin, Texas 78754• (512) 719-6000 • Fax: (512) 719-6099 • www.parsons.com

May 25, 2007

Reference Librarian - Adult Reference Desk
Adelanto Branch Library
11497 Bartlett Ave
Adelanto, CA 92301

Subject: Draft Environmental Assessment
Interim Western United States C-17 Landing Zone

Dear Reference Librarian:

On behalf of the U.S. Air Force, Headquarters Air Mobility Command at Scott Air Force Base, Illinois, Parsons is pleased to provide you with this copy of the Draft Environmental Assessment for the proposed establishment and operation of a C-17 landing zone in the western United States. This document should be made available to the public upon request. This document is also available on line at http://public.travis.amc.af.mil/. Additional printed copies of this document are also available upon request from (618) 229-0846.

We request that your receipt of this document be confirmed. Please fill in and sign the bottom portion of this letter and fax it back to (512) 719-6099 attn: John Wallin. The confirmation can also be mailed to the above address, attn: John Wallin. You may also confirm via an email message to john.wallin@parsons.com.

Should you have any questions, please call the undersigned at (512) 719-6010. Thank you for your assistance.

Sincerely,

PARSONS

John Wallin

Attachment: Draft Final EA

CONFIRMATION OF RECEIPT:

_____ _____
Signature Date

_____ _____
Printed Name For Lodi City Public Library

PARSONS

8000 Centre Park Drive, Suite 200• Austin, Texas 78754• (512) 719-6000 • Fax: (512) 719-6099 • www.parsons.com

June 25, 2007

Re: Draft Final Environmental Assessment
Interim Western United States C-17 Landing Zone

To Whom It May Concern:

The United States Air Force, with Parsons assistance, has prepared a Draft Environmental Assessment (EA) for the proposed establishment of a C-17 Landing Zone (LZ) for aircraft operations on an interim basis in the western United States. The proposed LZ allows C-17 aircraft predominantly from California (Travis Air Force Base (AFB) and March Air Reserve Base) to conduct required day and night training until a permanent LZ can be constructed. The Draft EA describes and analyzes alternative plans to implement the Proposed Action, the Travis AFB Alternative, the Southern California Logistics Airport Alternative, and the No Action Alternative.

According to the National Environmental Policy Act, the Air Force must assess the potential environmental impacts of the proposed and alternative actions. In accordance with Executive Order 12372, *Intergovernmental Review of Federal Programs*, the Air Force is requesting input from other federal, state, and local agencies on the Draft Final EA, which is attached along with a Draft Final Finding of No Significant Impact. Please identify any resources within your agency's purview that may be potentially impacted.

Please review the Final Draft EA and provide any comments or concerns you may have by July 29, 2007 to Mr. Doug Allbright, (618) 229-0846. Our point of contact for local issues at Travis AFB is Mr. Rudy Pontemayor, (707) 424-7517.

Sincerely,

PARSONS

Maria Hage for

John Wallin

Attachments: 1. Distribution List
2. Draft EA

Distribution List

Federal Aviation Administration Planning and Programming San Francisco Airports Division Attn: Mr. Joe Rodriguez 831 Mitten Road, Room 210 Burlingame, CA 94010	Federal Aviation Administration Northwest Mountain Region 1601 Lind Ave. SW Renton, WA 98055
Department of the Interior Office of Environmental Policy and Compliance Attn: Ms. Patricia Port 1111 Jackson Street, Suite 520 Oakland, CA 94607	U.S. Department of Interior Fish and Wildlife Service Federal Building 2800 Cottage, Room W-2605 Sacramento, CA 95825-1846
U.S. Environmental Protection Agency Region 9 75 Hawthorne Street San Francisco, CA 94105	California Department of Fish and Game P.O. Box 944209 Sacramento, CA 94299-2090
Governor's Office of Planning and Research State Clearinghouse P.O. Box 3044 Sacramento, CA 95814	State Historic Preservation Officer Department of Parks and Recreation P.O. Box 942896 Sacramento, CA 94296-0001
Air Force Western Regional Environmental Office Attn: Mr. Gary Munsterman AFCEE/CCR-S 333 Market Street., Suite 600 San Francisco, CA 94105	Department of Resource Management Solano County 675 Texas Street, Suite 5500 Fairfield, CA 94533
California Air Resources Board Air Quality and Transportation Division 1001 "I" Street P.O. Box 2815 Sacramento, CA 95812	Bay Area AQMD 939 Ellis Street San Francisco, CA 94109-7799
Yolo-Solano AQMD 1947 Galileo Ct., Ste 103 Davis, CA 95616-4882	Kern County APCD 2700 "M" Street, Suite 302 Bakersfield, California 93301-2370
Antelope Valley AQMD 43301 Division Street, Suite 206 Lancaster CA 93535	South Coast AQMD 21865 Copley Dr. Diamond Bar, CA 91765

Mojave Desert AQMD 14306 Park Ave. Victorville, CA 92392	Imperial County APCD 150 South 9th Street El Centro, CA 92243-2801
Washington Department of Natural Resources P.O. Box 190 Colville, WA 99114	Washington State Department of Ecology Eastern Regional Office – Air Quality N. 4601 Monroe St, Suite 100 Spokane, WA 99205-1295
State of Washington Environmental Review Washington Department of Ecology P.O. Box 47600 Olympia, WA 98504	Southern California Logistics Airport Mr. Peter Soderquist, Airport Director 18374 Phantom Victorville, CA 92394
Executive Manager Port of Moses Lake 7810 Andrews St. N. E., Suite 200 Moses Lake, WA 98837	Mr. Frank J. Andrews 1107 Kentucky Street Fairfield, CA 94533
Mr. Richard C. Jacobs Howard Rice Nemerovski Canady Falk & Rabkin Three Embarcadero Center Seventh Floor San Francisco, CA 94111-4024	

NOTICE OF AVAILABILITY
DRAFT ENVIRONMENTAL ASSESSMENT AND
DRAFT FINDING OF NO SIGNIFICANT IMPACT
INTERIM WESTERN UNITED STATES C-17 LANDING ZONE

In support of the Air Force Airlift Mobility Transformation Plan to standardize airlift aircraft fleets, increase reliability and capability, and reduce operating and support costs, Headquarters Air Mobility Command (HQ AMC), Scott Air Force Base (AFB), Illinois proposes to establish a C-17 Landing Zone (LZ) for aircraft operations on an interim basis in the western United States. The proposed LZ allows C-17 aircraft predominantly from California (Travis AFB and March Air Reserve Base) to conduct required day and night training until a permanent LZ can be constructed. The Proposed Action would occur at Grant County International Airport, Moses Lake, Washington, and alternative action locations are Travis AFB and the Southern California Logistics Airport (SCLA).

As part of the Air Force Environmental Impact Analysis Process, the HQ AMC is preparing an Environmental Assessment (EA) for this action. The Draft EA describes and analyzes the Proposed Action, the Travis AFB Alternative, the SCLA Alternative, and the No Action Alternative. The Draft EA is available at the Moses Lake, Fairfield-Suisun, Vacaville, Victorville, and Adelanto public libraries, the Mitchell Memorial Library on Travis AFB, and at http://public.travis.amc.af.mil/enviro

Written comments may be mailed to:

Department of the Air Force
Attn: Mr. Doug Allbright
HQ AMC/A7CP
507 Symington Drive
Scott AFB, IL 62225-5022

All written comment letters must be postmarked by **July 30, 2007**. Comments may also be faxed to the attention of Mr. Allbright at (618) 256-8624. Faxed comments must be received by close of business on July 30, 2007. Emailed comments will not be accepted. Should you have any questions, please contact Mr. Allbright at (618) 229-0846 or Mr. Rudy Pontemayor at (707) 424-7517 for Travis AFB issues.

No. 1 citizen of the town."

Little more than a decade ago, a black person in Ireland risked being gawked at, so rare was the sight of visitors from different racial backgrounds. But Ireland has absorbed more than 30,000 asylum seekers – particularly from Africa's most populous nation, Nigeria – since the mid-1990s, a wave attracted by Ireland's booming economy and its relatively lax immigration rules.

These days, West African entrepreneurs run stretches of shops in urban Dublin and other Irish towns and cities, and social activists like Adebari are encouraging the newcomers to integrate into their communities.

"I got involved in the community and I volunteered. It gave me the opportunity to meet people firsthand and they got to know me," Adebari said. "We all have to make an effort to reach out to one another."

Adebari traveled to Ireland with his wife and two boys in 2000 and claimed asylum on the *basis of religious persecution*, citing bloody clashes between Christians and Muslims in his homeland. His application was rejected because of insufficient evidence he had personally suffered persecution.

NOTICE OF AVAILABILITY
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INTERIM WESTERN UNITED STATES C-17 LANDING ZONE

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01

Department of the Air Force
ATTN: Mr Doug Allbright
HQ AMC/A7CP
507 Symington Drive
Scott AFB, IL 62225-5022

July 2, 2007

Dear Mr. Allbright:

I live two miles ease of Grant County International Airport. I have had many problems with the military flights in and out of the airport. I live on a ridge that rises several hundred feet from the level of the airport. Your planes fly over my house so low they have broken the seals on three of my windows. My home is not a low end house! In this market it would sell for over $600,000. I have pictures of the low altitude these planes routinely fly at. I have met with the commisioners on more than one occasion with no positive result.

The original promise the commissioners made to the people of Grant County was, NO flights after 10:00 P.M. That promise has been broken and we no longer trust them to look out for the people of Grant County. All flights should maintain a safe minimum altitude at all times and should cease at 10:00 P.M. as promised! I do not look forward to increased traffic at the airport as neither the military nor the commissioners have any concern for the impact it has on the people of Grant County or Moses Lake. I have given some copies of the pictures to the Grant County commissioners as proof of the low altitude being used. One commissioner doubted my allegation as he had been told that the planes never flew that low. The pictures provide undisputable reference points.

I realize that my letter alone won't change the decision to come to Moses Lake. My hope is that you keep your planes off my house and stop your flights at the promised time of 10:00 P.M.

Respectfully,

Tim Johnson

Tim Johnson

02

BRUCE D. PINKERTON
ATTORNEY AT LAW
1426 E. Hunter Place
Suite A
Moses Lake, WA 98837-2400

Telephone
(509) 765-0688
FAX
(509) 766-9893

FAX TRANSMITTAL

DATE: July 26, 2007

TO: Mr. Doug Allbright

COMPANY: Department of the Air Force

FAX NUMBER: (618) 256-8624

FROM: Bruce D. Pinkerton

FAX NUMBER: (509) 766-9893

NUMBER OF PAGES, INCLUDING THIS SHEET: 3

RE: Grant County C-17 Landing Zone

Original _X_ will __ not follow by _X_ regular ____ express __ overnight mail

The information contained in this message is intended only for the addressee or addressee's authorized agent. The message may contain information that is privileged, confidential or otherwise exempt from disclosure. If the reader of this message is not the intended recipient or recipient's authorized agent, then you are notified that any dissemination, distribution or copying of this message is prohibited. If you have received this message in error, please notify the sender by telephone and return the original and any copies of the message by mail to the sender at the address stated.

IF YOU HAVE PROBLEMS RECEIVING THIS TRANSMISSION, PLEASE CONTACT OUR OFFICE IMMEDIATELY AT (509) 765-0688.

MEMBER
NATIONAL ACADEMY OF
ELDER LAW ATTORNEYS

BRUCE D. PINKERTON
ATTORNEY AT LAW
1426 E. Hunter Place
Suite A
Moses Lake, WA 98837-2400

Telephone (509) 765-0688
FAX (509) 766-9893

July 26, 2007

Department of the Air Force
Attn: Mr. Doug Allbright
HQ AMC/A7CP
507 Symington Drive
Scott AFB, IL 62225-5022

VIA FACSIMILE
(618) 256-8624

Re: ***Grant County C-17 Landing Zone***

Dear Mr. Allbright:

My home, located at [redacted], is the last home in the glide path for the east to west landing of your current C-17 activities. Many times your planes fly over my home at varied levels and are extremely loud. In fact, there was one occasion when a plane came so low over my house that I had concerns that it might not clear my barn.

The purpose of this letter is to raise concern about any proposal that would increase landings after 10:00 p.m. I am not going to object to daytime flying activities because I understand there is a need to have flight training sessions for our military. I am concerned that any plan that would involve flights after 10:00 p.m. will become a potentially huge hardship to my family.

As stated, my house will receive the most noise of any plane prior to it landing from the east to west landing site. I live on the only hill in Moses Lake, which means I will have the closest proximity to your planes.

Would you please consider this letter as a strong request to reconsider a full night of landing operations on a regular basis. As I have indicated, if your flights are conducted during the daylight hours and cease before 10:00 p.m., I will not have a problem with those operations.

I have a 17-year old daughter who is a light sleeper, and a wife who is a teacher who is a light sleeper. If your planes travel over our house at low altitudes after 10:00 p.m., we will obviously suffer sleep deprivation.

To give you an example of the amount of noise we encounter on a daily basis, if a plane flies over our house, we just simply stop talking, especially if we are outside, because we cannot hear the

conversation, even though I might be located two feet from the person I am having a conversation with.

I would ask that you take this information into consideration prior to approving night time operations on a very increased level of landings.

Very truly yours,

Bruce D. Pinkerton
Attorney at Law

BDP/kdg

cc: Port of Moses Lake

03

July 27, 2006

Department of the Air Force
Mr. Doug Allbright
HQ AMC/A7CP
507 Symington Drive
Scott AFB, IL 62225-5022

Dear Mr. Allbright:

I am writing this letter in response to the Air Force proposing to make Grant County International Airport in Moses Lake, Washington an Interim Western United Sates C-17 Landing Zone. I became aware of this proposal while reading an article in our local newspaper on July 26th (yesterday). After reading the article I am not in agreement in having extra air traffic in our area. We recently purchased 40 acres of land and build a home in the country. Before building our home we were aware of the air traffic in our area but also new we would be able to handle it, since most of the traffic is during daylight hours. But after reading the article and discussing it with other community members it is apparent the increase in air traffic will increase from 10 p.m. until 7 a.m.

We have experienced low altitude flying aircrafts in our area and when they fly low, they have shook our house and upset our farm animals. We choose to build our home in the country so that we may enjoy having a peaceful environment for our family and friends. But with the additional air traffic, I think not.

Please take the time to reconsider a change in your flight patterns and time of flying.

Thank you for taking the time to consider my request.

Sincerely,

Gail S. Pinkerton

Gail S. Pinkerton

Cc: Port of Moses Lake

04

date: 7-27-07

to: MR. DOUG ALLBRIGHT

company: DEPT. OF THE AIR FORCE
SCOTT AFB IL. 62225-5022

phone #: (618) 229-0846

fax #: (618) 256-8624 pages: 05

from: PAT S. PALMERTON

phone #: [redacted]

message: MR. ALLBRIGHT - You told Jim Camden, Reporter for the Spokesman-Review that comments will only be accepted until July 29, 2007. I am FAXing a copy of the notice that states comments must be postmarked or FAXs received by July 30, 2007

Pat S. Palmerton

July 25, 2007

Department of the Air Force
Mr. Doug Allbright
HQ AMC/A7CP
507 Symington Drive
Scott AFB, IL 62225-5022

Dear Mr. Allbright

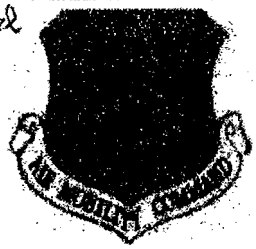
We are strongly opposed to the Department of the Air Force plan to establish an Interim Western United States C-17 Landing Zone at the Grant County International Airport in Moses Lake, Washington. We are currently experiencing a huge number of low level operations by C-17 aircraft based at McCord Air Force Base in Tacoma, Washington. Adding 12,960 additional C-17 operations per year to the Grant County Airport will negatively impact the quality of life in our community through increased noise and air pollution. It will also save on fuel costs to have the C-17 practice where they are based in California.

Sincerely,

Pat & Donna Palmerton
[redacted]
Moses Lake, WA [redacted]

cc: Port of Moses Lake
Congressman Doc Hastings

Moses Lake Herald
July 29, 07



NOTICE OF AVAILABILITY
DRAFT ENVIRONMENTAL ASSESSMENT AND DRAFT FINDING OF NO SIGNIFICANT IMPACT INTERIM WESTERN UNITED STATES C-17 LANDING ZONE

In support of the Air Force Airlift Mobility Transformation Plan to standardize airlift aircraft fleets, increase reliability and capability, and reduce operating and support costs, Headquarters Air Mobility Command (HQ AMC), Scott Air Force Base (AFB), Illinois proposes to establish a C-17 Landing Zone (LZ) for aircraft operations on an interim basis in the western United States. The proposed LZ allows C-17 aircraft predominantly from California (Travis AFB and March Air Reserve Base) to conduct required day and night training until a permanent LZ can be constructed. The Proposed Action would occur at Grant County International Airport, Moses Lake, Washington, and alternative action locations are Travis AFB and the Southern California Logistics Airport (SCLA).

As part of the Air Force Environmental Impact Analysis Process, the HQ AMC is preparing an Environmental Assessment (EA) for this action. The Draft EA describes and analyzes the Proposed Action, the Travis AFB Alternative, the SCLA Alternative, and the No Action Alternative. The Draft EA is available at the Moses Lake, Fairfield-Suisun, Vacaville, Victorville, and Adelanto public libraries, the Mitchell Memorial Library on Travis AFB, and at http://public.travis.amc.af.mil/enviro

Written comments may be mailed to:

Department of the Air Force
Attn: Mr. Doug Allbright
HQ AMC/A7CP
507 Symington Drive
Scott AFB, IL 62225-5022

All written comment letters must be postmarked by July 30, 2007. Comments may also be faxed to the attention of Mr. Allbright at (618) 256-8624. Faxed comments must be received by close of business on July 30, 2007. Emailed comments will not be accepted. Should you have any questions, please contact Mr. Allbright at (618) 229-0846 or Mr. Rudy Pontemayor at (707) 424-7517 for Travis AFB issues.

05

July 25, 2007

Department of the Air Force
Mr. Doug Allbright
HQ AMC/A7CP
507 Symington Drive
Scott AFB, IL 62225-5022

We live under the approach pattern of Runway 34 in Moses lake and are very opposed to the Air Force Plan to have C-17 aircraft stationed in California use the Grant County Airport for their Landing Zone until sometime in the future! We have more than enough military operations at Grant County Airport and these planes should practice where they are based.

Sincerely,

Darin & BeJai Palmerton
[redacted]
Moses Lake, WA [redacted]

cc: Port of Moses Lake
Congressman Doc Hastings

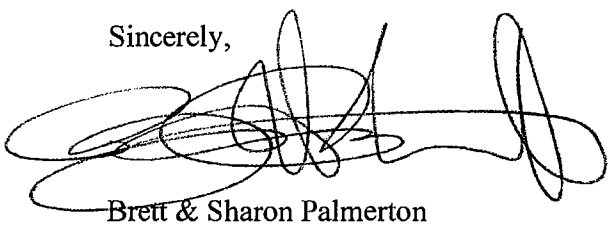
06

July 25, 2007

Department of the Air Force
Mr. Doug Allbright
HQ AMC/A7CP
507 Symington Drive
Scott AFB, IL 62225-5022

We live in Cascade Valley near the Grant County Airport and are adamantly against the plan to make our airport the Interim Western United States C-17 Landing Zone. We currently have the McCord C-17 landings and we do not need to be bringing in the planes based in California to practice and further disturb our way of life. We have enough air pollution from the planes landing at Grant County Airport and we do not want any more.

Sincerely,



Brett & Sharon Palmerton
[redacted]
Moses Lake, WA [redacted]

cc: Port of Moses Lake
Congressman Doc Hastings

07

July 27, 2007

Department of the Air Force
Attn: Mr. Doug Allbright
HQ AMC/A7CP
507 Symington Drive
Scott AFB, IL 6225-5022

FAX # (618) 256-8624

TO WHOM IT MAY CONCERN:

We are long time residents of Moses Lake, Washington where the former Larsen Air Force Base was located. We understand that the Air Force is proposing to make our Grant County International Airport the Interim Western Unites States C-17 Landing Zone.

We are asking that you ***please reconsider this decision***. While we remember the noises of the jets when Larsen AFB was active, it was understandable then. It is not understandable while the residents of our community and the staff/workers/students at the college and businesses near the airport should have to suffer the noise of the C-17 aircraft, when those aircraft are not even based in our community. What is Moses Lake gaining from this except more noise? We can remember in grade school & junior high, our teachers having to quit talking/teaching until the plane would pass because the noise was so loud. Please don't ask us to return to that!

Thank you in advance for any reconsideration you will give to this decision.

Sincerely,

Holly & Barry Moos

Holly & Barry Moos
[redacted]
Moses Lake, WA [redacted]

08

July 23, 2007

Department of the Air Force
Attn: Mr. Doug Allbright
HQ AMC/A7CP
507 Symington Drive
Scott AFB, IL 62225-5022

Gentlemen:

I am a resident of Moses Lake, Washington, live very close to the site once known as Larson Air Force Base now known as Grant County Airport and also work at Big Bend Community College located at this location. It is disturbing to learn that we may be an interim C-17 Landing Zone which means an increase of more than 50% with planes flying in from Travis Air Force Base and March Air Reserve Base in California conducted at low altitude both day and night (10:00 pm-7:00 am). I am against communities in western Washington and California benefiting from huge military payrolls, contracts and Defense Department spending while Moses Lake gets **extremely high levels of noise pollution** 24 hours a day, seven days a week! Please reconsider this decision.

Sincerely,

Janet Schafer

Janet Schafer
[redacted]
Moses Lake, WA [redacted]

cc: Port of Moses Lake
7810 Andrews Street NE, Suite 200
Moses Lake, WA 98837

09

July 20, 2007

Mr. Doug Allbright
Department of the Airforce
HQ AMC/A7CP
507 Symington Drive
Scott AFB, IL 62225-5022

Mr. Allbright,

This letter is written to express my comments regarding the C-17 aircraft training missions at Larson AFB at Moses Lake, WA.

I am totally in support of the US military using the old Air Force Base for whatever they need to. Larson AFB was built to handle large aircraft and is also a back up Space Shuttle landing site.

If we, as Americans, cannot support military training missions then how do we expect to have a strong military?

I would also like to express my interest in bringing Larson AFB back to life in Moses Lake, WA. The base closed before I was born, but as a history buff I enjoy reading stories about the aircraft, the technology, and the personnel that graced us lives for so many years.

In this era of base closings and trying to fight terrorism here and abroad, it is imperative that military installations continue to be built and personnel continue to train.

In conclusion, I completely support the training missions to be done in Moses Lake, WA by the US Air Force.

B Preston

Brian J. Preston
[redacted]
Moses Lake, WA [redacted]
[redacted] - Home
[redacted] - Mobile
[redacted]

10

July 30, 2007

Dear Mr. Albright:

My wife and I live on [redacted]. in Moses Lake and are directly under the flight path of all the airplanes approaching Grant Co. Airport from the south. We have had no complaints about noise pollution with the current C-17 training and feel the proposed additional training would not pose a hardship on us. We support the training 100%.

Sincerely,

Larry and Cindy Poff



11

[redacted]
Moses Lake, WA [redacted]

July 29, 2007

Department of the Air Force
Attn: Mr. Doug Allbright
HQ AMC/A7CP, 507 Symington Drive
Scott AFB, IL 62225-5022

Dear Mr. Allbright,

I am writing because I am very concerned about the Air Force plans to begin landing more C-17 aircraft at the Grant County International Airport in Moses Lake, Washington.

Our house is about 2 ½ miles east of the airport on the edge of a hill. To land, a plane flies directly over our house and has to drop in altitude a lot because the runway is so close and lower than our house. We believe this causes aircraft to fly lower over our house than FAA rules allow making that landing. Of course, the aircraft are very loud, often drop their landing gear right over us, and fly through the night when we are trying to sleep. Not only that, but the rumbling has ruined several windows in our house. The windows are low-E and argon filled. Vibrations have allowed the argon to escape leaving condensation in its place.

Last October after one very low fly-over, I finally called the PR manager at McCord Air Force Base. His answer to me was to question my patriotism. I can't even begin to express my frustration!

I don't want any more C-17s flying too low, too loud, all night over my house.

Sincerely,

Jerri L Parham

Jerri L Parham

12

Attn: Mr Doug Allbright:

Sir: This letter is concerning the proposal by the US Air Force to make Grant County International airport the interim western C-17 landing zone.
We the undersigned are stridently opposed to this proposal. We reside in the east-west flight path that the C-17 use to approach the runway at the airport.

The current noise level caused by the roar of the engines is one and a half times greater that the decimal noise level of noise pollution allowed by the State of Washington.
Occasionally the C-17 pilots fly so low over our property that the pilot is clearly visible in the cockpit window. I believe this is a violation of FAA regulations on minimum altitude. The late night flights already keep us awake and additional flights would be detrimental to our health by causing sleep loss.

Sir; Put yourself in our position. Would you want to subject yourself , via this proposal, to MORE irritation ,frustration,noise and air pollution and constant sleep deprivation.I think not.
Your consideration of our concerns over this proposal is greatly appreciated.

Residents of Bacon Lane in Moses Lake Wa.

Jeffrey B English
Linda English
Cindy Cardona
Jon Cardona
Juan M Cadena
Jana Floyd
Russell Bacon
Mary Lou Bacon
Jim Thorne
Mary Thorne
Paul Cunningham
Lynn Cunningham

13

[redacted]
Moses Lake, WA [redacted]
July 27, 2007

Dept. of the Air Force
HQ AMC/A7CP
507 Symington Drive
Scott AFB, IL 62225-5022

ATTN: Mr. Doug Allbright

RE: Interim C-17 Landing Zone
Grant County Airport, WA

Dear Mr. Allbright:

We live and work in Moses Lake, WA, and are not interested in the C-17 using Grant County for night time landings. They are welcome to land and take-off all during the day, but we do not want them landing after 7 pm or before 7 am (9 am on the weekends). We both work days and need our sleep to be able to get up and go through another day.

Moses Lake is a small town, and the approach to the runway seems to be right over our home half of the time. We know the planes change their approach slightly with each pass, but a huge part of the issue is that the military planes are far noisier than commercial airlines. Thus, though we live over five miles from the runways, we are affected by every pass.

We are impressed with Boeing's jets; their 747 and the new dreamliners are extremely quiet. So quiet that we wouldn't be concerned if those huge planes were practicing at night. But not the military planes. The noise from those planes actually shakes houses as they pass over.

Thank you for your assistance in seeing that military planes do not use Grant County Airport at night.

Sincerely yours,

Diana & Gerry McFaul

Diana and Gerry McFaul

cc: Port of Moses Lake
Suite 200
7810 Andrews Street NE
Moses Lake, WA 98837

14

Department of
U S Air Force
Att: Doug Allbright
HQ AMC/A7CP, 507
Symington Drive
Scott AFB, IL
62225-5022

To Whom this may Concern;

My Name is Kenneth Lloyd. I would like to commit about The over flight and Noise around here @ Moses Lake, Washington State.

Over.

#2

Dear Mr. Allbright;

It seems the USAF is letting Committs on this one day of Monday in July '05, I'm a USAF honorably discharged person of 6 years in May 1981. I know of AC simulations for experienced flight personal.

So Why is training have any importants here at Moses Lake Airport? How would you like if I came to your house, Now a than, 24-7, and cranked up Roar noises at your house? "All of the Time -"

In a time of energy and resource demands, Why just run Jumbo jets around day & night - 24-7, wasting?

#3,

"Pont 10" or Grant Co International Air-
pont at Moses Lake, Washington, was given us
by the government in the 60's. But now, If
your a property Owner you get to pay for it.
I pay $60 dollars each year. That Not Fair!
IF your airplanes must us this Pont 10,
do Not fly over my house! Us the over
angled landing strip.

A.F.C. 32851 ; 34154
Kenneth Lloyd
Moses Lake, Washing-
ton

Kenneth Lloyd

15

L. Jerald Sheffels
[redacted]

July 30 2007

Department of the Air Force
Atten Mr. Doug Allbright

Fax 618 256 8624

Subject: Increased use of Eastern Washington to train C-17's from California.

I am not in favor of more use of Moses Lake and Eastern Washington to train California C-17 pilots from Travis AFB and March AFB. If they do not have the facilities to train in California or nearby move the groups to Washington.

While we are on the subject I do not think that 1 small add in the Columbia Basin Herald one time is sufficient notice to the public that you plan to make a change. You have given no notice to the outlining area training routes that there will be an increase in use. We already have conflict issues with C-17's on these routes.

Have you considered the amount of fuel it takes to fly a C-17 to Eastern Washington and back to California? Think of the fuel saving if these planes could train closer to home.

My suggestion is for you to reopen this subject, properly advertise over the whole area and find out what kind of resulting comments you get.

Sincerely yours,

Jerry

Jerry Sheffels

cc
Senator Patty Murray
Senator Maria Cantwell
Congresswoman Cathy McMorris-Rodgers

16

July 28, 2007

Department of the Air Force
Attn: Mr. Doug Allbright
HQ AMC/A7CP
507 Symington Drive
Scott AFB, IL 62225-5022

Dear Mr. Allbright,

I do not believe that the Grant County Airport should be the Interim C-17 Landing Zone in the Western United States. I live within four square miles of the Grant County Airport and already experience a significant level of noise pollution. I also work within a square mile of the Airport.

The following pollutions already occur by having McCord Air Force Base conducting training activities – at work there are occasions that low level aircraft sound as though they will crash into the building. At home there is noise on a regular basis from McCord Air Force activity during the night. On one specific occasion a low flying aircraft was dumping liquid out over my property. I know because I seen it and I felt it.

In 2006 there were 24,700 C-17 operations at Grant County. The operations at Grant County Airport will increase by **50%** if Travis Air Force Base and March Air Reserve Base fly C-17s in to conduct an additional 12,960 operations.

I am against the communities in California and western Washington benefiting from huge military payrolls, contracts and Defense Department spending at the expense of Moses Lake receiving high levels of noise pollution 24 hours a day, seven days a week!

Sincerely,

Connie Rodriguez

Connie Rodriguez
[redacted]
Moses Lake, WA [redacted]

17

July 26, 2007
Attn: Mr Doug Allbright
HQ AMC/A7CP
507 Symington Dr
Scott AFB IL 62225-5022

Attn: Port of Moses Lake
7810 Andrews St NE Ste 200
Moses Lake WA 98837

We have raised our children in Moses Lake and love the area. We were part of our community effort that fought against the Air Force flying night operations several years back and are disheartened to see the threat again.

We moved from one area in Moses Lake that was over the flight path due to stress. Planes that fly low and slightly off flight path are bothersome where we currently live.

The Air Force planes fly too low of altitude and without normal sound buffers. The increased flights over our clean area will be a major source of air pollution and will be part of the chemtrail concern.

We support a ban on increasing Air Force flights into Grant County International Airport.

Sincerely,

Kathryn Jones Tom Jones

Tom and Kathryn Jones
[redacted]
Moses Lake WA [redacted]
[redacted]

18

July 27, 2007

Kim Jensen
[redacted]
Moses Lake, WA [redacted]

Department of the Air Force
Attn: Doug Allbright
HQ AMC/A7CP
507 Symington Drive
Scot AFB, IL 62225-5022

Dear Sir:

I have recently read in our local newspaper that plans to increase air force airplane traffic into the Grant County Airport, Moses Lake, WA is to be increased. I have lived on Stratford Road, within a mile of the airport, for 8 years and have had to endure the air traffic as it is now. There is nothing worse than being awakened by jets circling your home in the middle of the night. To increase this traffic especially with the loud military jets is outrageous. These flight paths go directly over my home and rattle the whole house.

I run a childcare from my home and the noise from the jets frighten the children when they are playing outside. Let alone trying to have an infant sleep through all that noise.

I strongly object to this increase in noise pollution around myself, my family and the small children I take have in my care. I am sure there are plenty of bases that can be used that are not in the middle of a town.

I would also like to know why this has not been brought to the public's attention before this time. We as American voters have a right to be included in the decisions that affect our day to day lives.

Sincerely,



Kim Jensen

Cc: Port of Moses Lake

19

July 27, 2007

Juan Ramirez
[redacted]
Moses Lake, WA [redacted]

Department of the Air Force
Attn: Doug Allbright
HQ AMC/A7CP
507 Symington Drive
Scot AFB, IL 62225-5022

Dear Sir:

I strongly object to the increase of military airplane use into Grant County Airport, Moses Lake, WA. The noise from these planes is awful and already is disruptive to my home and sleep.

Why isn't the public made aware of such plans before they are forced fed what some military potentate as decided to do hundreds of miles from his home.

Sincerely,

Juan Ramirez
Cc: Port of Moses Lake

STATE OF CALIFORNIA
GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH
STATE CLEARINGHOUSE AND PLANNING UNIT

ARNOLD SCHWARZENEGGER
GOVERNOR

CYNTHIA BRYANT
DIRECTOR

July 31, 2007

Mr. Doug Allbright
U.S. Air Force
Headquarters Air Mobility Command
HQAMC/A7CP, 507 Symington Drive
Scott AFB, IL 62225

Subject: Environmental Assessment Interim Western United States C-17 Landing Zone
SCH#: 2007034006

Dear Mr. Doug Allbright:

The State Clearinghouse submitted the above named Draft EIS to selected state agencies for review. The review period closed on July 30, 2007, and no state agencies submitted comments by that date. This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act.

Please call the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process. If you have a question about the above-named project, please refer to the ten-digit State Clearinghouse number when contacting this office.

Sincerely,

Terry Roberts

Terry Roberts
Director, State Clearinghouse

1400 10th Street P.O. Box 3044 Sacramento, California 95812-3044
(916) 445-0613 FAX (916) 323-3018 www.opr.ca.gov

Document Details Report
State Clearinghouse Data Base

SCH# 2007034006
Project Title Environmental Assessment Interim Western United States C-17 Landing Zone
Lead Agency U.S. Air Force

Type EIS Draft EIS
Description Establish and operate a C-17 landing zone and conduct aircraft operations on an interim basis.

Lead Agency Contact

Name Mr. Doug Allbright
Agency U.S. Air Force
Phone (618) 229-0846 **Fax**
email
Address Headquarters Air Mobility Command
HQAMC/A7CP, 507 Symington Drive
City Scott AFB **State** IL **Zip** 62225

Project Location

County Solano, San Bernardino
City
Region
Cross Streets
Parcel No.
Township **Range** **Section** **Base**

Proximity to:

Highways
Airports
Railways
Waterways
Schools
Land Use

Project Issues Air Quality; Landuse; Noise; Other Issues

Reviewing Agencies Caltrans, Division of Aeronautics; Air Resources Board, Airport Projects; Caltrans, District 4; Caltrans, District 8; California Highway Patrol; Department of Water Resources; Department of Fish and Game, Region 3; Department of Fish and Game, Region 6; Native American Heritage Commission; Department of Parks and Recreation; Resources Agency; State Water Resources Control Board, Division of Water Quality; Department of Toxic Substances Control

Date Received 06/28/2007 **Start of Review** 06/28/2007 **End of Review** 07/30/2007

Note: Blanks in data fields result from insufficient information provided by lead agency.

STATE OF CALIFORNIA Arnold Schwarzenegger, Governor

21

NATIVE AMERICAN HERITAGE COMMISSION
915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-6251
Fax (916) 657-5390
Web Site www.nahc.ca.gov
e-mail: ds_nahc@pacbell.net

clear
7/30/07
late

RECEIVED
AUG 0 6 2007
STATE CLEARING HOUSE

July 23, 2007

Mr. Doug Allbright
UNITED STATES AIR FORCE/HEADQUARTERS AIR MOBILITY COMMAND
HQAMC/A7CP,507 SYMINGTON DRIVE
SCOTT AFB, ILLINOIS 62225

Re: SCH#2007034006; National Environmental Policy Act (NEPA) for **draft environmental Impact Statement (DEIS) and draft Finding of No Significant Impact (FONSI), C-17 Landing Facilities** Air Force Bases in San Bernardino (California Logistics Airport – former George AFB at Adelanto) and Solano (Travis AFB), California

Dear Mr. Allbright:

Thank you for the opportunity to comment on the above-referenced document. The Native American Heritage Commission is the state's Trustee Agency for Native American Cultural Resources. The Commission recommends that you contact the persons on the attached Native American Contacts list for both San Bernardino and Solano counties to determine whether or not the proposed projects will have an impact on any Native American cultural resources.

We suggest that federal laws such as the National Environmental Policy Act (NEPA), the National Historic Preservation Act (NHPA; Section 106 in particular) and the Native American Graves Protection & Repatriation Act (NAGPRA) be applied to the proposed project. Each of these federal legislative actions have provision for consultation with Native American tribes that are culturally affiliated to the respective project areas.

Please feel free to contact me at (916) 653-6251 if you have any questions.

Sincerely,

Dave Singleton
Program Analyst

Cc: State Clearinghouse

Attachment: List of Native American Contacts

22

400 Capitol Mall, Eleventh Floor
Sacramento, CA 95814
916.558.6000 : 916.446.1611 FAX
. www.weintraub.com

July 29, 2007

MERITAS LAW FIRMS WORLDWIDE

Michael A. Kvarme
916.558.6081 DIRECT
mkvarme@weintraub.com

Mr. Doug Albright
PARSONS
8000 Centre Park Drive
Suite 200
Austin, Texas 78754

Re: Draft Final Environmental Assessment
Interim Western United States C-17 Landing Zone

Dear Sir:

While we understand that comments to the Draft Final Assessment -Interim Western United States C-17 Landing Zone ("Final Draft EA") are due per Mr. Wallin's letter of June 25, 2007," that being a Sunday, that are due on July 30, 2007. Nonetheless, out of an abundance of caution, we are submitting the following comments today on behalf of our clients, the Noonan Family who own approximately 1.010 acres ("Noonan Ranch") to the immediate north of the subject Travis Air Force Base. We reserve the right to further supplement these comments.

On behalf of the Noonan family, we consider the Final Draft EA inadequate for the following reasons:

1. Lack of adequate notice. Despite being one of the major land holdings impacted by the proposed decision, no notice was ever received by any member of the family.

2. Lack of consideration of less impactful decisions such as other possible military bases or former military bases in the western United States.

3. Failure to fully consider adverse environmental impacts within the local area and

beyond.

4. Adverse impacts on the local economy and orderly growth of the adjoining communities.

Given the lack of adequate notice, it is difficult to provide a comprehensive set of objections but the foregoing are a summary of the major flaws that we have been able to identify.

Very truly yours,

Michael Kvarme

Cc: Matt Noonan

weintraub genshlea chediak
LAW CORPORATION

400 Capitol Mall, Eleventh Floor
Sacramento, CA 95814
916.558.6000 : 916.446.1611 FAX
: www.weintraub.com

Facsimile Transmission Cover Sheet

Date:

of Pages:
(including this page)

To: PARSONS
Attn: Doug Albright

Fax: 512-719-6099

From: Michael Kiernan

Telephone:
512-719-6000

Re: ~~Wichita~~ Draft EA/Travis

Comments/Notes:

If you do not receive all of these pages, please contact our Communication Center at 916.558.6080.

☒ Original will not follow

Original will follow by:

- ☒ Regular mail
- ☐ Overnight carrier
- ☐ Hand delivery
- ☐ Other:

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earl.Allbright@Scott.AF.mil

23

HOWARD
RICE
NEMEROVSKI
CANADY
FALK
& RABKIN

A Professional Corporation

Three Embarcadero Center
Seventh Floor
San Francisco, CA 94111-4024
Telephone 415.434.1600
Facsimile 415.217.5910
www.howardrice.com
Writer's Information:
Richard C. Jacobs
Direct: 415.765.4690
rjacobs@howardrice.com

July 30, 2007

VIA FEDERAL EXPRESS

Doug Allbright
Parsons
8000 Centre Park Drive, Suite 200
Austin, TX 78754

Re: Draft Final Environmental Assessment
Interim Western United States C-17 Landing Zone

Dear Mr. Allbright:

We represent Matthew Noonan and the Noonan family with regard to the above assessment of the proposed United States Air Force Western United States C-17 landing zone and aircraft operations. We write with comments on and objections to that assessment.

Mr. Noonan and his family own approximately 1000 acres of property adjacent and to the north of Travis Air Force Base in California. Attached for your information is a map showing the location of this property. As you will see, the majority of the property is in a large piece immediately adjacent to the northern border of Travis, and a small portion is further north. Our analysis of the assessment indicates that approximately one-third of this acreage, or more than 300 acres, would fall within the expanded 60-65 dB contour lines around Travis, if the proposed landing zone and associated aircraft operations were placed at Travis.

The analysis of such a zone and operations at Travis AFB in the assessment indicates that the Travis alternative would result in a total addition of 1,271 acres to the area between the 60-65 dB contour lines, or 6% more than the no-action alternative. Assessment at p. 4-18, Table 4.3-1. The assessment then concludes that this increase in acreage would have no significant impacts and no mitigation would be required, if the Travis alternative were chosen.

We disagree with and object to that assessment. Under the recent Airport Land Use Compatibility Plan that was adopted by the Solano County Airport Land Use Commission and applicable to Travis, Mr. Noonan and his family would be precluded from developing their property between the 60-65 dB contour lines with residential housing, unless the City of Fairfield overrode the Plan's requirements.

That limitation would restrict the future potential uses of the property, and would impose very significant financial impacts on the Noonans. There is no discussion in the assessment of

any sort of the implications of the Airport Land Use Compatibility Plan, and no discussions of the financial impacts that a C-17 landing zone and associated aircraft operations would impose on the Noonans and other property owners in the area around Travis. The financial implications of the possible Travis AFB alternative are far too large and affect too much privately-held property to be ignored in the Air Force's final choice of where the C-17 landing zone should be placed.

For that reason, we believe the assessment is deficient, and ask that it be revised and recirculated for additional public and private analysis and comments. We also ask that the Air Force choose its preferred proposed action of using the Grant County International Airport at Moses Lake, Washington for the C-17 landing zone and aircraft operations, in order to avoid imposing these very substantial financial burdens on the Noonans and other owners of property close to Travis AFB.

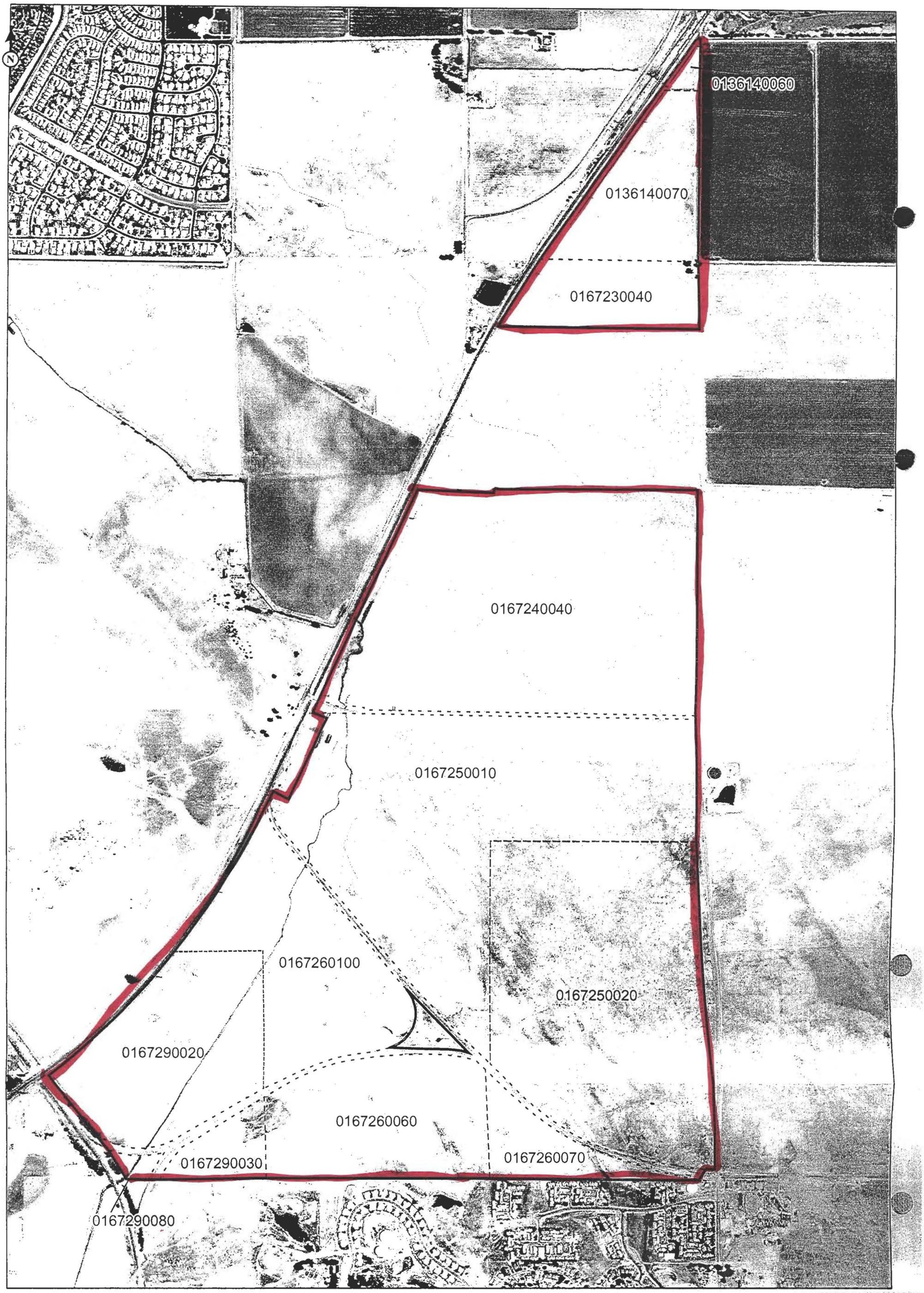
Very truly yours,

Richard C. Jacobs

RCJ/tlm
Attachment

cc: John Wallin, Parsons
Matthew Noonan

W03 073007-066660066/1407063/v1



LSA

0 500 1,000

FEET

Parcel Boundary

Study Area Boundary

FIGURE 2

Noonan Ranch

Project Location

Source: Aerial Imagery from the U.S. Department of Agriculture
I:\NNA0701\GIS\Figure2_ProjectLocation.mxd (06/27/07)

24

Muzzy Farms
1107 Kentucky Street
Fairfield CA 94533
(707) 426-0100 fax (707) 426-0318

Via Federal Express

Mr. Doug Allbright
HQ AMC/A7PC
507 Symington Drive
Scott Air Force Base, IL 62225-5022

July 19, 2007

Re: Draft Environmental Assessment for Interim Western United States C-17 Landing Zone

Dear Mr. Allbright:

We appreciate the opportunity to comment on the draft Environmental Assessment for the proposed establishment of the C-17 landing zone in the Western United States. Our comments are focused on the portion of that document dealing with bird strike hazards at Travis Air Force Base and are based on our concern that the document understates the risk to aircraft landing and taking off from the base. Muzzy Farms is part of a group that has owned approximately 4,000 acres adjacent to Travis for 20 years, and our comments are based on intimate knowledge of the land surrounding the base.

Section 4.1.2 of the Environmental Assessment states that "the potential for aircraft accidents or bird-air craft strikes would remain at the baseline conditions." As we have previously noted to Travis personnel, the "baseline" referred to in the Environmental Assessment resulted from our decision to terminate the irrigation of approximately 633 acres of land immediately north of the base in 2002 for the purpose of obtaining an accurate wetlands delineation on that property in connection with an application to the Unites States Fish & Wildlife Service and other agencies for the establishment of the Muzzy Ranch Conservation Bank. As a result, the land was being used only for dry land cattle grazing at the time of the land use surveys used for the Environmental Assessment. Our conservation bank plan called for converting to that property to seasonal wetlands and vernal pools (similar to the land located immediately east and south of the base). In this area, seasonal wetlands and vernal pools are usually dry from mid-spring to late fall or winter.

As a condition of approval of our conservation bank application, the Fish & Wildlife Service required that we obtain a no objection letter from Travis. At the suggestion of the Travis personnel we spoke to, we retained a respected biological consultant, LSA Associates, to prepare a bird strike study comparing the relative danger to aircraft at Travis from the proposed use of the property as seasonal wetlands and vernal pools and that resulting from its use for irrigated farm land. The study indicated that during the rainy season, seasonal wetlands and vernal pools would be less dangerous than irrigated farm land and that during the dry season seasonal wetlands and vernal pools would create a much smaller risk to aircraft at the base than irrigated farm land. A copy of the study is enclosed for inclusion in the Environmental Assessment. In particular, irrigated farmland attracts large waterfowl, such as geese (see, for instance, Section 3-9 of FAA Advisory Circular 150/5200-33). The significance of irrigated farm land as a waterfowl attractant is magnified by the fact that Travis is very near the 160,000 acre Suisun Marsh, which supports large populations of ducks, geese and other waterfowl year round.

Despite the findings of the study, the base command elected not to issue the no objection letter and, as a result, we are now resuming irrigation of those 633 acres.

We understand that the risk of bird strikes is greatest at lower altitudes and that the use of the proposed tactical runway will involve mostly low level flights. One of the significant new tracks at Travis resulting from the tactical runway (see Figure 4.3 of the Environmental Assessment) would run directly over the 633 acres in question.

In summary, the "baseline condition" referred to in the Environmental Assessment is not the condition existing at this time or at the time the tactical runway would be established if the Air Force chooses to locate it at Travis. Instead, the 633 acres immediately north of Travis will constitute the only significant area of irrigated farm land in the 12 square miles immediately surrounding the base and will attract far more birds, especially during spring, summer and fall months, than has been the case for the last five years.

Please feel free to contact us if you have any questions.

Very truly yours,

Muzzy Farms

Frank J. Andrews, Jr., Manager

Debra Yarbrough Russo, Manager

Enclosure

cc: Mr. Rudy Pontemayor

BIRD HAZARD ASSESSMENT

TRAVIS AIR FORCE BASE

FAIRFIELD, CALIFORNIA

SOLANO COUNTY

Submitted to:

Muzzy Land Company, LLC
1107 Kentucky Street
Fairfield, California 94533
(707) 426-0100

And

Solano Green Acres, LLC
3424 Astoria Court
Fairfield, California 94533
(707) 427-2772

Prepared by:

LSA Associates, Inc.
157 Park Place
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LSA Project No. ABP330

LSA

April 3, 2007

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INTRODUCTION

Travis Air Force Base (AFB) has expressed concern that two recently proposed vernal pool mitigation banks in the vicinity of the airfield (i.e., Muzzy Ranch and Solano Union Creek; see Figure 1) will attract more birds to the area than already present, thus resulting in increased hazards to aircraft. Both sites are located within the Federal Aviation Administration's (FAA) prescribed separation distance of 10,000 feet between the base's operations area and hazardous wildlife attractants (FAA 2004). Currently, bird hazards on or adjacent to the runways are minimized through an active falconry program and judicious use of depredation permits. The natural vernal pools and grasslands in the immediate vicinity of the runways are already known to attract large numbers of shorebirds and geese (M. Bierman, pers. comm.). However, there is relatively little known about bird use of other habitats surrounding the airfield, and to what extent the proposed mitigation bank sites currently contribute to regional bird use patterns. Also unknown is the extent to which the proposed vernal pool creation will affect future bird use of the sites, if at all. This assessment attempts to address these questions through a qualitative analysis of current bird use on and around Travis AFB, with the goal of identifying habitats that pose the greatest risk to aircraft in terms of potential bird hazards. In addition, post-restoration hazard levels of the two mitigation banks were estimated based on LSA biologists' knowledge of vernal pool systems and their predicted level of bird use.

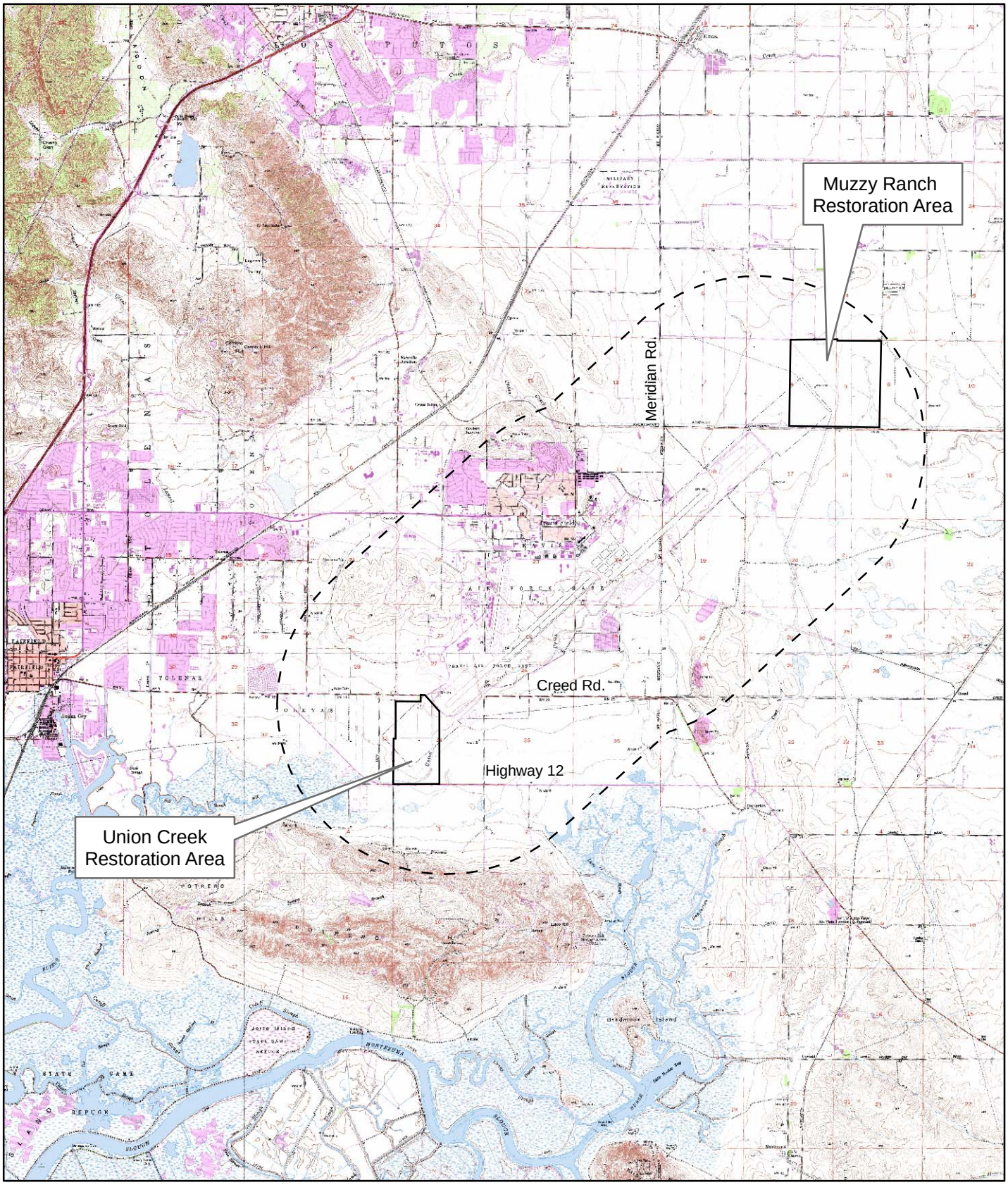
STUDY AREA LOCATION AND DESCRIPTION

For the purposes of this assessment, "study area" is defined as all lands within 10,000 feet of the Travis AFB runways in accordance with the FAA's prescribed separation distance between operations areas and wildlife attractants. The study area includes the entire Travis AFB and the eastern edge of the City of Fairfield. Highway 12 runs through the southern portion of the study area, which also includes the northern edge of the Potrero Hills. Creed Road is the major east-west road in the south-central portion of the study area, with Meridian Road providing access to the northern portion.

The study area is located within portions of the Denverton (T4N/5N, R1W), Elmira (T5N, R1W/1E), and Dozier (T5N, R1E) 7.5-minute U.S. Geological Survey (USGS) quadrangles. Topography is generally flat except for a range of small hills west of the AFB and a small portion of the Potrero Hills that intrudes into the southern portion of the study area.

HABITATS

For the purposes of this assessment, habitats within the study area were categorized into seven types: irrigated pasture, non-irrigated pasture, valley floor grassland, vernal pool grassland, managed grassland, open water/playa pool, and tidal marsh (see Figure 2). These categories were based on those developed for the Solano Habitat Conservation Plan (HCP), and were further refined for this assessment through the interpretation of high-resolution aerial photography and site visits by LSA personnel. Brief descriptions of each habitat type are provided below.



LSA

FIGURE 1

Bird Hazard Assessment
Travis Air Force Base

Site Location

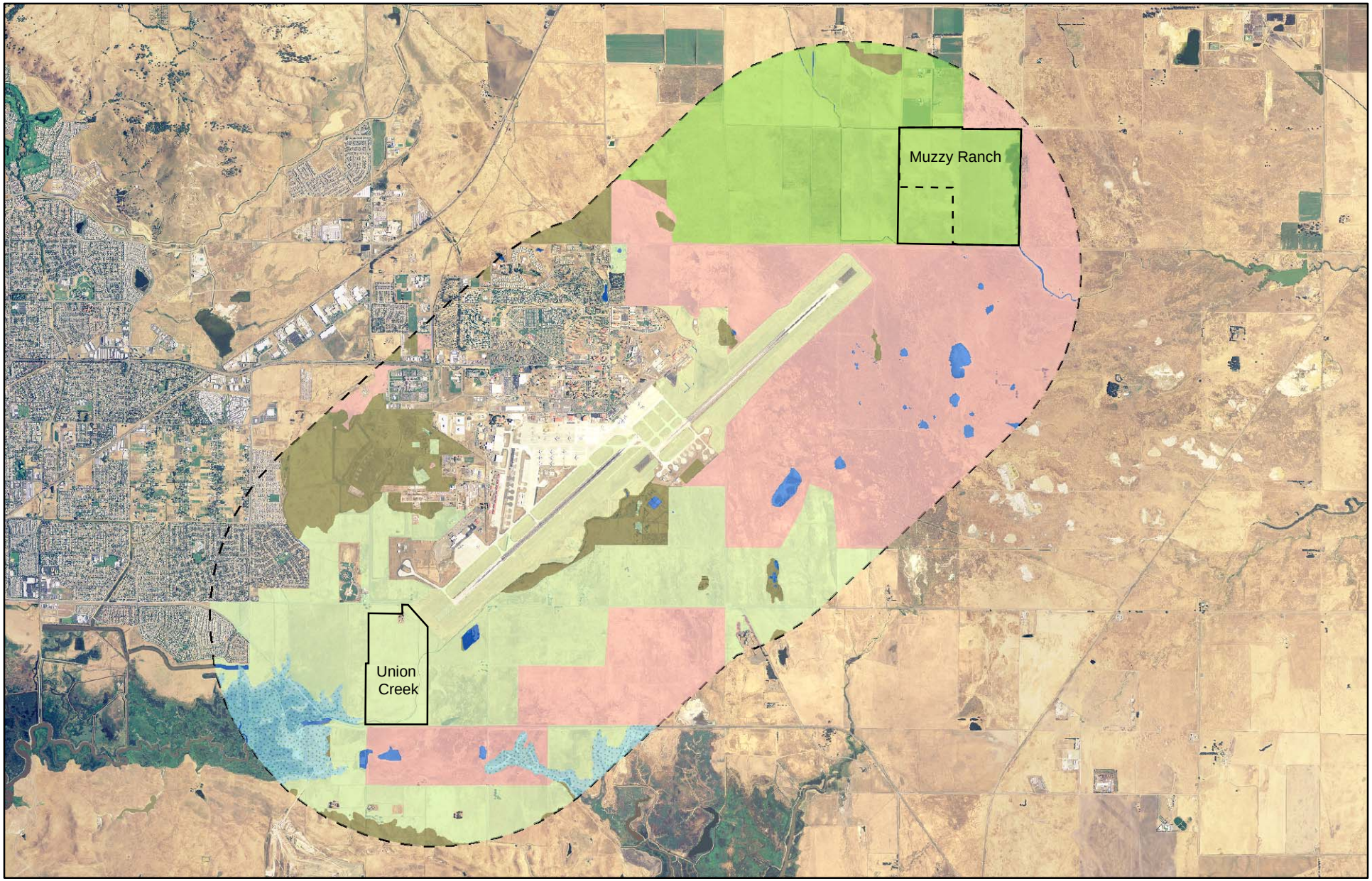
N

0 4,000 8,000

Feet

Source: USGS 7.5' Quads: Napa & Lodi

I:\ABP330\GIS\Maps\TravisAFB\Figure1_SiteLocation.mxd (04/02/2007)



LSA

N

0 3,000 6,000

Feet

Study Area
Restoration parcel
Limit of restoration

Managed Grassland
Irrigated Pasture
Nonirrigated Pasture
Open Water/Playa Pool

Grassland – Vernal Pool System
Valley Floor Grassland
Tidal Marsh

FIGURE 2

Bird Hazard Assessment
Travis Air Force Base

Study Area and Existing Habitats

Source: Aerial Photos from the U.S. Department of Agriculture
I:\ABP330\GIS\Maps\TravisAFB\Figure1_StudyAreaAndHabitats(8X11).mxd (04/02/2007)

Irrigated Pasture

Irrigated pasture is the dominant habitat in the northern portion of the study area, comprising most of the fields on either side of Meridian Road and north of an abandoned railroad grade, as well as the proposed restoration parcel of the Muzzy Ranch mitigation bank. Most of the fields in this area were farmed in the past but are presently used for livestock pasture and support non-native grassland and ruderal vegetation that includes vast stands of purple starthistle (*Centaurea calcitrapa*) as well as soft chess (*Bromus hordeaceus*), bristly ox-tongue (*Picris echioides*), and curly dock (*Rumex crispus*).

Both irrigated and non-irrigated pasture (see below) readily flood in the winter due to an underlying claypan that restricts the downward percolation of water. The soils of these two habitat types historically supported vernal pool communities. As such, the surface grading and land leveling that typically accompanied agricultural development left the underlying claypan relatively intact in most cases. In fact, such land leveling actually tends to increase the size and extent of shallow, seasonal flooding over the natural pool and mound topography typical of native vernal pool grasslands in Solano County (see below).

Non-irrigated Pasture

This category was applied to numerous fields in the southwestern and central portions of the study area, including the proposed Solano Union Creek mitigation bank immediately southwest of the Travis AFB runways (see Figure 2). Plant species composition is similar to that in irrigated pasture (i.e., non-native grassland with scattered seasonal wetlands). In terms of habitat, non-irrigated pasture differs from irrigated pasture in the seasonality of flooding. In the summer, non-irrigated pasture dries out and resembles non-agricultural grasslands found in the hillier portions of the County (e.g., valley floor grassland), whereas irrigated pasture is routinely flooded to provide forage for livestock. Forage production on these pastures, however, is about three times that of the native vernal pool grasslands (Bates et al. 1977).

Valley Floor Grassland

This habitat type refers to the non-native grasslands associated with the hillsides, slopes, and ridges within the study area (e.g, west of Travis AFB), which are drier and better drained than the above-described pastures. Vegetation is comprised almost entirely of annual non-native grasses and forbs such as wild oats (*Avena* spp.), bromes (*Bromus* spp.), hare barley (*Hordeum murinum* ssp. *leporinum*), Italian wildrye (*Lolium multuflorum*), mustard (*Brassica* ssp.), wild radish (*Raphanus sativa*), and vetches (*Vicia* spp.).

Vernal Pool Grassland

Vernal pool grassland is the most abundant habitat type within the study area, primarily to the east and southeast of the easternmost runway at Travis AFB (Figure 2). Several parcels on either side of Highway 12 in the southern portion of the study area also contain vernal pool grasslands. Vernal pools are relatively small, ephemeral (seasonal) wetlands that form in shallow depressions underlain by an impermeable layer near the ground surface that restricts the percolation of water. The topography of vernal pool grasslands is best described as gently undulating, with numerous small hillocks and mounds interspersed with small depressions in which the pools form. Vernal pools support a unique assemblage of plant species that have adapted to the annual cycle of wetting and drying. Characteristic vernal pool plants in the study area include Fremont's goldfields (*Lasthenia fremontii*), coyote thistles (*Eryngium* spp.), dwarf blennosperma (*Blennosperma nanum* ssp. *nanum*),

dwarf woolly-heads (*Psilocarphus brevissimus*), and slender popcorn-flower (*Plagiobothrys stipitatus*). Wetlands within this community type typically range for about 20 percent to over 50 percent of the land surface depending on soil types and the level of previous land disturbance.

Managed Grassland

This habitat type refers to the regularly mowed and disked grassland adjacent to and in the immediate vicinity of the Travis AFB runways. Grass height is kept short year-round for fuel control and to maintain visibility on and around the runways.

Open Water/Playa Pool

Playa pools are large pools within vernal pool grasslands that stay inundated longer than the smaller pools due to their larger size and depth. In general, playa pools are much more sparsely vegetated than vernal pools. Because of their larger size, playa pools often attract large flocks of waterfowl and shorebirds during the winter and migratory season, and are thus considered separately from vernal pool grasslands in terms of habitat value. Several stock ponds and reservoirs within the study area were also included in this category since they provide similar open-water habitat for waterfowl and other birds.

Tidal Marsh

This habitat type is limited to the southern portion of the study area, which includes small portions of Denverton Slough and the Hill Slough Wildlife Area. Tidal marshes in this portion of Solano County are brackish (i.e., intermediate between saltwater and freshwater) and typically dominated by cattails (*Typhus* sp.) and bulrush (*Scirpus* sp.), which often form dense stands up to 2 meters in height. Other species such as sedge (*Carex* spp.), rush (*Juncus* spp.), and pickleweed (*Salicornia* sp.) may also be present, depending on the salinity.

METHODS

Estimating the relative hazard levels of different habitats requires an understanding of existing habitat conditions and the bird species or species groups that are likely to occur. Because quantitative data on bird abundance, densities, and distribution in the study area are unavailable, this assessment is based on qualitative observations by LSA biologists as well as their general knowledge of the various species groups and their use of Solano County habitats. Species groups used in this assessment are based on those identified by the FAA (2004) as being hazardous to aircraft, based on relative hazard scores derived from the FAA National Wildlife Strike Database (Dolbeer et al. 2000). Several species groups on the FAA list are considered unlikely to occur in the study area (e.g., cormorants/pelicans, cranes), and were excluded from the habitat use analysis. A total of 19 species groups were evaluated for their potential to occur within the study area.

Following the definition of species groups and habitat categories (see above), a qualitative "habitat use rating" was assigned to each species group for each habitat, based on LSA biologists' knowledge of habitat requirements, flocking behavior, and seasonal status of each group. Habitat use ratings were based on the input of four different biologists in the LSA office, lending at least some objectivity to their development. Ratings were defined as follows:

- 0 = Species group not expected to occur more than on an incidental basis
- 1 = Species group expected to occur singly or in small groups
- 2 = Species group expected to occur in large flocks (> 20 individuals)

Ratings were assigned for both the wet season and dry season since several habitats differ substantially between these periods in the amount of water they contain (e.g., vernal pools, non-irrigated pasture). Each species group's habitat use rating (i.e., 0, 1, or 2) was then multiplied by its relative hazard score (FAA 2004), yielding a weighted score for each species group within a particular habitat. Weighted scores were then summed for each habitat. The resulting "weighted hazard scores" are considered an approximate representation of each habitat's hazard level. Relative hazard scores (FAA 2004), habitat use ratings, and weighted hazard scores are presented in Tables A and B.

Each weighted hazard score was placed into one of five qualitative hazard categories (i.e., very low, low, medium, high, very high) based on natural breaks between the scores. For the purposes of visual representation, Figures 3 through 6 depict habitat types along a color gradient according to their qualitative hazard category.

Table A: Wet Season Hazard Scores of Habitat Types in the Vicinity of Travis Air Force Base, Solano County.

Species or species group	RHS[a]	Habitat Use Rating[b] - Wet Season							
		Vernal Pool Grassland (1-2 yrs post-const)	Vernal Pool Grassland (3+ yrs post const/natural)	Open Water/Playa Pool	Non-irrigated Pasture	Irrigated Pasture	Valley Floor Grassland	Managed Grassland	Tidal Marsh
Turkey vulture	63	1	1	1	1	1	1	1	1
Geese	55	2	1	2	2	2	0	1	2
Eagles	41	0	0	0	0	0	0	0	0
Ducks	39	1	1	2	2	2	0	0	2
Herons and egrets	27	1	1	1	1	1	1	1	1
Hawks	25	1	1	1	1	1	1	1	1
Gulls	24	0	0	2	2	2	0	1	2
Rock pigeon	23	0	0	1	2	2	0	1	0
Owls	23	1	1	0	1	1	1	1	0
Horned lark	17	2	2	1	2	2	2	2	0
Crows/ravens	16	1	1	1	1	1	1	1	1
Mourning dove	14	1	1	1	1	1	1	1	0
Shorebirds (med-large)	10	1	1	2	2	2	2	2	2
Shorebirds (small)	10	1	1	2	1	1	1	1	2
Blackbirds and starlings	10	2	2	1	2	2	2	2	2
American kestrel	9	1	1	0	1	1	1	1	1
Meadowlarks	7	2	2	1	2	2	2	2	1
Sparrows	4	2	2	0	2	2	2	2	2
Swallows	4	1	1	1	1	1	1	1	1
Raw Score		**21**	**20**	**20**	**27**	**27**	**19**	**22**	**21**
Weighted Hazard Score		**426**	**371**	**482**	**569**	**569**	**287**	**389**	**455**

[a] Relative Hazard Score, from FAA 2004

[b] 0 = species not expected to occur more than on an incidental basis

1 = species expected to occur singly or in small groups

2 = species expected to occur in large flocks (> 20 inds.)

Weighted Hazard Score = sum of species RHS x habitat use rating

Table B: Dry Season Hazard Scores of Habitat Types in the Vicinity of Travis Air Force Base, Solano County.

Species or species group	RHS[a]	Habitat Use Rating[b] - Dry Season							
		Vernal Pool Grassland (1-2 yrs post-const)	Vernal Pool Grassland (3+ yrs post const/natural)	Open Water/Playa Pool	Non-irrigated Pasture	Irrigated Pasture	Valley Floor Grassland	Managed Grassland	Tidal Marsh
Turkey vulture	63	1	1	1	1	1	1	1	1
Geese	55	0	0	0	1	2	0	1	2
Eagles	41	0	0	0	0	0	0	0	0
Ducks	39	0	0	0	0	2	0	0	2
Herons and egrets	27	0	0	1	0	1	0	1	1
Hawks	25	1	1	1	1	1	1	1	1
Gulls	24	0	0	0	0	2	0	1	0
Rock pigeon	23	0	0	0	2	2	0	1	0
Owls	23	1	1	1	1	1	1	1	0
Horned lark	17	1	1	0	1	1	1	1	0
Crows-ravens	16	1	1	1	1	2	1	1	1
Mourning dove	14	1	1	1	1	1	1	1	0
Shorebirds (med-large)	10	0	0	0	0	0	0	0	0
Shorebirds (small)	10	0	0	0	0	2	0	1	1
Blackbirds and starlings	10	1	1	1	1	2	1	1	1
American kestrel	9	1	1	1	1	1	1	1	1
Meadowlarks	7	1	1	0	1	1	1	1	0
Sparrows	4	1	1	1	1	1	1	1	1
Swallows	4	1	1	2	1	2	1	1	2
Raw Score		**11**	**11**	**11**	**14**	**25**	**11**	**16**	**14**
Weighted Hazard Score		**192**	**192**	**199**	**293**	**551**	**192**	**331**	**360**

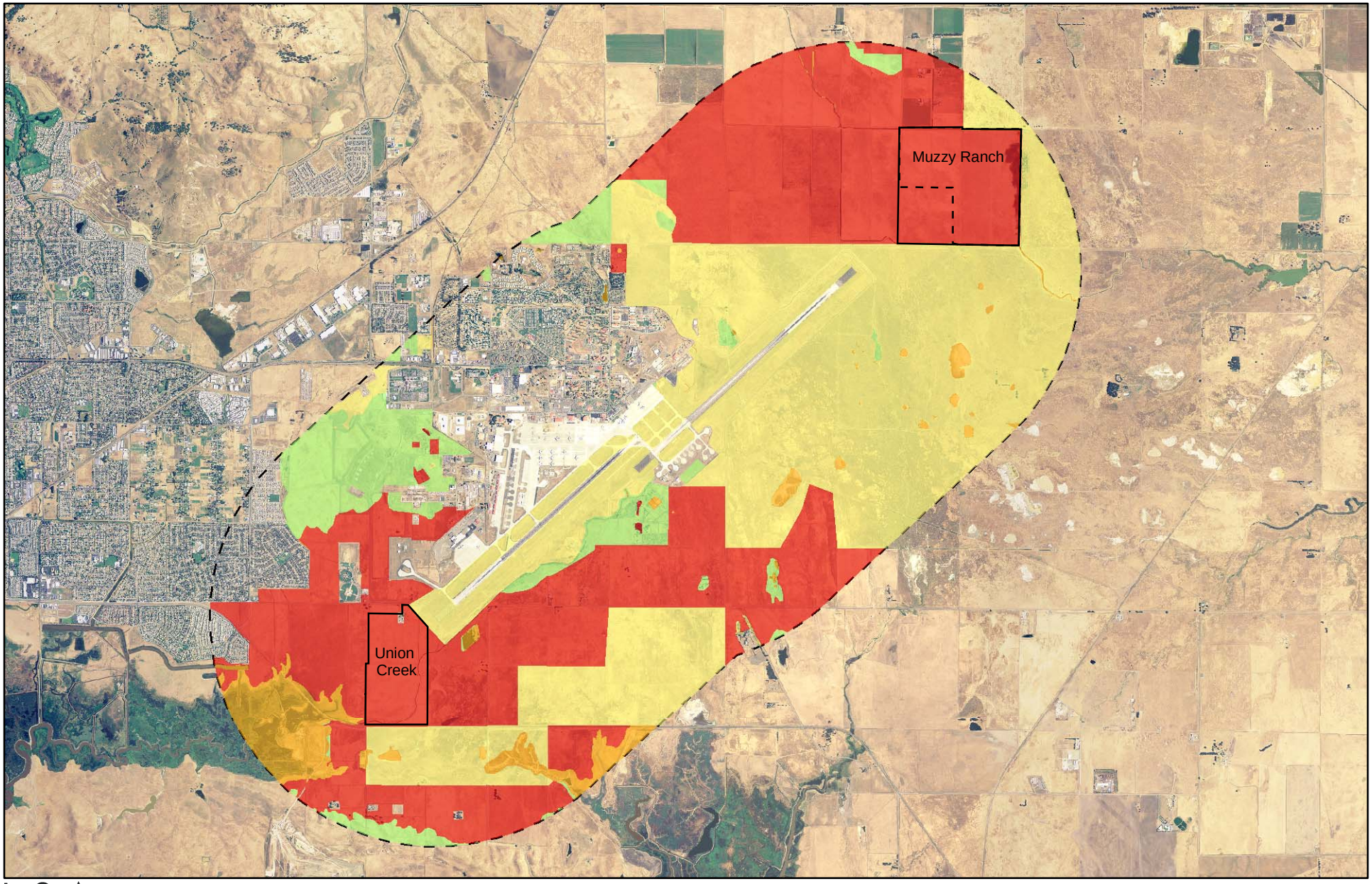
[a] Relative Hazard Score, from FAA 2004

[b] 0 = species not expected to occur more than on an incidental basis

1 = species expected to occur singly or in small groups

2 = species expected to occur in large flocks (> 20 inds.)

Weighted Hazard Score = sum of species RHS x habitat use rating



LSA

N

0 2,000 4,000

Feet

Study Area

Restoration parcel

Limit of restoration

Hazard Level

Low

Medium

High

Very high

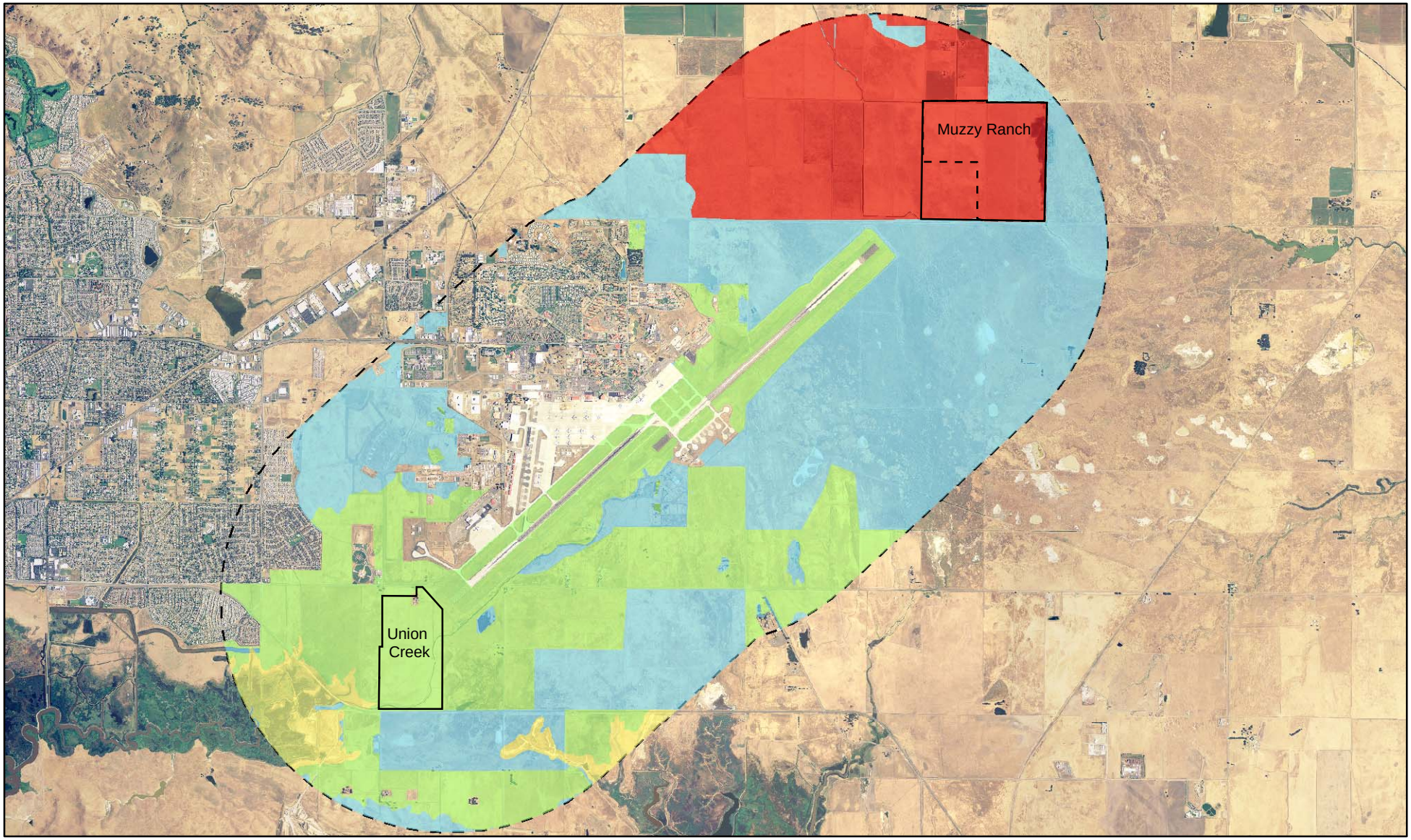
FIGURE 3

Bird Hazard Assessment
Travis Air Force Base

Hazard levels of surrounding habitats during wet season

Source: Aerial Photos from the U.S. Department of Agriculture (2005)

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LSA

N

0 3,000 6,000
Feet

Study Area
Restoration parcel
Limit of restoration

Hazard level
Very low
Low

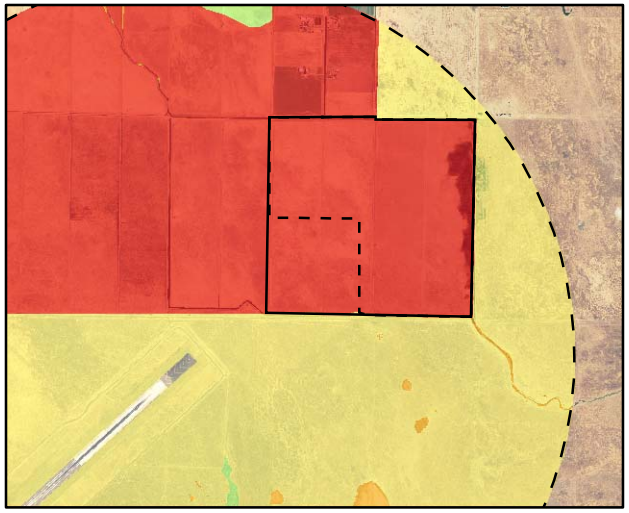
Medium
High
Very high

Source: Aerial Photos from the U.S. Department of Agriculture (2005)
I:\ABP330\GIS\Maps\TravisAFB\Figure3_HazardLevelsDrySeason(8X11).mxd (04/02/2007)

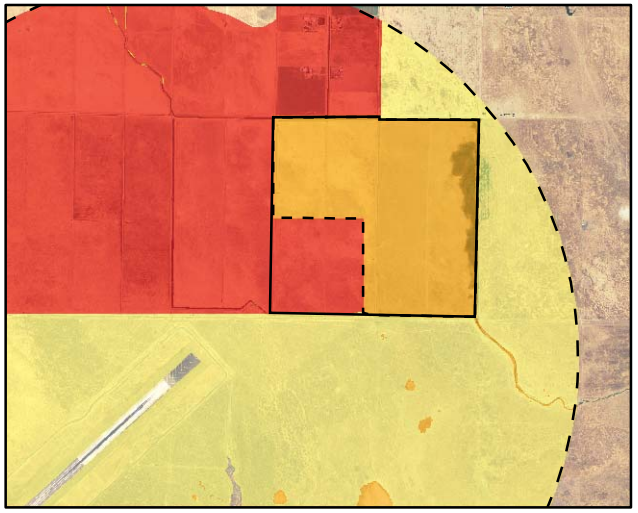
FIGURE 4

Bird Hazard Assessment
Travis Air Force Base

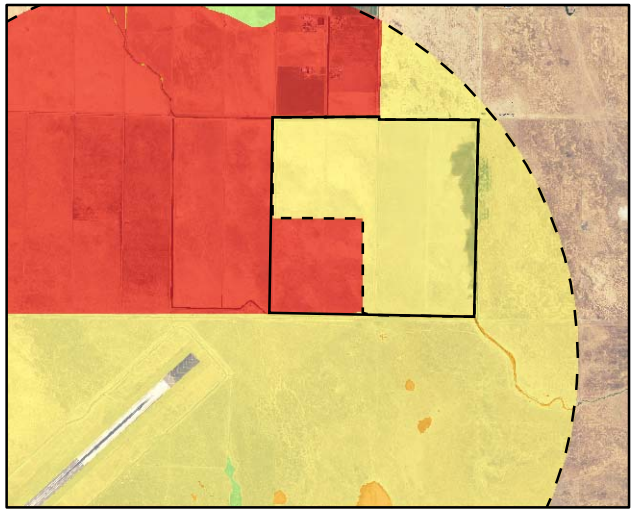
Hazard levels of surrounding habitats during dry season



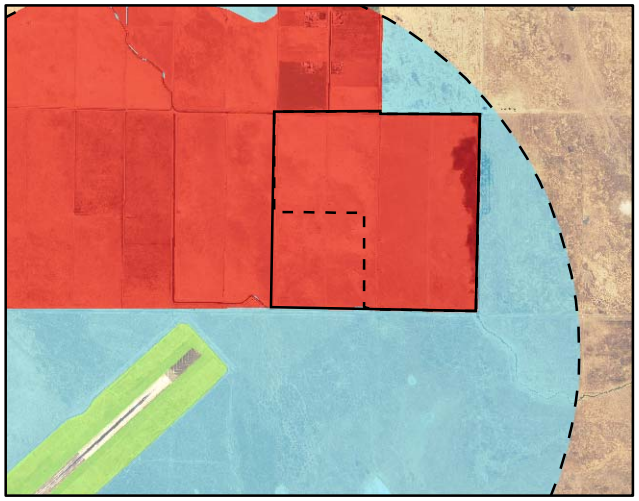
Wet Season- Present
Muzzy Ranch Weighted Hazard Score = 569



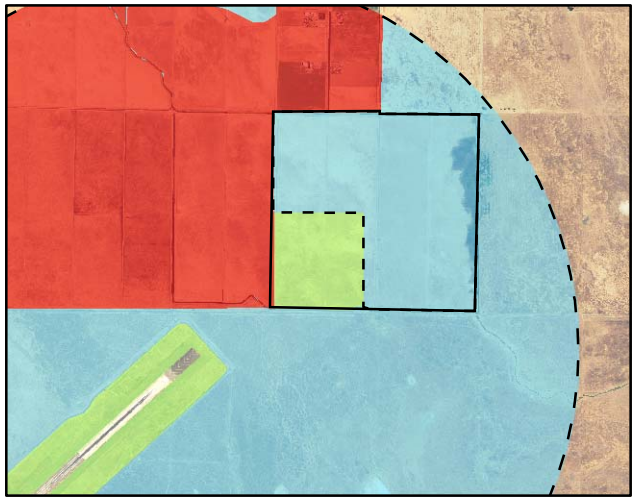
Wet Season- 1-2yrs after restoration
Muzzy Ranch Weighted Hazard Score = 426



Wet Season- 3yrs after restoration
Muzzy Ranch Weighted Hazard Score = 371



Dry Season- Present
Muzzy Ranch Weighted Hazard Score = 551



Dry Season- After Restoration
Muzzy Ranch Weighted Hazard Score = 192

LSA

N

0 2,500 5,000
Feet

Study Area
Restoration parcel
Limit of restoration

Hazard level
Very low
Low

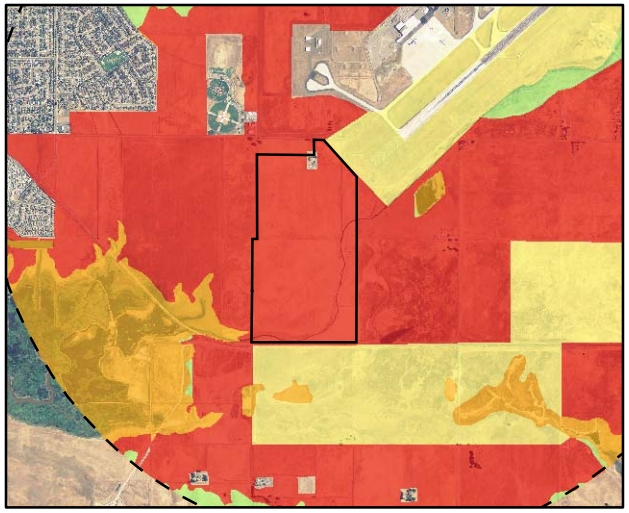
Medium
High
Very high

Source: Aerial Photos from the U.S. Department of Agriculture (2005)
I:\ABP330\GIS\Maps\TravisAFB\Figure5_MuzzyRanchHazardLevel(8X11).mxd (04/02/2007)

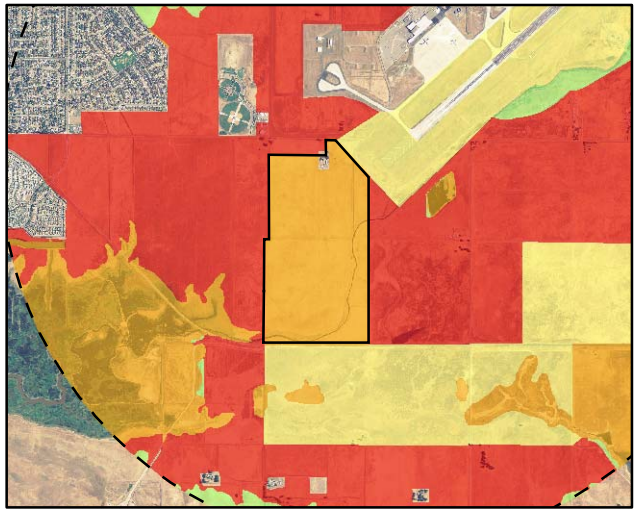
FIGURE 5

Bird Hazard Assessment
Travis Air Force Base

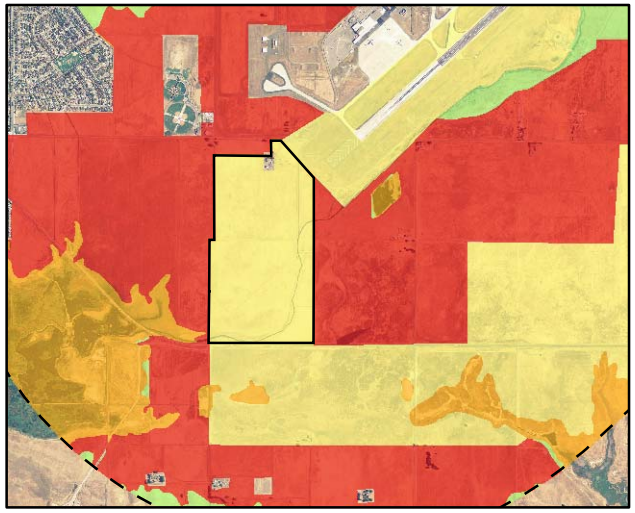
Current and post-restoration hazard levels
of Muzzy Ranch Mitigation Bank



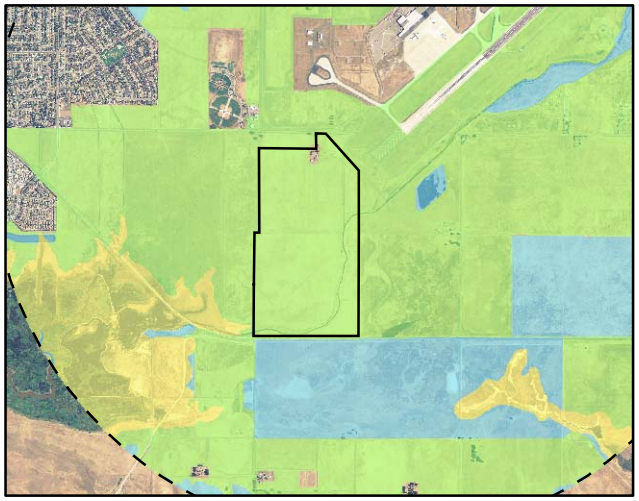
Wet Season- Present
Union Creek Weighted Hazard Score = 569



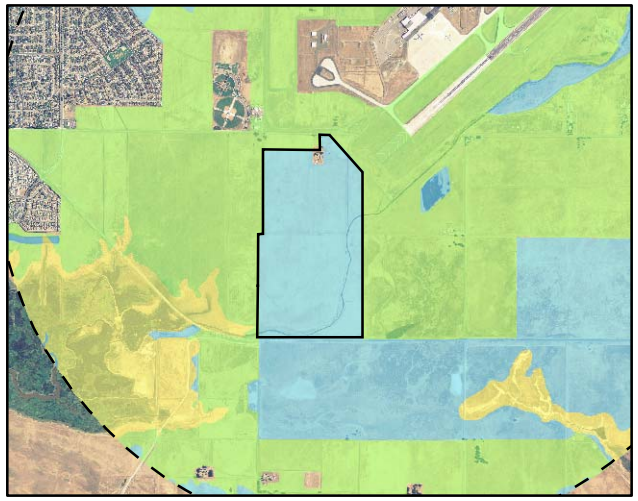
Wet Season- 1-2yrs after restoration
Union Creek Weighted Hazard Score = 426



Wet Season- 3yrs after restoration
Union Creek Weighted Hazard Score = 371



Dry Season- Present
Union Creek Weighted Hazard Score = 293



Dry Season- After Restoration
Union Creek Weighted Hazard Score = 192

LSA

N

0 2,500 5,000
Feet

Study Area
Union Creek Restoration Area

Hazard Level
Very low
Low
Medium
High
Very high

FIGURE 6

Bird Hazard Assessment
Travis Air Force Base

Current and post-restoration hazard levels
of Union Creek Mitigation Bank

Source: Aerial Photos from the U.S. Department of Agriculture (2005)
I:\ABP330\GIS\Maps\TravisAFB\Figure6_UnionCreekHazardLEvel(8X11).mxd (04/02/2007)

DISCUSSION

The winter or wet season produces hazardous conditions in most habitats because of the presence of shallow water and low-growing vegetation. Irrigated and non-irrigated pasture, playa pools, and tidal marsh tend to have higher hazard scores because of their attractiveness to large groups of species with correspondingly high relative hazard scores (geese, ducks, large flocking shorebirds, etc.). Larger sized, shallowly flooded ponds and fields with abundant forage are the major attractants. Vernal pools can also attract significant bird use, but species that typically use these systems tend to occur in isolated pairs or small flocks (Silveira 1998). The overall extent of wetlands across the landscape may be significant (30 to 50 percent of a given area), but individual pools tend to be smaller in size and separated by upland mounds of 3 to 5 feet in height, reducing the amount of available open water foraging habitat at a given pool.

In the dry season, irrigated pasture and marsh provide the primary attractants to birds because of the presence of water in an otherwise dry climate. Irrigated pastures become especially attractive because of their periodic inundation for flood irrigation and the resulting increase in prey availability. Irrigation schedules for pastures in this portion of Solano County require flooding every two to four weeks from May through October.

Vernal pool restoration basically involves the un-leveling of a former irrigated or non-irrigated pasture to recreate a more natural “pool and mound” topography. Currently, the proposed vernal pool restoration sites are located in habitats with high hazard scores during the wet season (Union Creek) or throughout the year (Muzzy Ranch), due to the presence of large areas of shallow standing water. Based on the results of this assessment, the conversion of these sites to vernal pool grassland may actually decrease bird hazards, particularly through the elimination of flood irrigation at Muzzy Ranch during the summer dry season. Also, the creation of numerous small pools interspersed with upland mounds will eliminate the large shallow pools that currently attract large flocks of waterbirds.

In summary, the restoration of irrigated (Muzzy Ranch) and non-irrigated (Union Creek) pasture to vernal pool grassland is not expected to significantly increase the amount of bird use in the vicinity of Travis AFB. Vernal pools are expected to attract fewer birds than large expanses of open water, which would continue to occur on both sites if they were allowed to remain in agricultural (i.e., forage) production. Given the abundance of vernal pool habitat already present in the vicinity of Travis AFB, the proposed restoration of the Muzzy Ranch and Union Creek parcels is not expected to provide substantial habitat values beyond those already present in the surrounding landscape.

REFERENCES

Bates, L. A., W. H. Dollarhide, G. Kliewer, G. S. Staidl and C. Goudey. 1977. *Soil Survey of Solano County*. USDA Soil Conservation Service and UC Agricultural Experiment Station.

Dolbeer, R. A., S. E. Wright, and E. C. Cleary. 2000. Ranking the hazard level of wildlife species to aviation. Wildlife Society Bulletin 28:372–378.

Federal Aviation Administration (FAA). 2004. Hazardous Wildlife Attractants on or near Airports. Advisory Circular No. 150/5200-33A. U.S. Department of Transportation. July 27.

Silveira, J. G. 1998. Avian uses of vernal pools and implications for conservation practice. Pages 92–106 *in* C. W. Witham, E. T. Bauder, D. Belk, W. R. Ferren Jr., and R. Ornduff (editors). Ecology, Conservation, and Management of Vernal Pool Ecosystems – Proceedings from a 1996 Conference. California Native Plant Society, Sacramento.

Oral and Written Comments
Interim Landing Zone, Moses Lake, Washington
Draft Environmental Assessment
June 2007

Comment Tracking Code	Date of Letter (2007)	Author
01	July 2	Tim Johnson
02	July 26	Brice D. Pinkerton, Esq.
03	July 27	Gail S. Pinkerton
04	July 27	Pat S. and Donna Palmerton
05	July 25	Darin and Bejai Palmerton
06	July 25	Brett and Sharon Palmerton
07	July 27	Holly and Barry Moos
08	July 23	Janet Schafer
09	July 20	Brian J. Preston
10	July 30	Larry and Cindy Poff
11	July 29	Jerri L. Parham
12	undated	Residents of Bacon Lane, Moses Lake, WA
13	July 27	Diana and Gerry McFaul
14	undated	Kenneth Lloyd
15	July 30	L. Jerald Sheffels
16	July 28	Connie Rodriguez
17	July 26	Tom and Kathryn Jones
18	July 27	Kim Jensen
19	July 27	Juan Ramirez
20	July 31	Terry Roberts, Director, CA State Clearinghouse
21	July 23	Native American Heritage Commission
22	July 29	Noonan Family (Michael A. Kvarme, Esq.)
23	July 19	Muzzy Farms (Frank Andrews, Debra Russo, Mgrs.)
24	July 30	Noon Family (Richard C. Jacobs, Esq.)

Cross Reference Index by Comment Tracking Number

Interim Landing Zone, Moses Lake, Washington

Draft Environmental Assessment
June 2007

Comment No.	Author	Summary Comment	Comment Response

01	Tim Johnson	I have had many problems with the military flights in and out of the airport. *** Your planes fly over my house so low they have broken the seals on three windows. *** I have pictures of the low altitude these planes routinely fly at. I have met with the commissioners on more than one occasion with no positive result. *** The original promise the commissioners made to the people of Grant County was, NO flights after 10:00 P.M. *** All flights should maintain a safe minimum altitude at all times and should cease at 10:00 P.M. as promised!	As presented in Table 3.1-6 of the draft EA, studies show that window damage does not occur until the noise/vibration from the source reaches 131 dB/1.5 psf. As stated in Subchapter 3.1.2.2 of the draft EA, C-17 aircraft would produce a maximum noise level of 113 dB upon takeoff (at takeoff power) and 200 feet from the receptor. Thus, it is highly unlikely that the failure of seals on household windows is from noise/vibration from C-17s operating at the airport. Air Force flight patterns at Grant County Airport result from several considerations, including: • Aircraft flight tracks routed to avoid noise-sensitive areas as much as possible; • Criteria governing the speed, rate of climb, and turning radius for each type of aircraft; • Efforts to control and schedule missions to keep noise levels low, especially at night; and • Coordination with the FAA to minimize conflict with civil aircraft operations. Flight track locations and the aircraft profile (i.e., airspeed, altitude, and power setting) along the flight tracks are a function of aircraft safety, the event being accomplished (i.e., type of takeoff, type of landing, type of closed pattern), and other aircraft operations in the area (i.e., other airports, flight tracks at other airports, published airways, etc.). Flights by C-17 aircraft are conducted in accordance with Air Force and Air Mobility Command directives, which are based on FAA criteria. These directives include guidance for items such as altitude, and the guidance considers aircraft altitude. The C-17 is a large aircraft and gives the visual perception that it is lower than it actually is. The Air Force considers aircraft altitude when developing flight tracks. Safety is paramount for all Air Force operations at Grant County Airport, and operations and aircrews do not operate C-17s outside the operating envelope. The methods and procedures by which aircrews accomplish training (tactical and non-tactical) consider risk and are designed to allow an adequate margin of safety above the “edge of the operating envelope” for the C-17 aircraft. Training events accomplished at night (i.e., 10:00 p.m. to 7:00 a.m.) are necessary because pilots are accomplishing more during operational missions at time period. Thus, to ensure pilots are trained in conditions that duplicate the conditions in which they can be employed, nighttime flying is necessary. The possibility for operations after 10:00 p.m. would be greater in the summer than in the winter because darkness occurs later in the day in the summer and the training events must be accomplished during darkness. Thus, operations after 10:00 p.m. could be seasonal.

02	Bruce Pinkerton	Many times your planes fly over my home at varied levels and are extremely loud. *** The purpose of this letter is to raise concern about any proposal that would increase landings after 10:00 p.m. I am not going to object to daytime flying activities because I understand there is a need to have flight training for our military. *** If your plans travel over our house at low altitudes after 10:00 p.m., we will obviously suffer sleep deprivation. *** …if a plane flies over our house, we simply stop talking, especially if we are outside, because we cannot hear the conversation, even though I might be located two feet from the person I am having a conversation with.	See response to comment 01 regarding aircraft altitude and operations after 10:00 p.m. The Federal Interagency Committee on Aviation Noise (FICAN) now recommends a new dose-response curve for predicting awakening. FICAN takes the conservative position that, because the adopted curve represents the upper limit of the data presented, it should be interpreted as predicting the maximum percentage of the exposed population expected to be awakened. Based on this new position, it is estimated that outdoor sound exposure level (SELs) of 80 to 100 dBA (60 to 80 dBA indoors) could result in 4 to 10 percent awakenings in the exposed population. Noise must penetrate the residence to disturb sleep. Interior noise levels are lower than exterior levels due to the attenuation of the sound energy by the structure. The amount of attenuation provided by the building is dependent on the type of construction and whether the windows are open or closed. The approximate national average attenuation factors are 15 dBs for open windows and 25 dBs for closed windows. Twenty dBA is conservatively used to estimate attenuation for a typical dwelling unit. Temporary speech interference as a result of overflight aircraft noise is possible as a result of the Proposed Action. As discussed in Subchapter 4.2.2 of the draft EA, there is good probability of frequent speech disruption from aircraft overflight that produces outdoor DNL 75 dBA.

03	Gail Pinkerton	*** But after reading the article and discussing it with other community members it is apparent the increase in air traffic will increase from 10 p.m. until 7 a.m. We have experienced low altitude flying aircrafts in our area and when they fly low, they have shook our house and upset our farm animals.	See response to comment 01 regarding aircraft altitude and operations after 10:00 p.m. As presented in Table 3.1-6 of the draft EA, studies show that structural damage does not occur until the noise/vibration from the source reaches 127 dB. As stated in Subchapter 3.1.2.2 of the draft EA, C-17 aircraft would produce a maximum noise level of 113 dB during takeoff (at takeoff power) and 200 feet from the receptor. Thus, it is highly unlikely that structural damage would occur from noise/vibration from C-17s operating at the airport. Studies of aircraft noise and sonic booms, both in the U.S. and overseas, have addressed acute effects, including effects of startle responses (sheep, horses, cattle, fowl), and effects on reproduction and growth (sheep, cattle, fowl, swine); parental behaviors (fowl, mink); milk letdown (dairy cattle, dairy goats, swine); and egg production. High noise may trigger a startle response that raises the heart rate, but the heart rate returns to normal in a very short time. There are good dose-response relationships describing the startle tendency to various levels of noise. However, studies determined there would be no long-term behavioral nor breeding effects.
04	Pat/Donna Palmerton	We are currently experiencing a huge number of low level operations by C-17 aircraft based at McCord Air Force Base in Tacoma, Washington. Adding 12,960 additional C-17 operations per year to the Grant County Airport will negatively impact the quality of life in our community through increased noise and air pollution.	See response to comment 01 regarding aircraft altitude. The flight tracks (location of aircraft) and profiles (aircraft airspeed and altitude at various points along the flight track) that would be used by the additional C-17 aircraft operating at the airport under the Proposed Action would be identical to those flown by McChord AFB C-17 aircrews under the baseline condition. The increase in persons exposed to elevated aircraft noise and the potential for health issues from noise would be minor. As noted in Table 4.2-2 of the draft EA, an additional 376 persons would be exposed to DNL 65 dBA and greater, an increase of 18% when compared to the baseline condition. However, the 376 persons would equate to 3% of the 12,373 persons who live within a 5-mile radius of the airport. As summarized in Table 2.5-1, noise-induced hearing loss would not occur because individuals would not be exposed to noise for the duration at which loss could occur. See response to comment 02 concerning speech interference. As presented in Table 4.2-5 of the draft EA, the greatest increase in any of the criteria pollutants would be minimal (0.1%) when compared to the baseline condition.

05	Darin/Bejar Palmerton	…very opposed to the Air Force plan to have C-17 aircraft stationed in California use the Grant County Airport…! *** …these planes should practice where they are based.	As noted in Subchapter 1.2 of the Draft EA, the California bases have C-17 aircraft but don't have a nearby LZ where they can practice operations. Regardless of the availability of an LZ, the aircrews must accomplish training requirements to stay proficient and available to accomplish missions worldwide.
06	Brett/Sharon Palmerton	We currently have the McCord C-17 landings and we do not need to be bringing in the planes based in California to practice and further disturb our way of life. We have enough air pollution from the planes landing at Grant County Airport and we do not want any more.	See response to comment 04 concerning air pollution.
07	Holly/Barry Moos	It is not understandable while the residents of our community and the staff/ workers/ students at the college and businesses near the airport should have to suffer the noise of the C-17 aircraft, when those aircraft are not even based in our community. *** We can remember in grade school & junior high, our teachers having to quit talking/teaching until the plane would pass because the noise was so loud.	See responses to comments 01, 02, 03, and 04 regarding noise, and comment 05 for out-of-state aircraft. Interior noise at schools could be minimized by: installing additional insulation; adding a second window pane; sealing gaps or leaks in windows and doors; replacing windows and doors with windows and doors that offer better sound proofing; installing baffles in vents; and improving the exterior roofing. Construct new (and when modernizing existing) schools to meet the American National Standards Institute standard of an hourly A-weighted average sound level of 40 dBs, which must not be exceeded for more than 10% of the hour. The Air Force does not have the authority to add noise devices or upgrades in facilities that are not on Air Force property.
08	Janet Schafer	It is disturbing to learn that we may be an interim C-17 Landing Zone which means an increase of more than 50% with planes flying in from Travis Air Force Base and March Air Reserve Base in California conduced at low altitude both day and night (10:00 pm-7:00 am). I am against communities in western Washington and California benefiting from huge military payrolls, contracts and Defense Department spending while Moses Lake gets **extremely high levels of noise pollution** [*author's emphasis*] 24 hours a day, seven days a week!	See response to comment 05 regarding aircraft from California using Grant County Airport. See response to comment 01 concerning low altitude flying and nighttime operations. See response to comments 01, 02, 03, and 04 regarding noise.
09	Brian Preston	No actionable comments	Noted.
10	Larry/Cindy Poff	No actionable comments	Noted.

11	Jerri Parham	We believe this causes aircraft to fly lower over our house than FAA rules allow making that landing. Of course, the aircraft are very loud, often drop their landing gear right over us, and fly through the night when we are trying to sleep. Not only that, but the rumbling has ruined several windows in our house. The windows are low-E and argon filled. Vibrations have allowed the argon to escape leaving condensation in its place.	See response to comments 01, 02, 03, and 04.
12	Residents Bacon Lane	The current noise level caused by the roar of the engines is one and a half times greater that [*sic*] the decimal noise level of pollution allowed by the State of Washington. Occasionally the C-17 pilots fly so low over our property that the pilot is clearly visible in the cockpit window. I believe this is a violation of FAA regulations on minimum altitude. The late night flights already keep us awake and additional flights would be detrimental to our health by causing sleep loss.	See response to comments 01, 02, 03, and 04.
13	Diana/Gerry McFaul	They are welcome to land and take-off all during the day, but we do not want them landing after 7 pm or before 7 am (9 am on the weekends). We both work days and need our sleep to be able to get up and go through another day. *** The noise from those plans actually shakes houses as they pass over.	See response to comments 01, 02, and 03.
14	Kenneth Lloyd	I know of AC [*aircraft*] simulations for experienced flight personal [*sic*]. So why is training have any importants [*sic*] here at Moses Lake Airport?	See response to comment 05 concerning use of Grant County Airport. As noted in the comment, the fidelity flight simulators can produce has increased significantly over the recent years due to technological improvements. In this respect, more and more training requirements are being accomplished in the simulator. However, there is still a need to practice flying events in the aircraft.
15	Jerald Sheffels	If they do not have the facilities to train in California or nearby move the groups to Washington. You have given no notice to the outlining [*sic*] area training routes that there will be an increase in use. We already have conflict issues with C-17's on these routes.	See response to comment 05 concerning use of Grant County Airport by C-17s from California. As described in Subchapter 2.2 of the Draft EA, the proposed action evaluated in this EA does not include use of low level military training routes in Washington that are used by McChord AFB aircrews.

16	Connie Rodriguez	The following pollutions already occur by having McCord Air Force Base conducting training activities - at work there are occasions that low level aircraft sound as through they will crash into the building. *** On one specific occasion a low flying aircraft was dumping liquid out over my property.	See response to comment 01 regarding aircraft altitude. It is assumed the comment refers to fuel. Dumping fuel is limited to actual aircraft emergency conditions where the weight of the aircraft has to be reduced quickly to allow the aircraft to continue to fly (i.e., engine failure at high aircraft gross weight). Fuel dumping training is accomplished in the flight simulator. Aircraft weight during training sorties is such that dumping fuel would not be required because the weight is below the critical weight where flight would not be possible should an engine fail. Fuel tanks are sealed bladders that are integral in the wings. Although minor leaks can occur, they are typically noted during the pre-flight walk-around inspection and repaired before flight. If not repaired, the aircraft is not flown for safety reasons. Aircrews are restricted from flying an aircraft with known fuel leaks. Additionally, if fuel was leaking at a rate that would be visible from the ground, the aircrew likely would notice it on the aircraft gauges and/or through the warning systems, correct the problem, and land as quickly as possible (i.e., not continue the sortie). It is likely the observed liquid was vapor that formed as a result of the meteorological conditions (humidity) and the air pressure changes as the air flows over the wing.
17	Tom/Kathryn Jones	The Air Force planes fly too low of altitude and without normal sound buffers. The increased flights over our clean area will be a major source of air pollution and will be part of the chemtrail concern.	See response to comment 01 for aircraft altitude and comment 04 for air emissions.
18	Kim Jensen	To increase this traffic especially with the loud military jets is outrageous. These flight paths go directly over my home and rattle the whole house.	See response to comments 01 and 03.
19	Juan Ramirez	The noise from these planes is awful and already is disruptive to my home and sleep.	See response to comments 02, 03, and 04.
20	CA Clearinghouse	No actionable comments	Noted.
21	Native American Heritage Commission	"We suggest that federal laws … be applied to the proposed project.	Letters notifying Native American tribes were mailed September 10, 2007.

22	Noonan Family (Michael A. Kvarme, Esq.)	The Final Draft EA [is] inadequate for the following reasons: Lack of adequate notice; lack of consideration of less impactful decisions such as other possible military bases or former military bases in the western United States; failure to fully consider adverse environmental impacts within the local area and beyond; and adverse impacts on the local economy and orderly growth of the adjoining communities.	The *Air Force Environmental Impact Analysis Process* (32 CFR 989) states that the environmental assessment and Finding of No Significant Impact should be made available to governmental agencies and the public for comment (see appendices A and B of the draft EA). In compliance with this directive, the Air Force distributed the draft EA to agencies and published newspaper ads announcing the availability of the draft EA to the public for review in newspapers that have coverage for the three installations being considered in the proposed action. Subchapter 2.1.3 of the draft EA explains the guidance (i.e., 32 CFR 989.8[b]) the Air Force followed in selecting the alternatives considered in the EA. The guidance states: "Reasonable alternatives are those that meet the underlying purpose and need for the proposed action…." The guidance also states: "If the Air Force identifies a large number of reasonable alternatives, it may limit alternatives selected for detailed environmental analysis to a reasonable range or to a reasonable number of examples covering the full spectrum of alternatives." The rationale for selection of resources considered in the EA is explained in Subchapter 1.2.3. The Air Force recognizes it contributes to local economies. However, the Air Force is only one of many factors that influence local economies.

23	Noonan Family (Richard C. Jacobs, Esq.)	Our analysis of the assessment indicates that approximately one-third of this acreage, or more than 300 acres, would fall within the expanded 60-65 dB contour lines around Travis, if the proposed landing zone and associated aircraft operations were placed at Travis. Under the recent Airport Land Use Compatibility Plan that was adopted by the Solano County Airport Land Use Commission and applicable to Travis, Mr. Noonan and his family would be precluded from developing their property between the 60-65 dB contour lines with residential housing, unless the City of Fairfield overrode the Plan's requirements. That limitation would restrict the future potential uses of the property, and would impose very significant financial impacts on the Noonans. There is no discussion in the assessment of any sort of the implications of the Airport Land Use Compatibility Plan, and no discussions of the financial impacts that a C-17 landing zone and associated aircraft operations would impose on the Noonans and other property owners in the area around Travis. We believe the assessment is deficient and ask that it be revised and recirculated for additional public and private analysis and comments.	The Air Force prepared and distributed a second draft EA for agency and public comment because of changes to the Proposed Action and Alternatives. Air Force environmental analysis documents do not assess financial impacts on specific tracts of land because there are many other factors that influence property value over which the Air Force has no control. Figures in the land use section of the second draft EA show that the noise contours in the Noonan property area for each of the three aircraft operating conditions being considered at Travis AFB (*i.e.*, Proposed Action at Travis AFB, Travis AFB Alternative at Travis AFB, and SCLA Alternative at Travis AFB) would be less extensive than the Airport Land Use Commission noise contours. Thus, the proposed action would be consistent with the ALUC.

24	Muzzy Farms (Frank Andrews, Debra Russo, Mgrs.)	Our comments are focused on the portion of the document dealing with bird strike hazards at Travis AFB. Section 4.1.2 of the Environmental Assessment states that "the potential for aircraft accidents or bird-aircraft strikes would remain at the baseline conditions." …the "baseline condition" referred to in the Environmental Assessment is not the condition existing at this time or at the time the tactical runway would be established if the Air Force chooses to locate it at Travis. Instead, the 633 acres immediately north of Travis will constitute the only significant area of irrigated farm land in the 12 square miles immediately surrounding the base and will attract far more birds, especially during spring, summer and fall months, than has been the case for the last five years.	The baseline condition (see Subchapter 3.2.1.3) for bird/wildlife aircraft strikes in the EA presents the occurrence of strikes by altitude of the aircraft for worldwide Air Force operations, which includes Travis AFB data. The EA states: "The potential for bird/wildlife aircraft strikes could fluctuate as a result of the cyclical patterns of bird populations. Historically, 1/2 of 1 percent of all reported bird/wildlife aircraft strikes involving Air Force aircraft resulted in a serious mishap. Therefore, it is unlikely that any of these bird/wildlife aircraft strike incidents would involve injury to either aircrews or to the public, or damage to property (other than the aircraft)." The center of the property related to the comment is located about 6,000 feet northeast of the airfield on an extension on the Runway 231L/03R centerline. Based on this location, aircraft intending to land on the runway as well as the proposed LZ would pass over the property because of the need for the aircraft to be aligned with the runway or the LZ when the aircraft is that close to the landing area. Thus, from a safety and an aircraft operating parameter perspective, overflight of at least a portion of the property cannot be avoided.

DEPARTMENT OF THE AIR FORCE

HEADQUARTERS AIR MOBILITY COMMAND

25 October 2007

Colonel Frank Gines
HQ AMC/A7P
507 Symington Drive
Scott AFB, IL 62225-5022

Mr. L. Jerals Sheffels
8505 Douglas Road East
Wilbur, Washington 99185

Dear Mr. Sheffels,

Thank you for your comments provided on the draft Environmental Assessment (EA) for an Interim Western United States C-17 Landing Zone. As required by law, the Air Force considered your comments relative to the adequacy of the initial draft EA or the merits of the alternatives discussed, or both, to produce a revised draft EA.

Current world events have demonstrated a need for C-17 airlift support to occur more frequently during darkness. Additionally, night time tactical landings occur more often on landing zones (LZ). This issue drives the requirement to accomplish a greater number of training events during periods of darkness.

The Air Force considered your comments and has produced a second draft EA. This draft EA assesses an overall reduction in the number of airfield operations at Grant County Airport within the proposed action and alternative actions. Additionally, the number of operations is reduced because operations would be accomplished at two or more airfields for the proposed action and each alternative. The first draft EA considered operations at only one airfield for the proposed action and each alternative.

Similar to the first draft EA, the second draft EA will be announced in the local newspaper, be available at the library, and via the internet. Please contact is Mr Doug Allbright at (618) 229-0846 if you have questions.

Sincerely,

FRANK GINES, Colonel, USAFR
IMA to Chief, Plans & Programs Division

DEPARTMENT OF THE AIR FORCE

HEADQUARTERS AIR MOBILITY COMMAND

25 October 2007

Colonel Frank Gines
HQ AMC/A7P
507 Symington Drive
Scott AFB, IL 62225-5022

Ms. Gail Pinkerton
7584 Rd K7 NE
Moses Lake, WA 98837

Dear Ms. Pinkerton,

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IMA to Chief, Plans & Programs Division

DEPARTMENT OF THE AIR FORCE

HEADQUARTERS AIR MOBILITY COMMAND

25 October 2007

Colonel Frank Gines
HQ AMC/A7P
507 Symington Drive
Scott AFB, IL 62225-5022

Mr. Kenneth Lloyd
7135 Poplar St
Moses Lake, WA 98837-2710

Dear Mr Lloyd,

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FRANK GINES, Colonel, USAFR
IMA to Chief, Plans & Programs Division

DEPARTMENT OF THE AIR FORCE

HEADQUARTERS AIR MOBILITY COMMAND

25 October 2007

Colonel Frank Gines
HQ AMC/A7P
507 Symington Drive
Scott AFB, IL 62225-5022

Mr. Larry Poff
1130 S Jefferson Ave
Moses Lake, WA 98837

Dear Mr Poff,

Thank you for your comments provided on the draft Environmental Assessment (EA) for an Interim Western United States C-17 Landing Zone. As required by law, the Air Force considered your comments relative to the adequacy of the initial draft EA or the merits of the alternatives discussed, or both, to produce a revised draft EA.

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Sincerely,

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IMA to Chief, Plans & Programs Division

DEPARTMENT OF THE AIR FORCE

HEADQUARTERS AIR MOBILITY COMMAND

25 October 2007

Colonel Frank Gines
HQ AMC/A7P
507 Symington Drive
Scott AFB, IL 62225-5022

Mr./Ms. English & Residents of Bacon Lane
6824 Bacon Ln NE
Moses Lake, WA 98837-1553

Dear Mr./Ms. English & Residents of Bacon Lane,

Thank you for your comments provided on the draft Environmental Assessment (EA) for an Interim Western United States C-17 Landing Zone. As required by law, the Air Force considered your comments relative to the adequacy of the initial draft EA or the merits of the alternatives discussed, or both, to produce a revised draft EA.

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IMA to Chief, Plans & Programs Division

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS AIR MOBILITY COMMAND

25 October 2007

Colonel Frank Gines
HQ AMC/A7P
507 Symington Drive
Scott AFB, IL 62225-5022

Ms. Diana & Mr. Gerry McFaul
940 South Garden Dr
Moses Lake, WA 98837

Dear Ms. & Mr. McFaul,

Thank you for your comments provided on the draft Environmental Assessment (EA) for an Interim Western United States C-17 Landing Zone. As required by law, the Air Force considered your comments relative to the adequacy of the initial draft EA or the merits of the alternatives discussed, or both, to produce a revised draft EA.

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IMA to Chief, Plans & Programs Division

DEPARTMENT OF THE AIR FORCE

HEADQUARTERS AIR MOBILITY COMMAND

25 October 2007

Colonel Frank Gines
HQ AMC/A7P
507 Symington Drive
Scott AFB, IL 62225-5022

Ms. Connie Rodriquez
8988 Neppel Rd. NE
Moses Lake, WA 98837

Dear Ms. Rodriquez,

Thank you for your comments provided on the draft Environmental Assessment (EA) for an Interim Western United States C-17 Landing Zone. As required by law, the Air Force considered your comments relative to the adequacy of the initial draft EA or the merits of the alternatives discussed, or both, to produce a revised draft EA.

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IMA to Chief, Plans & Programs Division

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS AIR MOBILITY COMMAND

25 October 2007

Colonel Frank Gines
HQ AMC/A7P
507 Symington Drive
Scott AFB, IL 62225-5022

Ms. Kim Jensen
6647 Stratford Rd NE
Moses Lake, WA 98837

Dear Ms. Jensen,

Thank you for your comments provided on the draft Environmental Assessment (EA) for an Interim Western United States C-17 Landing Zone. As required by law, the Air Force considered your comments relative to the adequacy of the initial draft EA or the merits of the alternatives discussed, or both, to produce a revised draft EA.

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IMA to Chief, Plans & Programs Division

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS AIR MOBILITY COMMAND

25 October 2007

Colonel Frank Gines
HQ AMC/A7P
507 Symington Drive
Scott AFB, IL 62225-5022

Ms. Holly & Mr. Barry Moos
2108 Beaumont Dr
Moses Lake, WA 98837

Dear Ms. & Mr. Moos,

Thank you for your comments provided on the draft Environmental Assessment (EA) for an Interim Western United States C-17 Landing Zone. As required by law, the Air Force considered your comments relative to the adequacy of the initial draft EA or the merits of the alternatives discussed, or both, to produce a revised draft EA.

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DEPARTMENT OF THE AIR FORCE

HEADQUARTERS AIR MOBILITY COMMAND

25 October 2007

Colonel Frank Gines
HQ AMC/A7P
507 Symington Drive
Scott AFB, IL 62225-5022

Mr. Bruce D. Pinkerton
1426 E. Hunter Place, Suite A
Moses Lake, WA 98837-2400

Dear Mr. Pinkerton,

Thank you for your comments provided on the draft Environmental Assessment (EA) for an Interim Western United States C-17 Landing Zone. As required by law, the Air Force considered your comments relative to the adequacy of the initial draft EA or the merits of the alternatives discussed, or both, to produce a revised draft EA.

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Frank Gines

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HEADQUARTERS AIR MOBILITY COMMAND

25 October 2007

Colonel Frank Gines
HQ AMC/A7P
507 Symington Drive
Scott AFB, IL 62225-5022

Mr. Pat & Ms. Donna Palmerton
537 Castle Dr
Moses Lake, WA 98837

Dear Mr. & Ms. Palmerton,

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HEADQUARTERS AIR MOBILITY COMMAND

25 October 2007

Colonel Frank Gines
HQ AMC/A7P
507 Symington Drive
Scott AFB, IL 62225-5022

Mr. Brett & Ms. Sharon Palmerton
4806 McLaughlin Rd, NE
Moses Lake, WA 98837

Dear Mr. & Ms. Palmerton,

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25 October 2007

Colonel Frank Gines
HQ AMC/A7P
507 Symington Drive
Scott AFB, IL 62225-5022

Mr. Darin & Ms. BeJai Palmerton
4806 McLaughlin Rd, NE
Moses Lake, WA 98837

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25 October 2007

Colonel Frank Gines
HQ AMC/A7P
507 Symington Drive
Scott AFB, IL 62225-5022

Ms. Janet Schafer
8730 Andrews St NE, Suite 200
Moses Lake, WA 98837

Dear Ms. Schafer,

Thank you for your comments provided on the draft Environmental Assessment (EA) for an Interim Western United States C-17 Landing Zone. As required by law, the Air Force considered your comments relative to the adequacy of the initial draft EA or the merits of the alternatives discussed, or both, to produce a revised draft EA.

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25 October 2007

Colonel Frank Gines
HQ AMC/A7P
507 Symington Drive
Scott AFB, IL 62225-5022

Mr. Juan Ramirez
6647 Stratford Road NE
Moses Lake, WA 98837

Dear Mr. Ramirez,

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25 October 2007

Colonel Frank Gines
HQ AMC/A7P
507 Symington Drive
Scott AFB, IL 62225-5022

Mr. Tom & Ms. Kathyrn Jones
422 N Earl Rd
Moses Lake, WA 98837

Dear Mr. & Ms. Jones,

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25 October 2007

Colonel Frank Gines
HQ AMC/A7P
507 Symington Drive
Scott AFB, IL 62225-5022

Mr. Timothy Johnson
701 W. Broadway
Moses Lake, WA 98837

Dear Mr. Johnson,

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25 October 2007

Colonel Frank Gines
HQ AMC/A7P
507 Symington Drive
Scott AFB, IL 62225-5022

Mr. Brian Preston
335 Ridge Rd
Moses Lake, WA 98837-1553

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25 October 2007

Colonel Frank Gines
HQ AMC/A7P
507 Symington Drive
Scott AFB, IL 62225-5022

Mr. Jerri Parham
7836 Rd K5 NE
Moses Lake, WA 98837

Dear Mr. Parham,

Thank you for your comments provided on the draft Environmental Assessment (EA) for an Interim Western United States C-17 Landing Zone. As required by law, the Air Force considered your comments relative to the adequacy of the initial draft EA or the merits of the alternatives discussed, or both, to produce a revised draft EA.

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FRANK GINES, Colonel, USAFR
IMA to Chief, Plans & Programs Division

PARSONS

8000 Centre Park Drive, Suite 200• Austin, Texas 78754• (512) 719-6000 • Fax: (512) 719-6099 • www.parsons.com

November 26, 2007

Reference Librarian - Adult Reference Desk
Vacaville Public Library
1020 Ulatis Drive
Vacaville, CA 95688

Subject: Draft Environmental Assessment
Interim Western United States C-17 Landing Zone

Dear Reference Librarian:

On behalf of the U.S. Air Force, Headquarters Air Mobility Command at Scott Air Force Base, Illinois, Parsons is pleased to provide you with this copy of the second Draft Environmental Assessment for the proposed establishment and operation of interim C-17 landing zones in the western United States. This document should be made available to the public upon request. This document is also available on line at http://public.travis.amc.af.mil/. Additional printed copies of this document are also available upon request from (618) 229-0846.

We request that your receipt of this document be confirmed. Please fill in and sign the bottom portion of this letter and fax it back to (512) 719-6099 attn: John Wallin. The confirmation can also be mailed to the above address, attn: John Wallin. You may also confirm via an email message to john.wallin@parsons.com.

Should you have any questions, please call the undersigned at (512) 719-6010. Thank you for your assistance.

Sincerely,
PARSONS

John Wallin

Attachment: Second Draft Final EA

CONFIRMATION OF RECEIPT:

_____ _____
Signature Date

_____ _____
Printed Name For Vacaville Public Library

PARSONS

8000 Centre Park Drive, Suite 200• Austin, Texas 78754• (512) 719-6000 • Fax: (512) 719-6099 • www.parsons.com

November 26, 2007

Reference Librarian - Adult Reference Desk
Fairfield-Suisun Community Library
1150 Kentucky Street
Fairfield, CA 94533

Subject: Draft Environmental Assessment
Interim Western United States C-17 Landing Zone

Dear Reference Librarian:

On behalf of the U.S. Air Force, Headquarters Air Mobility Command at Scott Air Force Base, Illinois, Parsons is pleased to provide you with this copy of the second Draft Environmental Assessment for the proposed establishment and operation of interim C-17 landing zones in the western United States. This document should be made available to the public upon request. This document is also available on line at http://public.travis.amc.af.mil/. Additional printed copies of this document are also available upon request from (618) 229-0846.

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_____ _____
Signature Date

_____ _____
Printed Name For Fairfield-Suisun Community Library

PARSONS

8000 Centre Park Drive, Suite 200• Austin, Texas 78754• (512) 719-6000 • Fax: (512) 719-6099 • www.parsons.com

November 26, 2007

Reference Librarian - Adult Reference Desk
Mitchell Memorial Library
510 Travis Boulevard
Travis AFB, CA 94535

Subject: Draft Environmental Assessment
Interim Western United States C-17 Landing Zone

Dear Reference Librarian:

On behalf of the U.S. Air Force, Headquarters Air Mobility Command at Scott Air Force Base, Illinois, Parsons is pleased to provide you with this copy of the second Draft Environmental Assessment for the proposed establishment and operation of interim C-17 landing zones in the western United States. This document should be made available to the public upon request. This document is also available on line at http://public.travis.amc.af.mil/. Additional printed copies of this document are also available upon request from (618) 229-0846.

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CONFIRMATION OF RECEIPT:

Signature _____ Date _____

Printed Name _____ For Mitchell Memorial Library

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8000 Centre Park Drive, Suite 200• Austin, Texas 78754• (512) 719-6000 • Fax: (512) 719-6099 • www.parsons.com

November 26, 2007

Reference Librarian - Adult Reference Desk
Moses Lake Library
418 E 5th Avenue
Moses Lake, WA 98837-1797

Subject: Draft Environmental Assessment
Interim Western United States C-17 Landing Zone

Dear Reference Librarian:

On behalf of the U.S. Air Force, Headquarters Air Mobility Command at Scott Air Force Base, Illinois, Parsons is pleased to provide you with this copy of the second Draft Environmental Assessment for the proposed establishment and operation of interim C-17 landing zones in the western United States. This document should be made available to the public upon request. This document is also available on line at http://public.travis.amc.af.mil/. Additional printed copies of this document are also available upon request from (618) 229-0846.

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Signature Date

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Printed Name For South Lake Tahoe Public Library

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8000 Centre Park Drive, Suite 200• Austin, Texas 78754• (512) 719-6000 • Fax: (512) 719-6099 • www.parsons.com

November 26, 2007

Reference Librarian - Adult Reference Desk
Victorville City Library
15011 Circle Dr.
Victorville, CA 92395

Subject: Draft Environmental Assessment
Interim Western United States C-17 Landing Zone

Dear Reference Librarian:

On behalf of the U.S. Air Force, Headquarters Air Mobility Command at Scott Air Force Base, Illinois, Parsons is pleased to provide you with this copy of the second Draft Environmental Assessment for the proposed establishment and operation of interim C-17 landing zones in the western United States. This document should be made available to the public upon request. This document is also available on line at http://public.travis.amc.af.mil/. Additional printed copies of this document are also available upon request from (618) 229-0846.

We request that your receipt of this document be confirmed. Please fill in and sign the bottom portion of this letter and fax it back to (512) 719-6099 attn: John Wallin. The confirmation can also be mailed to the above address, attn: John Wallin. You may also confirm via an email message to john.wallin@parsons.com.

Should you have any questions, please call the undersigned at (512) 719-6010. Thank you for your assistance.

Sincerely,
PARSONS

John Wallin

Attachment: Second Draft Final EA

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November 26, 2007

Reference Librarian - Adult Reference Desk
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11497 Bartlett Ave
Adelanto, CA 92301

Subject: Draft Environmental Assessment
Interim Western United States C-17 Landing Zone

Dear Reference Librarian:

On behalf of the U.S. Air Force, Headquarters Air Mobility Command at Scott Air Force Base, Illinois, Parsons is pleased to provide you with this copy of the second Draft Environmental Assessment for the proposed establishment and operation of interim C-17 landing zones in the western United States. This document should be made available to the public upon request. This document is also available on line at http://public.travis.amc.af.mil/. Additional printed copies of this document are also available upon request from (618) 229-0846.

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Sincerely,
PARSONS

John Wallin

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DEPARTMENT OF THE AIR FORCE
HEADQUARTERS AIR MOBILITY COMMAND

26 November 2007

Colonel Efren Garcia
HQ AMC/A7P
507 Symington Drive
Scott AFB, IL 62225-5022

Ms. Deborah Yarborough Russo, Manager
Mr. Frank J. Andrews, Manager
Muzzy Farms
1107 Kentucky Street
Fairfield, CA 94533

Dear Ms. Russo and Mr. Andrews,

Thank you for your comments for the Muzzy Farms regarding the draft Environmental Assessment (EA) for an Interim Western United States C-17 Landing Zone. As required by law, the Air Force has considered your comments relative to the adequacy of the Draft EA or the merits of the alternatives discussed, or both, and has addressed them in a second draft EA.

The baseline condition (see Subchapter 3.2.1.3) for bird/wildlife aircraft strikes in the EA presents the occurrence of strikes by altitude of the aircraft for worldwide Air Force operations, which includes Travis AFB data. The EA states: "The potential for bird/wildlife aircraft strikes could fluctuate as a result of the cyclical patterns of bird populations. Historically, 1/2 of 1 percent of all reported bird/wildlife aircraft strikes involving Air Force aircraft resulted in a serious mishap. Therefore, it is unlikely that any of these bird/wildlife aircraft strike incidents would involve injury to either aircrews or to the public, or damage to property (other than the aircraft)."

The center of the property related to the comment is located about 6,000 feet northeast of the airfield on an extension on the Runway 231L/03R centerline. Based on this location, aircraft intending to land on the runway, as well as the proposed LZ, would pass over the property because of the need for the aircraft to be aligned with the runway or the LZ when the aircraft is that close to the landing area. Thus, from a safety and an aircraft operating parameter perspective, overflight of at least a portion of the property cannot be avoided.

As with the first Draft EA, the second Draft EA will be announced via local newspaper ads and will be available at libraries near the installations and via the internet. Please contact is Mr Doug Allbright at (618) 229-0846 if you have questions.

Sincerely,

Anthony J. DeLuca for

EFREN V. M. GARCIA, Colonel, USAF
Chief, Plans & Programs Division
Directorate of Installations &
Mission Support

DEPARTMENT OF THE AIR FORCE

HEADQUARTERS AIR MOBILITY COMMAND

26 November 2007

Colonel Efren Garcia
HQ AMC/A7P
507 Symington Drive
Scott AFB, IL 62225-5022

Mr. Michael Kvarme
Weintraub Genshlea Chediak Law Corportion
400 Capitol Mall, Eleventh Floor
Sacramento, CA 95814

Dear Mr. Kvarme,

Thank you for your comments for the Noonan family regarding the draft Environmental Assessment (EA) for an Interim Western United States C-17 Landing Zone. As required by law, the Air Force has considered your comments relative to the adequacy of the Draft EA or the merits of the alternatives discussed, or both, and has addressed them in a second draft EA.

The Air Force, in compliance with the *Air Force Environmental Impact Analysis Process* (32 CFR 989), published newspaper ads that announced the availability of the draft EA for review by the public in newspapers that have coverage for the three installations being considered in the proposed action.

Subchapter 2.1.3 of the draft EA explains the guidance the Air Force followed (*i.e.*, 32 CFR 989.8[b]) in selecting the alternatives considered in the EA. The guidance states: "Reasonable alternatives are those that meet the underlying purpose and need for the proposed action...." The guidance also states: "If the Air Force identifies a large number of reasonable alternatives, it may limit alternatives selected for detailed environmental analysis to a reasonable range or to a reasonable number of examples covering the full spectrum of alternatives."

The rationale for selection of resources considered in the EA is explained in Subchapter 1.2.3. The Air Force recognizes it contributes to local economies. However, the Air Force is only one of many factors that influence local economies.

As with the first Draft EA, the second Draft EA will be announced via local newspaper ads and will be available at libraries near the installations and via the internet. Please contact is Mr Doug Allbright at (618) 229-0846 if you have questions.

Sincerely,

Anthy T. DeSimone for

EFREN V. M. GARCIA, Colonel, USAF
Chief, Plans & Programs Division
Directorate of Installations &
Mission Support

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS AIR MOBILITY COMMAND

26 November 2007

Colonel Efren Garcia
HQ AMC/A7P
507 Symington Drive
Scott AFB, IL 62225-5022

Mr. Richard C. Jacobs
Howard Rice Nemerovski Canady Falk & Rabkin
Three Embarcadero Center
Seventh Floor
San Francisco, CA 94111-4024

Dear Mr. Jacobs,

Thank you for your comments for the Noonan family regarding the draft Environmental Assessment (EA) for an Interim Western United States C-17 Landing Zone. As required by law, the Air Force has considered your comments relative to the adequacy of the Draft EA or the merits of the alternatives discussed, or both, and has addressed them in a second draft EA.

Figures in the land use section of the second draft EA show that the noise contours in the Noonan property area for each of the three aircraft operating conditions being considered at Travis AFB (*i.e.*, Proposed Action at Travis AFB, Travis AFB Alternative at Travis AFB, and SCLA Alternative at Travis AFB) would be less extensive than the Airport Land Use Commission noise contours. Thus, the proposed action at Travis AFB would be consistent with the Travis AFB Land Use Compatibility Plan as adopted by the Solano County Airport Land Use Commission.

Air Force environmental analysis documents do not assess financial impacts on specific tracts of land because there are many other factors that influence property value over which the Air Force has no control.

As with the first Draft EA, the second Draft EA will be announced in the local newspaper and will be available at the library and via the internet. Please contact is Mr Doug Allbright at (618) 229-0846 if you have questions.

Sincerely,

Anthy J. DeSimone for

EFREN V. M. GARCIA, Colonel, USAF
Chief, Plans & Programs Division
Directorate of Installations &
Mission Support

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NOTICE OF AVAILABILITY DRAFT ENVIRONMENTAL ASSESSMENT AND DRAFT FINDING OF NO SIGNIFICANT IMPACT INTERIM WESTERN UNITED STATES C-17 LANDING ZONE

In support of the Air Force Airlift Mobility Transformation Plan to standardize airlift aircraft fleets, increase reliability and capability, and reduce operating and support costs, Headquarters Air Mobility Command (HQ AMC), Scott Air Force Base (AFB), Illinois proposes to establish C-17 Landing Zones (LZ) for aircraft operations on an interim basis in the western United States. The proposed LZ allows C-17 aircraft from Travis Air Force Base (AFB), California to conduct required day and night training until a permanent LZ can be constructed. The Proposed Action would occur at Grant County International Airport (Grant County Airport), Moses Lake, Washington, and Travis AFB; and alternative action locations include Travis AFB, Grant County Airport, and the Southern California Logistics Airport (SCLA).

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Written comments may be mailed to:

Department of the Air Force
Attn: Mr. Doug Allbright
HQ AMC/A7CP
507 Symington Drive
Scott AFB, IL 62225-5022

All written comment letters must be postmarked by **January 5, 2008.** Comments may also be faxed to the attention of Mr. Allbright at (618) 256-8624. Faxed comments must be received by close of business on January 5, 2008. Emailed comments will not be accepted. Should you have any questions, please contact Mr. Allbright at (618) 229-0846 or Mr. Rudy Pontemayor at (707) 424-7517 for Travis AFB issues.

a computer and a laundry list of other counts.

Their fraud scheme, estimated at $100,000 this year alone, paid for jaunts to Paris, London and Hawaii and other luxury perks, including Kirsch's stop at a tony salon for $1,700 worth of hair extensions, police said.

Man charged in machete, gun attacks

ANCHORAGE, Alaska — A car chase through rush-hour traffic ended in the arrest of a man who killed two people and seriously injured three others in a series of machete and gun attacks, police said.

Police stopped Christopher Erin Rogers Jr., 28, on Monday in Anchorage by ramming the stolen sport utility vehicle he was driving, police spokesman Lt. Paul Honeman said. Rogers, who was being held on $1 million bail, is charged with two counts of first-degree murder and three counts of first-degree attempted murder.

Bush to visit Mideast to restart peace talks

WASHINGTON — President Bush will visit the Mideast in early January as he presses the Israelis and Palestinians to resume long-stalled peace talks and forge an elusive agreement for an independent Palestinian homeland.

The White House would not disclose details of Bush's itinerary, but an Israeli television station said he will go to Israel for the first time in his presidency.

– Daily Republic wire services

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(click on "Merry Ch

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Parent's Name _____
Address _____
Phone Number _____
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Please include a sel

NOTICE OF AVAILABILITY
DRAFT ENVIRONMENTAL ASSESSMENT AND DRAFT FINDING OF NO SIGNIFICANT IMPACT
INTERIM WESTERN UNITED STATES C-17 LANDING ZONE

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of set the tone a little bit," Bryant said. "I kind of let my teammates know that this is a game we have to get. No matter if we're short-handed or not, we have to come out here and take care of business."

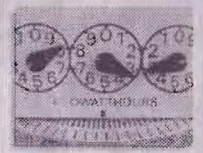
In Minnesota, rebuilding has been painful — literally.

The Timberwolves have been banged up all season, which certainly hasn't helped matters in what already was expected to be a difficult year after Kevin Garnett was dealt to Boston. Randy Foye (knee) and Theo Ratliff (knee) have been out for weeks, while Rashad McCants (knee) and Mark Madsen (shoulder) have recently returned from injuries.

Marko Jaric missed the game with a foot injury, leaving the Wolves with Telfair as the only healthy point guard.

Even their coach hasn't been able to stay healthy. Randy Wittman missed the game and will be out indefinitely when he undergoes back surgery on Wednesday. Sichting will fill in until Wittman returns, though the team has not said when that will be.

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Attn: Mr. Doug Allbright
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APPENDIX C
NATIVE AMERICAN COORDINATION

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NATIVE AMERICAN COORDINATION

To ensure that any sites of traditional cultural value are identified and adequately considered under the proposed action, The Air Force sent the notification letters in this appendix to the tribes announcing the action and requesting concerns regarding the proposed action. One response was received regarding Travis AFB.

The Air Force sent the second draft EA to the tribes to whom notification letters were sent. The distribution list is included in Appendix A.

The Air Force sent the final EA to the tribes to whom notification letters were sent. The distribution list is included in Appendix A.

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PARSONS

8000 Centre Park Drive, Suite 200 Austin, Texas ⊕ 78754-5140 ⊕ (512) 719-6000 ⊕ Fax: (512) 719-6099 ⊕ www.parsons.com

September 11, 2007

SUBJECT: Environmental Assessment for an Interim C-17 Landing Zone in the Western United States

TO: See Distribution

The United States Air Force, with Parsons assistance, is preparing an Environmental Assessment (EA) for an Interim C-17 Landing Zone in the western United States. The Air Force will complete basing 13 C-17 aircraft at Travis Air Force Base (AFB), California in 2008. Additionally, basing eight C-17s at March Air Reserve Base (ARB), California was completed in 2006. A key ability of the C-17 aircraft is its capability to land and take off from a short runway called a landing zone (LZ) that is 3,500 feet to 5,000 feet long and 90 feet wide. An important element of C-17 basing is that aircrews have access to an airfield with an LZ at which they can conduct tactical arrival, departure, and landing training. Currently, there is no LZ available in close proximity to Travis AFB or March ARB at which aircrews from the bases can conduct training.

Under the Proposed Action, aircrews from Travis AFB and March ARB would use the existing C-17 LZ at Grant County International Airport, Moses Lake, Washington. The LZ is currently used for training by C-17 aircrews from McChord AFB, Washington. Operations would begin in late 2007 and continue until approximately 2009.

As part of this effort, and in compliance with the National Historic Preservation Act of 1966, as amended, the American Indian Religious Freedom Act, and the Native American Graves Protection and Repatriation Act of 1990, we are initiating correspondence and consultation efforts with affiliated tribal groups regarding the Grant County International Airport near Lake Moses.

To ensure that any areas of sacred or spiritual significance to Native American groups are considered, we would appreciate your help in identifying any interests or concerns regarding traditional resources or properties within the project area.

Please provide any comments or information by October 19, 2007. You may address any comments or questions to Mr. Doug Allbright, HQAMC/A7CP, 507 Symington Drive, Scott AFB, IL 62225. Mr. Allbright may be reached by phoning (618) 229-0846 or via e-mail at: Doug.Allbright@scott.af.mil.

Sincerely,

Parsons Project Manager

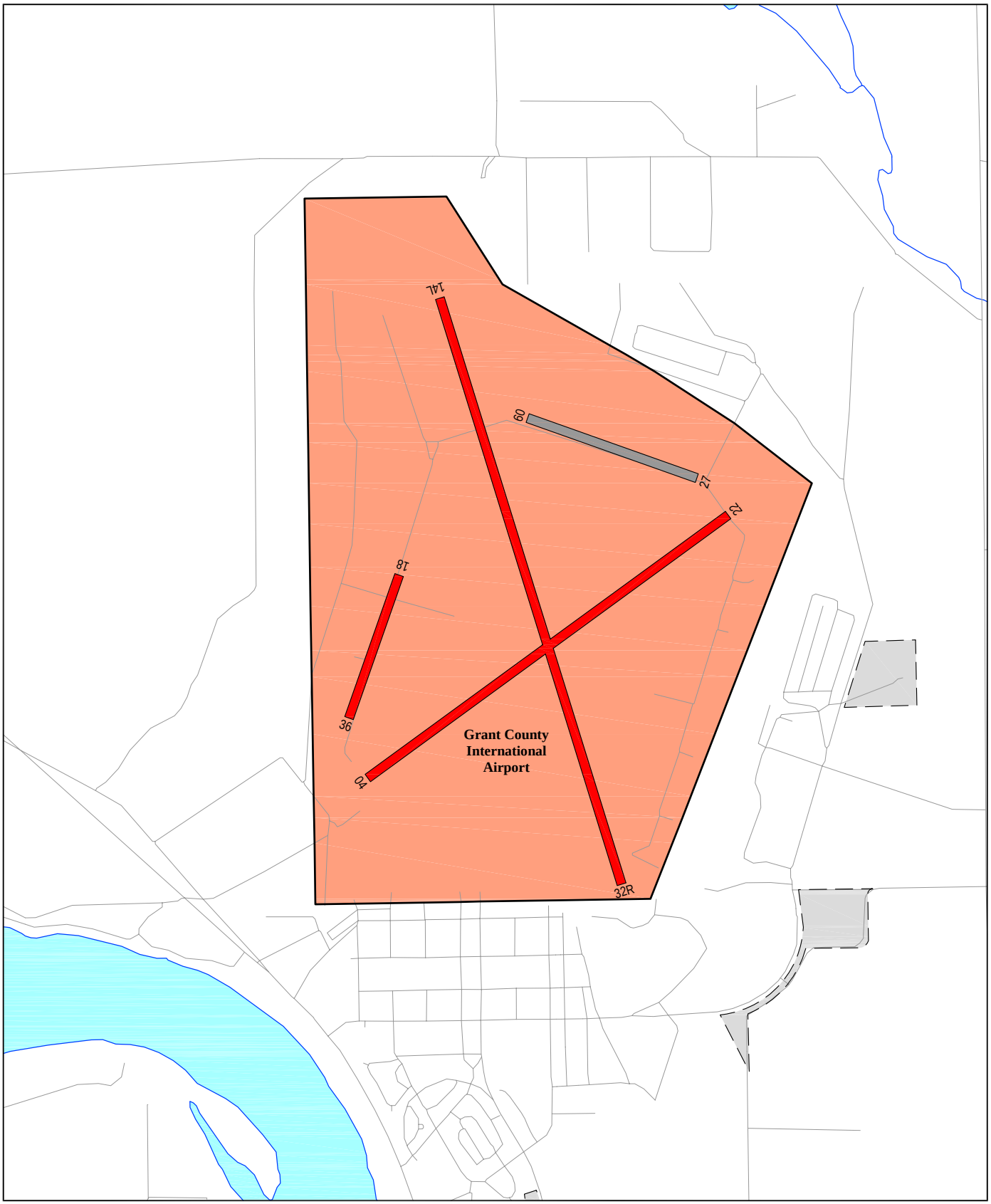
Attachment:
Location of Interim LZ at Grant County International Airport

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8000 Centre Park Drive, Suite 200 Austin, Texas ⊕ 78754-5140 ⊕ (512) 719-6000 ⊕ Fax (512) 719-6099 ⊕ www.parsons.com

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HQ AMC/A7CP Mr. Doug Allbright 507 Symington Drive Scott AFB, IL 6225	60 CES/CEVP Mr. Rudy Pontemayor 411 Airmen Drive Travis, AFB, CA 94535	



Grant County International Airport

LEGEND

Proposed Landing Zone Location

Roadway

N

0 3,000

Feet

Note:
Proposed LZ location is approximate.

Landing Zone Location, Grant County Airport

Figure 2-2

744211 WCLZ-ML-ALZ.DWG

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8000 Centre Park Drive, Suite 200 Austin, Texas ⊕ 78754-5140 ⊕ (512) 719-6000 ⊕ Fax: (512) 719-6099 ⊕ www.parsons.com

September 11, 2007

SUBJECT: Environmental Assessments for an Interim and a Permanent C-17 Landing Zone in the Western United States

TO: See Distribution

The United States. Air Force, with Parsons assistance, is preparing two Environmental Assessments (EAs) for an Interim and a Permanent C-17 Landing Zone in the western United States. The Air Force will complete basing 13 C-17 aircraft at Travis Air Force Base (AFB), California in 2008. Additionally, basing eight C-17s at March Air Reserve Base (ARB), California was completed in 2006. A key ability of the C-17 aircraft is its capability to land and take off from a short runway called a landing zone (LZ) that is 3,500 feet to 5,000 feet long and 90 feet wide. An important element of C-17 basing is that aircrews have access to an airfield with an LZ at which they can conduct tactical arrival, departure, and landing training. Currently, there is no LZ available in close proximity to Travis AFB or March ARB at which aircrews from the bases can conduct training.

For the Interim C-17 LZ EA, two project alternatives in California consist of painting a 3,500 foot-long, 90-foot-wide LZ threshold and side boundaries in the middle of existing runways, and installing landing zone marking panels and an IR lighting system at either Travis AFB or at the Southern California Logistics Airport (SCLA). Neither alternative involves any new construction. Operations would begin in late 2007 and continue until the permanent LZ is constructed.

For the Permanent C-17 LZ EA, the Proposed Action would consist of construction of a 3,500 foot-long, 90-foot-wide LZ with associated day/night LZ markings and an infrared (IR) lighting system for night vision goggle (NVG) operations on the Travis AFB airfield. The Project Alternative consists of construction of a permanent LZ at the SCLA in southern California. It is anticipated that construction would begin in 2008, be completed in 2009, and that aircraft operations would begin after the LZ is completed.

As part of these efforts, and in compliance with the National Historic Preservation Act of 1966, as amended, the American Indian Religious Freedom Act, and the Native American Graves Protection and Repatriation Act of 1990, we are initiating correspondence and consultation efforts with affiliated tribal groups regarding the two locations in California.

To ensure that any areas of sacred or spiritual significance to Native American groups are considered, we would appreciate your help in identifying any interests or concerns regarding traditional resources or properties within the project areas.

Please provide any comments or information by October 19, 2007. You may address any comments or questions to Mr. Doug Allbright, HQAMC/A7CP, 507 Symington Drive, Scott

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AFB, IL 62225. Mr. Allbright may be reached by phoning (618) 229-0846 or via e-mail at: Doug.Allbright@scott.af.mil.

Sincerely,

Parsons Project Manager

Attachments:

Location of Interim LZ at Travis AFB

Location of Interim LZ at SCLA

Location of Permanent LZ at Travis AFB

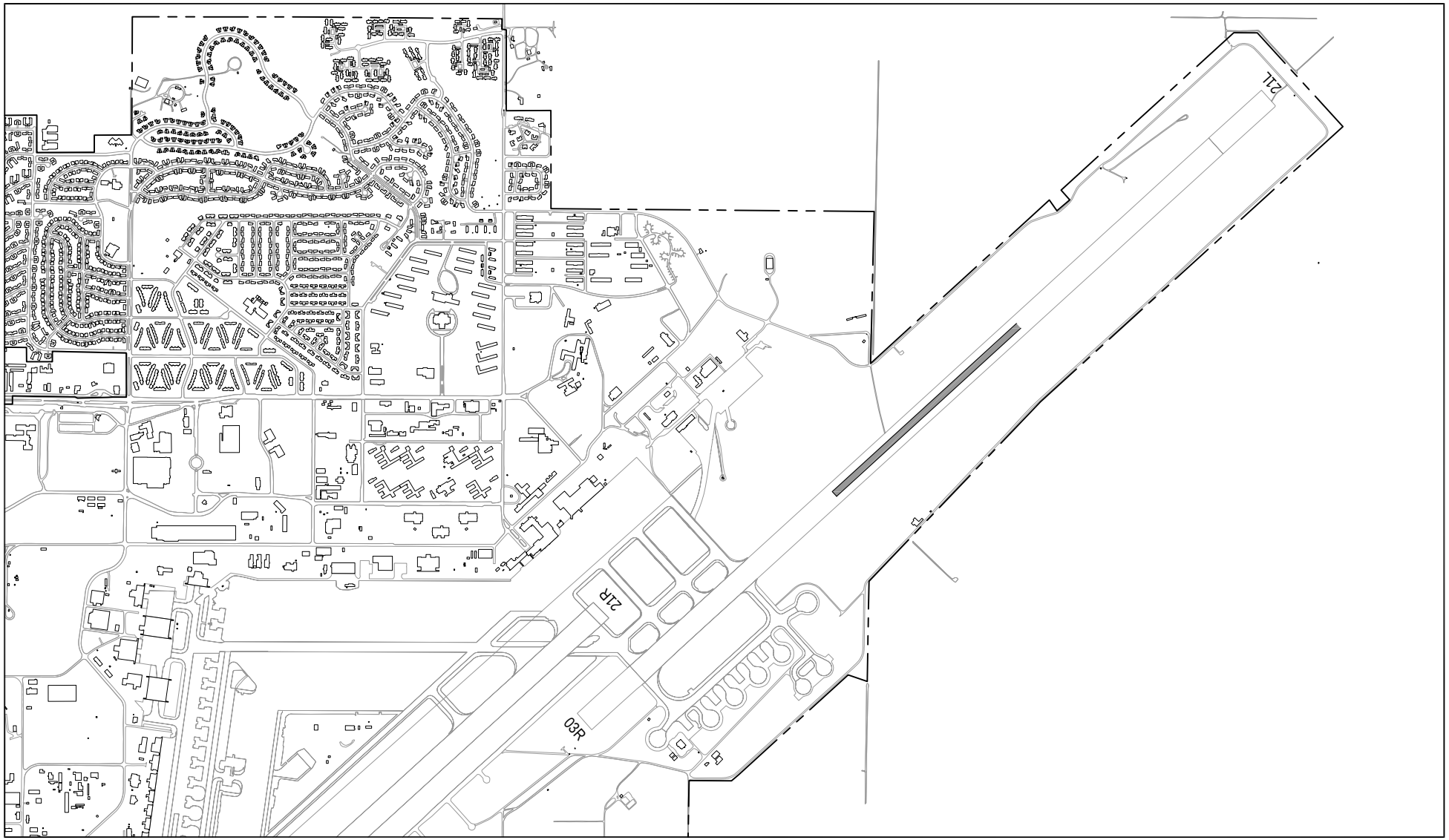
Location of Permanent LZ at SCLA

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Distribution List

California		
Linda Otero, Director **AhaMaKav Cultural Society** **Fort Mojave Indian Tribe** P.O. Box 5990 Mohave Valley, AZ 86440	Elaine Patterson, Chairperson **Cortina Band of Indians** P.O. Box 1630 Williams, CA 95987	Charles Wood, Chairperson **Chemehuevi Reservation** P.O. Box 1976 Chemehuevi Valley, CA 92363
Britt W. Wilson, Cultural Resources-Project Manager **Morongo Band of Mission Indians** 49750 Seminole Drive Cabazon, CA 92230	Marshall McKay, Chairperson **Rumsey Rancheria** P.O. Box 18 Brooks, CA 95606	John Valenzuela, Chairperson **San Fernando Band of Mission Indians** P.O. Box 221838 Newhall, CA 91322
Henry Duro, Chairperson **San Manuel Band of Mission Indians** 26569 Community Center Drive Highland, CA 92346	Ann Brierty, Environmental Department **San Manuel Band of Mission Indians** 101 Pure Water Lane Highland, CA 92346	Goldie Walker **Serrano Band of Indians** 6588 Valeria Drive Highland, CA 92346
Wintun Environmental Protection Agency P.O. Box 1839 Williams, CA 95987	Charlie Cooke **Tehachapi Indian Tribe** 32835 Santiago Road Acton, CA 993510	Kesner Flores P.O. Box 1047 Wheatland, CA 95692
Ron Wermuth P.O. Box 168 Kernville, CA 93238	HQ AMC/A7CP Mr. Doug Allbright 507 Symington Drive Scott AFB, IL 6225	60 CES/CEVP Mr. Rudy Pontemayor 411 Airmen Drive Travis, AFB, CA 94535

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Travis AFB

LEGEND

Proposed Landing Zone Location

Installation Boundary

N

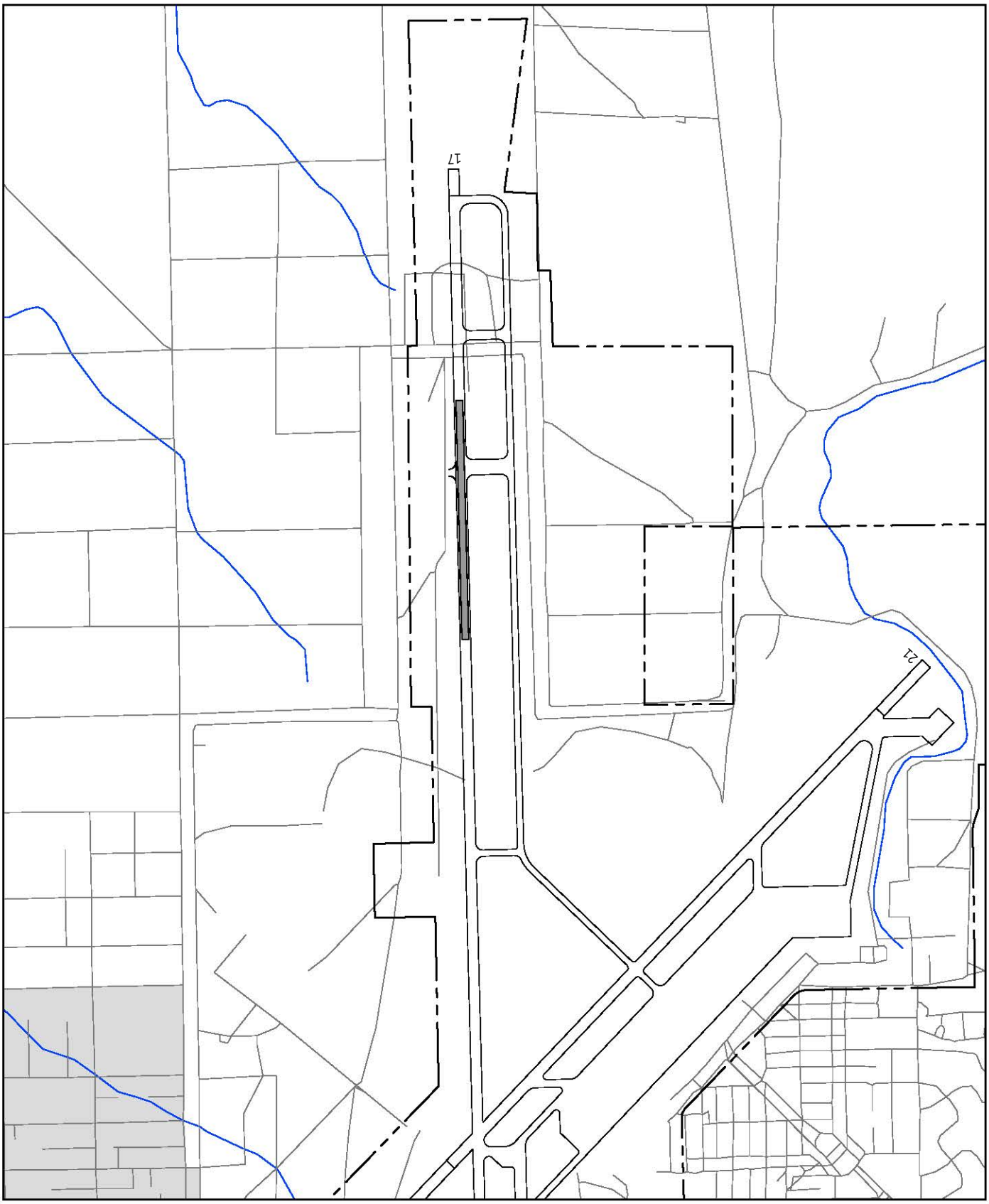
0 2,000

Feet

Note:
Proposed LZ location is approximate.

Landing Zone Location, Travis AFB Alternative

Figure 2-3



Southern California Logistics Airport

LEGEND

Proposed Landing Zone Location

Installation Boundary

N

0 2,000

Feet

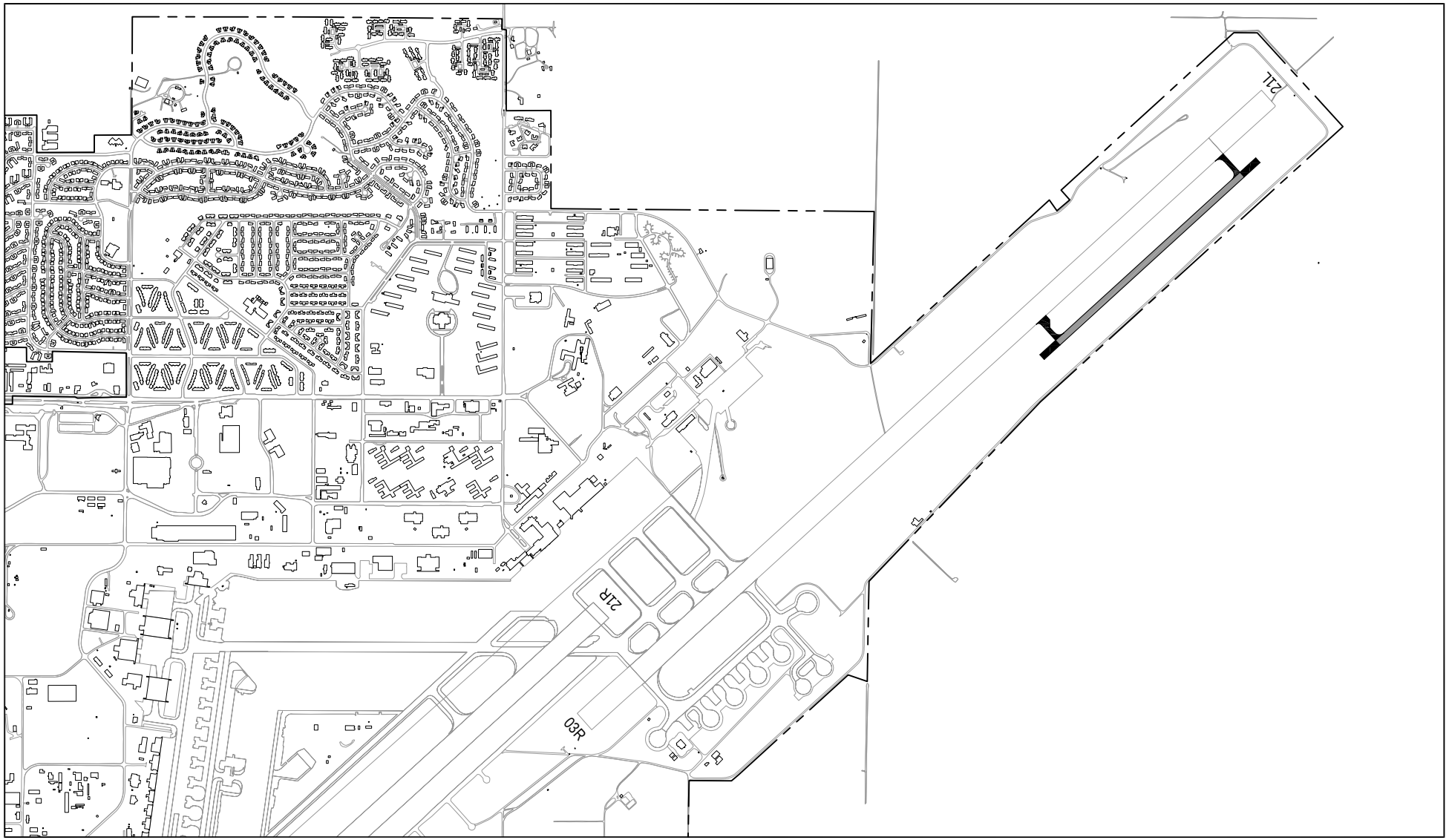
Note:
Proposed LZ location is approximate.

744211 WCLZ-SCL-ALZ.DWG

Landing Zone Location, Southern California Logistics Airport Landing Zone Alternative

Figure 2-4

744211 WCLZ-TR-ALZ.DWG



Travis AFB

LEGEND

Proposed Landing Zone Location

Installation Boundary

N

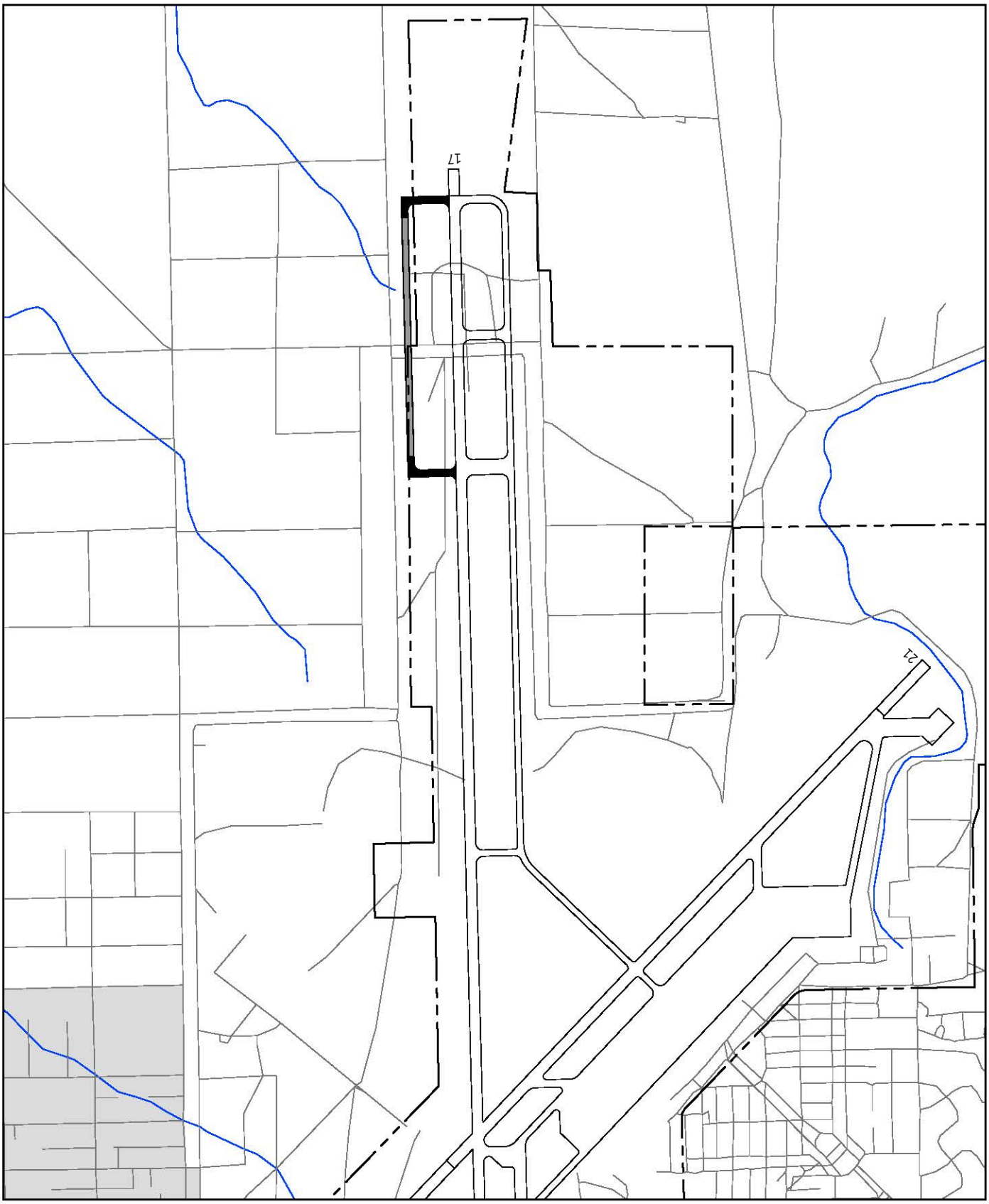
0 2,000

Feet

Note:
Proposed LZ location is approximate.

Landing Zone Location, Travis AFB Alternative

Figure 2-2



Southern California Logistics Airport

LEGEND

Proposed Landing Zone Location

Installation Boundary

N

0 2,000

Feet

Note:
Proposed LZ location is approximate.

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Landing Zone Location, Southern California Logistics Airport Landing Zone Alternative

Figure 2-5

Rumsey Band of
Wintun Indians

Rumsey Indian Rancheria

YOCHA-DE-HE

October 8, 2007

Mr. Doug Allbright
HQAMC/A7CP
507 Symington Drive
Scott AFB, ILL 62225

Re: Environmental Assessments for an Interim and a Permanent C-17 Landing Zone in the Western United States

Dear Mr. Allbright:

Thank you for your letter dated, September 11, 2007, seeking information regarding historic/sacred sites on the proposed interim C-17 Landing Zone at Travis AFB, your proposed building site. We appreciate your efforts to contact us, and wish to respond.

Based on the information provided, Rumsey Indian Rancheria of Wintun is not aware of any "historic properties" on this site. However, we do recommend that you contact the CHRIS Northwest Information Center at Sonoma State University. As the project progresses, if any new information or historic remains are found, we do have a process to protect such important and sacred artifacts.

Upon such a finding, please contact the following individuals:

Mr. Marshall McKay
Chairman, Rumsey Indian Rancheria of Wintun
Office: (530)796-3400
mmckay@rumseywintun-nsn.gov

Mr. Leland Kinter
Office: (530)796-3400
Windug21@hotmail.com

And copy all communications to:

Rumsey Indian Rancheria

YOCHA-DE-HE

Rumsey Band of
Wintun Indians

Ms. Michelle LaPena
Attorney
LaPena Law Corporation
2001 N Street, Suite 100
Sacramento, CA 95811

Thank you again for your commitment to preserving our cultural heritage.

Sincerely,

Marshall McKay

Tribal Chairman