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# **Citizen's Brochure**

## **for the**

### **452d Air Mobility Wing**

#### **Air Installation Compatible Use Zone Study**



**March Air Reserve Base, California**



**August 2005**

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## **What is AICUZ?**

The Air Installation Compatible Use Zone (AICUZ) program concerns people, and their comfort, safety, and protection. This pamphlet briefly summarizes the 2005 March Air Reserve Base (ARB) AICUZ Study, an extensive analysis of the effects of aircraft noise, accident potential, and compatible land use and development upon present and future neighbors of the March ARB. The AICUZ program seeks a cooperative understanding and a reasonable solution to this intricate problem.

## **Is there a problem?**

Military airfields attract development to immediate surrounding areas. In the absence of compatible land use controls, inappropriate uses may be made of properties near or adjacent to the installation causing eventual conflicts between flight operations and surrounding landowners. Because land close to March ARB is subject to aircraft noise and accident potential, certain types of development are not suitable.

## **What has been done?**

The March ARB has attempted to be a good neighbor by restricting flying activities that could adversely affect its neighbors. For example, the majority of base-assigned aircraft flying operations are conducted between dawn and dusk, Monday through Saturday. Practice approach and departure operations are also normally conducted during these hours. However, flying operations are not limited to these flying times. In addition to the base-assigned aircraft, civilian and cargo aircraft operations are conducted by the March Joint Powers Authority and the California Department of Forestry. Civilian and cargo operations are conducted during the day, evening, and nighttime hours. Flight pattern altitudes and the runway approach angles have been adjusted over the years in an effort to reduce noise impacts while maintaining safe operations. The base has demonstrated a spirit of cooperation by participating with surrounding communities in the areawide planning process. Continued cooperation by the March ARB, local governments, and the local populace will further reduce the potential for land use conflicts. This action will help ensure that future land uses will be compatible and beneficial.

## **What are the benefits?**

In addition to protecting public safety and health, primary benefits include protecting the taxpayers' investment in national defense represented by March ARB, and protecting economic benefits to the surrounding communities generated by base activities and employment. March ARB's

expenditures for salaries, contracts, construction, retirement pay, tuition, aid to schools, health insurance payments, and off-base accommodations for travelers enhance the local economy. In 2004, March ARB employed nearly 9,167 people with an annual payroll of about \$153 million. Through service and construction contracts, including primary and secondary employment and payrolls, more than \$423 million enters the local economy. While shrinking budgets challenge the leadership at March ARB, the installation continues to be a strong partner in the economic future of the local communities.

## **Why AICUZ now?**

March ARB has recently been approved to base C-17 aircraft. Modifications to flight operations at March ARB have resulted in changes to the noise contours outlined in the 1998 AICUZ Study. Information provided in the 2005 AICUZ Study is intended to offer assistance to those planning the future of March ARB's adjacent townships. By using the updated noise modeling program and information provided by Base personnel and the March Joint Powers Authority, neighboring communities are better equipped to make land use decisions and adopt land use controls which are compatible with March ARB, yet able to accommodate growth.

## **What does AICUZ mean to me?**

The AICUZ program means protection of public safety and health as well as protection of the Air Force's national defense mission, which includes training pilots. The AICUZ program itself is a composite of many factors: average noise levels, aircraft flight paths and altitudes, and accident potential. The noise contour map identifies the clear zone and accident potential zones, as well as the noise zones in increments of 5 decibels (dB), ranging from a Community Noise Equivalent Level (CNEL) of 60 to 80 dBA. The noise zones depict the average sound levels for a particular area using a CNEL system for describing the noise environment. The accompanying Land Use/Aircraft Noise Compatibility Guidelines table provides a quick reference of compatible land uses for the various noise and accident potential zones around March ARB. More detailed information can be found in the updated March ARB AICUZ Study.

## **How can I help?**

Historically, the citizens of the cities of Riverside, Perris, and Moreno Valley; and Riverside County have worked with March ARB personnel in cooperative efforts to better serve the needs and desires of all parties concerned. March ARB

has collectively found solutions, which have maximized benefits to the local communities and to March ARB. If the future of March ARB is to be as bright as its past, you, the citizens of the cities of Riverside, Perris, and Moreno Valley; and Riverside County need to participate in the solution of our mutual concerns. We request your careful and considered review of the recommendations contained in the 2005 March ARB AICUZ Study. In brief, these recommendations include

- (a) The AICUZ Study should be adopted as an official guideline for future planning.
- (b) Zoning ordinances for local communities should be adopted, or modified, to reflect the compatible land uses outlined in the March ARB AICUZ Study.
- (c) Final development plans should have notices identifying the potential of aircraft overflight.
- (d) Fair disclosure ordinances should be enacted to specify disclosure to the public of those AICUZ items directly related to operations at March ARB.
- (e) Height control of structures near flight paths should be regulated by incorporation into zoning ordinances.
- (f) Comprehensive plans should include the land use recommendations of the AICUZ Study.
- (g) Subdivision regulations should provide for rejection of new subdivisions or developments not compatible with

AICUZ land use objectives and provide controls for continued development in existing subdivisions.

- (h) Building codes should be amended to require noise level reduction efforts for structures to be built in noise zones, where alternative locations are not an option.
- (i) Capital improvement programs should be carefully reviewed to discourage incompatible land use patterns, with particular emphasis on utility extension planning.

### Who prepared the AICUZ study?

The AICUZ Study was developed by many concerned people at March ARB. The complete AICUZ Study is available through the Public Affairs Office at March ARB. Only the major points of the complete AICUZ Study are included in this pamphlet.

### What are the compatibility guidelines?

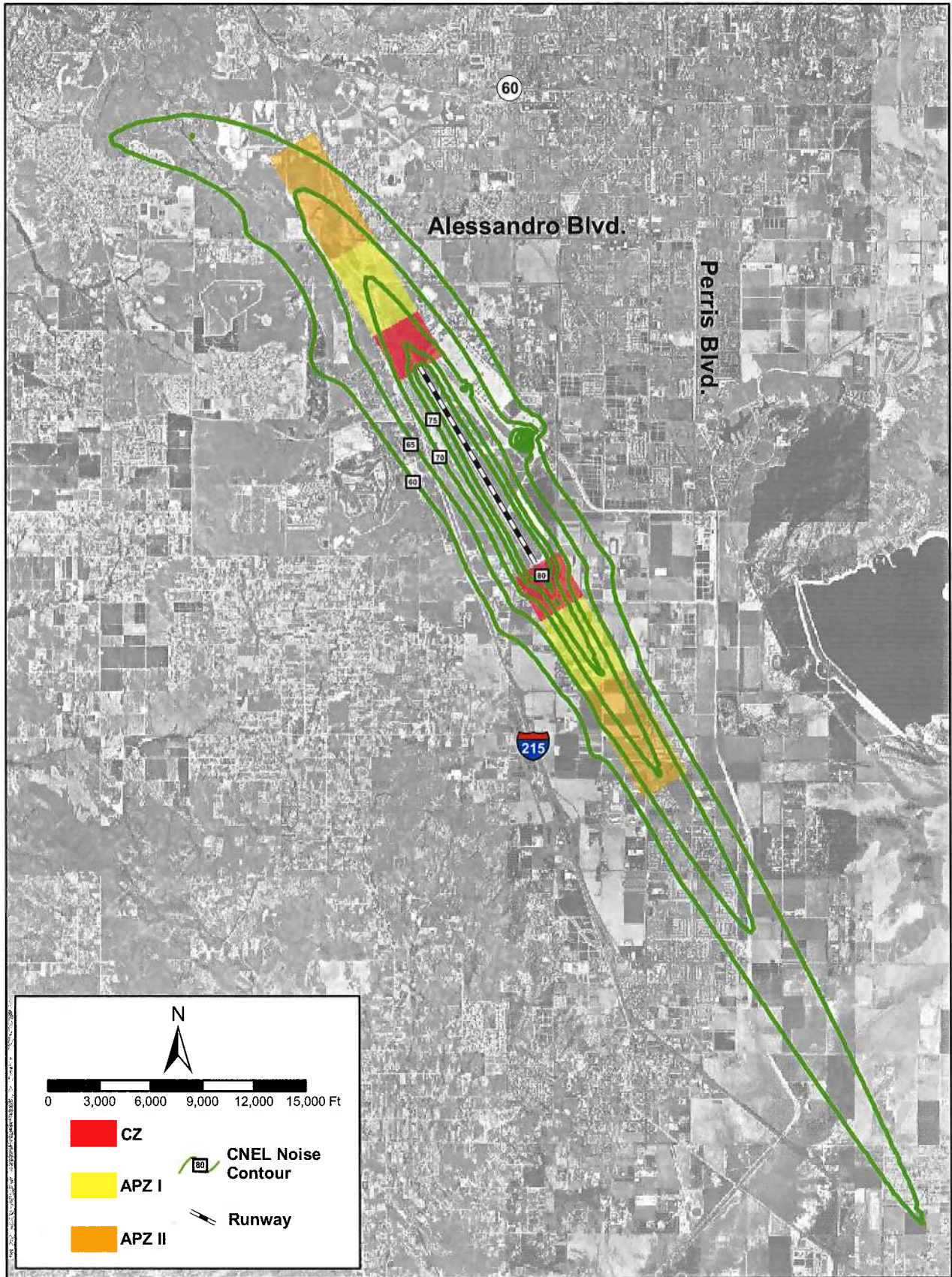
The following table lists the compatibility of various land uses with accident potential zones. A more comprehensive summary of land use compatibility with respect to aircraft noise and accident potential is included in Table 3-1 of the complete 2005 March ARB AICUZ Study.

**For further information, contact:  
March ARB Base Civil Engineer  
951-655-4851**

## Land Use/Accident Potential Zone Compatibility Guidelines

<i>Generalized Land Use</i>	<i>Clear Zone</i>	<i>APZ I</i>	<i>APZ II</i>
Residential	No	No	Yes <sup>1</sup>
Manufacturing	No	No <sup>2</sup>	Yes
Transportation, communications, and utilities	No <sup>3</sup>	Yes <sup>4</sup>	Yes
Trade, business, and offices	No	Yes <sup>2</sup>	Yes
Shopping districts	No	Yes <sup>2</sup>	Yes <sup>2</sup>
Public and quasi-public services	No	No	Yes <sup>5</sup>
Recreation	No	Yes <sup>6,7,8</sup>	Yes
Public Assembly	No	No	No
Agriculture and mining	No	Yes <sup>9</sup>	Yes

1. Suggested maximum density of 1–2 dwelling units per acre, possibly increased under a Planned Unit Development where maximum lot coverage is less than 20 percent.
2. Within each land use category, uses exist where further deliberating by local authorities could be needed due to the variation of densities in people and structures. Shopping malls and shopping centers are considered incompatible use in any accident potential zone (CZ, APZ I, or APZ II).
3. The placement of structures, buildings, or aboveground utility lines in the CZ is subject to severe restrictions. In a majority of the CZs, these items are prohibited. See Air Force Instruction 32-7060 and Air Force Joint Manual 32-8008 for specific guidance.
4. No passenger terminals and no major aboveground transmission lines in APZ I.
5. Low-intensity office uses only. Meeting places, auditoriums, and the like are not recommended.
6. Facilities must be low intensity.
7. Clubhouse not recommended.
8. Areas for gatherings of people are not recommended.
9. Factors to be considered: labor intensity, structural coverage, explosive characteristics, and air pollution.



**Forecast CNEL Noise Zones and Accident Potential Zones**

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# Air Installation Compatible Use Zone Study

for

## March Air Reserve Base



### March Air Reserve Base, California



August 2005

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## *Abbreviations and Acronyms*

163 ARW	163 Air Refueling Wing	IMC	Instrument Meteorological Conditions
452 AMW	452d Air Mobility Wing	IR	Instrument Route
AFCEE	Air Force Center for Environmental Excellence	KIAS	Knots Indicated Air Speed
AFRC	Air Force Reserve Command	MAJCOM	Major Command
AGL	above ground level	MJPA	March Joint Powers Authority
AICUZ	Air Installation Compatible Use Zone	MOA	Military Operations Area
APZ	Accident Potential Zone	Mph	miles per hour
ARB	Air Reserve Base	MSL	mean sea level
ATC	Air Traffic Control	MTR	Military Training Route
CAARNG	California Air National Guard	NM	nautical mile
CNEL	Community Noise Equivalent Level	NOAD	North American Air Defense
CZ	Clear Zone	NZ	Noise Zone
DB	decibel	PAA	Primary Authorized Aircraft
DBA	A-Weighted decibel	SEL	Sound Exposure Level
DNL	Day-Night Average A-Weighted Sound Level	SLUCM	Standard Land Use Coding Manual
DOD	Department of Defense	U.S.	United States
EA	Environmental Assessment	USAF	United States Air Force
FAA	Federal Aviation Administration	USEPA	United States Environmental Protection Agency
FAR	Federal Aviation Regulations	VFR	Visual Flight Rule
FHA	Federal Housing Authority	VMC	Visual Meteorological Conditions
FY	fiscal year	VR	Visual Route
HUD	Department of Housing and Urban Development		




**DEPARTMENT OF THE AIR FORCE**  
**AIR FORCE RESERVE COMMAND**

**MEMORANDUM FOR AREA GOVERNMENTS**

**FROM:** 452 AMW/CC  
2145 Graeber Street, Suite 117  
March ARB CA 92518-1667

**SUBJECT:** Air Installation Compatible Use Zone Study

1. The Department of Defense's Air Installation Compatible Use Zone (AICUZ) Program is intended to promote compatible land uses in nongovernment areas adjacent to military airfields. This AICUZ Study for March Air Reserve Base (ARB), Riverside County, California, is designed to aid in the development of local planning mechanisms that will protect public safety and health and preserve the mission and operational capabilities of March ARB.
2. The Study outlines the location of runway clear zones, aircraft accident potential zones, and noise contours. In addition, incompatible land uses are identified and compatible land use recommendations are provided for areas in the vicinity of the base. It is our hope that this information will be incorporated into your community plans, zoning ordinances, subdivision regulations, building codes, and other related documents, such as the *Joint Land Use Study (JLUS)*.
3. The basic objective of the AICUZ program is to achieve compatible uses of public and private lands in the vicinity of military airfields by controlling incompatible development through local actions. This AICUZ Study provides March ARB aircraft noise contours based upon the Day-Night Average A-weighted Sound Level (DNL) metric used by the U.S. Air Force and Community Noise Equivalent Level (CNEL) used by the State of California. It also provides the information necessary to maximize beneficial use of the land surrounding March ARB while minimizing the potential for degradation of the health and safety of the affected public.
4. We greatly value the positive relationship that March ARB has experienced with its neighbors over the years. As a partner in the process, we have attempted to minimize noise disturbances through such actions as avoiding flights over heavily populated areas and minimizing military night flights. In addition, March ARB has a working relationship with the community through the JLUS and the Joint Use Agreement between March ARB and the Joint Powers Authority. We solicit your cooperation in implementing the recommendation and guidelines presented in this AICUZ report.
5. This AICUZ study is being released with two sets of noise contours, which are based on Current (2005) and Forecast (2010) aircraft operations in both Day-Night Average A-Weighted Sound Level and Community Noise Equivalent Level noise metrics.



**JAMES T. RUBEOR, Brig Gen, USAFR**  
Commander

**AIR INSTALLATION COMPATIBLE USE ZONE STUDY  
FOR  
MARCH AIR RESERVE BASE**

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**March Air Reserve Base, California**

**PREPARED BY**

**ENGINEERING-ENVIRONMENTAL MANAGEMENT, INC.  
510 EAST RAMSEY  
SAN ANTONIO, TEXAS 78216**

**AUGUST 2005**

**AIR INSTALLATION COMPATIBLE USE ZONE STUDY  
FOR MARCH AIR RESERVE BASE, CALIFORNIA**

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# 1. Air Installation Compatible Use Zone Study

## 1.1 Introduction

The Air Installation Compatible Use Zone (AICUZ) Study is an update to the 1998 March Air Reserve Base (ARB) AICUZ Study. This update presents the Current (2005) and Forecast (2010) noise contours produced by aircraft operations at March ARB. This AICUZ Study reaffirms the United States (U.S.) Air Force (USAF) policy of promoting public health, safety, and general welfare in areas surrounding USAF installations. It provides compatible use Guidelines for land use areas around the base. This information is provided to assist local communities in future planning and zoning activities. Differences between the Current and Forecast noise contours are attributable to

- Changes in flight operations and aircraft for mission purposes
- Proposed changes in Joint Powers Authority Commercial and Cargo Aircraft Operations
- Technical improvements to the NOISEMAP software program, (used for calculating the noise contours)

## 1.2 Purpose and Need

The purpose of the USAF AICUZ program is to promote compatible land development in areas exposed to aircraft noise and accident potential. As neighboring cities and counties prepare and modify their land use development plans, recommendations from this updated AICUZ Study should be considered in their planning process to prevent incompatibilities that might compromise March ARB's ability to fulfill its mission requirements and assist the residents of the cities of Moreno Valley, Riverside, and Perris; and the County of Riverside to avoid safety hazards. Accident potential and aircraft noise should be major considerations in their planning processes.

Land use guidelines set forth in the USAF AICUZ program reflect land use recommendations for clear zones (CZs), accident potential zones (APZs) I and II, and applicable noise zones (NZs). These guidelines have been established on the basis of studies prepared and sponsored by the USAF, U.S. Department of Housing and Urban Development (HUD), U.S. Environmental Protection Agency (USEPA), Federal Aviation Administration (FAA), Federal Housing Authority (FHA), and state and local agencies. The guidelines recommend land uses that are compatible with airfield operations while allowing maximum beneficial use of adjacent

properties. This study contains recommendations developed to assist local governments in determining land uses that are compatible with airport environs.

### **1.3 Process and Procedure**

A project kick-off meeting and data collection site visit for this document were conducted at March ARB from September 29 through October 1, 2003. The purpose of the site visit was to collect information and verify the average daily operations at the airfield for aircraft operations and maintenance data by aircraft type. Data were provided according to flight track (where they fly), flight profile (how they fly), and ground run-up (engine maintenance activities).

The AICUZ program uses approved computer modeling technology (NOISEMAP 6.5) to define noise levels in areas near USAF installations. An analysis was conducted of all flying operations (i.e., military, commercial, civilian) conducted at March ARB, including types of aircraft, flight patterns used, variations in altitude, power settings, number of operations, and hours of operation. An operation is defined as any takeoff (departure), landing (arrival), or individual climbout and descent portion of a closed pattern such as a touch-and-go or missed approach. This information was used to develop the noise contours contained in this study. The Department of Defense (DOD) NOISEMAP methodology, the Day-Night Average A-Weighted Sound Level (DNL) metric, and Community Noise Equivalent Level (CNEL) metric used by the State of California were used to define the NZs for March ARB.

After verification of accuracy, data were entered into the NOISEMAP 6.5 software program and converted into DNL and CNEL noise contours. Flight operations were distributed on flight tracks based on a primary wind direction, personnel interviews, and aircraft destination. Appendix A contains detailed information about the AICUZ program. Noise contours and AICUZ maps presented in Sections 3 and 4 of this study are based on both the current (2005) aircraft operations and forecasted (2010) aircraft operations. As such, the Current Scenario and Forecast Scenario are presented in this document.

## 2. Installation Description

### 2.1 Mission

Several military missions are supported by the aircraft and personnel at March ARB. The mission of the 452d Air Mobility Wing (452 AMW) is to provide airlift support for the USAF in peacetime and to train for tactical combat airlift and airdrop of personnel and supplies in wartime. In 1998, the 452 AMW operated 16 C-141C aircraft in support of its airlift mission. Currently, the 452 AMW operates 10 KC-135R aircraft. The 452 AMW converted from C-141C aircraft to eight C-17 aircraft in fiscal year (FY) 2005. The California Air National Guard (CAANG) is the primary tenant organization assigned to March ARB. The 163 Air Refueling Wing (163 ARW) of the CAANG operates 10 KC-135R aircraft. The 120th Fighter Wing, Montana ANG, is based out of Great Falls, Montana, and operates four F-16 aircraft at March ARB with two additional aircraft added as mission requires. Two of the four F-16 aircraft are used for training exercises, and two are kept on 24-hour alert in support of the North American Air Defense (NOAD) mission.

As the host unit at March ARB, the 452 AMW is responsible for providing certain on-base services and facilities that are common to the Wing and tenant organizations. These include law enforcement, fire department, fuel storage area, base operations, and service for transient aircraft.

The Department of Homeland Security, Riverside Air Unit operates two UH-60A BlackHawk helicopters and one light single-engine Cessna airplane in support of Homeland Security, state, and local law enforcement missions. Often, an AS-350 light helicopter is also operationally assigned.

In addition to the military entities at March ARB, airport facilities are used by civilian aircraft and organizations. A joint use agreement was created on May 7, 1997, between the DOD and the March Joint Powers Authority (MJPA) to establish March Air Field as a joint use airport. A joint use airport is defined by the USAF as one where the facilities are owned and operated by the USAF and are made available for use by civil aviation. Consequently, the joint use agreement permits the establishment and operation of commercial aviation where civilian and military entities share essential aviation facilities (MJPA 2005).

In support of the Joint Use Agreement with MJPA and the ongoing cooperation with the Riverside County and the local municipalities (i.e., cities of Moreno Valley, Perris, and Riverside), a *Joint Land Use Study* (JLUS) is being completed. The objective of the JLUS is the

future adoption of an airport Comprehensive Land Use Plan for March ARB/March Inland Port by the MJPA and the Riverside County Airport Land Use Commission. The study is to be conducted under the direction of the MJPA. A grant from the U.S. Department of Defense Office of Economic Adjustment is the primary funding source for the project. The JLUS will include two major components:

- An airport land use compatibility plan to be adopted by March JPA and the Riverside County Airport Land Use Commission; and
- Implementation measures to be adopted by all five of the neighboring land use jurisdictions—Riverside County, March JPA, and the cities of Moreno Valley, Perris, and Riverside.

## 2.2 Location

March ARB is in western Riverside County, California, approximately 70 miles east of Los Angeles (see Figure 2-1). The base, which is composed of an airfield and associated support facilities, occupies approximately 2,300 acres of contiguous property (see Figure 2-2 for a vicinity map of March ARB). The MJPA planning area surrounds March ARB. In addition, the cities of Riverside, Moreno Valley, and Perris are adjacent to, or in close proximity to the base. Runway 14/32 is in the western portion of the base (see Figure 2-3).

## 2.3 Economic Impact

In FY 2004, March ARB employed nearly 9,167 persons; more than half of whom were employed by the 452 AMW. The 452 AMW includes 5,154 Air Force Reservists and 1,030 Air Reserve Technicians or civilians; all of whom live off base (Adams 2005).

March ARB's total expenditures were \$117,892,781 in FY 2004 and the total annual payroll was approximately \$153,615,510 (see Table 2-1). The payroll expenditure for March ARB, combined with the expenditure on operations and maintenance-related activities, is estimated to have had an overall economic impact of \$423,622,617 (Adams 2005).

**Table 2-1. FY 2004 Economic Impact of March ARB**

Category	Annual Amount (\$)
Total Annual Payroll	153.6 M
Total Annual Expenditures	117.8 M
Estimated Value of Jobs Created	152.2 M
<b>Grand Total of Economic Impact</b>	<b>423.6 M</b>



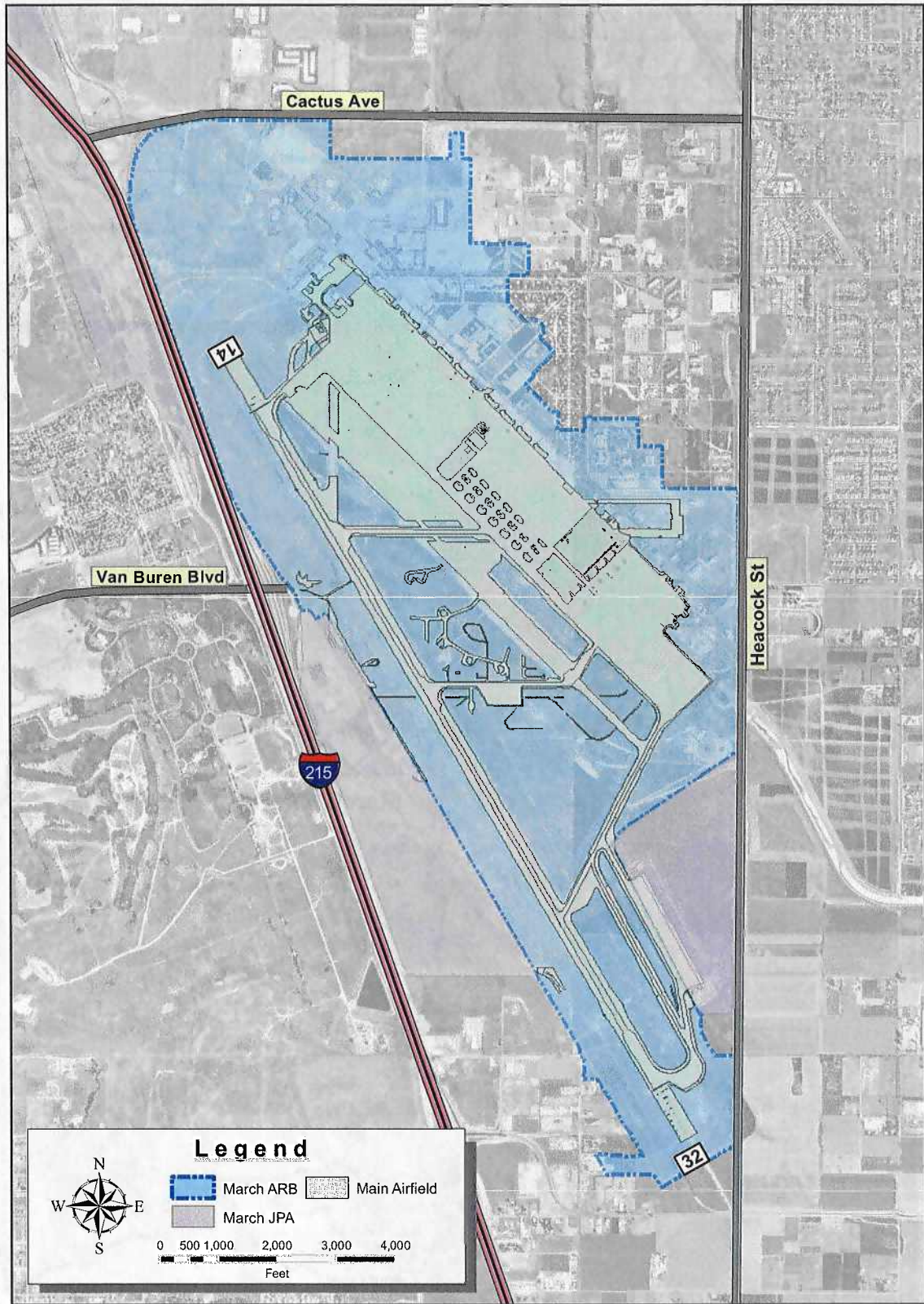


Figure 2-2. March ARB Main Airfield

The Region of Influence for economic activities at March ARB is Riverside County, California. Data relevant to Riverside County, the State of California, and the United States are provided in Table 2-2. To comply with Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, ethnicity and poverty status in the vicinity of March ARB were examined and compared to state and national data. The United States Census Bureau bases the poverty status of families and individuals on threshold variables, including income, family size, number of family members under 18 and over 65 years of age, and amount spent on food. The U.S. poverty threshold is \$13,738 for a family of three, and 12.4 percent of the U.S. population were below the poverty level in 2000 (MARB 2003a). Based on the 2000 U.S. Census Bureau (Table 2-2), Riverside County and the State of California have a slightly higher poverty level than the national level.

March ARB provides support for approximately 40,813 annual aircraft operations, of which 7,660 are C-141 aircraft operations, 2,460 are C-17 operations, and 14,431 are KC-135R aircraft operations.

**Table 2-2. Race and Poverty Characteristics in Riverside County, the State of California, and the U.S.**

	U.S.	State of California	Riverside County, California
Total Population	281,421,906	33,871,648	1,545,387
Percent White	75.1	59.5	65.6
Percent Black or African American	12.3	6.7	6.2
Percent American Indian, Eskimo, or Aleut	0.9	1.0	1.2
Percent Asian or Pacific Islander	3.7	11.2	4.0
Percent Other	5.5	16.8	18.7
Percent Reporting 2 or more races	2.4	4.7	4.4
Percent Living in Poverty	12.4	14.2	14.2

Source: U.S. Bureau of Census 2000

## 2.4 Flying Activity

To describe the relationship between aircraft operations and land use, it is necessary to fully evaluate the exact nature of flying activities. An inventory was completed for the number of aircraft based at March ARB, where those aircraft fly, how high they fly, how many times they

fly over a given area, and at what time of day they operate. The current aircraft activity at March ARB is summarized in Table 2-3.

Aircraft operations in Table 2-3 have been divided into military and civilian. Military operations include based, transient, and contract military carrier; civilian operations consist of MJPA cargo operations. With 33,637 annual operations, military aircraft account for 82 percent of the operations at March ARB. When looking exclusively at military operations, based aircraft have the highest percentage of nighttime operations. Approximately 9 percent of the operations occur at night (between 10 p.m. and 7 a.m.), approximately 12 percent occur in the evening (7 p.m. to 10 p.m.) and 79 percent occur during the daytime (7 a.m. to 7 p.m.). Civilian operations have a higher percentage of nighttime operations than military. Approximately 45 percent of the operations occur at night, 13 percent occur during evening hours, and 42 percent occur during the daytime.

To the maximum extent possible, engine run-up locations have been established in areas that minimize noise for people on base, as well as for those in the surrounding communities. Normal base operations do not include late night engine run-ups, but heavy work loads or unforeseen contingencies sometimes require a limited number of nighttime engine run-ups.

Airfield planning considers three primary aircraft operational/land use determinants: (1) accident potential to land users, (2) aircraft noise, and (3) hazards to operations from land uses (e.g., height obstructions). Each of these concerns is addressed in conjunction with mission requirements and safe aircraft operations to determine the optimum flight track for each aircraft type. The departures, arrivals, and closed-pattern flight tracks depicted in Figures 2-3, 2-4, and 2-5, respectively, are the result of such planning. These flight tracks are not aircraft-type dependent and have been configured to implement practicable mitigation measures to reduce noise impacts on the local community while maintaining flight safety standards.

Flight track configuration results from the following considerations:

- Take-off patterns routed to avoid heavily populated areas when possible
- USAF criteria governing the aircraft speed, rate of climb, and turning radius
- Efforts to control and schedule missions to keep noise levels low, especially at night
- Coordination with the FAA to minimize conflict with civilian aircraft operations

Table 2-3. Summary of Current Airfield Operations

Aircraft (Substitution)	Average Daily Arrival Operations			Average Daily Departure Operations			Average Daily Closed Pattern Operations			Total Average Daily Operations	Total Annual Operations	
	Day	Evening	Night	Day	Evening	Night	Day	Evening	Night			
<b>MILITARY AIRCRAFT</b>												
<b>Based</b>												
AH-1G	2.13	0.00	0.00	2.13	0.00	0.00	0.00	0.00	0.00	0.00	4.26	128
C-141A	1.85	0.59	0.01	2.28	0.16	0.01	9.94	2.34	0.00	0.00	29.46	7,660
C-17	2.01	0.58	0.04	2.01	0.58	0.04	1.68	0.29	0.13	0.00	9.46	2,460
CH-46E	4.43	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	8.86	266
CH-53E	3.43	0.00	0.00	3.43	0.00	0.00	0.00	0.00	0.00	0.00	6.87	206
F-16	1.78	0.15	0.00	1.78	0.15	0.00	0.84	0.07	0.00	0.00	5.68	1,477
KC-135R	2.40	1.01	0.88	3.26	0.73	0.31	12.02	4.86	6.58	0.00	55.51	14,431
UH-1N	4.67	0.00	0.00	4.67	0.00	0.00	0.00	0.00	0.00	0.00	9.34	280
UH60A	1.08	0.00	0.00	1.08	0.00	0.00	0.00	0.00	0.00	0.00	2.15	560
<i>Subtotal</i>	<i>23.78</i>	<i>2.33</i>	<i>0.93</i>	<i>25.07</i>	<i>1.62</i>	<i>0.36</i>	<i>24.48</i>	<i>7.56</i>	<i>6.71</i>	<i>131.59</i>		<i>27,468</i>
<b>Transient</b>												
AV-8B	0.10	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.20	68
C-12	0.71	0.00	0.00	0.71	0.00	0.00	0.00	0.00	0.00	0.00	1.41	480
C-130H&N&P	0.79	0.00	0.00	0.79	0.00	0.00	0.00	0.00	0.00	0.00	1.59	540
C-141A	0.22	0.00	0.00	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.43	146
C-17	0.50	0.00	0.00	0.50	0.00	0.00	0.00	0.00	0.00	0.00	1.00	340
C-21A	0.09	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.19	64
C-5A	0.82	0.00	0.00	0.82	0.00	0.00	0.00	0.00	0.00	0.00	1.65	560
C-9A	2.33	0.00	0.00	2.33	0.00	0.00	0.00	0.00	0.00	0.00	4.65	1,581

Table 2-3. Summary of Current Airfield Operations (continued)

Aircraft (Substitution)	Average Daily Arrival Operations			Average Daily Departure Operations			Average Daily Closed Pattern Operations			Total Average Daily Operations	Total Annual Operations
	Day	Evening	Night	Day	Evening	Night	Day	Evening	Night		
F-16	0.18	0.00	0.00	0.18	0.00	0.00	0.00	0.00	0.00	0.35	120
F-18	0.27	0.00	0.00	0.27	0.00	0.00	0.00	0.00	0.00	0.53	180
KC-10A	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	2.00	680
KC-135R	0.32	0.00	0.00	0.32	0.00	0.00	0.00	0.00	0.00	0.65	220
P-3A	0.04	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.07	26
SW-3	0.15	0.00	0.00	0.15	0.00	0.00	0.00	0.00	0.00	0.31	104
T-37B	0.05	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.11	36
T-38A	0.07	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.14	46
<i>Subtotal</i>	<i>7.63</i>	<i>0.00</i>	<i>0.00</i>	<i>7.63</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>15.27</i>	<i>5,191</i>
<b>Contract Military Carrier</b>											
B-737-D9N	0.73	0.14	0.05	0.73	0.14	0.05	0.00	0.00	0.00	1.83	220
B-747SP	0.73	0.14	0.05	0.73	0.14	0.05	0.00	0.00	0.00	1.83	220
B-757RR	0.22	0.04	0.01	0.22	0.04	0.01	0.00	0.00	0.00	0.55	66
B-767-CF6	0.15	0.03	0.01	0.15	0.03	0.01	0.00	0.00	0.00	0.37	44
B-777	0.27	0.05	0.02	0.27	0.05	0.02	0.00	0.00	0.00	0.68	82
DC-10-10	0.20	0.04	0.01	0.20	0.04	0.01	0.00	0.00	0.00	0.50	60
DC-10-20 (DC-10-30)	0.13	0.03	0.01	0.13	0.03	0.01	0.00	0.00	0.00	0.33	40
DC-10-30	0.20	0.04	0.01	0.20	0.04	0.01	0.00	0.00	0.00	0.50	60
L-1011	0.62	0.12	0.04	0.62	0.12	0.04	0.00	0.00	0.00	1.55	186
<i>Subtotal</i>	<i>3.26</i>	<i>0.61</i>	<i>0.20</i>	<i>3.26</i>	<i>0.61</i>	<i>0.20</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>8.15</i>	<i>978</i>
<b>Military Aircraft Total</b>											<b>33,637</b>

Table 2-3. Summary of Current Airfield Operations (continued)

Aircraft (Substitution)	Average Daily Arrival Operations			Average Daily Departure Operations			Average Daily Closed Pattern Operations			Total Average Daily Operations	Total Annual Operations
	Day	Evening	Night	Day	Evening	Night	Day	Evening	Night		
	<b>CIVILIAN AIRCRAFT</b>										
<b>Joint Powers Authority</b>											
<b>DHL Cargo</b>											
767-200F (767-CF6)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	2.00	624
767-200F (767-CF6)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	2.00	312
727-200 (727EM2)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	2.00	312
727-200 (727EM2)	0.00	1.00	1.00	0.00	0.00	2.00	0.00	0.00	0.00	4.00	1,248
747-400	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	4.00	1,248
A300	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	2.00	312
DC-8	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00	2.00	624
DC-9	0.00	1.33	2.67	0.00	0.00	4.00	0.00	0.00	0.00	8.00	2,496
<i>Subtotal</i>	<i>5.00</i>	<i>3.33</i>	<i>4.67</i>	<i>6.00</i>	<i>0.00</i>	<i>7.00</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>26.00</i>	<i>7,176</i>
<b>Civilian Aircraft Total</b>											
<b>GRAND TOTAL</b>	<b>39.68</b>	<b>6.28</b>	<b>5.80</b>	<b>41.97</b>	<b>2.23</b>	<b>7.56</b>	<b>24.48</b>	<b>7.56</b>	<b>6.71</b>	<b>181.00</b>	<b>40,813</b>

Notes:

The total annual operations are derived by multiplying the number of daily operations by the number of days that particular aircraft operates in an average year. Closed patterns account for two operations.



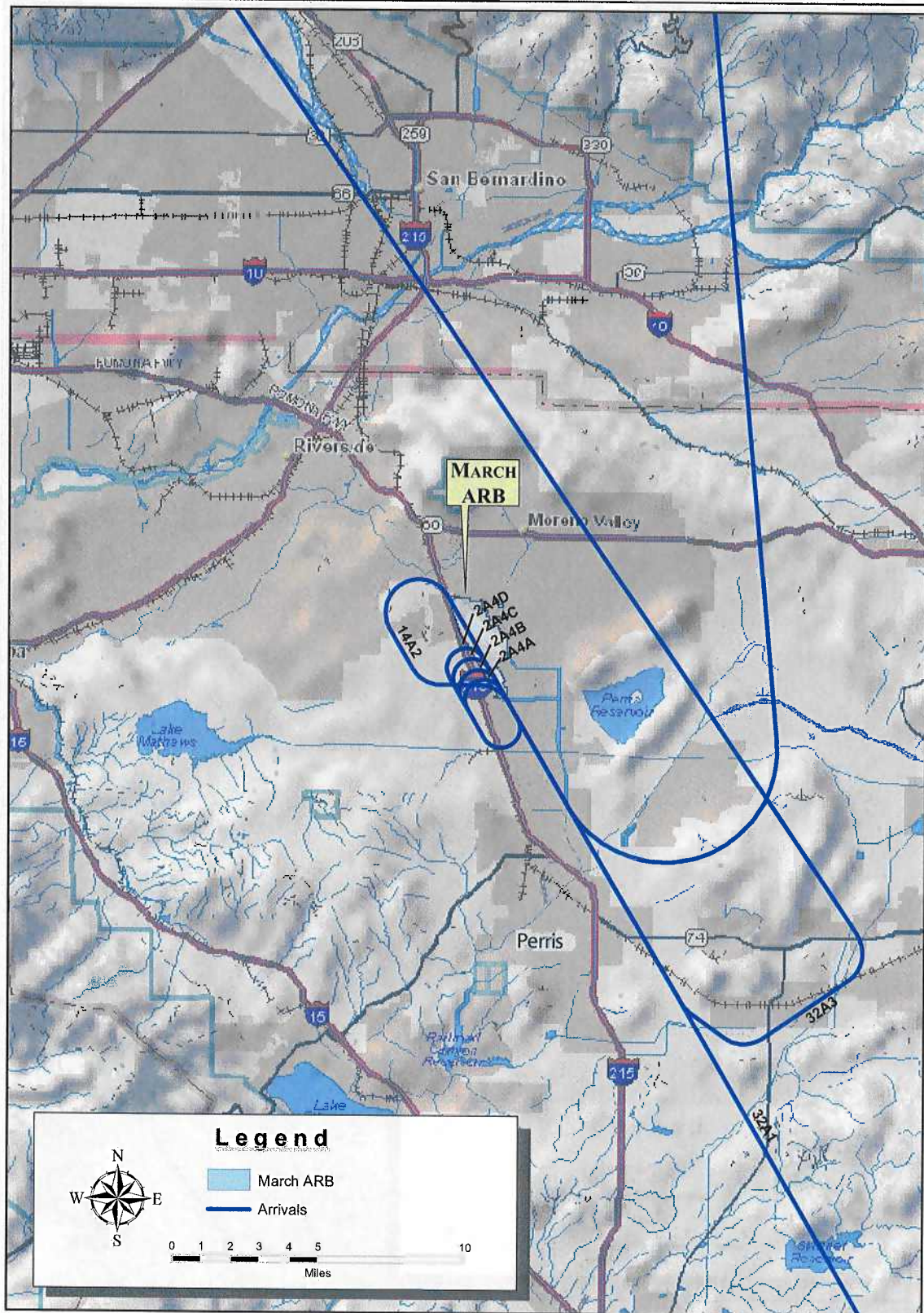


Figure 2-4. March ARB Flight Tracks - Arrivals

