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**ENVIRONMENTAL ASSESSMENT
CONVERT SLOW ROUTES 300 AND 301 TO
INSTRUMENT ROUTES**



**Department of the Air Force
Air Mobility Command
60th Air Mobility Wing
Travis Air Force Base, California**



July 2007

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| 14. ABSTRACT The purpose of the Proposed Action is to establish a single military training route (MTR): (1) for which Travis AFB C-17 aircrews can be the primary user for low-level navigation training; and (2) for which the Base can assume the originating and scheduling functions. This EA evaluates the No Action Alternative and the Proposed Action. Under the No Action Alternative, Slow Routes (SR)s 300/301 would not be converted to Instrument Routes (IR). However, Travis AFB C-17 aircrews would continue to fly SRs 300/301 as many as 122 times per year, and C-130s from an Air National Guard unit would accomplish five annual operations on the SRs. Under the Proposed Action, Travis AFB would become the scheduling and coordinating agency for SRs 300/301, which would be converted to IRs. Travis AFB C-17 aircrews would fly the IRs as many as 300 times per year and the C-130s would continue to fly the routes about five times a year. Resources considered in the impact analysis were: airspace operations (to include aircraft safety and bird/wildlife aircraft strike hazard); noise; land use; air quality; biological resources; cultural resources; and environmental justice. | | | | | |
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Finding of No Significant Impact Convert Slow Routes 300 and 301 to Instrument Routes

AGENCY

Department of the Air Force, Air Mobility Command, 60th Air Mobility Wing, Travis Air Force Base (AFB), California.

BACKGROUND

The low-level navigation training program developed for Travis C-17 aircrews and assessed in the *Environmental Assessment, West Coast Basing of C-17 Aircraft, June 2003* (West Coast C-17 Basing Environmental Assessment [EA]) is based on use of 16 military training routes (MTRs) originated and scheduled by other Department of Defense organizations. Most of the routes are distant from Travis AFB and many are heavily used by other military units. Since completion of the EA, Travis AFB staff reviewed the low-level navigation training program assessed in the West Coast C-17 Basing EA and desire to accomplish a greater number of operations on a route that: (1) is near Travis AFB; (2) is lightly used by other organizations; (3) allows operation on the route in Instrument Flight Rule (IFR) conditions as Instrument Routes (IRs); and (4) allows Travis AFB to accomplish the originating and scheduling functions for the route to reduce the coordination process and dependency for approval from other organizations. Slow Routes (SRs) 300/301, which are currently scheduled and coordinated by an Air National Guard (ANG) unit at Moffett Federal Airfield, California, meet all the selection factors when the routes are converted to IRs.

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 converting SRs 300/301 to IRs and the subsequent aircraft operations on the converted routes. The attached EA, which is incorporated by reference and supports this Finding of No Significant Impact, evaluated the No Action Alternative and Proposed Action.

NO ACTION ALTERNATIVE

SRs 300/301 would not be converted to IRs. However, the scheduling and coordinating responsibilities for the routes would transfer from the ANG unit at Moffett Federal Airfield to Travis AFB. Annually, Travis AFB C-17 and ANG C-130s aircrews would respectively accomplish as many as 122 and 5 flights on the route.

PROPOSED ACTION

SRs 300/301 would be converted to IRs and Travis AFB would become the scheduling and coordinating agency for the routes. Annually, Travis AFB C-17 and ANG C-130s aircrews would respectively accomplish as many as 300 and 5 flights on the route.

EVALUATION OF THE NO ACTION ALTERNATIVE

No significant impacts occur from the existing activities.

EVALUATION OF THE PROPOSED ACTION

Airspace Operations. The IRs can accommodate the additional C-17 operations and the airspace surrounding the proposed IR structure will not be affected by the conversion and operation as IRs. The potential for conflict between aircraft operating on the IRs and other aircraft operating in the airspace around the IRs is low because the existing scheduling and air traffic control procedures, as well as the procedures that will be implemented when the routes are converted, are designed to deconflict aircraft. The probability is low that an aircraft involved in an accident on the IRs will strike a person or structure on the ground. Although bird-aircraft strikes could be as great as 1.2 annual strikes, it is unlikely that any of these strikes will involve injury either to aircrews or to the public, or damage to property because, historically, only 1/2 of 1 percent of all reported strikes involving Air Force aircraft result in a serious mishap.

Noise. Noise from aircraft overflight will be below the level at which risk to the general population may occur. No structural damage will occur from aircraft noise.

Land Use. Use of existing overflight restrictions minimizes land use impacts. The 6 decibel increase in noise levels and less than one average daily overflight will not cause significant impact to sensitive land uses such as recreational and wilderness areas.

Air Quality. The emissions conform to the State Implementation Plans and a Clean Air Act General Conformity Determination is not required.

Biological Resources. Overflights will be infrequent, random, and pose no threat to wildlife at the behavioral, population, or species level.

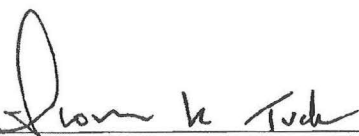
Cultural Resources. No adverse effect will occur to cultural resources or Native American interests.

ENVIRONMENTAL JUSTICE

Activities associated with the No Action Alternative and Proposed Action will not impose 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 EA and which is 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.



GIOVANNI K. TUCK, Colonel, USAF
Vice Commander, 60th Air Mobility Wing (AMC)

13 July 07

Date

**Environmental Assessment
Convert Slow Routes 300 and 301 to Instrument Routes**

**Department of the Air Force
Air Mobility Command
60th Air Mobility Wing
Travis Air Force Base, California**

July 2007



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ENVIRONMENTAL ASSESSMENT

Convert Slow Routes 300 and 301 to Instrument Routes

Responsible Agency: Department of the Air Force, Air Mobility Command, 60th Air Mobility Wing, Travis Air Force Base (AFB), California.

Proposed Action: Convert Slow Routes 300 and 301 to Instrument Routes

Written comments and inquiries regarding this document should be directed to: Mr. Rudy Pontemayor, 60 CES/CEVP, 411 Airmen Drive, Travis AFB, California 94535-2001, (707) 424-7517.

Abstract: The purpose of the Proposed Action is to establish a single military training route (MTR): (1) for which Travis AFB C-17 aircrews can be the primary user for low-level navigation training; and (2) for which the Base can assume the originating and scheduling functions. This EA evaluates the No Action Alternative and the Proposed Action. Under the No Action Alternative, Slow Routes (SR)s 300/301 would not be converted to Instrument Routes (IR). However, Travis AFB C-17 aircrews would continue to fly SRs 300/301 as many as 122 times per year, and C-130s from an Air National Guard unit would accomplish five annual operations on the SRs. Under the Proposed Action, Travis AFB would become the scheduling and coordinating agency for SRs 300/301, which would be converted to IRs. Travis AFB C-17 aircrews would fly the IRs as many as 300 times per year and the C-130s would continue to fly the routes about five times a year. Resources considered in the impact analysis were: airspace operations (to include aircraft safety and bird/wildlife aircraft strike hazard); noise; land use; air quality; biological resources; cultural resources; and environmental justice.

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ACRONYMS AND ABBREVIATIONS

| | |
|-------------------|---|
| AFB | Air Force Base |
| AFI | Air Force Instruction |
| AGL | above ground level |
| ANSI | American National Standards Institute |
| APE | area of potential effect |
| AQCR | air quality control region |
| ARTCC | air route traffic control center |
| BASH | bird/wildlife-aircraft strike hazard |
| BIA | Bureau of Indian Affairs |
| CAA | Clean Air Act |
| CEQ | Council on Environmental Quality |
| CESA | California Endangered Species Act |
| CFR | Code of Federal Regulations |
| CO | carbon monoxide |
| CO ₂ | carbon dioxide |
| CTAF | common traffic advisory frequency |
| dB | decibel |
| dBA | A-weighted sound level measured in decibels |
| DNL | day-night average sound level |
| DoD | Department of Defense |
| EO | executive order |
| EA | environmental assessment |
| EIAP | environmental impact analysis process |
| EIS | environmental impact statement |
| ESA | Endangered Species Act |
| FAA | Federal Aviation Administration |
| FONSI | finding of no significant impact |
| FY | fiscal year |
| HAP | high accident potential |
| HUD | United States Department of Housing and Urban Development |
| IFR | instrument flight rules |
| IICEP | Interagency and Intergovernmental Coordination for Environmental Planning |
| INRMP | Integrated Natural Resources Management Plan |
| IR | instrument route |
| lbs | pounds |
| L _{dnmr} | day-night average A-weighted sound level |
| L _{max} | maximum sound level |
| µg/m ³ | micrograms per cubic meter |
| MOA | military operations area |
| MSL | mean sea level |
| MTR | military training route |
| N ₂ O | nitrous oxide |
| NAAQS | National Ambient Air Quality Standards |
| 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 |

| | |
|------------------------------|---|
| O ₃ | ozone |
| ODFW | Oregon Department of Fish and Wildlife |
| Pb | lead |
| PM ₁₀ | particulate matter equal to or less than 10 microns in aerodynamic diameter |
| PM _{2.5} | particulate matter equal to or less than 2.5 microns in aerodynamic diameter |
| ROI | region of influence |
| SEL | sound exposure level |
| SHPO | State Historic Preservation Office |
| SIP | state implementation plan |
| SO ₂ | sulfur dioxide |
| SO _x | sulfur oxides |
| SR | slow route |
| SUA | special use airspace |
| the Base | Travis AFB |
| the Plan | Mobility Transformation Plan |
| tpy | tons per year |
| TSP | total suspended particulates |
| USC | United States Code |
| USDO! | United States Department of the Interior |
| USEPA | United States Environmental Protection Agency |
| USFWS | United States Fish and Wildlife Service |
| VOC | volatile organic compounds |
| VFR | visual flight rules |
| VR | visual route |
| West Coast C-17 Basing EA | <i>Environmental Assessment West Coast Basing of C-17 Aircraft, June 2003</i> |

CHAPTER 1 PURPOSE OF AND NEED FOR ACTION

1.1 PURPOSE OF AND NEED FOR ACTION

The Air Force Mobility Force Structure Briefing to Congress on April 15, 2002 presented an airlift Mobility Transformation Plan (the Plan) that proposes to standardize airlift aircraft fleets, increase reliability, lower operating and support costs, and increase airlift capability by 33 percent. As part of the Plan, Headquarters, Air Mobility Command decided to base C-17 aircraft at Travis Air Force Base (AFB), California (the Base). The Travis AFB C-17 basing action was environmentally assessed in a document 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 proposed C-17 basing action was signed July 21, 2003. The basing action is underway and the last of the 13 C-17s is scheduled for delivery at the Base in fiscal year 2007 (FY07).

C-17 aircrews are required to maintain proficiency in low-level navigation because the skills are needed for the global mission of the aircraft. Thus, Travis AFB C-17 aircrews have a need to accomplish low-level navigation training. The Department of Defense (DoD) and the Federal Aviation Administration (FAA) mutually developed and published military training routes (MTR) throughout the United States on which military aircrews conduct low-level navigation training.

There are three types of MTRs: Instrument Route (IR), Visual Route (VR), and Slow Route (SR). IRs allow the aircraft to operate below 10,000 feet above mean sea level (MSL) at speeds in excess of 250 knots in Instrument Flight Rules (IFR) conditions. VRs are guided by the same restrictions as IRs but are limited to flight in Visual Flight Rules (VFR) conditions. SRs are slow speed low altitude training routes that operate below 1,500 above ground level (AGL) at airspeeds of 250 knots or less and in VFR conditions.

The low-level navigation training program developed for Travis AFB C-17 aircrews and assessed in the West Coast C-17 Basing Environmental Assessment (EA) is based on use of 16 MTRs originated and scheduled by other DoD organizations. Most of the routes are distant from Travis AFB and many are heavily used by other military units. Since completion of the West Coast C-17 Basing EA, Travis AFB staff reviewed the low-level navigation training program assessed in the EA and desire to accomplish a greater number of operations on a route that is near Travis AFB and lightly used by other organizations. The goal is for Travis AFB to accomplish the originating and scheduling functions for the route to reduce the coordination process and dependency for approval from other organizations. Thus, Travis AFB has a need to become the primary user of a single MTR and to assume the originating and scheduling functions for the route.

1.2 SCOPE OF THE ENVIRONMENTAL REVIEW

The *National Environmental Policy Act* (NEPA) of 1969, as amended, requires federal agencies to consider environmental consequences in the decision-making process. The President's Council on Environmental Quality (CEQ) issued regulations to implement NEPA. The Air Force Environmental Impact Analysis Process (EIAP) is accomplished through adherence to the procedures set forth in CEQ regulations (40 Code of Federal Regulations [CFR] Parts 1500-1508) and 32 CFR 989, *Air Force 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:

- Briefly provide sufficient evidence and analysis to determine whether an environmental impact statement (EIS) or FONSI should be prepared;
- Aid in an agency's compliance with NEPA when no EIS is required; or
- Facilitate preparation of an EIS, when required.

This EA identifies, describes, and evaluates the potential environmental impacts that may result from conversion of SRs 300/301 to IRs and the No Action Alternative. As appropriate, the affected environment and environmental consequences of the Proposed Action may be described in terms of site-specific descriptions or regional overview. Finally, the EA identifies measures that would prevent or minimize environmental impacts.

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

No additional personnel would be based at Travis AFB and no construction activities would occur at the Base as a result of the Proposed Action. Therefore, the following resources will not be assessed in the EA because no impacts would occur from implementation of the Proposed Action: infrastructure and utilities; water resources; earth resources; hazardous material and hazardous waste, and socioeconomic resources.

As previously mentioned, the West Coast C-17 Basing EA assessed a total of 16 MTRs for use by Travis AFB C-17 aircrews. Since completion of the EA, Travis AFB staff have reviewed the low-level navigation program assessed in the West Coast C-17 Basing EA. As a result of the review, the Proposed Action in this EA would convert SRs 300/301 to IRs and Travis AFB would become the originating and scheduling organization for the routes. The Proposed Action would also increase the number of flights on the converted IRs and decrease the operations by Travis AFB C-17s on 10 of the other 15 MTRs when compared to the number of annual operations for each route assessed in the West Coast C-17 Basing EA. The increase in C-17 operations on

the converted IRs above that assessed in the West Coast C-17 Basing equals the sum of the reduction in the number of C-17 operations on the 10 routes. There would be no change in the number of Travis AFB C-17 operations on the other five routes. Overall, there would be no net change in the total number of MTR operations that Travis AFB C-17 aircrews would accomplish on the 16 routes. Thus, the potential for impact from operation on the 15 MTRs would not exceed that assessed in the West Coast C-17 Basing EA. Therefore, this EA does not assess the 15 MTRs and evaluates only the changes proposed for SRs 300/301.

A cumulative impact, as defined by the CEQ (40 CFR 1508.7), is the "...impact on the environment that 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." Travis AFB contacted the FAA concerning other actions by the FAA or DoD within the airspace that is adjacent to or intersects with the SR 300/301 airspace. No other actions were identified. Thus, cumulative impacts will not be evaluated in the EA.

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 and Proposed Action would not impose adverse environmental effects on adjacent populations. Therefore, no disproportionately high and adverse effects would occur to minority and low-income populations.

1.3 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 environmental assessment or 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 so that all such procedures run concurrently rather than consecutively."

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 Interagency and Intergovernmental Coordination for Environmental Planning (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*;
- Executive Order 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*.

To comply with the IICEP, Travis AFB notified numerous agencies in California, Nevada, and Oregon of the intent to prepare an EA for the conversion of Slow Routes 300/301 to Instrument Routes. Appendix A contains the IICEP correspondence.

Biological Resources

The Endangered Species Act (ESA) (16 United States Code [USC] 1531 *et seq.*) requires federal agencies that fund, authorize, or implement actions to avoid jeopardizing the continued existence of federally listed threatened or endangered species, or destroying or adversely affecting their critical habitat. Federal agencies must evaluate the effects of their actions through a set of defined procedures, which can include preparation of a biological assessment and formal consultation with the United States Fish and Wildlife Service (USFWS).

Cultural Resources

The *National Historic Protection Act* (NHPA) (16 USC 470, *et seq.*) provides the principal authority used to protect historic properties, establishes the National Register of Historic Places (NRHP), and defines in Section 106, the requirements for federal agencies to consider the effects of an action on properties on or eligible for 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.

In compliance with the NHPA, the American Indian Religious Freedom Act, and the Native American Graves Protection and Repatriation Act of 1990, Travis AFB initiated correspondence and consultation efforts with affiliated tribal groups regarding the lands beneath the SRs 300/301 flight corridor. Appendix B contains the Native American coordination correspondence.

Air Quality

The *Clean Air Act* (CAA) (42 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 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.

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 recommend acceptable levels of noise exposure for land use.

Aircraft Safety and Bird/Wildlife Aircraft Strike Hazard

Air Force Instruction 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.

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CHAPTER 2

ALTERNATIVES INCLUDING THE PROPOSED ACTION

2.1 ALTERNATIVES FORMULATION AND CONSIDERATION

The NEPA and its implementing regulations (*i.e.*, CEQ regulations) require not only an analysis of the proposed action, but also of “all reasonable alternatives” to the proposed action, including a No Action Alternative. CEQ regulations allow for eliminating alternatives from detailed study and require an EIS to discuss the reasons that an alternative was eliminated. The Air Force EIAP (32 CFR Part 989) provides a process for determining “reasonable” alternatives (thus requiring analysis) and a process based on reasonable selection standards for eliminating from detailed analysis alternatives determined not to be “reasonable.”

“Reasonable” alternatives are those that meet the underlying purpose and need for the proposed action that would cause a reasonable person to inquire further before choosing a particular course of action. The Air Force also must consider reasonable alternatives raised during the scoping process or suggested by others, as well as combinations of alternatives. The Air Force need not analyze highly speculative alternatives, such as those requiring a major, unlikely change in law or governmental policy. If the Air Force identifies a large number of reasonable alternatives, it may limit alternatives selected for detailed environmental analysis to a reasonable number of examples covering the full spectrum of alternatives (32 CFR Part 989.8(b)).

The Air Force may expressly eliminate alternatives from detailed analysis based on reasonable selection standards (*e.g.*, operational, technical, or environmental standards suitable to a particular project). The Air Force may develop written selection standards to firmly establish what is a “reasonable” alternative for a particular project, but it must not so narrowly define these standards that it unnecessarily limits considerations to the proposal initially favored by proponents (32 CFR Part 989.8(c)).

2.1.1 Selection Standards for Alternatives

A viable primary MTR that could be used for training by Travis AFB aircrews must:

- Be near Travis AFB to reduce “transit” time between the Base and the route entry/exit points. Transit time is undesirable in flying training programs because training events are not accomplished during that time. Flying training programs are developed to maximize the number of training events accomplished in the shortest period possible to conserve valuable training funds.
- Allow for frequent and unrestricted operation in which Travis AFB C-17 aircrews would be the primary user and would not have to “compete” with

other military units for access to the route.

- Allow airspeeds greater than 250 knots.
- Have the ability to provide an altitude structure that allows flight as low as 300 feet AGL while providing sufficient altitude to vertically clear terrain and other obstacles by 2,000 feet under IFR conditions due to weather patterns in northern California.
- Allow for a minimum of 25 minutes (about 150 linear miles) of low-level flying time each time the route is flown.
- Traverse a variety of terrain and provide multiple entry/exit points along the route.
- Be an existing MTR for which Travis AFB could be the originating and scheduling organization.

2.1.2 Identification of Alternatives

Travis AFB personnel reviewed the 16 MTRs evaluated in the West Coast C-17 Basing EA to identify an MTR to be the primary route its C-17 aircrews would use for training and for which the Base could be the originating and scheduling organization. As a result of the process and in addition to the No Action Alternative, Travis AFB identified the following alternatives to satisfy the need identified in Subchapter 1.1:

1. Convert SRs 300/301 to IRs.
2. Create an IR overlay above a portion of SRs 300/301 (*e.g.*, from Point D to Point O or Point D to Point N) that allows about 25 minutes of low-level flying time.
3. Convert SRs 300/301 to VRs.
4. Create a VR overlay above a portion of SRs 300/301 (*e.g.*, from Point D to Point O or Point D to Point N) that allows about 25 minutes of low-level flying time.

Airspace is an entity that can be used for multiple aviation purposes. Travis AFB personnel also considered creating a new MTR. Establishing an MTR in a high density aircraft traffic area such as that surrounding Travis AFB (*i.e.*, major airports at nearby Oakland and Sacramento, California) would be difficult because there are high levels of aircraft operations associated with these two airports and other airports that “compete” for use of airspace. Northern California currently has numerous MTRs and special use airspaces such as military operations areas that would make establishing a new MTR near Travis AFB difficult. Thus, creating a new MTR was not considered as a viable alternative.

2.1.3 Application of Selection Standards to Alternatives Considered

Travis AFB personnel compared the alternatives identified in Subchapter 2.1.2 to the selection standards in Subchapter 2.1.1. Table 2-1 summarizes the selection process and the following discussion explains how the selection standards were applied.

Table 2-1 Application of Selection Standards to Alternatives Considered

| Standard | Alternative | | | |
|--|--|--|---------------------------------------|---|
| | 1 Convert SRs 300/301 to IRs | 2 Create an IR Overlay above SRs 300/301 | 3 Convert SRs 300/301 to VRs | 4 Create a VR Overlay above SRs 300/301 |
| Near Travis AFB | Yes | Yes | Yes | Yes |
| Frequent and Unrestricted Use by Travis AFB | Yes | Yes | Yes | Yes |
| Airspeeds Greater than 250 knots | Yes | Yes | Yes | Yes |
| Allow Operation between 300 feet AGL and Vertically Clear Terrain by 2,000 Feet under IFR conditions | Yes | Yes | No | No |
| 25 Minute Enroute Time | Yes | Yes | Yes | Yes |
| Variety of Terrain | Yes | Yes | Yes | Yes |
| Existing MTR for which Travis AFB Could be the Originating/Scheduling Organization | Yes | Yes | Yes | Yes |

The only difference between Alternative 2 and Alternative 1 is that Alternative 2 would create an IR route that would be shorter than Alternative 1. The structure of the portion of the IR that would be created under Alternative 2 (*i.e.*, from Point D to Point O or Point D to Point N) would be identical to the same portion of an entire converted SR 300/301. Thus, the analysis for Alternative 1 would apply to Alternative 2, and Alternative 2 is not analyzed in detail in this EA.

As shown in Table 2-1, Alternatives 3 and 4 would meet all but one of the standards. The standard that these two alternatives do not meet, the ability to operate between 300 feet AGL and vertically clear terrain by 2,000 feet under IFR conditions, is a critical standard, especially when considering the weather in northern California, which very often requires operating in IFR conditions. Not being able to fly the MTR in IFR conditions would restrict the flexibility the Travis AFB C-17 training program, which needs to be able to train in all weather conditions. Thus, Alternatives 3 and 4 are eliminated from detailed analysis in this EA.

Based on the summary in Table 2-1 and the reasons in the preceding paragraphs, converting SRs 300/301 to IRs and Travis AFB becoming the originating and scheduling organization for the IRs was identified as the alternative best suited to meet the need identified in Subchapter 1.1.

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 identifying an MTR for which Travis AFB would be the primary user and the originating and scheduling organization was also identified (No Action Alternative) and is analyzed in detail in this EA.

2.2 DESCRIPTION OF THE NO ACTION ALTERNATIVE

Under the No Action Alternative, SRs 300/301 would not be converted to IRs. However, the scheduling and coordinating responsibilities for the routes would transfer from an Air National Guard unit at Moffett Federal Airfield, California to Travis AFB. Travis AFB C-17 aircrews would accomplish MTR operations as assessed in the West Coast C-17 Basing EA (*i.e.*, 122 times per year). C-130s from the Air National Guard unit would continue to fly the routes five times per year.


2.3 DESCRIPTION OF THE PROPOSED ACTION

Travis AFB would become the scheduling and coordinating agency for SRs 300/301, which would be converted to IRs. For the purposes of this EA, the converted routes are referred to as IRs XXX/XXX because the designator numbers would not be known until after the conversion process is completed. Travis AFB C-17 aircrews would fly IRs XXX/XXX as many as 300 times per year (25 times per month). Additionally, C-130s would continue to fly the routes about five times a year (1.4 times per month). Approximately 25 percent of the operations would occur during the evening (7:00 p.m. to 10:00 p.m.), and 25 percent would occur during the nighttime (10:00 p.m. to 7:00 a.m.).

Slow Route 300 is a 20-segment, 760 mile-long, 10-mile wide (5 miles either side of centerline) route that begins east of Stockton, California, extends east into Nevada, then to the northwest into Oregon, and ends northwest of Sacramento. Figure 2-1 shows the location of SRs 300/301. The route can be flown as SR 300 from Point A to Point U (SR 300) or as SR 301 from Point U to Point A. Alternate entry/exit points are established at Points E and I to allow aircrews to fly shorter portions of the route. The minimum altitude at which the route can be flown is 300 feet AGL and the maximum altitude is 1,500 feet AGL. The maximum airspeed along the entire route is 250 knots. C-17 aircraft would typically not fly IRs XXX/XXX in its entirety from Point A to Point U, but would use the new alternate entry exit points to fly a portion of the IRs to accomplish between 25-45 minutes of training on the route.

Alternate exit/entry points would be established at Points D, E, H, J, M, O, and R. Point I would no longer be an alternate exit/entry point. There would be no adjustment to the locations of Points A through U. The route width would continue to be a total of 10 miles. The maximum altitude on any of the segments would be about 13,000 feet



Travis AFB EA
LEGEND
 Air Route Traffic Control Center (ARTCC) Boundary

**SRs 300/301 Proposed IRs
 XXX/XXX,
 Travis AFB**

Figure 2-1

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MSL for the segment from Point E to Point F and the minimum altitude for the entire length of the route would be 300 feet AGL, except from Point N to Point O. Table 2-2 lists the altitude data for each segment of the route. Airspeed along the entire route could exceed 250 knots when needed for training.

Table 2-2 Proposed IRs XXX/XXX Altitude Data

| Route Segment | Altitude Minimum | Maximum |
|---------------|------------------|------------|
| A to B | 300 AGL | 11,000 MSL |
| B to C | 300 AGL | 11,000 MSL |
| C to D | 300 AGL | 12,000 MSL |
| D to E | 300 AGL | 12,000 MSL |
| E to F | 300 AGL | 13,000 MSL |
| F to G | 300 AGL | 11,000 MSL |
| G to H | 300 AGL | 11,000 MSL |
| H to I | 300 AGL | 11,000 MSL |
| I to J | 300 AGL | 12,000 MSL |
| J to K | 300 AGL | 9,000 MSL |
| K to L | 300 AGL | 11,000 MSL |
| L to M | 300 AGL | 10,000 MSL |
| M to N | 300 AGL | 10,000 MSL |
| N to O | 1,000 AGL | 9,000 MSL |
| O to P | 300 AGL | 9,000 MSL |
| P to Q | 300 AGL | 9,000 MSL |
| Q to R | 300 AGL | 9,000 MSL |
| R to S | 300 AGL | 9,000 MSL |
| S to T | 300 AGL | 6,000 MSL |
| T to U | 300 AGL | 6,000 MSL |

Note: Numbers reflect feet AGL or feet above MSL.

2.4 IDENTIFICATION OF THE PREFERRED ALTERNATIVE

The preferred alternative is the Proposed Action which would convert SRs 300/301 to IRs XXX/XXX and increase C-17 operations on the routes to as many as 300 flights per year.

2.5 COMPARISON OF ENVIRONMENTAL EFFECTS OF ALL ALTERNATIVES

Table 2-3 summarizes the impacts of the No action Alternative and the Proposed Action.

2.6 MITIGATION

No mitigation would be required to reduce the impacts to less than significant.

Table 2-3 Summary of Environmental Impacts for Conversion of SR 300/301 to Instrument Routes

| |
|---|
| <p>Airspace Operations</p> <p>No Action Alternative</p> <ul style="list-style-type: none"> The existing procedures for operating on the routes would be continued and would accommodate the current 122 C-17 and 5 C-130 annual operations. The existing conditions for aircraft safety and bird-aircraft strikes would continue because there would be no change in the type or level of aircraft operations. <p>Proposed Action</p> <ul style="list-style-type: none"> The IRs could accommodate the additional C-17 operations and the airspace surrounding the proposed IR structure would not be affected by the conversion and operation as IRs. The potential for conflict between aircraft operating on the IRs and other aircraft operating in the airspace around the IRs would be low because the existing scheduling and air traffic control procedures, as well as the procedures that would be implemented when the routes are converted, are designed to deconflict aircraft. The probability would be low that an aircraft involved in an accident on the IRs would strike a person or structure on the ground. Although bird-aircraft strikes could be as great as 1.2 annual strikes, it is unlikely that any of these strikes would involve injury either to aircrews or to the public, or damage to property because, historically, only 1/2 of 1 percent of all reported strikes involving Air Force aircraft result in a serious mishap. |
| <p>Noise</p> <p>No Action Alternative</p> <ul style="list-style-type: none"> Noise from aircraft overflight would continue to be below the level at which risk to the general population may occur. No structural damage would occur from aircraft noise. <p>Proposed Action</p> <ul style="list-style-type: none"> The summary for the No Action Alternative applies. |
| <p>Land Use</p> <p>No Action Alternative</p> <ul style="list-style-type: none"> Continued use of existing overflight restrictions would minimize land use impacts. The noise level from, and operations of, less than one average daily overflight would continue to not cause significant impact to sensitive land uses such as recreational and wilderness areas. <p>Proposed Action</p> <ul style="list-style-type: none"> Use of existing and proposed overflight restrictions would minimize land use impacts. The 6 decibel increase in noise levels and less than one average daily overflight would not cause significant impact to sensitive land uses such as recreational and wilderness areas. |
| <p>Air Quality</p> <p>No Action Alternative</p> <ul style="list-style-type: none"> Emissions from aircraft operations on SRs 300/301 would continue at the current rates and would not exceed air quality standards. <p>Proposed Action</p> <ul style="list-style-type: none"> The emissions conform to the State Implementation Plans and a Clean Air Act General Conformity Determination would not be required. |
| <p>Biological Resources</p> <p>No Action Alternative</p> <ul style="list-style-type: none"> Overflights would continue to be infrequent, random, and pose no threat to wildlife at the behavioral, population, or species level. <p>Proposed Action</p> <ul style="list-style-type: none"> The summary for the No Action Alternative applies. |
| <p>Cultural Resources</p> <p>No Action Alternative</p> <ul style="list-style-type: none"> The probability of an adverse effect occurring to an archaeological or historic resource as a result of aircraft accidents would continue to be very low. The noise threshold for a C-17 at 300 feet AGL is well below the threshold at which structural damage would occur from noise-induced vibration. The potential for adverse effects to Native American tribes along SRs 300/301 would continue to be minimized through the Base's ongoing consultation with the tribes. <p>Proposed Action</p> <ul style="list-style-type: none"> The summary for the No Action Alternative applies. |

CHAPTER 3

AFFECTED ENVIRONMENT

This chapter describes the existing environmental resources that could be affected by or could affect the No Action Alternative and the Proposed Action. 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 AIRSPACE 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 IFR or VFR. The FAA established special use airspace (SUA) to meet the needs of military aviation. MTRs, along with military operations areas (MOA) and restricted airspace, are examples of SUA.

Several factors reduce risks between MTRs and other airspace used by civil aviation activities. The ceiling of many MTRs is below the minimum enroute altitude established for most of the federal airways with which they intersect. Additionally, IR and VR routes are clearly designated on aeronautical charts. However, SRs are not on aeronautical charts used by civil pilots. Both military and civil pilots follow the general “see and avoid” rules of flight. MTRs may also interact with other elements of military training airspace, either transiting through MOAs, restricted areas, or intersecting and merging with other MTRs. MTRs are coordinated through the scheduling unit’s operations plan to eliminate simultaneous aircraft operations on conflicting routes scheduled by the installation. Aircrews monitor radio frequencies assigned by air traffic control or as stated in the DoD Flight Information Publications for the type of route being flown (*i.e.*, IR, VR, or SR) or the specific route. These actions advise aircrews of the location of other aircraft and help reduce the potential for airspace conflicts between aircraft operating on MTRs, in MOAs, and other aircraft.

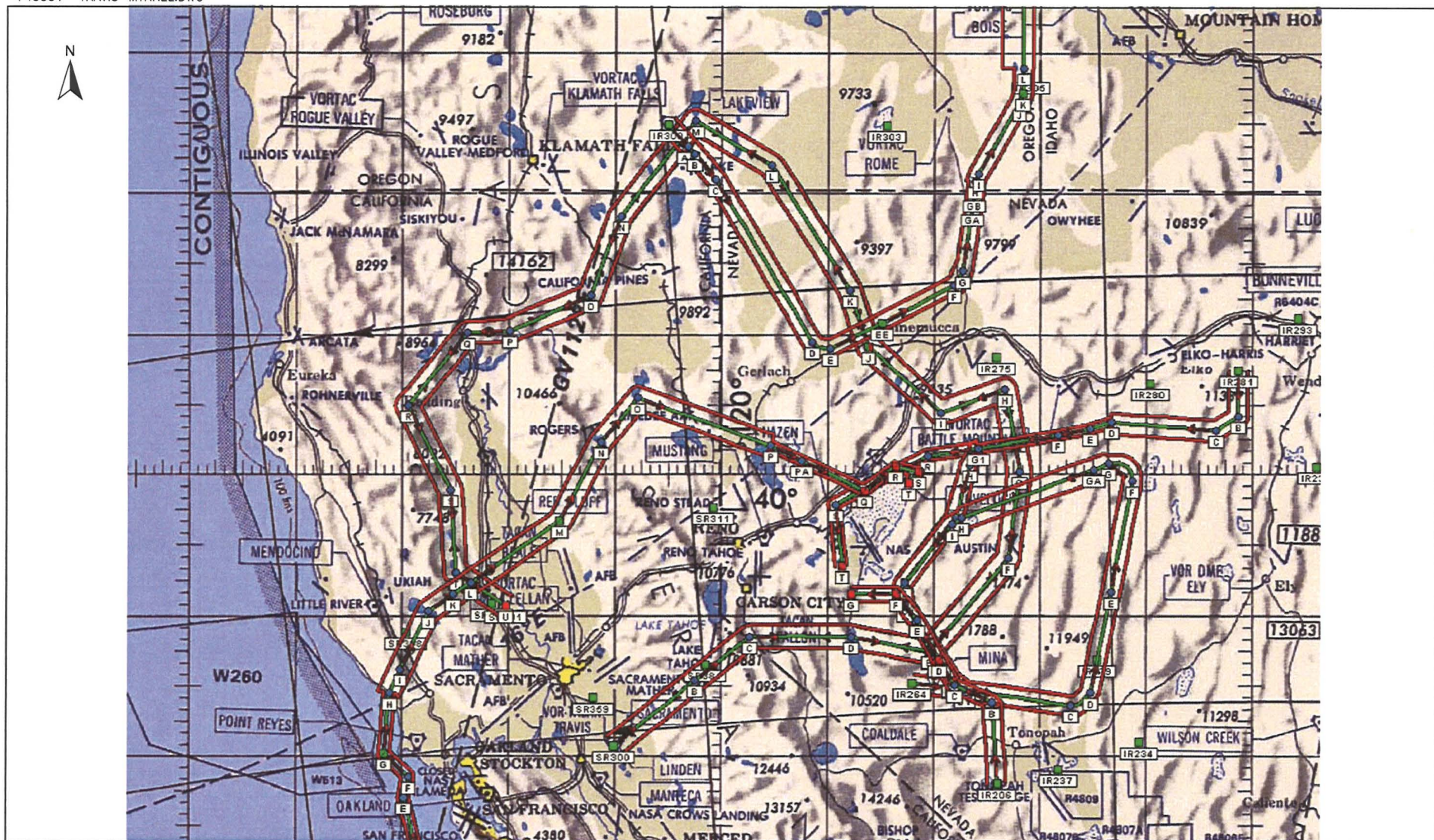
FAA guidance places limitations on low-altitude flying for pilots. AFI 11-202, Volume 3 (*General Flight Rules*), which implements FAA guidance for Air Force operations, states aircraft cannot be flown:

- Over congested areas (e.g., cities, towns, and groups of people) at an altitude of less than 1,000 feet above the highest obstacle within 2,000 feet of the aircraft; and
- Over non-congested areas at an altitude of less than 500 feet above the surface except over open water, in SUA, or in sparsely populated areas. Under such exceptions, aircraft must not operate closer than 500 feet to any person, vehicle, vessel, or structure.

Additionally, AFI 11-202 states that, except for SUA and MTRs, aircraft should not be flown lower than 2,000 feet above the terrain of national parks, monuments, seashores, lakeshores, recreation areas, and scenic river ways administered by the National Park Service (NPS), national wildlife refuges, big game refuges, game ranges, and wildlife refuges administered by the USFWS; and wilderness and primitive areas administered by the U.S. Forest Service.

FAA Handbook 7610.4 does not establish minimum altitudes for MTRs. Establishment of minimum MTR altitudes considers the above restrictions and an altitude that corresponds with the primary aircraft type for which the route is developed. Additionally, MTR operations attempt to duplicate, to the maximum extent practicable, conditions in which they would operate in a combat environment. Therefore, MTRs for highly maneuverable (fighter) aircraft that have special equipment such as terrain-following radar tend to fly lower altitudes. Larger aircraft that are less maneuverable and typically do not have equipment that safely allows low level flight (transport aircraft) fly MTRs at higher altitudes. Typical effective low-level training altitudes for transport aircraft (e.g., C-130 and C-17) are 300 feet AGL. However, the minimum altitudes flown consider the restrictions for overflying congested areas and people.

Tables 3-1 and 3-2 contain specific information such as the route entry and exit points, route width, route minimum altitudes, federal airways that intersect the SRs 300/301, other MTRs that intersect the SRs 300/301, and airports within the SRs 300/301 corridor. Figures 3-1 and 3-2, respectively, depict the other MTRs that intersect SRs 300/301 and the relationship of SRs 300/301 and MOAs. The text boxes in Figure 3-2 show the minimum and maximum altitudes for the MOAs that intersect SRs 300/301. As mentioned in Subchapter 2.2, SRs 300/301 would be flown as many as 122 times per year by Travis AFB C-17s and five times per year by C-130s. SRs 300/301 pass through airspace controlled by the Oakland, Salt Lake City, and Seattle Air Route Traffic Control Centers (ARTCC).

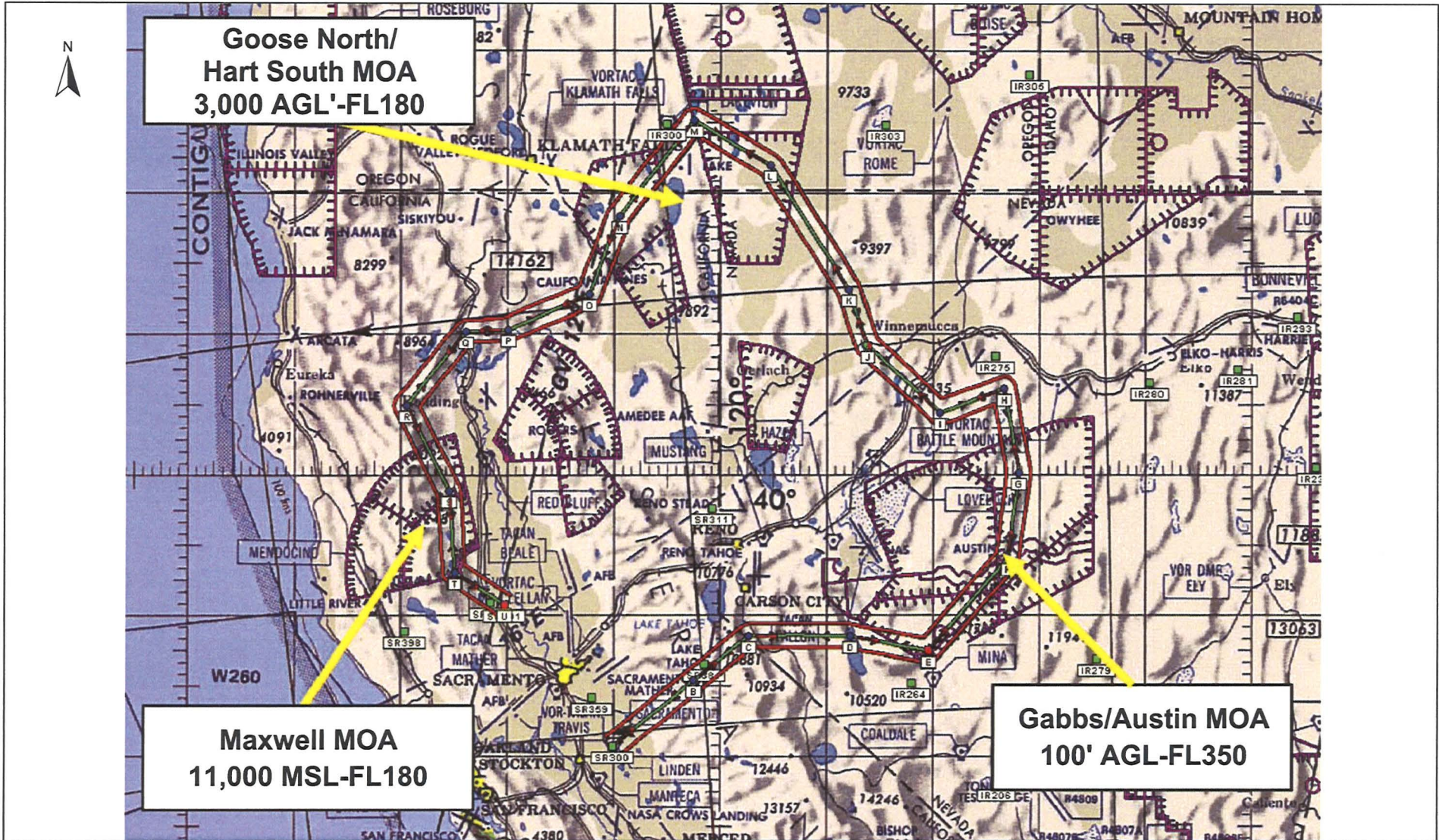


Travis AFB EA

Military Training Routes that Intersect with SRs 300/301, Travis AFB

Figure 3-1

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**Travis AFB EA
LEGEND**

- AGL** = Feet Above Ground Level
- MSL** = Feet Above Mean Sea Level
- FL** = Surfaces of constant atmospheric pressure which are related to a specific pressure datum (i.e., 29.92 inches) and are separated by specific pressure intervals. FL180 is approximately 18,000 feet MSL.

**Relationship of Military
Operations Areas and SRs
300/301 , Travis AFB**

Figure 3-2

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Table 3-1 SRs 300/301 Route Description

| Point | Minimum Altitude | Route Width (NM) | Length (NM) | Latitude | Longitude |
|--------------------------------|------------------|------------------|-------------|------------|-------------|
| A (Entry Point) | 300 AGL | 5 LT – 5 RT | | N38°04.30' | W121°00.20' |
| B | 300 AGL | 5 LT – 5 RT | 45 | N38°32.00' | W120°15.00' |
| C | 300 AGL | 5 LT – 5 RT | 31 | N38°51.00' | W119°44.00' |
| D | 300 AGL | 5 LT – 5 RT | 45 | N38°51.00' | W118°46.70' |
| E (Alternate Entry/Exit Point) | 300 AGL | 5 LT – 5 RT | 35 | N38°44.60' | W118°02.60' |
| F | 300 AGL | 5 LT – 5 RT | 52 | N39°24.00' | W117°18.20' |
| G | 300 AGL | 5 LT – 5 RT | 37 | N40°01.00' | W117°11.50' |
| H | 300 AGL | 5 LT – 5 RT | 36 | N40°36.83' | W117°20.00' |
| I | 300 AGL | 5 LT – 5 RT | 29 | N40°26.67' | W117°56.12' |
| J (Alternate Entry/Exit Point) | 300 AGL | 5 LT – 5 RT | 42 | N40°55.00' | W118°37.00' |
| K | 300 AGL | 5 LT – 5 RT | 25 | N41°19.00' | W118°48.00' |
| L | 300 AGL | 5 LT – 5 RT | 62 | N42°12.00' | W119°32.00' |
| M | 300 AGL | 5 LT – 5 RT | 37 | N42°31.00' | W120°15.00' |
| N | 1,000 AGL | 5 LT – 5 RT | 51 | N41°50.30' | W120°57.00' |
| O | 300 AGL | 5 LT – 5 RT | 36 | N41°16.80' | W121°13.80' |
| P | 300 AGL | 5 LT – 5 RT | 37 | N41°02.00' | W121°59.20' |
| Q | 500 AGL | 5 LT – 5 RT | 18 | N41°01.00' | W122°23.00' |
| R | 300 AGL | 5 LT – 5 RT | 40 | N40°29.80' | W122°56.90' |
| S | 300 AGL | 5 LT – 5 RT | 41 | N39°53.20' | W122°32.60' |
| T | 300 AGL | 5 LT – 5 RT | 35 | N39°18.20' | W122°29.50' |
| U (Exit Point) | | 5 LT – 5 RT | 26 | N39°04.10' | W122°01.50' |

LT=NM distance left of route center line; RT=NM distance right of route center line
 Source: DoD 2006

Table 3-2 Airports within or Near the SRs 300/301 Corridor and Military Training Routes, Federal Airways, and Military Operations Areas that Intersect SRs 300/301

| Airports | Military Training Routes | | Federal Airways | Military Operations Areas |
|-----------------|--------------------------|---------|-----------------|---------------------------|
| Battle Mountain | IR 203 | VR 202 | None | Goose North |
| Winnemuca | IR 206 | VR 1250 | | Hart |
| Red Bluff | IR 207 | VR 1252 | | Gabbs |
| Redding | IR 300 | VR 1255 | | Austin 1 |

Table 3-2 Airports within or Near the SRs 300/301 Corridor and Military Training Routes, Federal Airways, and Military Operations Areas that Intersect SRs 300/301 (continued)

| Airports | Military Training Routes | | Federal Airways | Military Operations Areas |
|----------|--------------------------|---------|-----------------|---------------------------|
| | IR | VR | | |
| | IR 366 | VR 1259 | | Maxwell |
| | IR 280 | VR 1260 | | |
| | IR 281 | VR1261 | | |
| | IR 271 | VR 1352 | | |
| | VR 201 | VR 1353 | | |

3.1.1.1 Aircraft Safety

Areas on the ground within an MTR corridor 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.

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.

The Air Force defines five categories of aircraft flight mishaps: Classes A, B, C, E, and High Accident Potential (HAP). 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. HAP 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 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 3-3 lists the 10-year Class A mishap rates for the C-17 and C-130 aircraft. The table reflects the Air Force-wide data for all elements of all missions and sorties for each aircraft.

Table 3-3 C-17 and C-130 Class A Aircraft Mishap Information

| Aircraft | Class A Mishap Rate |
|----------|---------------------|
| C-17 | 1.22 |
| C-130 | 0.42 |

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

Source: USAF 2005.

3.1.1.2 Bird/Wildlife Aircraft Strike Hazard

Bird and wildlife strikes constitute a safety concern because of the potential for damage to aircraft, injury to aircrews, or local populations 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 bird strikes occur in the airport environment, and 15 percent during low-level cruise (USAF 2003c). About 90 percent of the low-level cruise strikes occur between 300 and 5,000 feet AGL, the altitude range for most MTR operations (USAF 2003b).

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 plan provides guidance for reducing the incidents of bird strikes in and around areas where flying operations are being conducted. The plan is reviewed annually and updated as needed.

Collisions between aircraft and birds are an inherent risk. However, aircrews operating on MTRs have access to the data in the Bird Avoidance Model for the specific route. The Model is a predictive bird avoidance model that uses Geographic Information System technology for analysis and correlation of bird habitat, migration, and breeding characteristics to reduce the risk of bird collisions with aircraft. Use of the model allows aircrews to avoid severe BASH risk areas.

Air Force-wide, 5,902 bird-aircraft strikes occurred during MTR operations in 2002 (USAF 2003b) during a total of 1,127,064 flying hours (USAF 2003c), or a rate of 0.0052 strikes per flying hour. Based on an estimated maximum of 45 minutes of flying time per sortie on SRs 300/301, Travis AFB C-17 aircrews would fly a total of 91.5 hours annually on the routes. Using this estimate of flying time and the Air Force-wide data for 2002, it is anticipated that about 0.5 bird-aircraft strikes would occur annually from Travis AFB C-17 operations on SRs 300/301.

3.2 NOISE

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 decibel 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 S1.4 1983), are applied to the frequency content of the sound. Figure 3-3 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. The United States Environmental Protection Agency (USEPA) endorsed day-night average sound levels (DNL) for use by federal agencies and HUD, FAA, and DoD have adopted it.

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.

The metric used to describe the noise environment on and in the vicinity of an MTR is normally described in terms of DNL, the same metric used to describe noise around an airfield. The DNL metric averages noise events that occur over a 24-hour period. Aircraft operations occurring during “environmental” nighttime (*i.e.*, 10:00 p.m. to 7:00 a.m.) are weighted with a 10 dB penalty because people are more sensitive to noise during normal sleep hours when ambient noise levels are lower. DNL has been determined to be a reliable measure of community sensitivity to noise and has become the standard metric used in the United States to quantify noise in military noise studies.

The average noise over a 24-hour period does not ignore the louder single events. When noise levels of two or more sources are added, the source with the lower noise level is dominated by the source with the higher noise level. Thus, the combined noise level is usually only slightly higher than the noise level produced by the louder source. However, an individual does not “hear” DNL and its use is intended for land use planning and not to describe what someone hears when a single event occurs. The noise levels experienced inside a contour may be similar to that experienced outside a contour line at a given point in time depending on temperature, wind, and other factors.

Individual or single noise events are described in terms of the sound exposure level (SEL) in units of dB. SEL accounts for amplitude of a sound and the length of time over which each noise event occurs. SEL provides a direct comparison of the relative intrusiveness of single noise events of different intensities and durations.

Military aircrews conduct combat training over land at low altitudes and high airspeeds. Additionally, these aircraft seem to come from nowhere with a great noise and, just as quickly, disappear again. Assessing noise from military aircraft during these operations requires the use of a modified noise metric to appropriately account for the “startle” effect of the onset-rate of aircraft noise on humans. The adjusted DNL is designated as the onset-rate adjusted day-night average sound level (L_{dnmr}). This metric is used to assess noise associated with SUA and MTRs.

The noise modeling software used to assess the noise associated with MTR operations is ROUTEMAP. The program was developed for the DoD by the Air Force. The programs consider airspace information, the horizontal distribution of operations, flight profiles (*i.e.*, airspeed, altitude, and power setting at various points), and the number of operations.

Another unique characteristic of military operations is that they occur in sporadic fashion. Because of the sporadic occurrences of operations, the number of average daily operations is determined by using the number of flying days in a calendar month. This metric is designated as onset-rate adjusted monthly L_{dnmr} , which incorporates the adjustment for noise events with an onset-rate equal to or greater than 15 dB per second. The Air Force recommends L_{dnmr} values be applied to the same interpretive criteria as DNL values (USAF 1987).

Aircraft noise is expressed in terms of A-weighted sound levels, *i.e.*, dBA. A-weighting is a method of adjustment of the frequency content of a noise event to closely resemble the way in which the average human ear responds to aircraft noise. The A-weighting scale provides a good indication of the impact of noise produced by aircraft operations.

A limitation for computer modeling is encountered when calculating time-averaged sound levels for airspaces for lower levels (below 55 dB). The reliability of results varies due to the increased variability of effects of atmospheric conditions on individual aircraft sound levels at the longer distances and the presence of other noise sources. Additionally, when flight activity is infrequent, the time-averaged sound levels are generated by only a few individual aircraft noise events and may not be statistically representative of the aircraft being modeled.

As mentioned in Subchapter 2.2, SRs 300/301 would be flown as many as 122 times per year by Travis AFB C-17s and five times per year by C-130s. The L_{dnmr} for baseline SRs 300/301 operations would be 43 dBA. Table 3-4 lists the SEL values for C-17 and C-130 aircraft for points directly below and lateral to the aircraft ground track. The SEL decreases as the distance between the receptor and the route centerline increases. The L_{dnmr} is a maximum of 5 dBA greater than the 43 dBA at the points at which the MTRs intersect or when there are common route segments.

Table 3-4 Sound Exposure Level as a Function of Distance from Aircraft Ground Track Centerline

| Aircraft | 200 Feet | 315 Feet | 1,000 Feet | 2,000 Feet | 3,150 Feet |
|----------|----------|----------|------------|------------|------------|
| C-130 | 103 | 100 | 91 | 86 | 82 |
| C-17 | 106 | 103 | 92 | 84 | 78 |

Note: Values presented as SEL.

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.

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 that are 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 3-5 lists the effects of sound on structures.

Table 3-5 Effects of Noise on Structures

| dBA | psf ^a | Effects Summary | |
|---------|----------------------|---|---|
| 0-127 | 0-1 | Typical community exposures (generally below 2 psf) | No damage to structures No significant public reaction |
| 127-131 | 1.0-1.5 | | 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.

3.3 LAND USE

The land use areas potentially affected by operations on SRs 300/301 consist of those lands within the route corridors. The area potentially affected by the low-level route involves primarily rural regions of California, Nevada, and Oregon. Broad areas of open space and public lands are present, as are scattered population centers, including a few larger towns. A review of existing land uses that underlie SRs 300/301 identified the

following generalized land uses: populated areas, industrial, recreational areas, agricultural, commercial, and transportation corridors. The vast majority of land under SRs 300/301 is undeveloped.

Land uses associated with populated centers underlying SRs 300/301 include residential, commercial, industrial, and institutional (e.g., schools, hospitals). Table 3-6 lists the populated centers associated with SRs 300/301. The population data provided in Table 3-6 was obtained from the 2000 U.S. Census.

Table 3-6 Urban/Populated Lands Under Proposed Action Military Training Routes

| |
|--|
| Urban/Populated Area/Population Associated with SRs 300/301^b |
| Williams/3,670 |

Population data source: USDOC 2000.

Urban/populated areas listed are those shown on the National Atlas of the United States and the United States Geological Survey, with a population listed in the 2000 Census of Population and Housing.

Sensitive land uses are areas of environmental importance and concern, or areas reserved for specific public activities (e.g., recreation, camping). There are several national forests, wildlife refuges, and wilderness areas within the SRs 300/301 corridor. Table 3-7 describes the significant recreational activities beneath SRs 300/301.

Table 3-7 Recreational Lands Under SRs 300/301

| Recreational Area/Location | Major Activities |
|--|---|
| El Dorado National Forest | Public recreation, hunting, wildlife viewing. |
| Fremont National Forest | Public recreation including hang gliding, fishing, wildlife viewing. |
| Hart Mountain National Antelope Refuge | Public recreation, wildlife viewing. |
| Manly Peak Wilderness | Public recreation, wildlife viewing. |
| Mendocino National Forest | Public recreation, fishing, wildlife viewing. |
| Modoc National Forest | Public recreation including hang gliding, fishing, hunting, wildlife viewing. |
| Shasta National Forest | Public recreation, fishing, hunting, wildlife viewing. |

Table 3-7 Recreational Lands Under SRs 300/301 (continued)

| Recreational Area/Location | Major Activities |
|----------------------------------|--|
| Sheldon National Wildlife Refuge | Public recreation, wildlife viewing. |
| Stanislaus National Forest | Public recreation, fishing, wildlife viewing. |
| Toiyabe National Forest | Public recreation, fishing, wildlife viewing. |
| Trinity National Forest | Public recreation, fishing, hunting, wildlife viewing. |

3.4 AIR QUALITY

3.4.1 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 ($\mu\text{g}/\text{m}^3$). 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 ambient ceilings 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 set 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 (NO₂), ozone (O₃), sulfur oxides (SO_x, measured as sulfur dioxide [SO₂]), lead (Pb), and particulate matter with an aerodynamic diameter less than or equal to 10 micrometers (PM₁₀) 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 the 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), NO₂, nitrous oxide (N₂O), and others. However, only NO, NO₂, and N₂O 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 (CO₂), and carbonic acid. Some VOCs are considered non-reactive under atmospheric conditions and include methane, ethane, and several other organic compounds.

As noted above, O₃ is a secondary pollutant and is not directly emitted from common emissions sources. Therefore, to control O₃ 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 (SIP) 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 California are contained in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations. Table 3-8 lists the national, Oregon, Nevada, 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.

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Table 3-8 National, Oregon, Nevada, and California Ambient Air Quality Standards

| Criteria Pollutant | Averaging Time | Primary NAAQS ^{2,3,4} | Secondary NAAQS ^{3,5} | Oregon Standards ^a | Nevada Standards ^b | California Standards ¹ |
|--|---------------------------------------|---|---|---|--|--|
| Carbon Monoxide less than 5,000 ft above MSL | 8-hour | 9 ppm (10,000 µg/m ³) | No standard | 9 ppm (10,000 µg/m ³) | 9 ppm (10,000 µg/m ³) | 9 ppm (10,000 µg/m ³) |
| | | at or greater than 5,000 ft above MSL | 9 ppm (10,000 µg/m ³) | No standard | 9 ppm (10,000 µg/m ³) | 6.0 ppm (6,670 µg/m ³) |
| Carbon Monoxide at any elevation | 1-hour | 35 ppm (40,000 µg/m ³) | No standard | 35 ppm (40,000 µg/m ³) | 35 ppm (40,000 µg/m ³) | 20 ppm (20,000 µg/m ³) |
| Lead | Quarterly 30 Day Ave | 1.5 µg/m ³ No Standard | 1.5 µg/m ³ No Standard | 1.5 µg/m ³ No Standard | 1.5 µg/m ³ No Standard | No Standard 1.5 µg/m ³ |
| Nitrogen Oxides (measured as NO ₂) | Annual 1-Hour | 0.053 ppm (100 µg/m ³) No Standard | 0.053 ppm (100 µg/m ³) No Standard | 0.053 ppm (100 µg/m ³) No Standard | 0.053 ppm (100 µg/m ³) No Standard | No Standard 0.25 ppm (470 µg/m ³) |
| Ozone ^e | 8-hour | 0.08 ppm (157 µg/m ³) ⁶ | 0.08 ppm (157 µg/m ³) | 0.08 ppm (157 µg/m ³) ⁶ | 0.08 ppm (157 µg/m ³) | 0.07 ppm (137 µg/m ³) |
| Ozone ^e Lake Tahoe Basin | 1-hour | No Standard | No Standard | No Standard | 0.10 ppm (195 µg/m ³) | 0.09 ppm (180 µg/m ³) |
| Particulate Matter (measured as PM ₁₀) | Annual 24-hour | 50 µg/m ³ 150 µg/m ³ | 50 µg/m ³ 150 µg/m ³ | 50 µg/m ³ 150 µg/m ³ | 50 µg/m ³ 150 µg/m ³ | 20 µg/m ³ 50 µg/m ³ |
| Particulate Matter (measured as PM _{2.5}) ^e | Annual 24-hour | 15 µg/m ³ 65 µg/m ³ | 15 µg/m ³ 65 µg/m ³ | 15 µg/m ³ 65 µg/m ³ | No Standard No Standard | 12 µg/m ³ 65 µg/m ³ |
| Sulfur Oxides (measured as SO ₂) | Annual 24-hour 3-hour 1-Hour | 0.03 ppm (80 µg/m ³) 0.14 ppm (365 µg/m ³) No standard No Standard | No standard No standard 0.5 ppm (1,300 µg/m ³) No Standard | 0.02 ppm (52 µg/m ³) 0.10 ppm (260 µg/m ³) 0.05 ppm (130 µg/m ³) No Standard | 0.03 ppm (80 µg/m ³) 0.14 ppm (365 µg/m ³) 0.5 ppm (1,300 µg/m ³) No Standard | No Standard 0.04 ppm (105 µg/m ³) No Standard 0.25 ppm (655 µg/m ³) |

a ODEQ 2006

b NDEP 2006

1 California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, suspended particulate matter – PM₁₀, PM_{2.5}, are values that are 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 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 PM₁₀, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration is above 150 µg/m³ 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 upon 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.

Source: CARB 2006.

3.4.2 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. The areas are:

- Those areas that are in compliance with the NAAQS (attainment);
- Those areas 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 of the standards are met. In the case of O₃, CO, and PM₁₀, 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.

SRs 300/301 occur within California, Nevada, and Oregon. Table 3-9 lists the baseline emissions inventory for the AQCRs and the attainment status for each AQCR through which SRs 300/301 traverse. The emissions inventories for the counties in Nevada do not include emissions from mobile sources, only stationary sources.

Table 3-9 Baseline Air Emissions Inventory, Air Quality Control Regions Associated with Slow Routes 300/301

| Activity | CO (tpy) | VOC (tpy) | NO _x (tpy) | SO _x (tpy) | PM ₁₀ (tpy) | PM _{2.5} (tpy) | Attainment Status |
|-------------------|----------------|----------------|-----------------------|-----------------------|------------------------|-------------------------|----------------------|
| AQCR 30, CA CY05 | 807,636 | 141,109 | 199,619 | 19,710 | 77,928 | 33,033 | Nonattainment |
| AQCR 28, CA CY05 | 431,321 | 74,971 | 90,885 | 2,336 | 82,490 | 31,500 | Nonattainment |
| AQCR 23, CA CY05 | 49,604 | 6,607 | 2,811 | 548 | 71,358 | 17,739 | Attainment |
| AQCR 27, CA CY05 | 126,144 | 14,053 | 8,541 | 548 | 26,536 | 11,060 | Attainment |
| AQCR 147, NV CY01 | 705,847 | 75,689 | 108,691 | 57,483 | 115,432 | 41,914 | Nonattainment |
| AQCR 148, NV CY01 | 174,231 | 28,896 | 29,875 | 7,503 | 46,491 | 11,323 | Nonattainment |
| AQCR 190, OR CY01 | 373,478 | 55,100 | 25,982 | 4,657 | 70,142 | 31,378 | Nonattainment |

Note: Values in bold print reflect a pollutant for which the AQCR is nonattainment.

3.4.3 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 (lbs) 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 3-10 lists the emissions generated from the baseline C-17 and C-130 operations within each AQCR.

Table 3-10 Baseline Aircraft Emissions from Operations on Slow Routes 300/301

| Source | Criteria Air Pollutant | | | | | |
|--|------------------------|-----------|-----------------------|-----------------------|------------------------|-------------------------|
| | CO (tpy) | VOC (tpy) | NO _x (tpy) | SO _x (tpy) | PM ₁₀ (tpy) | PM _{2.5} (tpy) |
| San Francisco Bay Area Air Basin (AQCR 30) | | | | | | |
| C-17 Emissions | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| C-130 Emissions | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total Emissions from SR 300/301 Operations in AQCR | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aircraft Emissions as % of AQCR Emissions | 0.000% | 0.000% | 0.000% | 0.000% | 0.000% | 0.000% |
| Sacramento Valley Air Basin (AQCR 28) | | | | | | |
| C-17 Emissions | 0.20 | 0.12 | 16.55 | 0.53 | 1.27 | 1.26 |
| C-130 Emissions | 0.01 | 0.00 | 0.06 | 0.01 | 0.01 | 0.01 |
| Total Emissions from SR 300/301 Operations in AQCR | 0.21 | 0.12 | 16.61 | 0.54 | 1.28 | 1.27 |
| Aircraft Emissions as % of AQCR Emissions | 0.000% | 0.000% | 0.018% | 0.023% | 0.002% | 0.004% |
| Great Basin Valley Air Basin (AQCR 23) | | | | | | |
| C-17 Emissions | 0.05 | 0.03 | 3.97 | 0.13 | 0.31 | 0.30 |
| C-130 Emissions | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 |
| Total Emissions from SR 300/301 Operations in AQCR | 0.050 | 0.03 | 3.98 | 0.13 | 0.31 | 0.30 |
| Aircraft Emissions as % of AQCR Emissions | 0.000% | 0.000% | 0.142% | 0.023% | 0.000% | 0.002% |
| Northeast Plateau Air Basin (AQCR 27) | | | | | | |
| C-17 Emissions | 0.13 | 0.07 | 10.59 | 0.34 | 0.81 | 0.81 |
| C-130 Emissions | 0.01 | 0.00 | 0.04 | 0.00 | 0.01 | 0.01 |
| Total Emissions from SR 300/301 Operations in AQCR | 0.14 | 0.07 | 10.63 | 0.34 | 0.82 | 0.81 |

**Table 3-10 Baseline Aircraft Emissions from Operations on Slow Routes 300/301
 (continued)**

| Source | Criteria Air Pollutant | | | | | |
|--|------------------------|--------------|--------------------------|--------------------------|---------------------------|----------------------------|
| | CO (tpy) | VOC (tpy) | NO _x (tpy) | SO _x (tpy) | PM ₁₀ (tpy) | PM _{2.5} (tpy) |
| Northeast Plateau Air Basin (AQCR 27) | | | | | | |
| Aircraft Emissions as % of AQCR Emissions | 0.000% | 0.001% | 0.124% | 0.063% | 0.003% | 0.007% |
| AQCR 147 | | | | | | |
| C-17 Emissions | 0.66 | 0.38 | 54.94 | 1.76 | 4.23 | 4.19 |
| C-130 Emissions | 0.05 | 0.01 | 0.19 | 0.02 | 0.03 | 0.03 |
| Total Emissions from SR 300/301 Operations in AQCR | 0.71 | 0.39 | 55.13 | 1.78 | 4.26 | 4.22 |
| Aircraft Emissions as % of AQCR Emissions | 0.000% | 0.001% | 0.051% | 0.003% | 0.004% | 0.010% |
| AQCR 148 | | | | | | |
| C-17 Emissions | 0.06 | 0.04 | 5.30 | 0.17 | 0.41 | 0.40 |
| C-130 Emissions | 0.00 | 0.00 | 0.02 | 0.00 | 0.00 | 0.00 |
| Total Emissions from SR 300/301 Operations in AQCR | 0.06 | 0.04 | 5.32 | 0.17 | 0.41 | 0.40 |
| Aircraft Emissions as % of AQCR Emissions | 0.000% | 0.000% | 0.018% | 0.002% | 0.001% | 0.004% |
| AQCR 190 | | | | | | |
| C-17 Emissions | 0.07 | 0.04 | 5.96 | 0.19 | 0.46 | 0.45 |
| C-130 Emissions | 0.01 | 0.00 | 0.02 | 0.00 | 0.00 | 0.00 |
| Total Emissions from SR 300/301 Operations in AQCR | 0.08 | 0.04 | 5.98 | 0.19 | 0.46 | 0.45 |
| Aircraft Emissions as % of AQCR Emissions | 0.000% | 0.000% | 0.023% | 0.004% | 0.00% | 0.001% |

3.5 BIOLOGICAL RESOURCES

Management and conservation of listed endangered and threatened species on military installations are required by the ESA, DoD Instruction 4715.3 *Environmental Conservation Program* (3 May 1996), and AFI 32-7064 (*Integrated Natural Resources Management*). Under terms of the ESA, candidate species have no protection; however, the USFWS typically requests that impacts be avoided wherever possible. This is particularly pertinent to species where listing as threatened or endangered is imminent. The Air Force manages and integrates natural resource considerations into the installation mission in the Integrated Natural Resources Management Plan (INRMP) for each installation. Detailed descriptions of installation natural resource assets, characteristics, and conservation management approaches are provided in the INRMP for Travis AFB, which was updated in 2001 (USAF 2001).

The potential for effect to biological resources from the Proposed Action would be noise from aircraft overflight. There are no known effects of low-level aircraft overflight to vegetation communities or plant species. Therefore, description of the affected environment is limited to wildlife.

SRs 300/301 cross a wide elevational and climatic range of floristic provinces, representing a diverse complex of biological communities and ecosystems. These seral

and climax ecosystems host a rich diversity of wildlife, including listed species. The MTRs overfly wildlife assemblages of the Great Basin (Great Basin Floristic Province), Cascades (Vancouverian Floristic Province), Central Valley, and Sierra Nevada (Californian Floristic Province). These areas are generally described by Verner and Boss (1980), Kricher and Morrison (1993 and 1998), and Rockwell (1998).

Much of the area associated with the SRs 300/301 corridor is arid or semiarid with precipitation (rain and snow) an environmental limiting factor for both plants and wildlife. Generally, wildlife species diversity and richness increase disproportionately to the small area covered by interior wetlands and riparian corridors (Thomas, *et al.* 1979). However, even within this generalization, dramatic exceptions occur. The west slope of the Cascades and Coast Range routinely receives 60 to 100 inches of rain annually, while the east slope (Great Basin) routinely receives less than 15 inches annually.

The MTRs also overfly a multitude of protected and ecologically sensitive natural areas, principally in California but also including sites in Nevada and Oregon. These include National Forests and National Wildlife Refuges. Regulations at the federal and state level protect wildlife from aircraft noise and/or regulate airspace over public lands, parks, and preserves (see Subchapter 3.3). The protected natural areas are listed in Table 3-11.

Table 3-11 Protected Natural Areas Underlying Slow Routes 300/301

| Protected Natural Areas | Major Activities |
|--|--|
| El Dorado National Forest | Public recreation, hunting, wildlife viewing |
| Fremont National Forest | Public recreation including hang gliding, fishing, wildlife viewing |
| Hart Mountain National Antelope Refuge | Public recreation, wildlife viewing |
| Mendocino National Forest | Public recreation, fishing, wildlife viewing |
| Modoc National Forest | Public recreation including hang gliding, fishing, hunting, wildlife viewing |
| Shasta National Forest | Public recreation, fishing, hunting, wildlife viewing |
| Sheldon National Wildlife Refuge | Public recreation, wildlife viewing |
| Stanislaus National Forest | Public recreation, fishing, wildlife viewing |
| Toiyabe National Forest | Public recreation, fishing, wildlife viewing |
| Trinity National Forest | Public recreation, fishing, hunting, wildlife viewing |

3.5.1.1 Threatened, Endangered, and Special Status Species

The ESA recognizes that many species of fish, wildlife, and plants are in danger of, or threatened with, extinction. The ESA established a national policy that all federal agencies should work toward conservation of these species. The Air Force complies with the mandates of the ESA by identifying endangered and threatened species, and critical habitats or Air Force lands, and implementing programs for the conservation of these species, in coordination with the USFWS.

Threatened and endangered species that may potentially occur within the MTRs in California, Oregon, and Nevada have been identified for the Proposed Action. In California, the California Endangered Species Act (CESA) prohibits “take” of endangered and threatened species. “Take” is defined as hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill. The CESA requires state agencies to comply with CESA, including protection and recovery and to promote species conservation.

The State of Oregon maintains a sensitive animal species list as policy to reflect the Oregon Endangered Species Rules. Plants are afforded protection by the Oregon Department of Fish and Wildlife (ODFW) under Oregon Regulatory Statutes. In accordance with these rules, species can be classified as threatened or endangered and steps taken to recover them. Nevada protects plants declared by the State Forester Fire Warden, to be threatened with extinction pursuant to the Nevada Revised Statutes.

Special status plant and wildlife species are those afforded special recognition by state or federal agencies, or non-government organizations (ODFW 1997; CNPS 2001; Nevada Natural Heritage Program 2001). These species are generally considered unique, rare, threatened, or endangered due to declining or limited populations or loss of habitat. This may include, or overlap with federal or state-listed species. Table 3-12 lists species with a high probability of occurring within the SRs 300/301 corridor.

Table 3-12 Federally Listed Threatened and Endangered Wildlife Species Within the SRs 300/301 Corridor

| | |
|---|--------------------------|
| Bald Eagle | Desert Dace |
| California Red-Legged Frog | Giant Garter Snake |
| Chinook Salmon (California Central Valley Spring) | Lahontan Cutthroat Trout |
| Chinook Salmon (Winter Sacramento River Run) | Lost River Sucker |
| Mountain Yellow-Legged Frog | Modoc Sucker |

**Table 3-12 Federally Listed Threatened and Endangered Wildlife Species
Within the SRs 300/301 Corridor (continued)**

| | |
|---|--------------------------|
| Northern Spotted Owl | Sacramento Splittail |
| Steelhead (Central Valley California Run) | Shasta Crayfish |
| Valley Elderberry Longhorn Beetle | Vernal Pool Fairy Shrimp |
| Warner Sucker | |

Source: CDFG 2003; University of Nevada, Reno (UNR) Biological Resources Research Center 2001; NatureServe Explorer 2003; Nevada Natural Heritage Program 2001; ODFW 1997; USFWS 2003.

3.6 CULTURAL RESOURCES

Cultural resources include prehistoric and historic 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 NHPA 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 potential historic properties 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 that include: AFI 32-7065, *Cultural Resources Management*; 32 CFR 989; EO 11593 of 1971; National Historic Preservation Act of 1966, as amended; Archeological and Historic Preservation Act of 1974 (PL 93-291); the Archeological Resources Protection Act of 1979 (PL 96-95); the American Indian Religious Freedom Act of 1978 (PL 95-341); and, the Native American Graves Protection and Repatriation Act of 1990 (PL 101-601). In addition, any proposed undertaking must comply with the State Historic Preservation Office (SHPO) guidelines for the States of California, Nevada, and Oregon.

For this analysis, the Region of Influence (ROI) is synonymous with the Area of Potential Effect (APE), as defined by the NHPA. The ROI for the analysis of cultural resources includes:

- All area on the ground within the proposed SRs 300/301 corridor in California, Nevada, and Oregon that would be used for C-17 aircrew training (as shown on Figure 2-1). These areas include the built environment (*i.e.*, urban, suburban, rural communities) and open space (*i.e.*, undeveloped lands, national and state forests, coastal, and riverine areas).

Identification of cultural resources potentially impacted by the Proposed Action was accomplished by reviewing the National Register Information System (NRIS) (NPS 2007). A search of the NRIS was performed for NRHP-listed archaeological sites and historic resources in California, Nevada, and Oregon by affected counties and then cities. Given the vast area covered by the SRs 300/301 corridor, only those sites listed in the NRIS database were incorporated into this study. It is assumed that additional potentially NRHP-eligible sites exist in the project area, but are not listed in the NRIS.

3.6.1.1 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, and petroglyph and pictograph sites. Historic archaeological resources may include homesteads, mines, townsites, roads and trails, privies, and trash deposits.

Ten NRHP listed archaeological sites or archaeological districts have been identified within the SRs 300/301 corridor in the States of California, Nevada, and Oregon. Because the area below the MTR is vast and large areas are remote, there is a high probability that additional sites remain unrecorded or are listed on each state's SHPO database. The recorded archaeological sites within the SRs 300/301 corridor include caves, petroglyphs, a rockshelter, a village site, a trail, and a wild horse trap. Two archaeological districts, the Tower House Archeological District in California and the East Lake Abert Archaeological District in Oregon, are also contained within the 300/301 MTR corridor. Table 3-13 identifies the number of NRHP listed archaeological sites or districts by state.

Table 3-13 NRHP Listed Archaeological Resources Within or Adjacent to the Slow Routes 300/301 Corridor

| State | Number of Sites |
|------------|-----------------|
| California | 1 |
| Nevada | 6 |
| Oregon | 3 |
| Total | 10 |

Source: NPS 2007

3.6.1.2 Historic Resources

For purposes of this analysis, historic resources include buildings and structures, and other physical remains of historic significance present above the ground. Historic resources date from the period of initial European contact in this area (*circa* A.D. 1770) and extend to the present. These may include houses, homesteads, farmsteads (and associated support structures or buildings), cabins, churches, forts, schools, bridges, dams, logging sites, military facilities, mines, structures or buildings, and townsites.

Fifty-three NRHP listed historic properties have been identified beneath the SRs 300/301 corridor. Because the area below the MTR is vast and large areas that are remote, there is a high probability that additional resources remain unrecorded or are listed on each state's SHPO database. Structures identified include barns; a cemetery; churches; club halls; commercial buildings (banks, a butter manufacturing company, flour milling company, hotel, stores, a saloon, and a wool warehouse); government buildings (city hall, courthouses, a jail, libraries, and a post office); a hospital; ranch buildings; residential buildings; schoolhouses; a shrine; townsites; and transportation-related structures (a stone bridge, a railway passenger station, railroad turntable, and a wagon trail). Four historic districts, French Gulch and Tower House in California, and Austin and Berlin in Nevada, are also contained within the SRs 300/301 corridor. Table 3-14 identifies the number of NRHP listed historic resources and districts within the SRs 300/301 corridor by state.

Table 3-14 NRHP Listed Historic Properties Within or Adjacent to the Slow Routes 300/301 Corridor

| State | Number of Sites |
|------------|-----------------|
| California | 14 |
| Nevada | 31 |
| Oregon | 8 |
| Total | 53 |

Source: NPS 2007

3.6.1.3 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 associated with project activities includes extensive areas throughout California, Nevada, and Oregon.

Early and effective participation of Native American tribes and groups is an integral component to the successful completion of the Section 106 process. As lead federal agency, the Air Force initiated consultation with federally-recognized Native American tribes that may be affected by the Proposed Action, pursuant to 36 CFR 800.2 (see Appendix B).

Native American groups that may be present within the ROI of the proposed 300/301 MTR in California, Nevada, and Oregon were identified based on publications by the U.S. Department of the Interior and Bureau of Indian Affairs (BIA 2006). Table 3-15 lists the federally recognized Native American groups identified within the ROI for SRs 300/301. 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 B).

Table 3-15 Federally Recognized Native American Groups Located Within the Region of Influence for the 300/301 Military Training Route

| State | Tribal Name | State | Tribal Name |
|--------------------------------|--|------------------------|--|
| California | Big Valley Rancheria | Nevada | Battle Mountain Band Council |
| | Cortina Band of Indians | | Carson Community Council |
| | Elem Indian Colony/Sulfur Bank Rancheria | | Dresslerville Community Council |
| | Grindstone Rancheria | | Fallon Paiute Shoshone Tribal Business Council |
| | Ione Band of Miwok Indians | | Lovelock Piute Tribe |
| | Jackson Rancheria | | Pyramid Lake Paiute Tribal Council |
| | Middletown Rancheria | | Reno-Sparks Indian Colony |
| | Paskenta Band of Nomlaki Indians | | South Fork Band Nation |
| | Pit River Tribal Council | | Stewart Community Council |
| | Potter Valley Rancheria | | Summit Lake Paiute Tribe |
| | Quartz Valley Reservation | | Te-Moak Tribe of Western Shoshone Indians |
| | Redding Rancheria | | Walker River Paiute Tribe |
| | Round Valley Reservation | | Washoe Tribal Council |
| | Rumsey Rancheria | | Wells Indian Colony Band Council |
| | Scotts Valley Rancheria | | Winnemucca Tribal Council |
| | Shingle Springs Rancheria | Yerington Paiute Tribe | |
| United Auburn Indian Community | Yomba Shoshone Tribe | | |
| Woodfords Community Council | Oregon | Klamath Tribe | |

Source: BIA 2006

CHAPTER 4 ENVIRONMENTAL CONSEQUENCES

This chapter provides analysis of the environmental of the No Action Alternative and the Proposed Action.

4.1 AIRSPACE OPERATIONS

Impacts are assessed by comparing projected military flight operations and proposed airspace utilization with baseline conditions, to include civil aviation activities. This assessment includes analyzing the capability of the affected airspace elements to accommodate the projected level of military and civil flight activities, and determining whether such changes would have an adverse impact on overall use of the airspace. This includes consideration of such factors as the interaction of the proposed use of specific airspace with adjacent controlled, uncontrolled, or other military training airspace; possible impacts on other nonparticipating civil and military aircraft operations; and possible impacts on civil airports underlying or near the airspace projected for use in the Proposed Action.

4.1.1 No Action Alternative

Under the No Action Alternative, SRs 300/301 would not be converted to IRs. However, Travis AFB C-17 aircrews and the Air National Guard C-130 aircrews would continue to fly as many as 122 and five annual operations, respectively, on the SRs and Travis AFB would assume the originating and scheduling functions for the routes. The existing procedures for operating on the routes would be continued and would accommodate the type and level of aircraft operations. The existing conditions for aircraft safety and bird-aircraft strikes would continue because there would be no change in the type or level of aircraft operations.

4.1.2 Proposed Action

Under the Proposed Action, SRs 300/301 would be converted to IRs XXX/XXX. The route width, length, and latitude and longitude for the points along the IRs would remain as listed for the current condition in Table 3-1. The minimum and maximum altitudes for the segments of the IRs are listed in Table 2-2. The following conditions will be published as operating guidance in *DoD Flight Information Publication, Area Planning, Military Training Routes, North and South America* for any aircrew that would operate an aircraft on IRs XXX/XXX.

- Terrain following operations will be authorized for the entire route.
- Overflight of all towns will be avoided to the maximum extent possible.

- Avoid flight within 1,500 feet or 3 nautical miles of charted/uncontrolled airports when practical.
- Aircrews are responsible for resolving route conflicts with the following routes and special use airspaces: IRs 203,206, 207,300, 366; VRs 201, 202, 1250, 1252, 1255, 1259, 1260, 1261, 1352, 1353; Austin 1, Gabbs, Goose North, and Hart MOAs.
- The aircrew flying routes in the preceding paragraph must provide conflict crossing times to within 3 minutes to the agency that schedules the route(s) and/or MOA(s).
- Stay 1 nautical mile left of centerline for route segment I-J to avoid a bird sanctuary.
- Use caution for numerous birds between points I-J.
- Military Authority Assumes Responsibility for Separation of Aircraft applies to the route. This is a condition where the military services involved assume responsibility for the separation between participating military aircraft in the Air Traffic Control system. It is used only for required IFR operations which are specified in letters of agreement or other appropriate FAA or military documents.
- Aircrews flying the routes are to monitor the common traffic advisory frequency (CTAF) for the Battle Mountain and Winnemucca airports between points H-I, and Lakeview Airport between points M-N, and Red Bluff and Redding airports between points Q-S. A CTAF frequency is assigned for the purpose of carrying out airport advisory practices for aircraft operating to or from an uncontrolled airport.
- Aircrews should use caution for multiple cables that are 200-300 feet AGL between points O-P.
- Aircraft will contact air traffic control (*i.e.*, Oakland, Salt Lake City, and Seattle ARTCC, as applicable) and be level at the top of the altitude block (*i.e.*, 12,000 feet MSL at Points D, E, and J, 11,000 feet MSL at Point H, 10,000 feet MSL at Point M, 9,000 feet MSL at Points O and R, and 6,000 feet MSL at Point U) three minutes prior to departing the route.

With redesignation of SRs 300/301 as IRs, the routes would be published on aeronautical charts that are available to all military and civil pilots. Publication of the routes would increase awareness of the existence of the routes to more pilots than is currently available. SRs are not published on aeronautical charts other than some charts used by military pilots.

Several conditions reduce the potential “competition” for the same airspace at intersecting points by aircraft on as federal airway and aircraft on an MTR. The federal airway can be flown under both VFR and IFR conditions, as can an IR. Under IFR conditions, aircraft are radar identified and controlled by air traffic control, and the pilots

maintain radio communication with air traffic control agencies, thereby improving aircraft separation conditions. When flying in visual meteorological conditions, pilots use the “see and avoid” concept. A VR is flown only under VFR conditions. Therefore, potential for conflict between aircraft during VFR conditions is greater than for IFR because aircraft are not necessarily radar identified. However, VFR conditions provide a better opportunity for pilots to “see and avoid” each other. Additionally, aircraft on airways and aircraft on the MTR monitor common air traffic control frequencies for air traffic advisories and guard frequencies for emergency notification. Air traffic control personnel monitor aircraft directly by radar monitoring and communication with aircraft through periodic receipt of aircraft position through position reporting. Position reporting and traffic advisories, combined with visual contact between pilots and radar control of aircraft, reduce the potential for two aircraft at the same altitude, at the same point, at the same time. Given the conditions mentioned in this paragraph, the probability would be very low that an aircraft on a federal airway and an aircraft on IRs XXX/XXX would be at the same altitude at the same position.

As listed in Table 3-2., some MTRs could penetrate airspace associated with instrument approaches at airports along the routes. As mentioned earlier in this subchapter, the operating guidance that will be published for IRs XXX/XXX will direct aircrews flying on the IRs to monitor the CTAF associated with the airport for traffic advisories to avoid other traffic. Additionally, directives request that aircraft on an MTR avoid airports by 3 nautical miles and 1,500 feet AGL where practicable. Continuation of these procedures would assist Travis AFB C-17 aircrews to deconflict operations with aircraft operating at airports along the route.

In summary, IRs XXX/XXX have the capacity to accommodate the additional operations associated with the Proposed Action and the airspace surrounding the proposed IR structure will not be affected by the conversion and operation as IRs. The potential for conflict between aircraft operating on IRs XXX/XXX and other aircraft operating in the airspace around the IRs would be low because the existing scheduling and air traffic control procedures, as well as the procedures that would be implemented when the routes are converted, are designed to deconflict aircraft.

4.1.2.1 Aircraft Safety

It is impossible to predict the precise location of an aircraft accident. However, MTRs are developed to avoid overflying residences and built-up areas to the maximum extent practicable. The types of C-17 and C-130 operations that would occur on IRs XXX/XXX would be consistent with those flown over the lifetime for each aircraft. Thus, it is anticipated the baseline class A mishap rates (see Table 3-3), would apply to the operations anticipated under the Proposed Action. For these reasons, the probability is low that an aircraft involved in an accident on IRs XXX/XXX would strike a person or structure on the ground.

4.1.2.2 Bird/Wildlife Aircraft Strike Hazard

Bird/wildlife aircraft strike hazards can be assessed using a combination of bird 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.

It is estimated Travis AFB C-17 aircrews would fly a total of 225 hours annually on IRs XXX/XX. Using this estimate of flying time and the Air Force-wide data for 2002 (*i.e.*, 0.0052 strikes per flying hour), it is anticipated that about 1.2 bird/wildlife aircraft strikes would occur annually from Travis AFB C-17 operations, an increase of 0.7 strikes when compared to the No Action Alternative (*i.e.*, baseline).

The number of bird/wildlife aircraft strikes described in the previous paragraph 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 either to aircrews or to the public, or damage to property (other than the aircraft).

Collisions between aircraft and birds would continue to be an inherent risk. However, aircrews operating on IRs XXX/XXX would have access to the data in the Bird Avoidance Model, and use of the Model would allow aircrews to avoid severe BASH risk areas.

4.1.3 Mitigation

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

4.2 NOISE

One of the principal environmental concerns resulting from aircraft operations is noise. There are several characteristics of noise, including loudness (amplitude), sharpness or pitch (sound-wave frequency), and the length of time over which the noise is transmitted to a receptor (duration). The noise most often experienced as a result of aircraft operations is generally moderately loud, high-pitched, and lasting for up to several minutes per event (*e.g.*, takeoffs, landings, and flyovers). The overall level of noise perceived by an individual depends on distance from the source.

Several items were examined in evaluating potential noise impacts, including (1) the degree to which noise levels generated by aircraft operations were different than the baseline noise levels, and (2) the degree to which there may be annoyance and/or activity interference.

4.2.1 No Action Alternative

Under the No Action Alternative, Travis AFB C-17 aircrews and the Air National Guard C-130 aircrews would continue to fly as many as 122 and five annual operations, respectively, on the SRs. The L_{dnmr} for No Action Alternative SRs 300/301 operations would remain at 43 dBA. There is no reason to expect the general population would be at risk from any of the effects of noise for sound levels at and below L_{dnmr} 55 dBA (USEPA 1974).

4.2.2 Proposed Action

As mentioned in Subchapter 2.3, Travis AFB C-17 aircrews would fly IRs XXX/XXX as many as 300 times per year (25 times per month) and C-130s would continue to fly the route about five times a year (1.4 times per month). The hourly distribution of C-17 operations on the IRs would be: 50 percent between 7:00 a.m. and 7:00 p.m., 25 percent between 7:00 and 10:00 p.m., and 25 percent between 10:00 p.m. and 7:00 a.m. Table 4-1 compares the L_{dnmr} for the C-17 and other aircraft operations that would occur on IRs XXX/XXX with the baseline condition on SRs 300/301. As indicated in the table, the L_{dnmr} would increase by 6 dBA to 49 dBA. There is no reason to expect the general population would be at risk from any of the effects of noise for sound levels at and below L_{dnmr} 55 dBA (USEPA 1974). The L_{dnmr} would be a maximum of 54 dBA at the points at which the MTRs intersect or when there are common route segments.

Table 4-1 Comparison of Aircraft Noise Levels as a Function of Distance from Aircraft Ground Track Centerline, Proposed Action

| L_{dnmr} (dBA) | | |
|------------------|----|------|
| Baseline | PA | Chg. |
| 43 | 49 | +6 |

Note: L_{dnmr} is represented for 300 feet AGL.

The noise anticipated from IRs XXX/XXX operations would not exceed the level used for hearing loss and speech interference analysis (*i.e.*, L_{dnmr} 75 dBA).

The maximum sound level (L_{max}) for a C-17 at 300 feet AGL, the minimum altitude flown on IRs XXX/XXX, would be about 100 dBA, which is well below the threshold at which structural damage would occur (*i.e.*, 127 dBA). Thus, no structural damage would be expected from C-17 operations on IRs XXX/XXX.

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 which 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 that there would be no long-term behavioral nor breeding effects.

Studies on wildlife have shown that noise levels as high as 95 dBA have little or no effect on turkey vultures, great egrets, and grebes. Noise levels between 85 to 95 dBA could disturb or agitate the ring-necked duck, coot, gadwall, purple gallinule, and pintail duck. Noise levels within the range of 110 to 135 dBA would affect the nesting of turkeys. Another study, using low flying F-16 aircraft, has shown that noise levels of up to 100 dBA would not alter the reproductive behavior of the great egret, snowy egret, tricolor heron, little blue heron, and cattle egret.

4.2.3 Mitigation

No noise impacts were identified. Therefore, no mitigation would be required.

4.3 LAND USE

This subchapter presents an analysis of the potential impacts on land use within the IRs XXX/XXX corridors. An impact to land use would be considered significant if one or more of the following occur as a result of the proposed action: (1) conflict with applicable ordinances and/or permit requirements; (2) nonconformance with applicable land use plans; (3) preclusion of adjacent or nearby properties being used for existing activities; or (4) conflict with established uses of an area.

4.3.1 No Action Alternative

Under the No Action Alternative, Travis AFB C-17 aircrews and the Air National Guard C-130 aircrews would continue to fly as many as 122 and five annual operations, respectively, on the SRs. To avoid land use impacts, aircraft operating on SRs 300/301 would continue to avoid flying:

- Over congested areas (*e.g.*, cities, towns, and groups of people) at an altitude of less than 1,000 feet above the highest obstacle within 2,000 feet of the aircraft; and
- Over non-congested areas at an altitude of less than 500 feet above the surface except over open water, in special use airspace, or in sparsely populated areas. Under such exceptions, aircraft must not operate closer than 500 feet to any person, vehicle, vessel, or structure.
- Except for SUA and MTRs, aircraft should not be flown lower than 2,000 feet above the terrain of national parks, monuments, seashores,

lakeshores, recreation areas, and scenic river ways administered by the NPS, national wildlife refuges, big game refuges, game ranges, and wildlife refuges administered by the USFWS; and wilderness and primitive areas administered by the U.S. Forest Service.

4.3.2 Proposed Action

Travis AFB C-17 and Air National Guard C-130 aircrews would continue to operate under the overflight restrictions discussed for the No Action Alternative plus the restrictions to be implemented with the conversion of the routes to IRs (see Subchapter 4.1.2) to avoid land use impacts.

Sensitive land uses (*e.g.*, wildlife management areas, parks, residential) would be exposed to noise levels of L_{dnmr} 49 dBA. This level of noise would be below DNL 65 dBA, the maximum level considered acceptable for unrestricted residential use. Additionally, the noise would be below L_{dnmr} 55 dBA, the noise level at which there is no reason to expect the general population would be at risk from any of the effects of noise (USEPA 1974). There are numerous recreational/wilderness areas below the proposed IRs XXX/XXX (see Table 3-7) where visitors may be annoyed by aircraft overflight. However, based on the sensitive land uses and exposed noise levels, no significant impacts to sensitive land uses would be anticipated due to the slight increase in noise levels (*i.e.*, L_{dnmr} 6 dBA) and the less than 0.50 additional average daily C-17 overflights (*i.e.*, 0.33 average daily baseline operations compared to 0.82 average daily operations from the Proposed Action).

4.3.3 Mitigation

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

4.4 AIR QUALITY

Impacts to air quality in attainment areas would be considered significant if pollutant emissions associated with the 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 an 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 or maintenance area's emissions inventory by 10 percent or more for individual nonattainment pollutants; or exceeded *de minimis* threshold levels established in 40 CFR 93.153(b) for individual nonattainment pollutants or pollutants for which an area has been redesignated as a maintenance area.

**Table 4-2 Net Change in Emissions from Aircraft Operations Activities,
 Proposed Action, Travis AFB (continued)**

| | Criteria Air Pollutant | | | | | |
|--|------------------------|--------------|--------------------------|--------------------------|---------------------------|----------------------------|
| | CO (tpy) | VOC (tpy) | NO _x (tpy) | SO _x (tpy) | PM ₁₀ (tpy) | PM _{2.5} (tpy) |
| AQCR 147 | | | | | | |
| Proposed Action Emissions | 0.96 | 0.56 | 80.16 | 2.56 | 6.17 | 6.11 |
| Baseline Emissions | 0.71 | 0.39 | 55.13 | 1.78 | 4.26 | 4.22 |
| Net Change in Emissions | 0.25 | 0.17 | 25.03 | 0.78 | 1.91 | 1.89 |
| Baseline AQCR Emissions | 705,847 | 75,689 | 108,691 | 57,483 | 115,432 | 41,914 |
| Proposed Action Emissions as Percent of AQCR Emissions | 0.000% | 0.001% | 0.074% | 0.005% | 0.005% | 0.015% |
| Net Change in Emissions as Percent of AQCR Emissions | 0.000% | 0.000% | 0.023% | 0.001% | 0.002% | 0.005% |
| AQCR 148 | | | | | | |
| Proposed Action Emissions | 0.09 | 0.05 | 7.73 | 0.25 | 0.59 | 0.59 |
| Baseline Emissions | 0.06 | 0.04 | 5.32 | 0.17 | 0.41 | 0.40 |
| Net Change in Emissions | 0.03 | 0.01 | 2.41 | 0.08 | 0.18 | 0.19 |
| Baseline AQCR Emissions | 174,231 | 28,896 | 29,875 | 7,503 | 46,491 | 11,323 |
| Proposed Action Emissions as Percent of AQCR Emissions | 0.000% | 0.000% | 0.026% | 0.003% | 0.001% | 0.005% |
| Net Change in Emissions as Percent of AQCR Emissions | 0.000% | 0.000% | 0.008% | 0.001% | 0.000% | 0.002% |
| AQCR 190 | | | | | | |
| Proposed Action Emissions | 0.10 | 0.06 | 8.69 | 0.28 | 0.67 | 0.66 |
| Baseline Emissions | 0.08 | 0.04 | 5.98 | 0.19 | 0.46 | 0.45 |
| Net Change in Emissions | 0.02 | 0.02 | 2.71 | 0.09 | 0.21 | 0.21 |
| Baseline AQCR Emissions | 373,478 | 55,100 | 25,982 | 4,657 | 70,142 | 31,378 |
| Proposed Action Emissions as Percent of AQCR Emissions | 0.000% | 0.000% | 0.034% | 0.006% | 0.001% | 0.002% |
| Net Change in Emissions as Percent of AQCR Emissions | 0.000% | 0.000% | 0.010% | 0.002% | 0.000% | 0.001% |

As indicated on Table 3-8, AQCRs 28 and 30 in California, AQCRs 147 and 148 in Nevada, and AQCR 190 in Oregon, are in nonattainment. Based on emissions calculations summarized in Table 4-2, the net change in emissions for any of the criteria pollutants in any of these AQCRs would be less than 10 percent of the particular emissions inventory and the action would not be considered regionally significant. As a result of the Proposed Action, none of the criteria pollutant emissions would exceed its respective *de minimis* threshold. A federal action conforms to the applicable SIP when criteria pollutants do not exceed its respective *de minimis* threshold. It has been determined that the Proposed Action does positively conform to the applicable SIPs. A General Conformity determination would not be required.

Review of data in Table 4-2 for AQCRs 23 and 27 in California indicates that the emissions in these air basins would fall below the 10 percent level that would be considered regionally significant by the USEPA if the region were in nonattainment for any of the criteria pollutants as stated in 40 CFR 51, Subpart W, Section 852. However, the AQCRs are in attainment. Therefore, the air emission impacts from activities associated with the Proposed Action in these AQCRs would not be considered significant and a Conformity Determination would not be required.

4.4.3 Mitigation

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

4.5 BIOLOGICAL RESOURCES

An impact to biological resources would be considered significant if the action would impact a threatened or endangered species, substantially diminish habitat for animal species, substantially diminish a regionally or locally important animal species, interfere substantially with wildlife movement or reproductive behavior, and/or result in a substantial infusion of animal species.

4.5.1 No Action Alternative

Under the No Action Alternative, Travis AFB C-17 aircrews and the Air National Guard C-130 aircrews would continue to fly as many as 122 and five annual operations, respectively, on the SRs. In general, military overflights would be infrequent (*i.e.*, an average of 0.33 overflights per day), random, and pose no threat to wildlife at the behavioral (individual), population, or species level. There are no known effects of low-level aircraft overflight to vegetation communities or plant species. Aircraft overflight would most likely continue to result in immediate, non-harmful and short-duration responses by some wildlife. Wildlife would be expected to quickly habituate to sights and sounds associated with low-level aircraft overflights.

4.5.2 Proposed Action

Wildlife

The corridor associated with IRs XXX/XXX covers a broad geographic range in California, Nevada, and Oregon. The diversity of landforms and geography covered by the routes support a number of plant communities, which are categorized into several life zones. In general, MTR corridors are typically selected to avoid potential human-disturbance conflicts. However, travel across remote, less-densely populated sections of the western states results in increased contact between military overflights and natural resources. There are no known effects of low-level overflights of the MTRs to vegetation communities or plant species.

In some situations, noise and visual disturbance caused by military overflight may cause short-duration impacts to wildlife, or conflict with conservation purposes of National Wildlife Refuges (General Accounting Office 1989; USFWS 1993; Dewey and Mead 1994). Only when animals have little freedom of movement (*i.e.*, for escape) and/or are subjected to intense sound volume and frequency would negative impacts likely to be measurable or long-lasting (Janis and Busnel 1978). The Proposed Action would not restrict movement of birds and mammals.

An increasing number of studies involving low-level, fixed-wing military overflights of varying intensity of sonic or sub-sonic noise (dBA) elicit little response from most free-roaming species, particularly birds and mammals (Platt 1977; Ellis 1981; Utah State University Foundation 1992; Grubb and Bowerman 1997; Johnson and Reynolds 2002). Numerous studies showing little or no effect on wildlife from aircraft-related noise and visual disturbances are reported by the USFWS (Gladwin, *et al.* 1988).

The Proposed Action would result in C-17 aircraft flying within the IRs XXX/XXX corridor. Activities would most likely result in immediate, non-harmful and short-duration responses by some wildlife. Wildlife would be expected to quickly habituate to sights and sounds associated with low-level aircraft overflights. In general, military overflights would be infrequent (*i.e.*, an average of less than one overflight per day), random, and pose no threat to wildlife at the behavioral (individual), population, or species level.

Threatened, Endangered, and Special Status Species

There are no known effects of noise or overflight disturbance to threatened and endangered species of plants. The noise effects discussion in the previous paragraphs also applies to listed mammal species. Birds would have the greatest potential for effect from aircraft overflight. Thus, this analysis focuses on birds.

Little research has been done comparing the differences in bird responsiveness to aircraft overflight and ground-based disturbances. Four studies that examined the effects of aircraft overflight on nesting birds noted a slight, insignificant decrease in nesting

success and productivity when comparing disturbed and undisturbed nests (USACE 2000).

Birds may be more susceptible to disturbance-caused nest abandonment early in the nesting season. Studies have shown the following nest abandonment after being exposed to ground-based and aircraft overflight disturbances (USACE 2000).

- 30 percent of ferruginous hawk abandoned the nest after exposure to various ground-based disturbances (no control group was used for comparison).
- 2 of 29 red-tailed hawk nests were abandoned after being flushed by helicopter overflight compared to 0 of 12 for the control group.
- 1 of 19 prairie falcon nests was abandoned when exposed to frequent low-altitude jet overflight (no control group was used for comparison).
- 1 of 11 gyrfalcon nests failed (reportedly due to snow damage) compared to 0 of 12 for the control group.
- 1 of 6 peregrine falcon nests exposed to helicopter flights were abandoned (apparently due to inclement weather) compared to 0 of 3 control sites.

An Arizona study on the affect of anthropogenic disturbances on bald eagles found that the highest response frequency and severity of response was to ground-based, aquatic, and aerial disturbances, respectively. Another study involving the Mexican spotted owl found that chain saws resulted in a greater flush response than helicopters at comparable distances and noise levels. Birds not previously exposed to specific disturbance types (*e.g.*, aircraft approach distance) are more likely to flush (USACE 2000).

Studies associated with the stimulus distance have indicated it was rare for birds to flush when the stimulus distance was greater than 197 feet. Many studies imply that animal response to noise disturbance events increases with a decrease in the distance to the stimulus source. One study found that owl flushing in response to a disturbance was “strongly and negatively related to stimulus distance and positively related to noise level.” Another study found similar results when experimentally exposing red-cockaded woodpeckers to military training noise (USACE 2000).

A study found that snail kites living near an airport and thus accustomed to aircraft noise did not flush even when the noise levels were as high as 105 dBA. Mexican spotted owls did not flush during the nesting season when the SEL from helicopters was equal to or less than 92 dBA and the equivalent average sound level for chain saws was equal to or less than 46 dBA. (Equivalent average sound level is the steady-state A-weighted sound level that contains the same acoustical energy as the time varying A-weighted sound level during the same interval.) Noise response thresholds for the nonnesting season were comparable with those for the nesting season (USACE 2000).

The USACE completed a study to determine the effect of military noise on the Red-cockaded woodpecker (USACE 2000). Although specific to the red-cockaded woodpecker, it is anticipated the findings of the study would apply to other bird species.

Three types of sample sites were chosen: passive disturbed; undisturbed; and experimental. A passive disturbed site received potentially significant noise disturbance as part of normal training operations; however, there was no control over time, number, or level of noise events at the site. Noise sources at the passive disturbed sites were from firing large-caliber weapons, small arms, and grenade and artillery simulators and helicopter overflight. An undisturbed site was one where the noise levels were judged to be consistently low or absent for all these noise types. Birds at experimental sites were exposed to either artillery simulators or 0.50-caliber blank fire under controlled conditions at distances ranging from 50 to 801 feet from the nest tree.

Summary of the USACE 2000 study focuses on the results from passive disturbance since aircraft overflight would not produce ground-based noise sources such as weapons firing. No red-cockaded woodpeckers were observed flushing the nest when a passive noise source was equal to or greater than 656 feet from the nest. More specifically, birds did not flush when helicopters were equal to or greater than 328 feet from the nest site and SEL noise levels were less than 88 dBA (USACE 2000), which would be about 85 dBA at 500 feet from the source.

The USACE study indicated that red-cockaded woodpeckers that re-nested after initial nest failure due to disturbance were as successful and productive as sites that nested only once (*i.e.*, were not disturbed). Disturbed and undisturbed nest sites did not differ significantly in the number of eggs, nestlings, or successful fledglings per nest. Table 4-3 summarizes the success and productivity results from the study.

Table 4-3 Summary of Red-Cockaded Woodpecker Nesting Data

| Condition | Disturbed Nest Site | Undisturbed Nest Site |
|-----------------------------------|---------------------|-----------------------|
| Successful sites | 42 | 23 |
| Total sites | 48 | 25 |
| Average eggs per nest | 3.47 | 3.56 |
| Average nestlings per nest | 2.27 | 2.28 |
| Average young/occupied per nest | 1.84 | 1.80 |
| Average young/successful per nest | 2.14 | 1.96 |

Source: USACE 2000.

C-17 aircraft altitude on IRs XXX/XXX would be no lower than 300 feet AGL. The routes would be flown about 0.82 times per day based on seven days of flying per week. Thus, the routes would be flown infrequently. As indicated in Table 3-4, the SEL for a C-17 aircraft directly overhead on a MTR at 315 feet AGL would be 103 dBA. Overflight noise would be less as the slant range to the nest increases. Specific studies involving bald eagles and peregrine falcons have shown both to tolerate low-flying jets without short- or long-term behavioral or reproductive impacts (Platt 1977; Ellis, 1981;

Grubb and Bowerman 1997). For the reasons in this and preceding paragraphs, it is not likely that IRs XXX/XXX operations by Travis AFB C-17 aircraft would adversely affect listed bird species.

Air Force Instruction 11-202 and Federal Aviation Regulations recommend all aircraft maintain a minimum altitude of 2,000 feet AGL over national wildlife refuges, National Parks, and Forest Service lands in order to minimize aircraft-wildlife conflicts including BASH. Specific guidance for operating on IRs XXX/XXX requires that aircrews are to use caution for numerous birds and avoid the bird sanctuary located between points I-J (see Subchapter 4.1.2). For these reasons, use of IRs XXX/XXX, including associated noise, would not adversely affect listed wildlife species.

4.5.3 Mitigation

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

4.6 CULTURAL RESOURCES

An undertaking 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 is 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 National Register;
- 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 Proposed Action. Activities with potential to adversely affect cultural resources would be potential aircraft crashes and noise. A discussion of the current level of information relating to the ways in which noise could affect cultural resources is provided in the following paragraphs.

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 has focused 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 which conclude that 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, 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 (100-dBA at 300-foot AGL) on SRs 300/301 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 APE, 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.

4.6.1 No Action Alternative

Under the No Action Alternative, Travis AFB C-17 aircrews and the Air National Guard C-130 aircrews would continue to fly as many as 122 and five annual operations, respectively, on the SRs. The potential for adverse effects to Native American resources along SRs 300/301 would continue to be minimized through the Base's ongoing consultation with the Native American tribes associated with the route.

4.6.2 Proposed Action

Archaeological Resources

Ten NRHP listed archaeological resources were identified within the SRs 300/301 corridor (see Table 3-13). The only potential impacts to archaeological resources as a result of operation of the Proposed Action would be from direct ground disturbance from aircraft accidents and noise-induced vibration. As discussed above, the probability of an adverse effect occurring to an archaeological site as a result of aircrafts accidents is very low. As presented in Subchapter 4.2.2, the L_{max} for a C-17 at 300 feet AGL, the minimum altitude flown on an MTR, would be about 100 dBA, which is well below the threshold at which structural damage would occur (*i.e.*, 127 dBA). Thus, no structural damage to archaeological resources (*i.e.*, petroglyphs) from noise-induced vibration would be expected from C-17 operations on SRs 300/301.

Historic Resources

Fifty-three NRHP listed historic resources (including historic districts) were identified within the SRs 300/301 corridor (see Table 3-15). The only potential impacts to historic resources as a result of operation on the Proposed Action MTR would be from direct ground disturbance from aircraft accidents and noise-induced vibration. As discussed above, the probability of an adverse effect occurring to historic resources as a result of aircrafts accidents is very low. As presented in Subchapter 4.2.2, the L_{max} for a C-17 at 300 feet AGL, the minimum altitude flown on an MTR, would be about 100 dBA, which is well below the threshold at which structural damage would occur (*i.e.*, 127 dBA). Thus, no structural damage to historic resources (*i.e.*, standing structures) from noise-induced vibration would be expected from C-17 operations on SRs 300/301.

Native American Interests

A list of federally recognized Native American tribes and groups identified at the time of preparation of this document is contained in Table 3.6.1-3. The Air Force initiated consultation with these entities pursuant to 36 CFR 800.2 (see Appendix B).

4.6.3 Mitigation

No NRHP-listed archaeological or historic resources would be adversely effected by the Proposed Action. Native American consultation will be ongoing to mitigate visual and noise effects to sacred sites and sensitive habitats.

4.7 UNAVOIDABLE ADVERSE IMPACTS

Unavoidable adverse impacts would result from implementation of the Proposed Action.

Air Quality

The emission of air pollutants associated with aircraft operation is an unavoidable condition, but is not considered significant and a Clean Air Act General Conformity Determination would not be required.

Noise

Noise resulting from anticipated aircraft operations is an unavoidable condition. However, hearing impairment is not expected. Noise would not be considered a significant impact.

Biological Resources

In general, military overflights within the IRs XXX/XXX corridor would be infrequent, random, and pose no threat to wildlife at the behavioral (individual), population, or species level.

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.

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

The Proposed Action would not result in intensification of land use within the IRs XXX/XXX corridor. Implementation of the Proposed Action or No Action Alternative would not represent a loss of open space. Therefore, it is not anticipated that the Proposed Action or No Action Alternative would result in any cumulative land use or aesthetic impacts. Long-term productivity of land within the IRs XXX/XXX corridor 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 or 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 nor the No Action Alternative would result in construction of new facilities. Thus, no land would be lost to other uses.

Biological Habitat

Neither the Proposed Action nor the No Action Alternative Action would result in the destruction or loss of the vegetation and wildlife habitat.

Human Resources

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

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CHAPTER 5
LIST OF PREPARERS

| Name | Degree | Resource | Years of Experience |
|----------------------|--|---|----------------------------|
| Bupp, Susan | B.A., Anthropology M.A., Anthropology | Cultural Resources | 27 |
| Crisologo, Rosemarie | B.S., Biological Sciences M.S., Environmental Engineering | Public Involvement | 24 |
| Houston, Taylor | B.A., Natural Resource Management | Biological Resources | 7 |
| Miller, Dorothy | B.S., Mathematics | Aircraft Noise Modeling | 29 |
| Schnapp, Angela | B.S., Nuclear Engineering M.S., Environmental Engineering | Air Quality | 9 |
| Wallin, John | B.A., Biology M.A., Management | Project Manager; Airspace and Airfield Operations, BASH, and Aircraft Safety; Noise; Land Use | 32 |
| Wooten, R.C., Ph.D. | Ph.D., Ecology and Biology | Technical Manager | 34 |

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CHAPTER 6

PERSONS AND AGENCIES CONSULTED

The following persons and agencies consulted during preparation of this EA.

Brooks Air Force Base, Texas, Headquarters Air Force Center for Environmental Excellence

Mathews, Howard (HQ AFCEE/ICM)
Munsterman, Gary (HQ AFCEE/CCR-S)

Travis Air Force Base, California, 60th Air Mobility Wing

Bass, John Lt (60 CES/CEVN)
Castillo, Paul MSgt (60 AMW/C-17PO)
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Kelley, Tom (60 OSS/OSO)
Moon, Ryan Capt (60 OSS/OSO)
Parrott, Gregory (60 AMW/JA)
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Weese, Linda (60 AMW /PA)
Williams, Wayne (60 CES/CEV)

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APPENDIX A
INTERAGENCY AND INTERGOVERNMENTAL
CORRESPONDENCE FOR ENVIRONMENTAL PLANNING

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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 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, Travis AFB notified numerous agencies in California, Nevada, and Oregon of the intent to prepare an EA for the conversion of Slow Routes 300/301 to Instrument Routes. 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 responses from the Nevada State Clearinghouse and the Yolo-Solano Air Quality Management District, as well as the Air Force letter responding to the Yolo-Solano letter, are also included.

Travis AFB also sent the draft final environmental assessment (EA) to federal, state, and local agencies for review. The letter transmitting the draft final EA to the agencies is included in this appendix. A California Form A accompanied the draft final EA sent to the California Clearinghouse. The responses from the Nevada State Clearinghouse and the Federal Aviation Administration are also included.

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DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 60TH AIR MOBILITY WING (AMC)



MEMORANDUM FOR SEE DISTRIBUTION

11 JAN 2007

FROM: 60 AMW/CV
400 Brennan Circle
Travis AFB, CA 94535

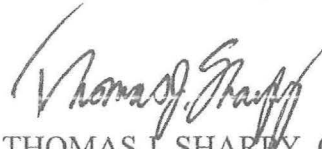
SUBJECT: Environmental Assessment for Conversion of Slow Routes 300/301 to Instrument Routes

1. The U.S. Air Force is preparing an Environmental Assessment (EA) for the proposed conversion of Slow Routes (SRs) 300/301 to Instrument Routes (IRs). The EA will describe and analyze proposed action as well as the No Action Alternative.
2. In accordance with Executive Order 12372, *Intergovernmental Review of Federal Programs*, please identify specific issues or topics of environmental concern. The concerns may include potential permits or other requirements that should be addressed in the EA. The following paragraphs contain a short description of the purpose and need for action, as well as a description of the proposed activities associated with the Proposed Action and No Action Alternative.
3. The Proposed Action consists of the conversion of SRs 300/301 to IRs and the operations by Travis AFB C-17s and aircraft from other military units on the IRs. Converting the SRs to IRs would allow aircraft to accomplish training flights on the IRs at airspeeds greater than 250 nautical miles per hour (knots) and at altitudes up to as high as 13,000 feet above mean sea level. Aircraft altitude on the IRs could be as low as 300 feet above ground level, the same as the minimum altitude for SR operations.
4. Travis AFB C-17 operations on SR 300/301 were assessed in a document entitled *Environmental Assessment West Coast Basing of C-17 Aircraft, June 2003* (West Coast C-17 Basing EA). In addition to the conversion of SRs 300/301 to IRs, the number of annual C-17 operations on the converted IRs by Travis AFB C-17s would increase from the 122 annual operations assessed in the West Coast C-17 Basing EA to many as 300 operations per year. Under the Proposed Action, Travis AFB would become the originating and scheduling organization for the converted IRs.
5. Under the No Action Alternative, SRs 300/301 would not be converted to IRs and the routes would continue to be scheduled and coordinated by an Air National Guard unit at Moffett Federal Airfield, California. Travis AFB C-17 aircrews would conduct as many as 122 annual operations on SRs 300/301.

6. In addition to identifying resources within your agency's purview that may be potentially impacted, we also request any point-of-contact information or relevant documentation available that would assist in preparing the EA. We appreciate identification of major project in the vicinity that may contribute to cumulative effects and would facilitate cumulative impact analysis.

7. Please provide any comments or information by February ³/_k, 2007. Address any questions to Mr. Rudy Pontemayor (707) 424-7517.

Sincerely,



THOMAS J. SHARPY, Colonel, USAF
Vice Commander

Attachment:
Location of SR 300/301

Distribution List

| | |
|---|---|
| <p>Federal Aviation Administration Planning and Programming San Francisco Airports Division Attn: Mr. Joe Rodriguez 831 Mitten Road, Room 210 Burlingame, CA 94010</p> | <p>US Forest Service Ecosystem Planning Pacific Southwest Region Attn: Ms. Kathy Clement 1323 Club Drive Vallejo, CA 94592</p> |
| <p>Department of the Interior Office of Environmental Policy and Compliance Attn: Ms. Patricia Port 1111 Jackson Street, Suite 520 Oakland, CA 94607</p> | <p>U.S. Bureau of Land Management California State Office 2800 Cottage Way Suite W-1834 Sacramento, CA 95825-1866</p> |
| <p>U.S. Bureau of Land Management Nevada State Office 1340 Financial Blvd. Reno, NV 89502</p> | <p>U.S. Bureau of Land Management Oregon State Office 333 S.W. 1st Avenue Portland, OR 97204</p> |
| <p>129 RQW/DOW P.O. Box 103, Stop 14 Moffett Federal Airfield, CA 94035</p> | <p>AFF AWP-910 1500 Aviation Blvd. Hawthorne, CA 90250</p> |
| <p>Governor's Office of Planning and Research State Clearinghouse P.O. Box 3044 Sacramento, CA 95814</p> | <p>State Historic Preservation Officer Department of Parks and Recreation P.O. Box 942896 Sacramento, CA 94296-0001</p> |
| <p>Nevada State Clearinghouse Dept of Admin., Budget and Plng Div Blasdel Building, Room 200 209 E Musser St. Carson City, NV 89701</p> | <p>State Historic Preservation Officer Nevada Department of Cultural Affairs 100 N. Stewart St. Carson City, NV 89701-4285</p> |
| <p>State Historic Preservation Officer Oregon Parks and Recreation Dept 1725 summer St NE, Suite C Salem, OR 97301</p> | <p>California Department of Fish and Game P.O. Box 944209 Sacramento, CA 94299-2090</p> |
| <p>Dept of Conservation and Natural Resources Division of Environmental Protection 333 W. Nye Lane, Room 138 Carson City, NV 89406-0851</p> | <p>Oregon Department of Environmental Quality 811 SW Sixth Avenue Portland, OR 97204-1390</p> |
| <p>California Air Resources Board Air Quality and Transportation Division 1001 "I" Street P.O. Box 2815 Sacramento, CA 95812</p> | <p>U.S. Department of Interior Fish and Wildlife Service Federal Building 2800 Cottage, Room W-2605 Sacramento, CA 95825-1846</p> |
| <p>U.S. Environmental Protection Agency Region 9 75 Hawthorne Street San Francisco, CA 94105</p> | <p>Bay Area AQMD 939 Ellis Street San Francisco, CA 94109-7799</p> |

Distribution List

| | |
|---|---|
| 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 |
| Air Force Western Regional Environmental Office Attn: Mr. Gary Munsterman AFCEE/CCR-S 333 Market Street., Suite 600 San Francisco, CA 94105 | |



Travis AFB EA
LEGEND
 Air Route Traffic Control Center (ARTCC) Boundary

**SRs 300/301 Proposed IRs
 XXX/XXX,
 Travis AFB**

Figure 2-1

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: CONVERT SLOW ROUTES 300/301 TO INSTRUMENT ROUTES
Lead Agency: U.S. AIR FORCE 60TH AIR MOBILITY WING
Mailing Address: 60 CES/CEV 411 ARMEN DR
City: TRAVIS AFB, CA Zip: 74535
Contact Person: MR. RUDY PONTEMAYOR
Phone: 707-424-7517
County:

Project Location: NUMEROUS COUNTIES IN NORTHERN CA
County:
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 [] Water Facilities: Type MGD
[] Office: Sq.ft. Acres Employees [] Transportation: Type
[] Commercial: Sq.ft. Acres Employees [] Mining: Mineral
[] Industrial: Sq.ft. Acres Employees [] Power: Type MW
[] Educational [] Waste Treatment: Type MGD
[] Recreational [] 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)
CONVERT SLOW ROUTES 300/301 TO INSTRUMENT ROUTES
(SEE LETTER TRANSMITTING THIS FORM FOR PROJECT DESCRIPTION)

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 CENTRAL PARK DR
City/State/Zip: AUSTIN, TX 78754
Contact: JOAN WALLW
Phone: (512) 719-6010

Applicant: GO CBS /CSV
Address: 411 ARMEN DR
City/State/Zip: TRAVIS AFB, CA 94535
Phone: (707) 424-7517

Signature of Lead Agency Representative [Signature] Date 12/11/06

JIM GIBBONS
Governor

STATE OF NEVADA

ANDREW K. CLINGER
Director



RECEIVED

FEB 13 2007

AKC

DEPARTMENT OF ADMINISTRATION

209 E. Musser Street, Room 200

Carson City, Nevada 89701-4298

(775) 684-0222

Fax (775) 684-0260

<http://www.budget.state.nv.us/>

February 2, 2007

Mr. Rudy Pontemayor
US Air Force
60 AMW/CV
400 Brennan Circle
Travis AFB, CA 94535

Re: SAI NV # **E2007-210**

Reference:

Project: **Slow Route Conversion at Travis AFB**

Dear Mr. Rudy Pontemayor:

The State Clearinghouse has processed the proposal and has no comment. Your proposal is not in conflict with state plans, goals or objectives.

This constitutes the State Clearinghouse review of this proposal as per Executive Order 12372. If you have questions, please contact me at (775) 684-0209.

Sincerely,

Gosia Sylwestrzak
for Gosia Sylwestrzak
Nevada State Clearinghouse

Enclosure

Rebecca Palmer

1/26

From: Clearinghouse [clearinghouse@budget.state.nv.us]
Sent: Tuesday, January 23, 2007 12:29 PM
To: Rebecca Palmer
Subject: E2007-210 Slow Route Conversion at Travis AFB - 60 AMW/CV

RECEIVED

FEB 01 2007

DEPARTMENT OF ADMINISTRATION
OFFICE OF THE DIRECTOR
BUDGET AND PLANNING DIVISION

NEVADA STATE CLEARINGHOUSE
Department of Administration, Budget and Planning Division
209 East Musser Street, Room 200, Carson City, Nevada 89701-4298
(775) 684-0209 Fax (775) 684-0260
DATE: January 23, 2007

State Historic Preservation Office

Nevada SAI # E2007-210
Project: Slow Route Conversion at Travis AFB

Follow the link below to download an Adobe PDF document concerning the above-mentioned project for your review and comment.

<http://budget.state.nv.us/clearinghouse/Notice/2007/E2007-210.pdf>

Please evaluate it with respect to its effect on your plans and programs; the importance of its contribution to state and/or local areawide goals and objectives; and its accord with any applicable laws, orders or regulations with which you are familiar.

Please submit your comments no later than Friday, February 2, 2007.

Use the space below for short comments. If significant comments are provided, please use agency letterhead and include the Nevada SAI number and comment due date for our reference. Questions? Gosia Sylwestrzak, (775) 684-0209 or <mailto:clearinghouse@budget.state.nv.us>.

Very Short Comment Period

No comment on this project Proposal supported as written

AGENCY COMMENTS:

Signature:



Date:

1/31/07

Distribution:

Sandy Quilici, Department of Conservation & Natural Resources Stephanie Martensen, Division of Emergency Management Chad Hastings, Fire Marshal Skip Canfield, AICP, Division of State Lands Michael J. Stewart, Legislative Counsel Bureau John Walker, Division of Environmental Protection Catherine Cuccaro, Department of Transportation Bill Thompson, Department of Transportation, Aviation Anthony Grossman, Department of Wildlife, Director's Office Roy Leach, Department of Wildlife, Fallon D. Bradford Hardenbrook, Department of Wildlife, Las Vegas Joseph C. Strolin, Agency for Nuclear Projects Steve Weaver, Division of State Parks Mark Harris, PE, Public Utilities Commission Pete Konesky, State Energy Office Rebecca Palmer, State Historic Preservation Office John Muntean, UNR Bureau of Mines Jon Price, UNR Bureau of Mines Gosia Sylwestrzak, zzClearinghouse Reese Tietje, zzClearinghouse -Reese Maud Naroll, zzClearinghouse-Maud Gosia Sylwestrzak, zzClearinghouse -Gosia

Gosia,

Thank you very much for following up on this matter and providing your findings. The Southern Region office of the Nevada Department of Wildlife has no further comments to the proposed action.

Brad Hardenbrook
Supervisory Habitat Biologist
NDOW - Southern Region

-----Original Message-----

From: Clearinghouse [mailto:clearinghouse@budget.state.nv.us]
Sent: Friday, January 26, 2007 3:15 PM
To: Brad Hardenbrook
Subject: E2007-210 Slow Route Conversion at Travis AFB

NEVADA STATE CLEARINGHOUSE
Department of Administration, Budget and Planning Division
209 East Musser Street, Room 200, Carson City, Nevada 89701-4298
(775) 684-0209 Fax (775) 684-0260
DATE: January 26, 2007

Department of Wildlife, Las Vegas

Nevada SAI # E2007-210
Project: Slow Route Conversion at Travis AFB
Subject: Slow Route Conversion at Travis AFB

A few questions arose regarding the map in this project. After speaking with Rudolfo Pontemayor at Travis Air Force Base, Clearinghouse can confidently say that the red lines on the map are the slow routes that will change and that the planes normally fly in a clockwise manner.

There are many additional maps available. Please contact Thomas Kelley with operations personnel at thomas.kelley@travis.af.mil and let him know what points of interest you need to best describe this project.

Questions? Gosia Sylwestrzak,
(775) 684-0209 or <mailto:clearinghouse@budget.state.nv.us>.

Distribution:

Sandy Quilici, Department of Conservation & Natural Resources Stephanie Martensen, Division of Emergency Management Chad Hastings, Fire Marshal Skip Canfield, AICP, Division of State Lands Michael J. Stewart, Legislative Counsel Bureau John Walker, Division of Environmental Protection Catherine Cuccaro, Department of Transportation Bill Thompson, Department of Transportation, Aviation Anthony Grossman, Department of Wildlife, Director's Office Roy Leach, Department of Wildlife, Fallon D. Bradford Hardenbrook, Department of Wildlife, Las Vegas Joseph C. Strolin, Agency for Nuclear Projects Steve Weaver, Division of State Parks Mark Harris, PE, Public Utilities Commission Pete Konesky, State Energy Office Rebecca Palmer, State Historic Preservation Office John Muntean, UNR Bureau of Mines Jon Price, UNR Bureau of Mines Gosia Sylwestrzak, zzClearinghouse Reese Tietje, zzClearinghouse -Reese Maud Naroll, zzClearinghouse-Maud Gosia Sylwestrzak, zzClearinghouse -Gosia

The Nevada Division of State Lands has no comment on this proposal.

-Skip Canfield, AICP

-----Original Message-----

From: Clearinghouse [mailto:clearinghouse@budget.state.nv.us]

Sent: Friday, January 26, 2007 3:15 PM

To: Skip Canfield

Subject: E2007-210 Slow Route Conversion at Travis AFB

NEVADA STATE CLEARINGHOUSE

Department of Administration, Budget and Planning Division

209 East Musser Street, Room 200, Carson City, Nevada 89701-4298

(775) 684-0209 Fax (775) 684-0260

DATE: January 26, 2007

Division of State Lands

Nevada SAI # E2007-210

Project: Slow Route Conversion at Travis AFB

Subject: Slow Route Conversion at Travis AFB

A few questions arose regarding the map in this project. After speaking with Rudolfo Pontemayor at Travis Air Force Base, Clearinghouse can confidently say that the red lines on the map are the slow routes that will change and that the planes normally fly in a clockwise manner.

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Questions? Gosia Sylwestrzak,
(775) 684-0209 or <mailto:clearinghouse@budget.state.nv.us>.

Distribution:

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Stephanie Martensen, Division of Emergency Management

Chad Hastings, Fire Marshal

Skip Canfield, AICP, Division of State Lands

Michael J. Stewart, Legislative Counsel Bureau

John Walker, Division of Environmental Protection

Catherine Cuccaro, Department of Transportation

Bill Thompson, Department of Transportation, Aviation

Anthony Grossman, Department of Wildlife, Director's Office

Roy Leach, Department of Wildlife, Fallon

D. Bradford Hardenbrook, Department of Wildlife, Las Vegas

Joseph C. Strolin, Agency for Nuclear Projects

Steve Weaver, Division of State Parks

Mark Harris, PE, Public Utilities Commission

Pete Konesky, State Energy Office

Rebecca Palmer, State Historic Preservation Office

John Muntean, UNR Bureau of Mines

Jon Price, UNR Bureau of Mines

Gosia Sylwestrzak, zzClearinghouse



February 26, 2007

Mr. Rudy Pontemayor
Department of the Air Force
60 AMW/CV
400 Brennan Circle
Travis AFB, CA 94535

RJP
RECEIVED
MAR 12 2007

Subject: Environmental Assessment for Conversion of Slow Routes 300/301 to Instrument Routes

Dear Mr. Pontemayor:

The Yolo-Solano Air Quality Management District (District) received notice of an Environmental Assessment for the above mentioned proposed action. The proposed action would allow aircrafts to operate at greater airspeed and higher altitude. In addition, the proposed action would increase the number of aircraft annual operations from 122 to 300 operations per year.

The District has jurisdiction over most air quality matters in Yolo County and the northeast portion of Solano County. Figure 2-1 of the notice shows that flight routes associated with the project would cover most of Northern California from Travis Air Force Base (AFB) in Fairfield to the California-Oregon and Nevada state borders. The District's greatest concerns are aircraft takeoff and ground operations emissions at the AFB, where the Bay Area Air Quality Management District (BAAQMD) has jurisdiction. Consequently, the District requests that the Lead Agency work with the BAAQMD for determining the appropriate air quality analysis.

The District appreciates receiving the notice and has informed BAAQMD about it. If you require additional information from the District, please contact me at (530) 757-3668.

Sincerely,

Matthew R Jones

Matthew Jones
Senior Air Quality Planner



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 60TH AIR MOBILITY WING (AMC)



02 JUN 2007

Colonel Steven J. Arquette
Commander, 60th Air Mobility Wing
400 Brennan Circle
Travis AFB, CA 94535-5000

Mr. Matthew Jones
Yolo-Solano Air Quality Management District
1947 Galileo Ct., Suite 103
Davis, CA 95618

Dear Mr. Jones

Thank you for your letter dated February 26, 2007, in response to our letter that notified government agencies that we are preparing environmental assessment (EA) for Conversion of Slow Routes 300/301 to Instrument Routes (Slow Routes 300/301 EA). In your letter you expressed concern for the emissions from aircraft takeoff and ground operations that occur at Travis AFB and in the Bay Area Air Quality Management District (BAAQMD). Please note that BAAQMD also received the Slow Routes 300/301 EA notification letter.

The basing and operation of C-17 aircraft at Travis AFB were assessed in an EA entitled *Environmental Assessment West Coast Basing of C-17 Aircraft, June 2003* (Basing EA). The basing action is underway and the last of the 13 C-17s is scheduled for delivery at Travis AFB in 2008. The action being assessed in the Slow Routes 300/301 EA will not change the number of aircraft takeoff and ground operations that were assessed for Travis AFB in the Basing EA. Thus, aircraft operations described in the Slow Routes 300/301 EA will not change the emissions assessed in the Basing EA. No significant impacts were identified in the Basing EA and the Finding of No Significant Impact associated with the EA was signed July 21, 2003.

The draft Slow Routes 300/301 EA was distributed to agencies and the public for a 30-day review period in April 2007. We sent copies of the draft EA to the Yolo-Solano and Bay Area Air Quality Management Districts.

Again, thank you for your letter and interest in the Slow Routes 300-301 EA. Please address any questions to Mr. Rudy Pontemayor (707) 424-7517.

Sincerely

STEVEN J. ARQUETTE, Colonel, USAF
Commander



February 26, 2007

Mr. Rudy Pontemayor
Department of the Air Force
60 AMW/CV
400 Brennan Circle
Travis AFB, CA 94535

DJP
RECEIVED

MAR 12 2007

Subject: Environmental Assessment for Conversion of Slow Routes 300/301 to Instrument Routes

Dear Mr. Pontemayor:

The Yolo-Solano Air Quality Management District (District) received notice of an Environmental Assessment for the above mentioned proposed action. The proposed action would allow aircrafts to operate at greater airspeed and higher altitude. In addition, the proposed action would increase the number of aircraft annual operations from 122 to 300 operations per year.

The District has jurisdiction over most air quality matters in Yolo County and the northeast portion of Solano County. Figure 2-1 of the notice shows that flight routes associated with the project would cover most of Northern California from Travis Air Force Base (AFB) in Fairfield to the California-Oregon and Nevada state borders. The District's greatest concerns are aircraft takeoff and ground operations emissions at the AFB, where the Bay Area Air Quality Management District (BAAQMD) has jurisdiction. Consequently, the District requests that the Lead Agency work with the BAAQMD for determining the appropriate air quality analysis.

The District appreciates receiving the notice and has informed BAAQMD about it. If you require additional information from the District, please contact me at (530) 757-3668.

Sincerely,

Matthew R Jones

Matthew Jones
Senior Air Quality Planner



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 60TH AIR MOBILITY WING (AMC)



MEMORANDUM FOR SEE DISTRIBUTION

11 JAN 2007

FROM: 60 AMW/CV
400 Brennan Circle
Travis AFB, CA 94535

SUBJECT: Environmental Assessment for Conversion of Slow Routes 300/301 to Instrument Routes

1. The U.S. Air Force is preparing an Environmental Assessment (EA) for the proposed conversion of Slow Routes (SRs) 300/301 to Instrument Routes (IRs). The EA will describe and analyze proposed action as well as the No Action Alternative.
2. In accordance with Executive Order 12372, *Intergovernmental Review of Federal Programs*, please identify specific issues or topics of environmental concern. The concerns may include potential permits or other requirements that should be addressed in the EA. The following paragraphs contain a short description of the purpose and need for action, as well as a description of the proposed activities associated with the Proposed Action and No Action Alternative.
3. The Proposed Action consists of the conversion of SRs 300/301 to IRs and the operations by Travis AFB C-17s and aircraft from other military units on the IRs. Converting the SRs to IRs would allow aircraft to accomplish training flights on the IRs at airspeeds greater than 250 nautical miles per hour (knots) and at altitudes up to as high as 13,000 feet above mean sea level. Aircraft altitude on the IRs could be as low as 300 feet above ground level, the same as the minimum altitude for SR operations.
4. Travis AFB C-17 operations on SR 300/301 were assessed in a document entitled *Environmental Assessment West Coast Basing of C-17 Aircraft, June 2003* (West Coast C-17 Basing EA). In addition to the conversion of SRs 300/301 to IRs, the number of annual C-17 operations on the converted IRs by Travis AFB C-17s would increase from the 122 annual operations assessed in the West Coast C-17 Basing EA to many as 300 operations per year. Under the Proposed Action, Travis AFB would become the originating and scheduling organization for the converted IRs.
5. Under the No Action Alternative, SRs 300/301 would not be converted to IRs and the routes would continue to be scheduled and coordinated by an Air National Guard unit at Moffett Federal Airfield, California. Travis AFB C-17 aircrews would conduct as many as 122 annual operations on SRs 300/301.

6. In addition to identifying resources within your agency's purview that may be potentially impacted, we also request any point-of-contact information or relevant documentation available that would assist in preparing the EA. We appreciate identification of major project in the vicinity that may contribute to cumulative effects and would facilitate cumulative impact analysis.

7. Please provide any comments or information by February 2³/_k, 2007. Address any questions to Mr. Rudy Pontemayor (707) 424-7517.

Sincerely



THOMAS J. SHARPY, Colonel, USAF
Vice Commander

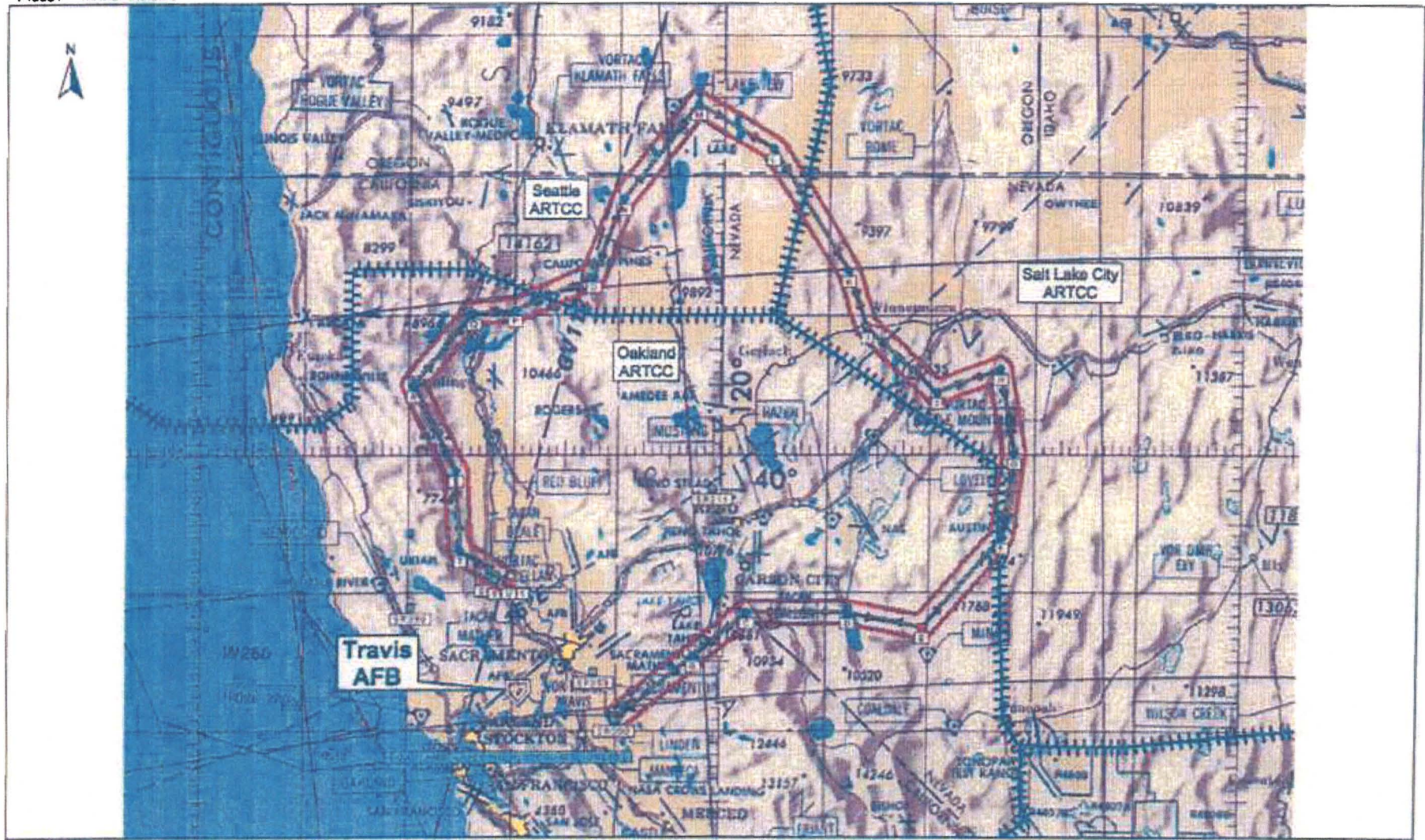
Attachment:
Location of SR 300/301


Distribution List

| | |
|---|---|
| <p>Federal Aviation Administration Planning and Programming San Francisco Airports Division Attn: Mr. Joe Rodriguez 831 Mitten Road, Room 210 Burlingame, CA 94010</p> | <p>US Forest Service Ecosystem Planning Pacific Southwest Region Attn: Ms. Kathy Clement 1323 Club Drive Vallejo, CA 94592</p> |
| <p>Department of the Interior Office of Environmental Policy and Compliance Attn: Ms. Patricia Port 1111 Jackson Street, Suite 520 Oakland, CA 94607</p> | <p>U.S. Bureau of Land Management California State Office 2800 Cottage Way Suite W-1834 Sacramento, CA 95825-1866</p> |
| <p>U.S. Bureau of Land Management Nevada State Office 1340 Financial Blvd. Reno, NV 89502</p> | <p>U.S. Bureau of Land Management Oregon State Office 333 S.W. 1st Avenue Portland, OR 97204</p> |
| <p>129 RQW/DOW P.O. Box 103, Stop 14 Moffett Federal Airfield, CA 94035</p> | <p>AFF AWP-910 1500 Aviation Blvd. Hawthorne, CA 90250</p> |
| <p>Governor's Office of Planning and Research State Clearinghouse P.O. Box 3044 Sacramento, CA 95814</p> | <p>State Historic Preservation Officer Department of Parks and Recreation P.O. Box 942896 Sacramento, CA 94296-0001</p> |
| <p>Nevada State Clearinghouse Dept of Admin., Budget and Plng Div Blasdel Building, Room 200 209 E Musser St. Carson City, NV 89701</p> | <p>State Historic Preservation Officer Nevada Department of Cultural Affairs 100 N. Stewart St. Carson City, NV 89701-4285</p> |
| <p>State Historic Preservation Officer Oregon Parks and Recreation Dept 1725 summer St NE, Suite C Salem, OR 97301</p> | <p>California Department of Fish and Game P.O. Box 944209 Sacramento, CA 94299-2090</p> |
| <p>Dept of Conservation and Natural Resources Division of Environmental Protection 333 W. Nye Lane, Room 138 Carson City, NV 89406-0851</p> | <p>Oregon Department of Environmental Quality 811 SW Sixth Avenue Portland, OR 97204-1390</p> |
| <p>California Air Resources Board Air Quality and Transportation Division 1001 "I" Street P.O. Box 2815 Sacramento, CA 95812</p> | <p>U.S. Department of Interior Fish and Wildlife Service Federal Building 2800 Cottage, Room W-2605 Sacramento, CA 95825-1846</p> |
| <p>U.S. Environmental Protection Agency Region 9 75 Hawthorne Street San Francisco, CA 94105</p> | <p>Bay Area AQMD 939 Ellis Street San Francisco, CA 94109-7799</p> |

Distribution List

| | |
|--|---|
| <p>Yolo-Solano AQMD 1947 Galileo Ct., Ste 103 Davis, CA 95616-4882</p> | <p>Department of Resource Management Solano County 675 Texas Street, Suite 5500 Fairfield, CA 94533</p> |
| <p>Air Force Western Regional Environmental Office Attn: Mr. Gary Munsterman AFCEE/CCR-S 333 Market Street., Suite 600 San Francisco, CA 94105</p> | |



Travis AFB EA
LEGEND
 Air Route Traffic Control Center (ARTCC) Boundary

**SRs 300/301 Proposed IRs
 XXX/XXX,
 Travis AFB**

Figure 2-1

April 26, 2007

Re: Draft Final Environmental Assessment
Convert Slow Routes 300 and 301 to Instrument Routes
Travis Air Force Base, California

To Whom It May Concern:


The United States Air Force, with Parsons assistance, has prepared an Environmental Assessment (EA) to assess the potential environmental impacts of the proposal to convert Slow Routes (SRs) 300 and 301 to Instrument Routes (IRs).

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 May 30, 2007 to: Mr. Rudy Pontemayor, 411 Airmen Drive, Travis AFB, CA 94535; (707)424-7517.

Sincerely,

PARSONS



John Wallin

Attachments: 1. Distribution List
2. Draft Final EA

Distribution List

| | |
|---|---|
| <p>Federal Aviation Administration Planning and Programming San Francisco Airports Division Attn: Mr. Joe Rodriguez 831 Mitten Road, Room 210 Burlingame, CA 94010</p> | <p>US Forest Service Ecosystem Planning Pacific Southwest Region Attn: Ms. Kathy Clement 1323 Club Drive Vallejo, CA 94592</p> |
| <p>Department of the Interior Office of Environmental Policy and Compliance Attn: Ms. Patricia Port 1111 Jackson Street, Suite 520 Oakland, CA 94607</p> | <p>U.S. Bureau of Land Management California State Office 2800 Cottage Way Suite W-1834 Sacramento, CA 95825-1866</p> |
| <p>U.S. Bureau of Land Management Nevada State Office 1340 Financial Blvd. Reno, NV 89502</p> | <p>U.S. Bureau of Land Management Oregon State Office 333 S.W. 1st Avenue Portland, OR 97204</p> |
| <p>129 RQW/DOW P.O. Box 103, Stop 14 Moffett Federal Airfield, CA 94035</p> | <p>California Air Resources Board Air Quality and Transportation Division 1001 "I" Street P.O. Box 2815 Sacramento, CA 95812</p> |
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| <p>Dept of Conservation and Natural Resources Division of Environmental Protection 333 W. Nye Lane, Room 138 Carson City, NV 89406-0851</p> | <p>Oregon Department of Environmental Quality 811 SW Sixth Avenue Portland, OR 97204-1390</p> |



U.S. Department
of Transportation
**Federal Aviation
Administration**

Western-Pacific Region
Airports Division
San Francisco Airports District Office

831 Mitten Road, Suite 210
Burlingame, CA 94010-1300

May 10, 2007

Mr. Rudy Pontemayor
Travis Air Force Base
411 Airmen Drive
Travis AFB, CA 94535

RMP
RECEIVED
MAY 16 2007

Dear Mr. Albright:

RE: April 2007 Draft Final Environmental Assessment Convert Slow Routes
300 and 301 to Instrument Routes

We have forwarded the subject document to our Los Angeles Regional
Office, Air Traffic Division for comment. The mailing address for the
Los Angeles office is:

Federal Aviation Administration
Air Traffic Division, AWP-500
P.O. Box 92007
Los Angeles, CA 90009

Enclosed for information is a response letter we issued regarding the
C-17 Landing Zone Notice.

Thank you for providing our office an opportunity to comment on the
proposed development.

Sincerely,

Joseph R. Rodriguez
Supervisor, Environmental Planning and Compliance Section

CC: PAA, Air Traffic Division, AWP-500

JIM GIBBONS
Governor

STATE OF NEVADA



DEPARTMENT OF ADMINISTRATION

209 E. Musser Street, Room 200
Carson City, Nevada 89701-4298
(775) 684-0222
Fax (775) 684-0260
<http://www.budget.state.nv.us/>

ANDREW K. CLINGER
Director


RECEIVED

JUN 07 2007

May 29, 2007

Mr. Rudy Pontemayor
US Air Force
60 AMW/CV
411 Airmen Drive
Travis AFB, CA 94535

Re: SAI NV # E2007-324

Reference:

Project: EA for Slow Route Conversion at Travis AFB

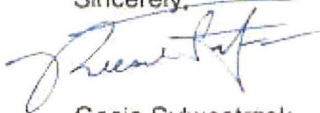
Dear Mr. Rudy Pontemayor:

The following agencies support the above referenced document as written:

State Historic Preservation Office

This constitutes the State Clearinghouse review of this proposal as per Executive Order 12372. If you have questions, please contact me at (775) 684-0209.

Sincerely,


Gosia Sylwestrzak
Nevada State Clearinghouse

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APPENDIX B
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, Travis AFB sent the notification letter in this appendix to the tribes announcing the action and requesting concerns regarding the Proposed Action. No responses were received.

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DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 60TH AIR MOBILITY WING (AMC)



MEMORANDUM FOR SEE DISTRIBUTION

11 JAN 2007

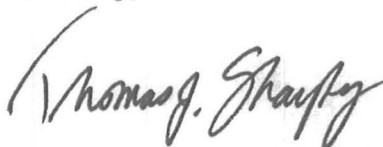
FROM: 60 AMW/CV
400 Brennan Circle
Travis AFB, CA 94535

SUBJECT: Environmental Assessment for Conversion of Slow Routes 300/301 to Instrument Routes

1. The U.S. Air Force is preparing an Environmental Assessment (EA) for the proposed conversion of Slow Routes (SR) 300/301 to Instrument Routes (IR). 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 lands beneath the SRs 300/301 flight corridor.
2. 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 lands in the flight corridor.
3. The Proposed Action consists of the conversion of SR 300/301 to IRs and the operations by Travis AFB C-17s and aircraft from other military units on the IRs. Converting the SRs to IRs would allow aircraft to accomplish training flights on the IRs at airspeeds greater than 250 nautical miles per hour (knots) and at altitudes up to as high as 13,000 feet above mean sea level. Aircraft altitude on the IRs could be as low as 300 feet above ground level, the same as the minimum altitude for SR operations. The attached figure depicts SR 300/301.
4. Travis AFB C-17 operations on SR 300/301 were assessed in a document entitled *Environmental Assessment West Coast Basing of C-17 Aircraft, June 2003* (West Coast C-17 Basing EA). In addition to the conversion of SR 300/301 to IRs, the number of annual C-17 operations on the converted IRs by Travis AFB C-17s would increase from the 122 annual operations assessed in the West Coast C-17 Basing EA to as many as 300 operations per year. Under the Proposed Action, Travis AFB would become the originating and scheduling organization for the converted IRs.

5. Please provide any comments or information by February 23, 007. You may address any comments or questions to Mr. Rudy Pontemayor, 60 CES/Environmental Flight, 411 Airman Drive, Travis AFB, CA 94535. Mr. Pontemayor may be reached by calling (707) 424-7517 or via e-mail at: Rodolfo.Pontemayor@travis.af.mil.

Sincerely,

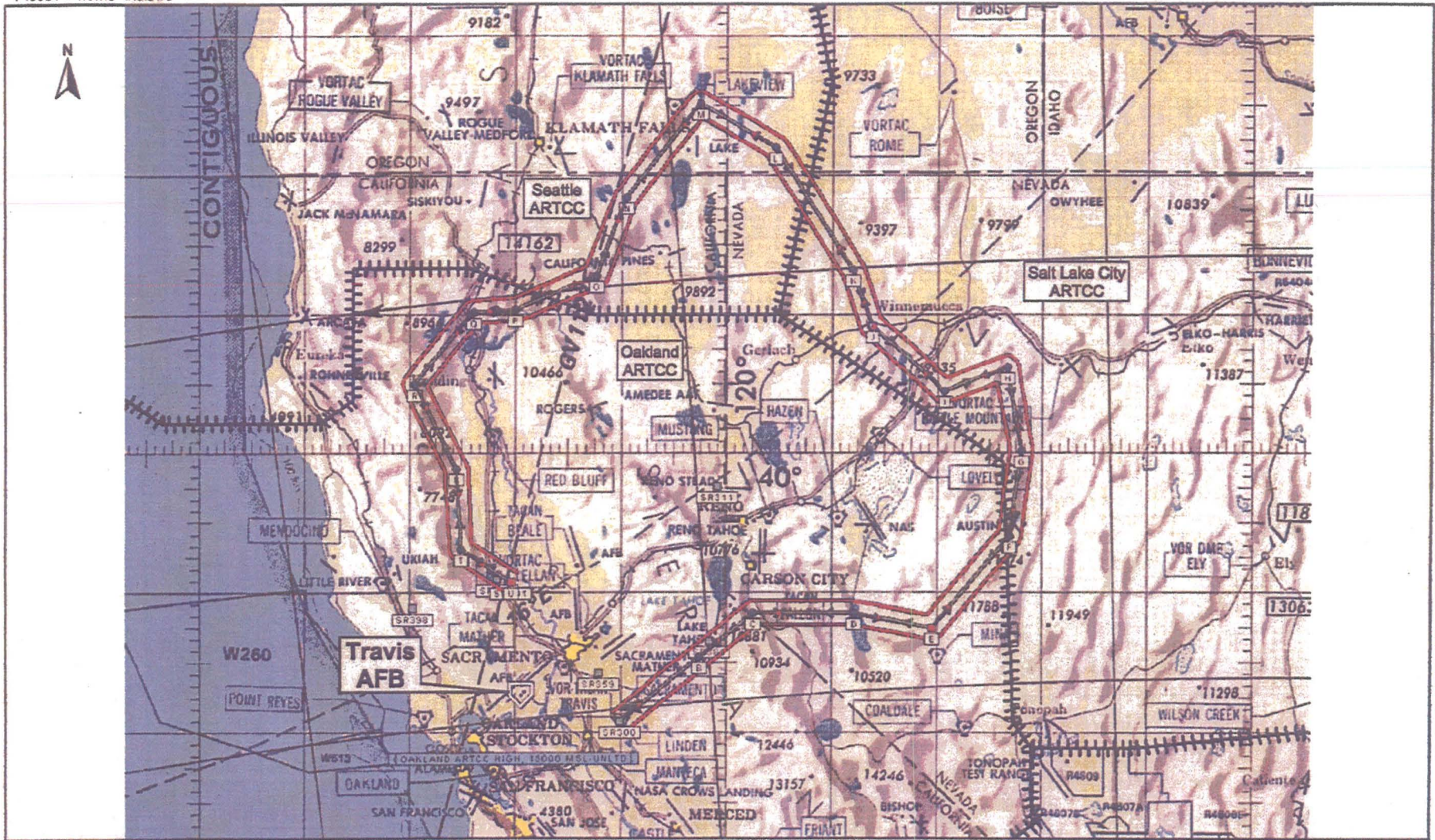
A handwritten signature in cursive script, appearing to read "Thomas J. Sharpy".

THOMAS J. SHARPY, Colonel, USAF
Vice Commander

Attachment:
Location of SR 300/301

Distribution List

| California | | |
|---|---|---|
| Anthony Jack, Chairperson Big Valley Rancheria 2726 Mission Rancheria Rd. Lakeport, CA 95453 | Elaine Patterson, Chairperson Cortina Band of Indians P.O. Box 1630 Williams, CA 95987 | Raymond Brown, Sr., Chairman Elem Indian Colony/ Sulphur Bank Rancheria P.O. Box 989 Clearlake Oaks, CA 95423 |
| Kenneth Swearinger, Chairman Grindstone Rancheria P.O. Box 63 Elk Creek, CA 95939 | Mathew Franklin, Chairman Ione Band of Miwok Indians P.O. Box 1190 Ione, CA 95640 | Margaret Dalton, Chairperson Jackson Rancheria P.O. Box 1090 Jackson, CA 95642 |
| Jose Simon, III, Chairman Middletown Rancheria P.O. Box 1035 Middletown, CA 95461 | Everett Freeman, Chairman Paskenta Band of the Nomlaki Indians P.O. Box 398 Orland, CA 95963 | Jessica Jim, Chairperson Pit River Tribal Council 37118 Main Street Burney, CA 96013 |
| Salvador Rosales, Chairman Potter Valley Rancheria 2251 South State Street Ukiah, CA 95482 | Ronald Lincoln, Chairman Quartz Valley Reservation 13601 Quartz Valley Rd. Fort Jones, CA 96032 | Barbara Murphy, Chairman Redding Rancheria 2000 Redding Rancheria Rd. Redding, CA 96001 |
| Shannon Barney, President Round Valley Reservation P.O. Box 448 Covelo, CA 95428 | Marshall McKay, Chairperson Rumsey Rancheria P.O. Box 18 Brooks, CA 95606 | Donald Arnold, Chairperson Scotts Valley Rancheria 301 Industrial Avenue Lakeport, CA 95453 |
| Nicholas Fonseca, Chairman Shingle Springs Rancheria P.O. Box 1340 Shingle Springs, CA 95682 | Jessica Tavares, President United Auburn Indian Community 575 Menlo Drive, Suite 2 Rocklin, CA 95765 | Mahlon Machado, Chairman Woodfords Community Council 96 Washoe Blvd. Markleeville, CA 96120 |
| Nevada | | |
| Mike Young, Chairman Battle Mountain Band Council 37 Battle Mountain Band Council Battle Mountain, NV 89820 | Warner Nevers, Chairman Carson Community Council 2900 S. Curry Street Carsons City, NV 89703 | Anthony Smokey, Chairman Dresslerville Community Council 585 Watasheamu Road Gardnerville, NV 89410 |
| Alvin Moyle, Chairman Fallon Paiute Shoshone Tribal Business Council 565 Rio Vista Road Fallon, NV 89406-9159 | Alfred Happy, Sr., Chairman Lovelock Paiute Tribe P.O. Box 878 Lovelock, NV 89419 | Norman Harry, Chairman Pyramid Lake Paiute Tribal Council P.O. Box 256 Nixon, NV 89424 |
| Arlan Melendez, Chairman Reno-Sparks Indian Colony 98 Colony Road Reno, NV 89502 | Ronnie Woods, Chairman South Fork Band Nation HC 30, P.O. Box B-13-Lee Spring Creek, NV 89815 | Wanda Batchelor, Chairperson Stewart Community Council 5300 Snyder Ave. Carsons City, NV 89701 |
| Robyn Burdette, Chairperson Summit Lake Paiute Tribe 653 Anderson Street Winnemucca, NV 89445 | Hugh Stevens, Chairman Te-Moak Tribe of Western Shoshone Indians 525 Sunset Street Elko, NV 89801 | Genia Williams, Chairperson Walker River Paiute Tribe P.O. Box 220 Schurz, NV 89427 |
| A. Brian Wallace, Chairman Washoe Tribal Council 919 Hwy 395 South Gardnerville, NV 89410 | Laretta Hildreth, Chairperson Wells Indian Colony Band Council P.O. Box 809 Wells, NV 89835 | Glenn Wasson, Chairman Winnemucca Tribal Council P.O. Box 1370 Winnemucca, NV 89446 |
| Wayne Garcia, Chairman Yerington Paiute Tribe 171 Campbell Lane Yerington, NV 89447 | Dennis Bill, Chairman Yomba Shoshone Tribe HC61, Box 6275 Austin, NV 89310 | |
| Oregon | | |
| Allen Foreman, Chairman Klamath Tribe P.O. Box 436 Chiloquin, OR 97624-0436 | | |



Travis AFB EA
LEGEND
 Air Route Traffic Control Center (ARTCC) Boundary

**SRs 300/301 Proposed IRs
 XXX/XXX,
 Travis AFB**

Figure 2-1

APPENDIX C
CLEAN AIR ACT GENERAL CONFORMITY APPLICABILITY
ANALYSIS, CONVERSION OF SLOW ROUTES 300 AND 301 TO
INSTRUMENT ROUTES

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Neither the Air Force nor the affected states had comments on the draft Clean Air Act General Conformity Applicability Analysis included in this appendix. Therefore, a final document was not prepared.

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DRAFT

CLEAN AIR ACT

**GENERAL CONFORMITY APPLICABILITY ANALYSIS
FOR THE CONVERSION OF SLOW ROUTES 300 AND
301 TO INSTRUMENT ROUTES**



**DEPARTMENT OF THE AIR FORCE
AIR MOBILITY COMMAND
60th AIR MOBILITY WING
TRAVIS AIR FORCE BASE, CALIFORNIA**

January 2007

DRAFT
CLEAN AIR ACT
GENERAL CONFORMITY APPLICABILITY ANALYSIS FOR
THE CONVERSION OF SLOW ROUTES 300 AND 301 TO
INSTRUMENT ROUTES

DEPARTMENT OF THE AIR FORCE
AIR MOBILITY COMMAND

January 2007

Table 1-2 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 |
| *threshold applicable to AQCR 28, AQCR 30, and AQCR 190 | | |

Source: 40 CFR 51.853

AQCRs 23 and 7 are in attainment for all criteria pollutants. Therefore, no further analysis is required, and these AQCRs are not considered in this Conformity Applicability Analysis.

Regional Significance

A federal action that does not exceed the threshold rates of criteria pollutants may still be subject to a General Conformity determination. General Conformity applies if a federal action is considered to be “regionally significant,” meaning the direct and indirect emissions of any pollutant represent 10 percent or more of a nonattainment or maintenance area’s emissions inventory for that pollutant.

Exemptions and Presumptions

The final rule contains exemptions from the General Conformity process. Certain federal actions are deemed by the USEPA to conform because of the thorough air quality analysis required to comply with other statutory requirements. Examples of these actions include those subject to the New Source Review program and remedial activities under the Comprehensive Environmental Response, Compensation, and Liability Act.

Other federal actions that are exempt from the conformity process include those actions that would result in no increase in emissions, or an increase in emissions that is clearly *de minimis*. Examples include continuing or recurring activities, routine maintenance and repair, administrative and planning actions, land transfers, and routine movement of mobile assets.

A federal agency can establish its own presumptions of conformity through separate rulemaking actions. Section 176(c) of the CAA does not specifically exempt any activity; thus, a separate analysis would need to show that the activity presumed to conform has no impacts to air quality. Based on this analysis, a federal agency can document that certain types of future actions would be *de minimis*.

1.3.2 Analysis

A conformity analysis for the federal action examines the impacts of the direct and indirect emissions from mobile and stationary sources, and emissions from any reasonably foreseeable federal action. Indirect emissions are those emissions of a criteria pollutant or its precursors that are caused by the federal action but may occur later in time and/or may be farther removed in distance from the action itself but are still reasonably foreseeable; and the federal agency can control and will maintain control over the indirect action due to a

1 continuing program responsibility of the federal agency. Reasonably foreseeable emissions
2 are projected future indirect emissions that are identified at the time the conformity
3 determination is made; the location of such emissions is known and the emissions are
4 quantifiable, as described and documented by the federal agency based on its own information
5 and after reviewing any information presented to the federal agency.

6 The conformity determination procedure is detailed in 40 CFR 51.589. The analysis is
7 based on the latest planning assumptions, the latest emission estimation techniques, applicable
8 air quality models, databases, and other requirements of the “Guideline on Air Quality Models
9 (Revised)” (EPA Publication No. 450/2-78-027R, 1986), and on the total of direct and
10 indirect emissions from the action. Finally, actions required to issue a conformity
11 determination must list mitigation measures and go through the public notice process.
12 Exempt actions are not required to go through this process.

13 **1.3.3 Procedure**

14 Procedural requirements of the conformity rule allow for public review of the federal
15 agency’s conformity determination. Although the conformity determination is a federal
16 responsibility, state and local air agencies are provided notification and their expertise is
17 consulted. No documentation or public participation is required for applicability analyses that
18 result in *de minimis* determinations.

19 The federal agency must provide a 30-day notice of the federal action and draft
20 conformity determination to the appropriate USEPA Region and state and local air control
21 agencies. The federal agency must also make the draft determination available to the public
22 to allow opportunity for review and comment.

23 The federal agency should consider aligning the conformity public participation
24 requirements with those under the National Environmental Policy Act. However, the final
25 rule does not require a concurrent process.

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1 **2.3 ELEMENTS OF THE PROPOSED ACTION**

2 Travis AFB would become the scheduling and coordinating agency for SRs 300/301,
3 which would be converted to IRs. For the purposes of this Conformity Applicability
4 Analysis, the converted routes are referred to as IRs XXX/XXX because the designator
5 numbers would not be known until after the conversion process is completed. Travis AFB
6 C-17 aircrews would fly the new IRs as many as 300 times per year. Table 2-1 lists the
7 proposed annual and average daily operations for IRs XXX/XXX. Table 2-2 lists the current
8 annual and average daily operations for SRs 300/301 (USAF 2006).

9 **Table 2-1 Proposed Annual and Average Daily IRs XXX/XXX Operations**

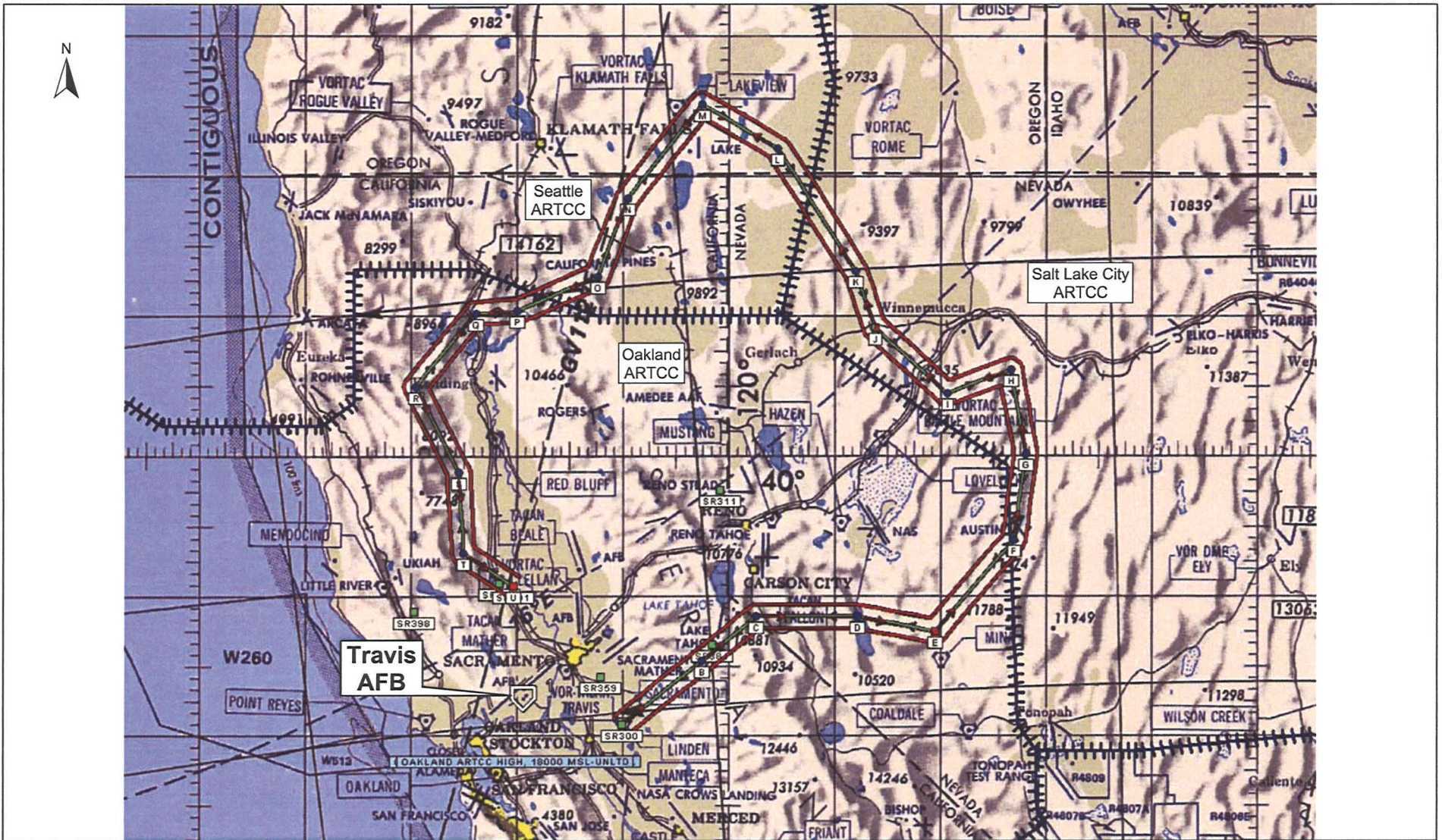
| Aircraft | Total MTR Operations | |
|-----------------|----------------------|------------|
| | Annual | Avg. Daily |
| C-17 Operations | 300 | 0.83 |


10 Note: 122 of the annual 300 C-17 operations were assessed in the
11 West Coast C-17 Basing EA. C-130s would continue to fly the
12 routes 5 times per year.

13 **Table 2-2 Current Annual and Average Daily SRs 300/301 Operations**

| Aircraft | Total MTR Operations | |
|------------------|----------------------|------------|
| | Annual | Avg. Daily |
| C-17 Operations | 122 | 0.33 |
| C-130 Operations | 5 | 0.01 |
| Total | 127 | 0.34 |

14 Note: The 122 annual C-17 and the C-130 operations were
15 assessed in the West Coast C-17 Basing EA.



Travis AFB EA
LEGEND
 Air Route Traffic Control Center (ARTCC) Boundary

**SRs 300/301 Proposed IRs
 XXX/XXX,
 Travis AFB**

Figure 2-1

1

2

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3

1 **AQCR 28**

2 The average annual wind speed in the Sacramento Valley Air Basin is 7.1 knots, ranging
3 between 7.2 knots during the winter months and 6.9 knots in the summer months. The
4 predominant wind direction during June through August is from the south and typically has
5 the highest average wind speed of 7.7 knots (WRCC 2006).

6 The Sacramento Valley Air Basin experiences mild temperatures with an average annual
7 temperature of 61 °F. The warmest months are July and August with a mean monthly
8 temperature of 95°F. January is the coldest month with a mean monthly temperature of 34°F
9 (WRCC 2006).

10 The Sacramento Valley Air Basin experiences moderate precipitation with most of the
11 precipitation falling during the winter months of November through March. The average
12 precipitation during this time period is 3.6 inches per month. The average precipitation
13 throughout the remainder of the year is only 0.6 inches per month. Average annual
14 precipitation is 22 inches (WRCC 2006).

15 **AQCR 147**

16 The average annual wind speed in AQCR 147 is 7.2 knots, ranging between 6.4 knots
17 during the winter months and 7.6 knots in the summer months. The predominant wind
18 directions during June through August are from the south and west and typically have the
19 highest average wind speed of 19 knots (WRCC 2006).

20 AQCR 147 experiences mild temperatures with an average annual temperature of 49 °F.
21 The warmest months are July and August with a mean monthly temperature of 89°F. January
22 is the coldest month with a mean monthly temperature of 17°F (WRCC 2006).

23 AQCR 147 experiences moderate precipitation, which ranges between 0.4 and 0.8 inches
24 of precipitation throughout the year. The average precipitation is 0.7 inches per month.
25 Average annual precipitation is 7 inches (WRCC 2006).

26 **AQCR 148**

27 The average annual wind speed in AQCR 148 is 5.5 knots, ranging between 4.5 knots
28 during the winter months and 6.3 knots in the summer months. The predominant wind
29 direction during January through June is from the west and typically has the highest average
30 wind speed of 7 knots (WRCC 2006).

31 AQCR 148 experiences mild temperatures with an average annual temperature of 51°F.
32 The warmest months are July and August with a mean monthly temperature of 92°F.
33 December is the coldest month with a mean monthly temperature of 17°F (WRCC 2006).

34 AQCR 148 experiences moderate precipitation, which ranges between 0.2 and 0.6 inches
35 of precipitation throughout the year. The average precipitation is 0.4 inches per month.
36 Average annual precipitation is 5 inches (WRCC 2006).

37 **AQCR 190**

38 The average annual wind speed in AQCR 190 is 7 knots, ranging between 6.8 knots
39 during the winter months and 6.8 knots in the summer months. The predominant wind

1 direction is from the north and typically has a highest average wind speed of 8 knots
2 (WRCC 2006).

3 AQCR 190 experiences mild temperatures with an average annual temperature of 48°F.
4 The warmest months are July and August with a mean monthly temperature of 85°F. January
5 is the coldest month with a mean monthly temperature of 20°F (WRCC 2006).

6 AQCR 190 experiences moderate precipitation, which ranges between 0.3 and 1.3 inches
7 of precipitation throughout the year. The average precipitation is 1 inch per month. Average
8 annual precipitation is 12 inches (WRCC 2006).

9 **3.2 CRITERIA POLLUTANTS AND STANDARDS**

10 The NAAQS were established by the USEPA for six pollutants. Criteria pollutants are
11 defined as those pollutants for which the federal and state governments have established
12 ambient air quality standards, or criteria, for outdoor concentrations in order to protect public
13 health. Criteria pollutants cause or contribute to air pollution which could endanger the public
14 health or welfare. The USEPA has described the potential health and welfare effects of these
15 pollutants. It is on the basis of these criteria and the health and welfare objectives that the
16 standards are set or revised.

17 The six criteria pollutants are ozone (O₃), particulate matter (PM_{2.5} and PM₁₀), nitrogen
18 dioxide (NO₂), carbon monoxide (CO), SO₂, and lead (Pb). Even though O₃ is a regulated
19 criteria pollutant, it is not directly emitted from sources. Ozone forms as a result of VOCs
20 and NO_x reacting with sunlight in the atmosphere.

21 The General Conformity Rule addresses the impact of the federal action on the area's
22 attainment of the NAAQS. The NAAQS for the criteria pollutants are shown in Table 3-1.

23 Air quality is determined by comparing ambient air levels with the appropriate primary or
24 secondary NAAQS for each criteria pollutant. National primary standards establish the level
25 of air quality necessary to allow an adequate margin of safety to protect the public health.
26 National secondary standards establish the level of air quality necessary to protect the public
27 welfare from any known or anticipated adverse effects of a pollutant.

28 Areas not meeting ambient air quality standards are designated as being in nonattainment
29 for the specific pollutant causing the violation. The CAA Amendments of 1990 further
30 classified O₃, CO, and PM nonattainment areas based on the magnitude of the problem.
31 Depending on the classification (*e.g.*, O₃: marginal, moderate, serious, severe, or extreme), an
32 area must adopt certain air pollution reduction measures. The classification also determines
33 when the area must achieve attainment.

34 **3.2.1 Ozone**

35 Ozone is not emitted directly into the air but is formed through chemical reactions
36 between natural and man-made emissions of VOC and NO_x in the presence of sunlight. Thus,
37 VOC and NO_x are referred to as "precursors" of O₃. The level of O₃ in the air depends on the
38 outdoor levels of these organic gases, the radiant energy of the sun, and other weather
39 conditions. The biggest concern with high O₃ concentrations is the damage it causes to human
40 health, vegetation, and many common materials used everyday. High O₃ concentrations can

1 cause shortness of breath, coughing, wheezing, headaches, nausea, eye and throat irritations,
 2 and lung damage.

3 **Table 3-1 National Ambient Air Quality Standards**

| Pollutant | Averaging Time | Federal Standards | | |
|---|--------------------------|------------------------------------|-----------------------------------|--|
| | | Primary | Secondary | Method |
| Ozone (O ₃) | 1 Hour | No Standard | Same as Primary Standard | Ethylene Chemiluminescence |
| | 8 Hour | 0.08 ppm (157 µg/m ³) | | |
| Respirable Particulate Matter (PM ₁₀) | 24 Hour | 150 µg/m ³ | Same as Primary Standard | Inertial Separation and Gravimetric Analysis |
| | Annual Arithmetic Mean | 50 µg/m ³ | | |
| Fine Particulate Matter (PM _{2.5}) | 24 Hour | 65 µg/m ³ | Same as Primary Standard | Inertial Separation and Gravimetric Analysis |
| | Annual Arithmetic Mean | 15 µg/m ³ | | |
| Carbon Monoxide (CO) | 8 Hour | 9 ppm (10 mg/m ³) | None | Non-dispersive Infrared Photometry (NDIR) |
| | 1 Hour | 35 ppm (40 mg/m ³) | | |
| Nitrogen Dioxide (NO ₂) | Annual Arithmetic Mean | 0.053 ppm (100 µg/m ³) | Same as Primary Standard | Gas Phase Chemiluminescence |
| Lead | Average Calendar Quarter | 1.5 µg/m ³ | Same as Primary Standard | High Volume Sampler and Atomic Absorption |
| Sulfur Dioxide (SO ₂) | Annual Arithmetic Mean | 0.030 ppm (80 µg/m ³) | --- | Pararosaniline |
| | 24 Hour | 0.14 ppm (365 µg/m ³) | --- | |
| | 3 Hour | --- | 0.5 ppm (1300 µg/m ³) | |

4 **3.2.2 Carbon Monoxide**

5 Carbon monoxide is a colorless, odorless and tasteless toxic gas found naturally in trace
 6 quantities in the atmosphere and emitted from any form of combustion. At low
 7 concentrations, the central nervous system is affected. At higher concentrations, irritability,
 8 headaches, rapid breathing, blurred vision, lack of coordination, nausea and dizziness can all
 9 occur. It is especially dangerous indoors when ventilation is inadequate; unconsciousness or
 10 death can occur.

3.2.3 Nitrogen Dioxide

Nitrogen dioxide is a reddish-brown to dark brown poisonous gas that produces an irritating odor. It is a byproduct of high combustion sources. Health effects include damage to lungs, bronchial and respiratory system irritation, headaches, nausea, coughing, choking, and chest pains.

3.2.4 Sulfur Dioxide

Sulfur dioxide is a colorless gas with a strong suffocating odor. It is a gas resulting from the burning of sulfur-containing fuels. Exposure to SO₂ can irritate the respiratory system including lung and throat irritations and nasal bleeding. In the presence of moisture, SO₂ can form sulfuric acid that can cause damage to vegetation.

3.2.5 Suspended Particulate Matter

There are two categories of particulate matter: particles with diameters less than 10 microns and particles with diameters less than 2.5 microns. The sources of PM₁₀ emissions include industrial and agricultural operations, automobile exhaust, and construction. Since PM₁₀ is so small, it is not easily filtered and can penetrate to the deeper portions of the lungs. Chronic and acute respiratory illnesses may be caused from inhalation of PM₁₀.

3.2.6 Lead

Lead is a bluish-white to silvery gray solid. Lead particles can originate from motor vehicle exhaust, industrial smelters and battery plants. Health effects include decreased motor function, reflexes and learning; as well as, damage to the central nervous system, kidneys, and brain. At high levels of exposure, seizures, coma, or death may occur.

3.3 AIR QUALITY CONTROL REGION

The State of California is divided into a number of areas designated as air basins. One of the basins, the SFBAAB, includes the Counties of Marin, San Francisco, San Mateo, Santa Clara, Alameda, Contra Costa, Napa, and portions of Sonoma and Solano. This area is known as AQCR 30. The air basin is governed by the Bay Area Air Quality Management District. Table 3-2 lists the air emissions for the SFBAAB for 2005 and is the emissions inventory considered for this applicability analysis.

**Table 3-2 2005 Emissions Inventory for the San Francisco Bay Area
Air Basin (AQCR 30) (tons)**

| CO | VOCs | NO _x | SO _x | PM ₁₀ | PM _{2.5} |
|---------|---------|-----------------|-----------------|------------------|-------------------|
| 807,636 | 141,109 | 199,619 | 19,710 | 77,928 | 33,033 |

Source: CARB 2006

The Sacramento Valley Air Basin includes the Counties of Shasta, Tehama, Glenn, Butte, Colusa, Sutter, Yuba, Yolo, Sacramento, and portions of Solano and Placer. This area is known as AQCR 28. Table 3-3 lists the air emissions for the Sacramento Valley Air Basin for 2005 and is the emissions inventory considered for this applicability analysis.

**Table 3-3 2005 Emissions Inventory for Sacramento Valley
 Air Basin (AQCR 28) (tons)**

| CO | VOCs | NO _x | SO _x | PM ₁₀ | PM _{2.5} |
|---------|--------|-----------------|-----------------|------------------|-------------------|
| 431,321 | 74,971 | 90,885 | 2,336 | 82,490 | 31,500 |

Source: CARB 2006

The State of Nevada is divided into a number of areas designated as AQCRs. AQCR 147 includes the Counties of Churchill, Clark, Elko, Esmeralda, Eureka, Humboldt, Lander, Lincoln, Mineral, Nye, Pershing, and White Pine. Table 3-4 lists the air emissions for AQCR 147 for 2001 and is the emissions inventory considered for this applicability analysis.

Table 3-4 2001 Emissions Inventory for AQCR 147 (tons)

| CO | VOCs | NO _x | SO _x | PM ₁₀ | PM _{2.5} |
|---------|--------|-----------------|-----------------|------------------|-------------------|
| 705,847 | 75,689 | 108,691 | 57,483 | 115,432 | 41,914 |

Source: USEPA 2006

AQCR 148 includes the Counties of Carson City, Douglas, Lyon, Storey, and Washoe. Table 3-5 lists the air emissions for AQCR 148 in 2001 and is the emissions inventory considered for this applicability analysis.

Table 3-5 2001 Emissions Inventory for AQCR 148 (tons)

| CO | VOCs | NO _x | SO _x | PM ₁₀ | PM _{2.5} |
|---------|--------|-----------------|-----------------|------------------|-------------------|
| 174,231 | 28,896 | 29,875 | 7,503 | 46,491 | 11,323 |

Source: USEPA 2006

The State of Oregon is divided into a number of AQCRs. AQCR 190 includes the counties of Crook, Deschutes, Hood River, Jefferson, Klamath, Lake, Sherman, and Wasco. Table 3-6 lists the air emissions for AQCR 190 for 2001 and is the emissions inventory considered for this applicability analysis.

Table 3-6 2001 Emissions Inventory for AQCR 190 (tons)

| CO | VOCs | NO _x | SO _x | PM ₁₀ | PM _{2.5} |
|---------|--------|-----------------|-----------------|------------------|-------------------|
| 373,478 | 55,100 | 25,982 | 4,657 | 70,142 | 31,378 |

Source: USEPA 2006

3.3.1 Attainment Status

Areas not meeting ambient air quality standards are designated as being in nonattainment for the specific pollutant causing the violation. National standards other than for O₃, particulates, and those based on annual averages, are not to be exceeded more than once a year. The 8-hour O₃ standard is attained when the 3-year average of the 4th highest daily concentration is 0.08 parts per million (ppm) or less. The 24-hour PM₁₀ standard is attained when the 3-year average of the 99th percentile of monitored concentrations is less than

1 150 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$). The 24-hour $\text{PM}_{2.5}$ standard is attained when the
2 3-year average of 98th percentile is less than $65 \mu\text{g}/\text{m}^3$. Except for the national particulate
3 standards, annual standards are met if the annual average falls below the standard at every
4 site. The national annual particulate standard for PM_{10} is met if the 3-year average falls below
5 the standard at every site. The annual $\text{PM}_{2.5}$ standard is met if the 3-year average of annual
6 averages spatially averaged across officially designed clusters of sites falls below the
7 standard.

8 **3.3.1.1 Ozone**

9 In 1997, the USEPA promulgated the 8-hour O_3 standard. On April 15, 2004, USEPA
10 issued the first 8-hour O_3 designations. Prior to that date, O_3 attainment designations were
11 determined by the 1-hour O_3 standard of 0.12 ppm. The new 8-hour standard became
12 effective 60 days after promulgation (June 15, 2004), while the existing 1-hour standard, for
13 most purposes, remains in effect until USEPA determines an area has air quality meeting the
14 1-hour standard.

15 Regarding General Conformity, the proper *de minimis* threshold to use to determine
16 conformity depends upon when the federal action begins. Actions beginning before
17 June 15, 2005 must meet the 1-hour O_3 *de minimis* threshold. Actions beginning on or after
18 June 15, 2005 must meet the 8-hour O_3 *de minimis* threshold (Stonefield 2004). The 8-hour
19 O_3 threshold applies to this applicability analysis because the Proposed Action is scheduled to
20 start after June 15, 2005.

21 **AQCR 30**

22 According to 40 CFR 81.305, this area has been designated as marginal nonattainment
23 for the 8-hour O_3 standard.

24 **AQCR 28**

25 According to 40 CFR 81.305, this area has been designated as serious nonattainment for
26 the 8-hour O_3 standard.

27 **AQCR 147**

28 According to 40 CFR 81.329, this area has been designated as nonattainment Subpart 1
29 for the 8-hour O_3 standard.

30 **AQCR 148**

31 According to 40 CFR 81.329, this area has been designated as unclassifiable/attainment
32 for the 8-hour O_3 standard.

33 **AQCR 190**

34 According to 40 CFR 81.338, this area has been designated as unclassifiable/attainment
35 for the 8-hour O_3 standard.

36 **3.3.1.2 Particulate Matter**

37 On January 5, 2005, USEPA issued the first $\text{PM}_{2.5}$ designations. Prior to that date, PM
38 attainment designations were determined by the PM_{10} standard of $150 \mu\text{g}/\text{m}^3$. The new $\text{PM}_{2.5}$

1 standard became effective 90 days after promulgation on April 5, 2005, while the existing
2 PM₁₀ standard, for most purposes, remains in effect until USEPA determines an area has air
3 quality meeting the PM₁₀ standard.

4 In relation to General Conformity, the proper *de minimis* threshold to use to determine
5 conformity depends upon when the federal action Finding of No Significant Impact or Record
6 of Decision is signed. Documents signed before April 5, 2006 must meet the PM₁₀ *de*
7 *minimis* threshold. Documents signed on or after April 5, 2006 must meet the PM_{2.5} *de*
8 *minimis* threshold (Stonefield 2005).

9 **AQCR 30**

10 According to 40 CFR 81.305, AQCR 30 has been designated as unclassifiable/ attainment
11 for PM_{2.5} and as unclassifiable for PM₁₀.

12 **AQCR 28**

13 According to 40 CFR 81.305, AQCR 28 has been designated as unclassifiable/ attainment
14 for PM_{2.5} and as moderate nonattainment for PM₁₀.

15 **AQCR 147**

16 According to 40 CFR 81.329, AQCR 147 has been designated as unclassifiable/
17 attainment for PM_{2.5} and as serious nonattainment for PM₁₀.

18 **AQCR 148**

19 According to 40 CFR 81.329, AQCR 148 has been designated as unclassifiable/
20 attainment for PM_{2.5} and as serious nonattainment for PM₁₀.

21 **AQCR 190**

22 According to 40 CFR 81.338, AQCR 190 has been designated as unclassifiable/
23 attainment for PM_{2.5} and as moderate nonattainment for PM₁₀.

24 **3.3.1.3 Nitrogen Dioxide**

25 **AQCR 30**

26 According to 40 CFR 81.305, AQCR 30 has been designated as cannot be classified or
27 better than national standards for NO₂.

28 **AQCR 28**

29 According to 40 CFR 81.305, AQCR 28 has been designated as cannot be classified or
30 better than national standards for NO₂.

31 **AQCR 147**

32 According to 40 CFR 81.329, AQCR 147 has been designated as cannot be classified or
33 better than national standards for NO₂.

34 **AQCR 148**

35 According to 40 CFR 81.329, AQCR 148 has been designated as cannot be classified or
36 better than national standards for NO₂.

1 **AQCR 190**

2 According to 40 CFR 81.338, AQCR 190 has been designated as cannot be classified or
3 better than national standards for NO₂.

4 **3.3.1.4 Sulfur Dioxide**

5 **AQCR 30**

6 According to 40 CFR 81.305, AQCR 30 has been designated as better than national
7 standards for SO₂.

8 **AQCR 28**

9 According to 40 CFR 81.305, AQCR 28 has been designated cannot be classified for
10 SO₂.

11 **AQCR 147**

12 According to 40 CFR 81.329, AQCR 147 has been designated as better than national
13 standards for SO₂.

14 **AQCR 148**

15 According to 40 CFR 81.329, AQCR 148 has been designated as better than national
16 standards for SO₂.

17 **AQCR 190**

18 According to 40 CFR 81.338, AQCR 190 has been designated as better than national
19 standards for SO₂.

20 **3.3.1.5 Carbon Monoxide**

21 **AQCR 30**

22 According to 40 CFR 81.305, AQCR 30 has been designated maintenance attainment for
23 CO.

24 **AQCR 28**

25 According to 40 CFR 81.305, AQCR 28 has been designated maintenance attainment for
26 CO.

27 **AQCR 147**

28 According to 40 CFR 81.329, AQCR 147 has been designated serious nonattainment for
29 CO.

30 **AQCR 148**

31 According to 40 CFR 81.329, AQCR 148 has been designated moderate nonattainment
32 for CO.

33 **AQCR 190**

34 According to 40 CFR 81.338, AQCR 190 has been designated maintenance attainment
35 for CO.

1 **3.3.1.6 Lead**

2 **AQCR 30**

3 There is no information concerning Pb in 40 CFR 81.305 for any part of California;
4 therefore, the area has been designated as cannot be classified for lead.

5 **AQCR 28**

6 There is no information concerning Pb in 40 CFR 81.305 for any part of California;
7 therefore, the area has been designated as cannot be classified for lead.

8 **AQCR 147**

9 There is no information concerning Pb in 40 CFR 81.329 for any part of Nevada;
10 therefore, the area has been designated as cannot be classified for lead.

11 **AQCR 148**

12 There is no information concerning Pb in 40 CFR 81.329 for any part of Nevada;
13 therefore, the area has been designated as cannot be classified for lead.

14 **AQCR 190**

15 There is no information concerning Pb in 40 CFR 81.338 for any part of Oregon;
16 therefore, the area has been designated as cannot be classified for lead.

17

SECTION 4 ANALYSIS AND RESULTS

This section includes a comprehensive analysis of the resultant emissions from the proposed federal action. The purpose of this analysis is to determine whether the federal action will conform to the SIP as specified in Section 176(c) of the CAA. A positive conformity determination can be demonstrated by determining that the federal action does not increase emissions with respect to the current emissions. A discussion of the overall analytical method, emission changes by sources, and conclusions of General Conformity are presented in this chapter. Appendix A contains supporting documentation for the emission calculations resulting from the additional C-17 operations on IRs XXX/XXX after SRs 300/301 are converted.

4.1 CONFORMITY DETERMINATION METHOD

4.1.1 Analytical Method

The method for the General Conformity analysis for the federal action consisted of the following steps: (1) determine the pollutants of concern based on the attainment status of the air basin; (2) define the scope of the federal action; (3) calculate emissions based on the scope; (4) review net emission changes for *de minimis* threshold levels and regional significance; and (5) determine conformity for applicable criteria pollutants. Chapter 2 describes the scope of the federal action.

The emission factors applied in the analysis are from the United States Air Force Institute for Environmental, Safety, & Occupational Health Risk Analysis (AFIERA) document *Air Emissions Inventory Guidance for Mobile Sources at Air Force Installations, January 2002 (Revised December 2003)*, referred to as the AFIERA document in this analysis (AFIERA 2003). Additional PM emission factors are from the California Air Resources Board (CARB) PM Profile (CARB 2002) and USEPA's estimates for PM_{2.5} (USEPA 2005). Subsection 4.2 describes the analysis and results of the federal action.

4.1.2 Pollutants of Concern

The areas affected by the federal action are in marginal, serious, and nonattainment for 8-hour O₃ as described in Subsection 3.3.1.1; moderate and serious nonattainment for PM₁₀ as described in Subsection 3.3.1.2; serious and moderate nonattainment for carbon monoxide as described in Subsection 3.3.1.5; and maintenance for CO as described in Subsection 3.3.1.5. Consequently, direct and indirect emissions of VOC and NO_x (precursors to O₃), as well as CO, resulting from the federal action are subject to the Conformity Applicability Analysis. Thus, the following analysis will focus on only these pollutants.

4.1.3 Applicability

As discussed in Subsection 1.3.1, the federal action conforms for a criteria pollutant if the emissions for that pollutant do not exceed the *de minimis* thresholds specified in the final conformity rule (see Tables 1-1 and 1-2). Conversely, if the total direct and indirect emissions of a pollutant exceed its *de minimis* threshold, a formal General Conformity

Determination is required for that pollutant. As will be shown in the following analysis, none of the criteria pollutant emissions will exceed its respective *de minimis* thresholds from the additional aircraft operations after SRs 300/301 are converted to IRs.

4.2 CHANGES IN EMISSIONS FOR THE PROPOSED ACTION

The federal action will affect the total amount of emissions from additional aircraft operations. The analysis includes all sources subject to the change in emissions rates, exclusive of any stationary sources that are subject to review and that may require a permit under the New Source Review or Prevention of Significant Deterioration programs. The emissions associated with changes in MTR operations are included in the analysis.

4.2.1 Military Training Routes

As discussed in Section 2, the emissions for 122 annual operations by Travis AFB C-17s on SRs 300/301 were previously assessed in the West Coast C-17 Basing EA. The emissions from these operations are considered as current activity. Thus, this Conformity Applicability Analysis evaluates the emissions in the various AQCRs from the additional 178 annual operations that would be accomplished by Travis AFB C-17 aircrews after SRs 300/301 are converted to IRs.

4.2.1.1 Method

The total emissions for the additional C-17 operations after SRs 300/301 are converted were calculated. The emissions for each AQCR were prorated based on the percent of time the aircraft would operate within a particular AQCR compared to the total time for the route. Travel speeds were assumed to be 350 knots at an altitude of 300 feet AGL. Emission factors for C-17 aircraft from the AFIERA document were used for the calculations.

4.2.1.2 Results

The total MTR operations emission changes were calculated for the federal action. Table 4-1 summarizes the anticipated net change in emissions resulting from the additional C-17 operations after SRs 300/301 would be converted to IRs. The results show an increase in all pollutant emissions.

**Table 4-1 Net Change in Emissions Associated with the Federal Action
(tons/year)**

| | Pollutants Emitted (tons/year) | | | | | |
|---|-----------------------------------|---------|-----------------|-----------------|------------------|-------------------|
| | CO | VOC | NO _x | SO _x | PM ₁₀ | PM _{2.5} |
| Current MTR Operations Emissions | | | | | | |
| C-130 Operations | 0.0853 | 0.0178 | 0.3282 | 0.0336 | 0.0510 | 0.0505 |
| C-17 Operations | 1.1668 | 0.6806 | 97.2997 | 3.1115 | 7.4871 | 7.4122 |
| Total Current MTR Operations Emissions | 1.7533 | 0.6984 | 97.6279 | 3.1451 | 7.5381 | 7.4627 |
| Change in MTR Operations Emissions from Additional C-17 Operations | | | | | | |
| C-17 Operations | +1.4476 | +0.8444 | +120.7159 | +3.8603 | +9.2889 | +9.1960 |
| Net Change in Emissions | +1.4476 | +0.8444 | +120.7159 | +3.8603 | +9.2889 | +9.1960 |

1 **4.2.2 Summary of Results**

2 Table 4-2 summarizes the net change in emissions for each AQCR from the additional
3 aircraft operations that would occur after SRs 300/301 would be converted. Tables 4-3
4 through 4-7 compare the net change in emissions associated with the Proposed Action with
5 the *de minimis* thresholds for each AQCR and states whether or not the emissions exceed *de*
6 *minimis* or would be regionally significant.

7 **Table 4-2 Net Change in Emissions within the Affected Air Quality Control**
8 **Regions after SRs 300/301 would be Converted (tons/year)**

| AQCR | Pollutants Emitted (tons/year) | | | | | |
|-------------------------|-----------------------------------|----------------|-----------------|-----------------|------------------|-------------------|
| | CO | VOC | NO _x | SO _x | PM ₁₀ | PM _{2.5} |
| AQCR 30 | 0 | 0 | 0 | 0 | 0 | 0 |
| AQCR 28 | +0.2895 | +0.1689 | +24.1432 | +0.7721 | +1.8578 | +1.8392 |
| AQCR 147 | +0.9612 | +0.5607 | +80.1553 | +2.5633 | +6.1678 | +6.1062 |
| AQCR 148 | +0.0926 | +0.0540 | +7.7258 | +0.2471 | +0.5945 | +0.5885 |
| AQCR 190 | +0.1042 | +0.0608 | +8.6915 | +0.2779 | +0.6688 | +0.6621 |
| Net Change in Emissions | +1.4476 | +0.8444 | +120.7158 | +3.8604 | +9.2889 | +9.1960 |

9 * Bold indicates pollutants of concern for Conformity Determination.

10 **Table 4-3 Regional Significance Analysis and Comparison to Conformity**
11 ***de minimis* Thresholds in AQCR 30**

| Category | Pollutants Emitted (tons/year) | | | | | |
|--|-----------------------------------|----------------|-----------------|-----------------|------------------|-------------------|
| | 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 |
| Project Emissions | 0 | 0 | 0 | 0 | 0 | 0 |
| Project Emissions as Percent of Inventory | 0.0000% | 0.0000% | 0.0000% | 0.0000% | 0.0000% | 0.0000% |
| <i>de minimis</i> Threshold | NA | 100 | 100 | NA | NA | NA |
| Exceed <i>de minimis</i> Threshold? | NA | No | No | NA | NA | NA |
| Regionally Significant? (>10%) | NA | No | No | NA | NA | NA |

12 NA – Not Applicable. *De minimis* does not apply since AQCR is in attainment for pollutant.

13 Bold indicates pollutants of concern for Conformity Determination.

1 **Table 4-4 Regional Significance Analysis and Comparison to Conformity**
2 ***de minimis* Thresholds in AQCR 28**

| Category | Pollutants Emitted (tons/year) | | | | | |
|--|-----------------------------------|---------------|-----------------|-----------------|------------------|-------------------|
| | CO | VOC | NO _x | SO _x | PM ₁₀ | PM _{2.5} |
| Emissions Inventory | 431,321 | 74,971 | 90,885 | 2,336 | 82,490 | 31,500 |
| Project Emissions | 0.2895 | 0.1689 | 24.1432 | 0.7721 | 1.8578 | 1.8392 |
| Project Emissions as Percent of Inventory | 0.0000% | 0.0002% | 0.0266% | 0.0331% | 0.0023% | 0.0058% |
| <i>de minimis</i> Threshold | 100 | 50 | 50 | NA | 100 | NA |
| Exceed <i>de minimis</i> Threshold? | No | No | No | NA | No | NA |
| Regionally Significant? (>10%) | No | No | No | NA | No | NA |

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

5 **Table 4-5 Regional Significance Analysis and Comparison to Conformity**
6 ***de minimis* Thresholds in AQCR 147**

| Category | Pollutants Emitted (tons/year) | | | | | |
|--|-----------------------------------|---------------|-----------------|-----------------|------------------|-------------------|
| | CO | VOC | NO _x | SO _x | PM ₁₀ | PM _{2.5} |
| Emissions Inventory | 705,847 | 75,689 | 108,691 | 57,483 | 115,432 | 41,914 |
| Project Emissions | 0.9612 | 0.5607 | 80.1553 | 2.5633 | 6.1678 | 6.1062 |
| Project Emissions as Percent of Inventory | 0.0001% | 0.0007% | 0.0737% | 0.0045% | 0.0053% | 0.0146% |
| <i>de minimis</i> Threshold | 100 | 100 | 100 | NA | 100 | NA |
| Exceed <i>de minimis</i> Threshold? | No | No | No | NA | No | NA |
| Regionally Significant? (>10%) | No | No | No | NA | No | NA |

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

10 **Table 4-6 Regional Significance Analysis and Comparison to Conformity**
11 ***de minimis* Thresholds in AQCR 148**

| Category | Pollutants Emitted (tons/year) | | | | | |
|--|-----------------------------------|---------|-----------------|-----------------|------------------|-------------------|
| | CO | VOC | NO _x | SO _x | PM ₁₀ | PM _{2.5} |
| Emissions Inventory | 174,231 | 28,896 | 29,875 | 7,503 | 46,491 | 11,323 |
| Project Emissions | 0.0926 | 0.0540 | 7.7258 | 0.2471 | 0.5945 | 0.5885 |
| Project Emissions as Percent of Inventory | 0.0001% | 0.0002% | 0.0259% | 0.0033% | 0.0013% | 0.0052% |
| <i>de minimis</i> Threshold | 100 | NA | NA | NA | 100 | NA |
| Exceed <i>de minimis</i> Threshold? | No | NA | NA | NA | No | NA |
| Regionally Significant? (>10%) | No | NA | NA | NA | No | NA |

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

**Table 4-7 Regional Significance Analysis and Comparison to Conformity
de minimis Thresholds in AQCR 190**

| Category | Pollutants Emitted (tons/year) | | | | | |
|--|-----------------------------------|---------|-----------------|-----------------|------------------|-------------------|
| | CO | VOC | NO _x | SO _x | PM ₁₀ | PM _{2.5} |
| Emissions Inventory | 373,478 | 55,100 | 25,982 | 4,657 | 70,142 | 31,378 |
| Project Emissions | 0.1042 | 0.0608 | 8.6915 | 0.2779 | 0.6688 | 0.6621 |
| Project Emissions as Percent of Inventory | 0.0000% | 0.0001% | 0.0335% | 0.0060% | 0.0010% | 0.0021% |
| <i>de minimis</i> Threshold | 100 | NA | NA | NA | 100 | NA |
| Exceed <i>de minimis</i> Threshold? | No | NA | NA | NA | No | NA |
| Regionally Significant? (>10%) | No | NA | NA | NA | No | NA |

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

4.3 CONFORMITY DETERMINATION RESULTS

As explained in Subsection 4.1.3, a conformity determination is required if the total direct and indirect emissions of a pollutant from the federal action exceed the *de minimis* threshold established in the final rule. The emissions must be compared to the air quality emissions inventory of the air basin to determine regional significance of the federal action when the total nonattainment criteria pollutant emissions do not exceed the *de minimis* thresholds. The federal action is considered regionally significant in regards to that particular pollutant if the amount of emissions is greater than 10 percent of the emissions inventory. Regionally significant actions must be further reviewed to determine conformity.

4.3.1 Proposed Action

De Minimis Levels

Table 4-3 summarizes the Proposed Action emissions in AQCR 30 and compares them to the *de minimis* thresholds. As a result of the Proposed Action, there would be no increase in emissions for NO_x and VOC emissions. A federal action conforms to the applicable SIP when criteria pollutants do not exceed the respective *de minimis* thresholds of 100 tons per year (tpy) for NO_x and VOC within the AQCR. Neither of the criteria pollutants exceeds its *de minimis* threshold.

Table 4-4 summarizes the Proposed Action emissions in AQCR 28 and compares them to the *de minimis* thresholds. As a result of the Proposed Action, emissions for NO_x would increase by 24.1432 tpy; VOC emissions would increase by 0.1689 tpy; CO emissions would increase by 0.2895 tpy; and PM₁₀ emissions would increase by 1.8578 tpy. A federal action conforms to the applicable SIP when criteria pollutants do not exceed the respective *de minimis* thresholds of 100 tpy for CO and PM₁₀ and of 50 tpy for NO_x and VOC within the AQCR. None of the criteria pollutants exceed its *de minimis* threshold of 100 tpy.

Table 4-5 summarizes the Proposed Action emissions in AQCR 147 and compares them to the *de minimis* thresholds. As a result of the Proposed Action, emissions for NO_x would increase by 80.1553 tpy; VOC emissions would increase by 0.5607 tpy; CO emissions would

1 increase by 0.9612 tpy; and PM₁₀ emissions would increase by 6.1678 tpy. A federal action
2 conforms to the applicable SIP when criteria pollutants do not exceed the respective
3 *de minimis* thresholds of 100 tpy for CO, NO_x, VOC, and PM₁₀ within the AQCR. None of
4 the criteria pollutants exceed its *de minimis* threshold.

5 Table 4-6 summarizes the Proposed Action emissions in AQCR 148 and compares them
6 to the *de minimis* thresholds. As a result of the Proposed Action, emissions for CO would
7 increase by 0.0926 tpy; and PM₁₀ emissions would increase by 0.5945 tpy. A federal action
8 conforms to the applicable SIP when criteria pollutants do not exceed the respective
9 *de minimis* thresholds of 100 tpy for CO and PM₁₀ within the AQCR. None of the criteria
10 pollutants exceed its *de minimis* threshold.

11 Table 4-7 summarizes the Proposed Action emissions in AQCR 190 and compares them
12 to the *de minimis* thresholds. As a result of the Proposed Action, CO emissions would
13 increase by 0.1042 tpy; and PM₁₀ emissions would increase by 0.6688 tpy. A federal action
14 conforms to the applicable SIP when criteria pollutants do not exceed the respective
15 *de minimis* thresholds of 100 tpy for CO and PM₁₀ within the AQCR. None of the criteria
16 pollutants exceed its *de minimis* threshold.

17 **Regional Significance**

18 The Proposed Action is not considered to be regionally significant because the NO_x
19 VOC, CO, and PM₁₀ emissions are less than 10 percent of the emissions inventory (see
20 Tables 4-3 through 4-7).

21 **4.4 CONCLUSION**

22 The Proposed Action will occur within an air basin designated as:

- 23 • AQCR 28, an area designated as serious nonattainment for 8-hour O₃, moderate
24 nonattainment for PM₁₀ and maintenance for CO.
- 25 • AQCR 30, an area designated as marginal nonattainment for 8-hour O₃ and
26 maintenance for CO.
- 27 • AQCR 147, an area designated serious nonattainment for carbon monoxide, serious
28 nonattainment for PM₁₀ and nonattainment for 8-hour O₃.
- 29 • AQCR 148, an area designated as moderate nonattainment for CO and serious
30 nonattainment for PM₁₀ and;
- 31 • AQCR 190, an area designated as moderate nonattainment for PM₁₀ and
32 maintenance for CO.

33 The General Conformity Rule also extends to the precursors of O₃. Thus, this conformity
34 determination focuses on the criteria pollutants of VOC and NO_x, as well as CO and PM₁₀.

35 The analysis of direct and indirect emission changes from mobile sources and reasonably
36 foreseeable and controllable actions for the Proposed Action supports a positive conformity
37 determination.

38 The total of direct and indirect CO, NO_x, VOC, and PM₁₀ emissions are below the
39 *de minimis* threshold established for these pollutants within each affected AQCR (see

1 Tables 4-3 through 4-7). The emissions for CO, NO_x, VOC, and PM₁₀ would be less than
2 10 percent of the emissions inventory for each pollutant within the affected AQCRs, and the
3 action would not be considered regionally significant (see Tables 4-3 through 4-7). It has
4 been determined that the Proposed Action positively conforms to the SIPs for the affected
5 AQCRs. The Air Force is supporting an activity that has been demonstrated by USEPA
6 standards to not cause or contribute to new violations of any NAAQSs in the affected area,
7 nor increase the frequency or severity of an existing violation. Implementation of the federal
8 action will not delay timely attainment of pollutant standards in any of the AQCRs, and the
9 action is in compliance or is consistent with all relevant requirements and milestones
10 contained in the applicable SIPs. This conclusion of positive General Conformity
11 determination for the Proposed Action fulfills the Air Force's obligation and responsibility
12 under 40 CFR Part 93, Subpart B.

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2

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**APPENDIX A
EMISSIONS CALCULATIONS**

Emissions Inventory

CALIFORNIA AREAS

| | CO | VOC | Tons per Year | | PM10 | PM2.5 |
|----------------------------------|---------|---------|---------------|--------|--------|--------|
| | | | NOX | SOX | | |
| San Francisco Bay Area Air Basin | 807,636 | 141,109 | 199,619 | 19,710 | 77,928 | 33,033 |
| Sacramento Valley Air Basin | 431,321 | 74,971 | 90,885 | 2,336 | 82,490 | 31,500 |
| Great Basin Valley Air Basin | 49,604 | 6,607 | 2,811 | 548 | 71,358 | 17,739 |
| Northeast Plateau Air Basin | 126,144 | 14,053 | 8,541 | 548 | 26,536 | 11,060 |

NEVADA AREAS

| | CO | VOC | Tons per Year | | PM10 | PM2.5 |
|-------------------------|----------------|---------------|---------------|--------------|---------------|---------------|
| | | | NOX | SOX | | |
| AQCR 148 | | | | | | |
| Carson City | 11,754 | 3,196 | 1,537 | 324 | 2,825 | 639 |
| Douglas County | 20,295 | 2,727 | 2,399 | 188 | 9,694 | 2,084 |
| Lyon County | 22,337 | 2,709 | 8,414 | 3,037 | 9,018 | 2,087 |
| Storey County | 2,407 | 327 | 3,409 | 2,064 | 2,303 | 677 |
| Washoe County | 117,438 | 19,937 | 14,116 | 1,890 | 22,651 | 5,836 |
| ACQCR 148 Total: | 174,231 | 28,896 | 29,875 | 7,503 | 46,491 | 11,323 |

AQCR 147

| | | | | | | |
|-------------------------|----------------|---------------|----------------|---------------|----------------|---------------|
| Churchill County | 24,547 | 2,666 | 2,491 | 232 | 7,389 | 2,109 |
| Clark County | 387,850 | 50,376 | 76,295 | 48,088 | 53,292 | 15,114 |
| Elko County | 86,764 | 6,601 | 8,234 | 839 | 13,722 | 6,039 |
| Esmeralda County | 3,816 | 259 | 248 | 90 | 1,877 | 555 |
| Eureka County | 16,702 | 984 | 1,611 | 238 | 3,240 | 1,504 |
| Humboldt County | 39,019 | 3,066 | 10,713 | 6,868 | 7,517 | 3,420 |
| Lander County | 21,513 | 1,409 | 1,546 | 178 | 3,915 | 2,009 |
| Lincoln County | 23,477 | 1,352 | 1,622 | 193 | 4,488 | 2,202 |
| Mineral County | 9,606 | 1,809 | 374 | 66 | 2,810 | 1,090 |
| Nye County | 38,311 | 2,952 | 1,880 | 293 | 7,175 | 3,356 |
| Pershing County | 24,936 | 2,130 | 2,635 | 199 | 4,246 | 1,721 |
| White Pine County | 29,306 | 2,085 | 1,042 | 199 | 5,761 | 2,795 |
| ACQCR 147 Total: | 705,847 | 75,689 | 108,691 | 57,483 | 115,432 | 41,914 |

OREGON AREAS

| | CO | VOC | Tons per Year | | PM10 | PM2.5 |
|---------------------------|----------------|---------------|---------------|--------------|---------------|---------------|
| | | | NOX | SOX | | |
| AQCR 190 | | | | | | |
| Crook | 35,348 | 2,886 | 1,534 | 337 | 6,564 | 3,270 |
| Deschutes | 75,380 | 26,015 | 7,005 | 1,229 | 19,403 | 6,527 |
| Hood River | 18,806 | 2,505 | 2,514 | 257 | 4,623 | 1,405 |
| Jefferson | 25,878 | 2,911 | 2,233 | 286 | 5,926 | 2,505 |
| Klamath | 82,306 | 11,168 | 5,969 | 1,053 | 14,679 | 7,194 |
| Lake | 81,282 | 5,767 | 2,268 | 576 | 9,946 | 6,888 |
| Sherman | 7,259 | 813 | 1,434 | 109 | 3,064 | 837 |
| Wasco | 47,219 | 3,035 | 3,025 | 810 | 5,937 | 2,752 |
| Total for AQCR 190 | 373,478 | 55,100 | 25,982 | 4,657 | 70,142 | 31,378 |

C-130 MTR Calculations for Current Operations

Travis
 1.125" = 60 nm SR
 0.6875" = 60 nm VR

| MTR # | Map Distance (Inches) | Distance (nautical miles) | Speed (mi/hour) | Time in Mode (hours) |
|--|-----------------------|---------------------------|-----------------|----------------------|
| 0.75" = 60 nm | IR | | | |
| SR-300/301 | 1.5625 | 83.33 | 402.78 | 0.21 |
| Total Aircraft Time in Mode @ AQCR 28 Sacramento Valley Air Basin | | | | |
| SR-300/301 | 0.375 | 20 | 402.78 | 0.05 |
| Total Aircraft Time in Mode @ AQCR 28 Great Basin Valley Air Basin | | | | |
| SR-300/301 | 1 | 53.33 | 402.78 | 0.13 |
| Total Aircraft Time in Mode @ AQCR 27 Northeast Plateau Air Basin | | | | |
| SR-300/301 | 1.1875 | 63.33 | 402.78 | 0.16 |
| Total Aircraft Time in Mode @ AQCR 147 Humboldt County, NV | | | | |
| SR-300/301 | 1.375 | 73.33 | 402.78 | 0.18 |
| Total Aircraft Time in Mode @ AQCR 147 Lander County, NV | | | | |
| SR-300/301 | 0.3125 | 16.67 | 402.78 | 0.04 |
| Total Aircraft Time in Mode @ AQCR 148 Lyon County, NV | | | | |
| SR-300/301 | 0.9375 | 50 | 402.78 | 0.12 |
| Total Aircraft Time in Mode @ AQCR 147 Mineral County, NV | | | | |
| SR-300/301 | 0.625 | 33.33 | 402.78 | 0.08 |
| Total Aircraft Time in Mode @ AQCR 147 Nye County, NV | | | | |
| SR-300/301 | 1.0625 | 56.67 | 402.78 | 0.14 |
| Total Aircraft Time in Mode @ AQCR 147 Pershing County, NV | | | | |
| SR-300/301 | 0.1875 | 10 | 402.78 | 0.02 |
| Total Aircraft Time in Mode @ AQCR 148 Washoe County, NV | | | | |
| SR-300/301 | 0.5625 | 30 | 402.78 | 0.07 |
| Total Aircraft Time in Mode @ AQCR 190, OR | | | | |

| MTR # | Power setting | Speed (knots) 350 | Fuel Consumption Rate (lb/hr) | Emission Rates, lb/1000 lb Fuel Burned | | | | | | # of Ops per MTR | Total A/C Time in Mode (hr) | Total Emissions (tons/year) | | | | | |
|--|---------------|----------------------|-------------------------------|--|------------|-------|------|------|-------|------------------|-----------------------------|-----------------------------|------|------|------|------|-------|
| | | | | CO | VOC | NOX | SOX | PM10 | PM2.5 | | | CO | VOC | NOX | SOX | PM10 | PM2.5 |
| | | | | SR-300/301 | Normal RTD | 1,724 | 2.44 | 0.51 | 9.39 | | | 0.96 | 1.46 | 1.45 | 5 | 0.21 | 0.01 |
| Total Emissions for AQCR 28 Sacramento Valley Air Basin | | | | | | | | | | | 0.01 | 0.00 | 0.03 | 0.00 | 0.01 | 0.01 | |
| SR-300/301 | Normal RTD | 1,724 | 2.44 | 0.51 | 9.39 | 0.96 | 1.46 | 1.45 | 5 | 0.05 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | |
| Total Emissions for AQCR 23 Great Basin Valley Air Basin | | | | | | | | | | | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | |
| SR-300/301 | Normal RTD | 1,724 | 2.44 | 0.51 | 9.39 | 0.96 | 1.46 | 1.45 | 5 | 0.13 | 0.01 | 0.00 | 0.02 | 0.00 | 0.00 | 0.00 | |
| Total Emissions for AQCR 27 Northeast Plateau Air Basin | | | | | | | | | | | 0.01 | 0.00 | 0.02 | 0.00 | 0.00 | 0.00 | |
| SR-300/301 | Normal RTD | 1,724 | 2.44 | 0.51 | 9.39 | 0.96 | 1.46 | 1.45 | 5 | 0.16 | 0.01 | 0.00 | 0.03 | 0.00 | 0.00 | 0.00 | |
| Total Emissions for AQCR 147 Humboldt County, NV | | | | | | | | | | | 0.01 | 0.00 | 0.03 | 0.00 | 0.00 | 0.00 | |
| SR-300/301 | Normal RTD | 1,724 | 2.44 | 0.51 | 9.39 | 0.96 | 1.46 | 1.45 | 5 | 0.18 | 0.01 | 0.00 | 0.03 | 0.00 | 0.00 | 0.00 | |
| Total Emissions for AQCR 147 Lander County, NV | | | | | | | | | | | 0.01 | 0.00 | 0.03 | 0.00 | 0.00 | 0.00 | |
| SR-300/301 | Normal RTD | 1,724 | 2.44 | 0.51 | 9.39 | 0.96 | 1.46 | 1.45 | 5 | 0.04 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | |
| Total Emissions for AQCR 148 Lyon County, NV | | | | | | | | | | | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | |
| SR-300/301 | Normal RTD | 1,724 | 2.44 | 0.51 | 9.39 | 0.96 | 1.46 | 1.45 | 5 | 0.12 | 0.01 | 0.00 | 0.02 | 0.00 | 0.00 | 0.00 | |
| Total Emissions for AQCR 147 Mineral County, NV | | | | | | | | | | | 0.01 | 0.00 | 0.02 | 0.00 | 0.00 | 0.00 | |
| SR-300/301 | Normal RTD | 1,724 | 2.44 | 0.51 | 9.39 | 0.96 | 1.46 | 1.45 | 5 | 0.08 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | |
| Total Emissions for AQCR 147 Nye County, NV | | | | | | | | | | | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | |
| SR-300/301 | Normal RTD | 1,724 | 2.44 | 0.51 | 9.39 | 0.96 | 1.46 | 1.45 | 5 | 0.14 | 0.01 | 0.00 | 0.02 | 0.00 | 0.00 | 0.00 | |
| Total Emissions for AQCR 147 Pershing County, NV | | | | | | | | | | | 0.01 | 0.00 | 0.02 | 0.00 | 0.00 | 0.00 | |
| SR-300/301 | Normal RTD | 1,724 | 2.44 | 0.51 | 9.39 | 0.96 | 1.46 | 1.45 | 5 | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| Total Emissions for AQCR 148 Washoe County, NV | | | | | | | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| SR-300/301 | Normal RTD | 1,724 | 2.44 | 0.51 | 9.39 | 0.96 | 1.46 | 1.45 | 5 | 0.07 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | |
| Total Emissions for AQCR 190, OR | | | | | | | | | | | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | |

C-17 MTR Calculations for Proposed Action

| Travis | | | | | |
|--|-----------------------|---------------------------|-----------------|----------------------|--|
| 1.125" = 60 nm | SR | | | | |
| 0.6875" = 60 nm | VR | | | | |
| 0.75" = 60 nm | | IR | | | |
| MTR # | Map Distance (inches) | Distance (nautical miles) | Speed (mi/hour) | Time in Mode (hours) | |
| SR-300/301 | 1.5625 | 83.33 | 402.78 | 0.21 | |
| Total Aircraft Time in Mode @ AQCR 28 Sacramento Valley Air Basin | | | | | |
| SR-300/301 | 0.375 | 20 | 402.78 | 0.05 | |
| Total Aircraft Time in Mode @ AQCR 23 Great Basin Valley Air Basin | | | | | |
| SR-300/301 | 1 | 53.33 | 402.78 | 0.13 | |
| Total Aircraft Time in Mode @ AQCR 27 Northeast Plateau Air Basin | | | | | |
| SR-300/301 | 1.1875 | 63.33 | 402.78 | 0.16 | |
| Total Aircraft Time in Mode @ AQCR 147 Humboldt County, NV | | | | | |
| SR-300/301 | 1.375 | 73.33 | 402.78 | 0.18 | |
| Total Aircraft Time in Mode @ AQCR 147 Lander County, NV | | | | | |
| SR-300/301 | 0.3125 | 16.67 | 402.78 | 0.04 | |
| Total Aircraft Time in Mode @ AQCR 148 Lyon County, NV | | | | | |
| SR-300/301 | 0.9375 | 50 | 402.78 | 0.12 | |
| Total Aircraft Time in Mode @ AQCR 147 Mineral County, NV | | | | | |
| SR-300/301 | 0.625 | 33.33 | 402.78 | 0.08 | |
| Total Aircraft Time in Mode @ AQCR 147 Nye County, NV | | | | | |
| SR-300/301 | 1.0625 | 56.67 | 402.78 | 0.14 | |
| Total Aircraft Time in Mode @ AQCR 147 Pershing County, NV | | | | | |
| SR-300/301 | 0.1875 | 10 | 402.78 | 0.02 | |
| Total Aircraft Time in Mode @ AQCR 148 Washoe County, NV | | | | | |
| SR-300/301 | 0.5625 | 30 | 402.78 | 0.07 | |
| Total Aircraft Time in Mode @ AQCR 190, OR | | | | | |

| MTR # | Power setting | Fuel Consumption Rate (lb/hr) | Emission Rates, lb/1000 lb Fuel Burned | | | | | | # of Ops per MTR | Total A/C Time in Mode (hr) | Total Emissions (tons/year) | | | | | |
|--|---------------|-------------------------------|--|------|-------|------|------|-------|------------------|-----------------------------|-----------------------------|-------|-------|------|------|-------|
| | | | CO | VOC | NOX | SOX | PM10 | PM2.5 | | | CO | VOC | NOX | SOX | PM10 | PM2.5 |
| SR-300/301 | Intermediate | 10,919 | 0.36 | 0.21 | 30.02 | 0.96 | 2.31 | 2.29 | 178 | 0.21 | 0.29 | 0.17 | 24.14 | 0.77 | 1.86 | 1.84 |
| Total Emissions for AQCR 28 Sacramento Valley Air Basin | | | | | | | | | | 0.29 | 0.17 | 24.14 | 0.77 | 1.86 | 1.84 | |
| SR-300/301 | Intermediate | 10,919 | 0.36 | 0.21 | 30.02 | 0.96 | 2.31 | 2.29 | 178 | 0.05 | 0.07 | 0.04 | 5.79 | 0.19 | 0.45 | 0.44 |
| Total Emissions for AQCR 23 Great Basin Valley Air Basin | | | | | | | | | | 0.07 | 0.04 | 5.79 | 0.19 | 0.45 | 0.44 | |
| SR-300/301 | Intermediate | 10,919 | 0.36 | 0.21 | 30.02 | 0.96 | 2.31 | 2.29 | 178 | 0.13 | 0.19 | 0.11 | 15.45 | 0.49 | 1.19 | 1.18 |
| Total Emissions for AQCR 27 Northeast Plateau Air Basin | | | | | | | | | | 0.19 | 0.11 | 15.45 | 0.49 | 1.19 | 1.18 | |
| SR-300/301 | Intermediate | 10,919 | 0.36 | 0.21 | 30.02 | 0.96 | 2.31 | 2.29 | 178 | 0.16 | 0.22 | 0.13 | 18.35 | 0.59 | 1.41 | 1.40 |
| Total Emissions for AQCR 147 Humboldt County, NV | | | | | | | | | | 0.22 | 0.13 | 18.35 | 0.59 | 1.41 | 1.40 | |
| SR-300/301 | Intermediate | 10,919 | 0.36 | 0.21 | 30.02 | 0.96 | 2.31 | 2.29 | 178 | 0.18 | 0.25 | 0.15 | 21.25 | 0.68 | 1.63 | 1.62 |
| Total Emissions for AQCR 147 Lander County, NV | | | | | | | | | | 0.25 | 0.15 | 21.25 | 0.68 | 1.63 | 1.62 | |
| SR-300/301 | Intermediate | 10,919 | 0.36 | 0.21 | 30.02 | 0.96 | 2.31 | 2.29 | 178 | 0.04 | 0.06 | 0.03 | 4.83 | 0.15 | 0.37 | 0.37 |
| Total Emissions for AQCR 148 Lyon County, NV | | | | | | | | | | 0.06 | 0.03 | 4.83 | 0.15 | 0.37 | 0.37 | |
| SR-300/301 | Intermediate | 10,919 | 0.36 | 0.21 | 30.02 | 0.96 | 2.31 | 2.29 | 178 | 0.12 | 0.17 | 0.10 | 14.49 | 0.46 | 1.11 | 1.10 |
| Total Emissions for AQCR 147 Mineral County, NV | | | | | | | | | | 0.17 | 0.10 | 14.49 | 0.46 | 1.11 | 1.10 | |
| SR-300/301 | Intermediate | 10,919 | 0.36 | 0.21 | 30.02 | 0.96 | 2.31 | 2.29 | 178 | 0.08 | 0.12 | 0.07 | 9.66 | 0.31 | 0.74 | 0.74 |
| Total Emissions for AQCR 147 Nye County, NV | | | | | | | | | | 0.12 | 0.07 | 9.66 | 0.31 | 0.74 | 0.74 | |
| SR-300/301 | Intermediate | 10,919 | 0.36 | 0.21 | 30.02 | 0.96 | 2.31 | 2.29 | 178 | 0.14 | 0.20 | 0.11 | 16.42 | 0.53 | 1.26 | 1.25 |
| Total Emissions for AQCR 147 Pershing County, NV | | | | | | | | | | 0.20 | 0.11 | 16.42 | 0.53 | 1.26 | 1.25 | |
| SR-300/301 | Intermediate | 10,919 | 0.36 | 0.21 | 30.02 | 0.96 | 2.31 | 2.29 | 178 | 0.02 | 0.03 | 0.02 | 2.90 | 0.09 | 0.22 | 0.22 |
| Total Emissions for AQCR 148 Washoe County, NV | | | | | | | | | | 0.03 | 0.02 | 2.90 | 0.09 | 0.22 | 0.22 | |
| SR-300/301 | Intermediate | 10,919 | 0.36 | 0.21 | 30.02 | 0.96 | 2.31 | 2.29 | 178 | 0.07 | 0.10 | 0.06 | 8.69 | 0.28 | 0.67 | 0.66 |
| Total Emissions for AQCR 190, OR | | | | | | | | | | 0.10 | 0.06 | 8.69 | 0.28 | 0.67 | 0.66 | |

C-17 AQCR Percentages

San Francisco Bay Area Air Basin (AQCR 30)

| | CO | VOC | NOX | SOX | PM10 | PM2.5 | |
|---------------------|-----------|------------|------------|------------|-------------|--------------|-----|
| MTR Emissions | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | tpy |
| Emission Inventory: | 807,636 | 141,109 | 199,619 | 19,710 | 77,928 | 33,033 | tpy |
| % Change: | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | |

Sacramento Valley Air Basin (AQCR 28)

| | CO | VOC | NOX | SOX | PM10 | PM2.5 | |
|---------------------|-----------|------------|------------|------------|-------------|--------------|-----|
| MTR Emissions | 0.2895 | 0.1689 | 24.1432 | 0.7721 | 1.8578 | 1.8392 | tpy |
| Emission Inventory: | 431,321 | 74,971 | 90,885 | 2,336 | 82,490 | 31,500 | tpy |
| % Change: | 0.0001 | 0.0002 | 0.0266 | 0.0331 | 0.0023 | 0.0058 | |

Great Basin Valley Air Basin (AQCR 23)

| | CO | VOC | NOX | SOX | PM10 | PM2.5 | |
|---------------------|-----------|------------|------------|------------|-------------|--------------|-----|
| MTR Emissions | 0.0695 | 0.0405 | 5.7944 | 0.1853 | 0.4459 | 0.4414 | tpy |
| Emission Inventory: | 49,604 | 6,607 | 2,811 | 548 | 71,358 | 17,739 | tpy |
| % Change: | 0.0001 | 0.0006 | 0.2062 | 0.0338 | 0.0006 | 0.0025 | |

Northeast Plateau Air Basin (AQCR 27)

| | CO | VOC | NOX | SOX | PM10 | PM2.5 | |
|---------------------|-----------|------------|------------|------------|-------------|--------------|-----|
| MTR Emissions | 0.1853 | 0.1081 | 15.4516 | 0.4941 | 1.1890 | 1.1771 | tpy |
| Emission Inventory: | 126,144 | 14,053 | 8,541 | 548 | 26,536 | 11,060 | tpy |
| % Change: | 0.0001 | 0.0008 | 0.1809 | 0.0903 | 0.0045 | 0.0106 | |

AQCR 147

| | CO | VOC | NOX | SOX | PM10 | PM2.5 | |
|---------------------|-----------|------------|------------|------------|-------------|--------------|-----|
| MTR Emissions | 0.9612 | 0.5607 | 80.1553 | 2.5633 | 6.1678 | 6.1062 | tpy |
| Emission Inventory: | 705,847 | 75,689 | 108,691 | 57,483 | 115,432 | 41,914 | tpy |
| % Change: | 0.0001 | 0.0007 | 0.0737 | 0.0045 | 0.0053 | 0.0146 | |

AQCR 148

| | CO | VOC | NOX | SOX | PM10 | PM2.5 | |
|---------------------|-----------|------------|------------|------------|-------------|--------------|-----|
| MTR Emissions | 0.0926 | 0.0540 | 7.7258 | 0.2471 | 0.5945 | 0.5885 | tpy |
| Emission Inventory: | 174,231 | 28,896 | 29,875 | 7,503 | 46,491 | 11,323 | tpy |
| % Change: | 0.0001 | 0.0002 | 0.0259 | 0.0033 | 0.0013 | 0.0052 | |

AQCR 190

| | CO | VOC | NOX | SOX | PM10 | PM2.5 | |
|---------------------|-----------|------------|------------|------------|-------------|--------------|-----|
| MTR Emissions | 0.1042 | 0.0608 | 8.6915 | 0.2779 | 0.6688 | 0.6621 | tpy |
| Emission Inventory: | 373,478 | 55,100 | 25,982 | 4,657 | 70,142 | 31,378 | tpy |
| % Change: | 0.0000 | 0.0001 | 0.0335 | 0.0060 | 0.0010 | 0.0021 | |

APPENDIX D
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 draft final EA was published in newspapers. Additionally, a copy of the draft final EA was placed in seven libraries for public review and was available at <http://public.travis.amc.af.mil/>. The names of the newspapers and the libraries are listed below and copies of the letters transmitting the draft final EA to the libraries and the letter announcing the public meeting are in this appendix. The responses from the libraries that confirmed receipt are also included.

Daily Republic
Vacaville Reporter (Vacaville, California)
Tahoe Daily Tribune
Redding Record Searchlight (Redding, California)
Lodi News-Sentinel (Lodi, California)
Tailwind (Travis AFB newspaper)

| | |
|---|---|
| Vacaville Public Library 1020 Ulatis Drive Vacaville, CA 95688 | Fairfield-Suisun Community Library 1150 Kentucky Street Fairfield, CA 94533 |
| Mitchell Memorial Library 510 Travis Boulevard Travis AFB, CA 94535 | South Lake Tahoe Public Library 1000 Rufus Allen Boulevard South Lake Tahoe, CA 96150 |
| Shasta Lake Gateway Library 4150 Ashby Ct. Central Valley, CA 96019 | Lodi City Public Library 210 West Locust Street Lodi, CA 95240 |
| Alpine County Library 270 Laramie Street Markleeville, CA 96120 | |

A public meeting was planned and announced for May 10, 2007 at the Northern Solano County Association of Realtors office, 3690 Hilborn Road, Fairchild, California. Nobody from the community attended the meeting. No comments were received from the public regarding the draft final EA.

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PARSONS

8000 Centre Park Drive, Suite 200 • Austin, Texas 78754 • (512) 719-6000 • Fax: (512) 719-6099 • www.parsons.com

April 25, 2007

Reference Librarian - Adult Reference Desk
Vacaville Public Library
1020 Ulatis Drive
Vacaville, CA 95688

Subject: Draft Final Environmental Assessment
Convert Slow Routes 300 and 301 to Instrument Routes
Travis Air Force Base, California

Dear Reference Librarian:

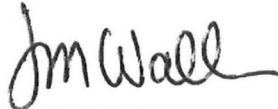
On behalf of the U.S. Air Force, 60th Air Mobility Wing at Travis Air Force Base, Parsons is pleased to provide you with this copy of the Draft Environmental Assessment for the proposed conversion of Slow Routes 300 and 301 to Instrument Routes. This document should be made available to the public upon 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 (707) 424-7517.

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

April 25, 2007

Reference Librarian - Adult Reference Desk
Fairfield-Suisun Community Library
1150 Kentucky Street
Fairfield, CA 94533

Subject: Draft Final Environmental Assessment
Convert Slow Routes 300 and 301 to Instrument Routes
Travis Air Force Base, California

Dear Reference Librarian:

On behalf of the U.S. Air Force, 60th Air Mobility Wing at Travis Air Force Base, Parsons is pleased to provide you with this copy of the Draft Environmental Assessment for the proposed conversion of Slow Routes 300 and 301 to Instrument Routes. 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 (707) 424-7517.

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 Fairfield-Suisun Community Library

PARSONS

8000 Centre Park Drive, Suite 200 • Austin, Texas 78754 • (512) 719-6000 • Fax: (512) 719-6099 • www.parsons.com

April 25, 2007

Reference Librarian - Adult Reference Desk
Mitchell Memorial Library
510 Travis Boulevard
Travis AFB, CA 94535

Subject: Draft Final Environmental Assessment
Convert Slow Routes 300 and 301 to Instrument Routes
Travis Air Force Base, California

Dear Reference Librarian:

On behalf of the U.S. Air Force, 60th Air Mobility Wing at Travis Air Force Base, Parsons is pleased to provide you with this copy of the Draft Environmental Assessment for the proposed conversion of Slow Routes 300 and 301 to Instrument Routes. 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 (707) 424-7517.

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 Mitchell Memorial Library

April 25, 2007

Reference Librarian - Adult Reference Desk
South Lake Tahoe Public Library
1000 Rufus Allen Boulevard
South Lake Tahoe, CA 96150

Subject: Draft Final Environmental Assessment
Convert Slow Routes 300 and 301 to Instrument Routes
Travis Air Force Base, California

Dear Reference Librarian:

On behalf of the U.S. Air Force, 60th Air Mobility Wing at Travis Air Force Base, Parsons is pleased to provide you with this copy of the Draft Environmental Assessment for the proposed conversion of Slow Routes 300 and 301 to Instrument Routes. 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 (707) 424-7517.

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 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

April 25, 2007

Reference Librarian - Adult Reference Desk
Shasta Lake Gateway Library
4150 Ashby Ct.
Central Valley, CA 96019

Subject: Draft Final Environmental Assessment
Convert Slow Routes 300 and 301 to Instrument Routes
Travis Air Force Base, California

Dear Reference Librarian:

On behalf of the U.S. Air Force, 60th Air Mobility Wing at Travis Air Force Base, Parsons is pleased to provide you with this copy of the Draft Environmental Assessment for the proposed conversion of Slow Routes 300 and 301 to Instrument Routes. 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 (707) 424-7517.

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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

April 25, 2007

Reference Librarian - Adult Reference Desk
Lodi City Public Library
210 West Locust Street
Lodi, CA 95240

Subject: Draft Final Environmental Assessment
Convert Slow Routes 300 and 301 to Instrument Routes
Travis Air Force Base, California

Dear Reference Librarian:

On behalf of the U.S. Air Force, 60th Air Mobility Wing at Travis Air Force Base, Parsons is pleased to provide you with this copy of the Draft Environmental Assessment for the proposed conversion of Slow Routes 300 and 301 to Instrument Routes. 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 (707) 424-7517.

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Signature

Date

Printed Name

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PARSONS

8000 Centre Park Drive, Suite 200 • Austin, Texas 78754 • (512) 719-6000 • Fax: (512) 719-6099 • www.parsons.com

April 25, 2007

Reference Librarian - Adult Reference Desk
Alpine County Library
270 Laramie Street
Markleeville, CA 96120

Subject: Draft Final Environmental Assessment
Convert Slow Routes 300 and 301 to Instrument Routes
Travis Air Force Base, California

Dear Reference Librarian:

On behalf of the U.S. Air Force, 60th Air Mobility Wing at Travis Air Force Base, Parsons is pleased to provide you with this copy of the Draft Environmental Assessment for the proposed conversion of Slow Routes 300 and 301 to Instrument Routes. 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 (707) 424-7517.

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Sincerely,

PARSONS



John Wallin

Attachment: Draft Final EA

CONFIRMATION OF RECEIPT:

Signature

Date

Printed Name

For Alpine County Library

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 60TH AIR MOBILITY WING (AMC)



24 APR 2007

Colonel Thomas J. Sharpy
Vice Commander, 60th Air Mobility Wing
400 Brennan Circle
Travis AFB CA 94535-5049

Dear Sir/Madam:

The Air Force will conduct a Public Meeting on the proposed conversion of Slow Routes (SR) 300 and 301 to Instrument Routes (IR) and the transfer of the scheduling and coordinating responsibilities for the IRs from an Air National Guard unit at Moffett Federal Airfield, California to Travis Air Force Base (AFB), California. The converted routes would be used for training Travis AFB C-17 aircrews in low level navigation. Travis AFB C-17 aircrews would fly the converted IRs as many as 300 times per year (25 times per month). Additionally, C-130s would continue to fly the route about five times a year (1.4 times per month). Approximately 25 percent of the operations would occur during the evening (7:00 p.m. to 10:00 p.m.), while 25 percent would occur during the nighttime (10:00 p.m. to 7:00 a.m.).

As part of the Air Force Environmental Impact Analysis Process (EIAP), the Air Force has prepared an Environmental Assessment (EA) for this action. The EA evaluates the potential impacts of the Proposed Action and No Action Alternative on the environment. The Draft EA is available at the Fairfield-Suisun, Vacaville, South Lake Tahoe, Shasta Lake Gateway, Lodi City and Alpine County public libraries, the Mitchell Memorial Library on Travis AFB, and at <http://public.travis.amc.af.mil/enviro>.

The public is invited to attend a public meeting to obtain information, and provide input, on the potential environmental impacts of this action:

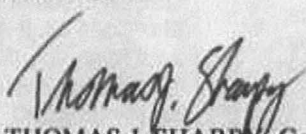
Thursday, May 10, 2007 at 6:00 p.m.
Northern Solano County Association of Realtors Office
3690 Hilborn Road, Fairfield, California

If attendance is not possible, your written comments may be mailed to:

Department of the Air Force
Attn: Mr. Rudy Pontemayor
60 CES/Environmental Flight
411 Airman Drive
Travis AFB, CA 94535

All written comment letters must be postmarked by May 30, 2007. Comments may also be faxed to the attention of Mr. Pontemayor at (707) 424-5105. Faxed comments must be received by close of business on May 30, 2007. Emailed comments and phone communications will not be accepted. Should you have any questions, please contact Mr. Pontemayor at (707) 424-7517. Thank you for your interest in this project.

Sincerely,

A handwritten signature in cursive script, appearing to read "Thomas J. Sharp".

THOMAS J. SHARP, Colonel, USAF
Vice Commander

| | | |
|---|--|--|
| Greg Michael Manager, Sacramento FSDO Federal Aviation Administration 6650 Belleau Wood Lane Sacramento, CA 95822 | Louis Benton Manager, Reno FSDO Federal Aviation Administration 4900 Energy Way Reno, NV 89502 | Scott Speer District Manager, Portland HUB Federal Aviation Administration 7108 N.E. Airport Way Portland, OR 97218 |
| U.S. Fish and Wildlife Service Klamath Falls Fish and Wildlife Office 6610 Washburn Way Klamath Falls, OR 97603 | U.S. Fish and Wildlife Service Yreka Fish and Wildlife Office 1829 S. Oregon Street Yreka, CA 96037 | U.S. Fish and Wildlife Service Sacramento Fish and Wildlife Office 2800 Cottage Way Room W-2605 Sacramento, CA 95825-1846 |
| U.S. Fish and Wildlife Service Nevada Fish and Wildlife Office 1340 Financial Blvd Suite 234 Reno, NV 89502-7147 | USEPA Office of Federal Activities Mail Code 2252-A, Room 7241 Ariel Rios Bldg (South Oval Lobby) 1200 Pennsylvania Ave. NW Washington, DC 20004 | Region IX Administrator, USEPA 75 Hawthorne Street San Francisco, CA 94105 |
| California State Clearinghouse Office of Planning and Research P.O. Box 3044 Sacramento, CA 95812-3044 | Nevada State Clearinghouse Department of Administration Budget & Planning Blasdel Building, Room 200 209 E. Musser St Carson City, NV 89701 | Oregon Department of Environmental Quality 811 SW 6th Avenue Portland, OR 97204-1390 |
| Dr. Knox Mellon, SHPO California Department of Parks and Recreation, Office of Historic Preservation 1416 9th Street, Room 1442-7 Sacramento, CA 95814 | Mr. Ronald James, SHPO Historic Preservation Office 100 North Stewart Street Capitol Complex Carson City, NV 89701-4285 | Mr. Tim Wood, SHPO Oregon Parks & Recreation Department 725 Summer Street NE, Suite C Salem, OR 97301 |
| Vacaville Public Library 1020 Ulatis Drive Vacaville, CA 95688 (707) 449-6290 | Fairfield-Suisun Community Library 1150 Kentucky Street Fairfield, CA 94533 (707) 421-6500 | Mitchell Memorial Library 510 Travis Boulevard Travis AFB, CA 94535 (707) 424-3279 |
| South Lake Tahoe Public Library 1000 Rufus Allen Blvd South Lake Tahoe, CA 96150 (530) 573-3185 | Shasta Lake Gateway Library 4150 Ashby Ct Central Valley, CA 96019 (530) 275-7490 | Lodi City Public Library 201 W Locust St Lodi, CA 95240 (209) 333-5566 |
| Alpine County Library 270 Laramie St Markleeville, CA 96120 (530) 694-2120 | | |
| Anthony Jack, Chairperson Big Valley Rancheria 2726 Mission Rancheria Rd. Lakeport, CA 95453 | Elaine Patterson, Chairperson Cortina Band of Indians P.O. Box 1630 Williams, CA 95987 | Raymond Brown, Sr., Chairman Elem Indian Colony/ Sulphur Bank Rancheria P.O. Box 989 Clearlake Oaks, CA 95423 |
| Anthony Jack, Chairperson Big Valley Rancheria 2726 Mission Rancheria Rd. Lakeport, CA 95453 | Elaine Patterson, Chairperson Cortina Band of Indians P.O. Box 1630 Williams, CA 95987 | Raymond Brown, Sr., Chairman Elem Indian Colony/ Sulphur Bank Rancheria P.O. Box 989 Clearlake Oaks, CA 95423 |
| Kenneth Swearinger, Chairman Grindstone Rancheria P.O. Box 63 Elk Creek, CA 95939 | Mathew Franklin, Chairman Ione Band of Miwok Indians P.O. Box 1190 Ione, CA 95640 | Margaret Dalton, Chairperson Jackson Rancheria P.O. Box 1090 Jackson, CA 95642 |
| Jose Simon, III, Chairman Middletown Rancheria P.O. Box 1035 | Everett Freeman, Chairman Paskenta Band of the Nomlaki Indians | Jessica Jim, Chairperson Pit River Tribal Council 37118 Main Street |

| | | |
|---|---|--|
| Middletown, CA 95461 | P.O. Box 398 Orland, CA 95963 | Burney, CA 96013 |
| Salvador Rosales, Chairman Potter Valley Rancheria 2251 South State Street Ukiah, CA 95482 | Ronald Lincoln, Chairman Quartz Valley Reservation 13601 Quartz Valley Rd. Fort Jones, CA 96032 | Barbara Murphy, Chairman Redding Rancheria 2000 Redding Rancheria Rd. Redding, CA 96001 |
| Shannon Barney, President Round Valley Reservation P.O. Box 448 Covelo, CA 95428 | Marshall McKay, Chairperson Rumsey Rancheria P.O. Box 18 Brooks, CA 95606 | Donald Arnold, Chairperson Scotts Valley Rancheria 301 Industrial Avenue Lakeport, CA 95453 |
| Nicholas Fonseca, Chairman Shingle Springs Rancheria P.O. Box 1340 Shingle Springs, CA 95682 | Jessica Tavares, President United Auburn Indian Community 575 Menlo Drive, Suite 2 Rocklin, CA 95765 | Mahlon Machado, Chairman Woodfords Community Council 96 Washoe Blvd. Markleeville, CA 96120 |
| Mike Young, Chairman Battle Mountain Band Council 37 Battle Mountain Band Council Battle Mountain, NV 89820 | Warner Nevers, Chairman Carson Community Council 2900 S. Curry Street Carsons City, NV 89703 | Anthony Smokey, Chairman Dresslerville Community Council 585 Watasheamu Road Gardnerville, NV 89460 |
| Alvin Moyle, Chairman Fallon Paiute Shoshone Tribal Business Council 565 Rio Vista Road Fallon, NV 89406-9159 | Alfred Happy, Sr., Chairman Lovelock Paiute Tribe P.O. Box 878 Lovelock, NV 89419 | Norman Harry, Chairman Pyramid Lake Paiute Tribal Council P.O. Box 256 Nixon, NV 89424 |
| Arlan Melendez, Chairman Reno-Sparks Indian Colony 98 Colony Road Reno, NV 89502 | Ronnie Woods, Chairman South Fork Band Nation HC 30, P.O. Box B-13-Lee Spring Creek, NV 89815 | Wanda Batchelor, Chairperson Stewart Community Council 5300 Snyder Ave. Carsons City, NV 89701 |
| Robyn Burdette, Chairperson Summit Lake Paiute Tribe 653 Anderson Street Winnemucca, NV 89445 | Hugh Stevens, Chairman Te-Moak Tribe of Western Shoshone Indians 525 Sunset Street Elko, NV 89801 | Genia Williams, Chairperson Walker River Paiute Tribe P.O. Box 220 Schurz, NV 89427 |
| A. Brian Wallace, Chairman Washoe Tribal Council 919 Hwy 395 South Gardnerville, NV 89410 | Laretta Hildreth, Chairperson Wells Indian Colony Band Council P.O. Box 809 Wells, NV 89835 | Glenn Wasson, Chairman Winnemucca Tribal Council P.O. Box 1370 Winnemucca, NV 89446 |
| Wayne Garcia, Chairman Yerington Paiute Tribe 171 Campbell Lane Yerington, NV 89447 | Dennis Bill, Chairman Yomba Shoshone Tribe HC61, Box 6275 Austin, NV 89310 | Allen Foreman, Chairman Klamath Tribe P.O. Box 436 Chiloquin, OR 97624-0436 |

61 agencies

Wallin, John

From: Reference Librarian [referencelib@lodilibrary.org]
Sent: Sunday, April 29, 2007 3:24 PM
To: Wallin, John
Subject: Draft EIA Convert Slow Routes 300 and 301 to instrument routes Travis AFB

We received a copy of the aforementioned document.

Sandra Smith
Adult Services Librarian
Lodi Public Library

6/14/2007

Wallin, John

From: lib-pl@eldoradolibrary.org
Sent: Friday, May 04, 2007 12:35 PM
To: Wallin, John
Subject: Travis Air Force Base proposed routes 300 & 301

Dear John Wallin:

The South Lake Tahoe Branch Library did receive a copy of the Draft final environmental assessment convert slow routes 300 and 301 to instrument routes. The basic question is WHY?

Is it because the proposed routes go near South Lake Tahoe???

Bonnie Battaglia
Reference Librarian

El Dorado County Library
345 Fair Lane
Placerville, CA 95667

Phone: 530-621-5541
Fax: 530-622-3911

PARSONS

8000 Centre Park Drive, Suite 200 • Austin, Texas 78754 • (512) 719-6000 • Fax: (512) 719-6099 • www.parsons.com

April 25, 2007

Reference Librarian - Adult Reference Desk
Shasta Lake Gateway Library
4150 Ashby Ct.
Central Valley, CA 96019

Subject: Draft Final Environmental Assessment
Convert Slow Routes 300 and 301 to Instrument Routes
Travis Air Force Base, California

Dear Reference Librarian:

On behalf of the U.S. Air Force, 60th Air Mobility Wing at Travis Air Force Base, Parsons is pleased to provide you with this copy of the Draft Environmental Assessment for the proposed conversion of Slow Routes 300 and 301 to Instrument Routes. 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 (707) 424-7517.

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:

Debra M Wacker - Sec./Treas. S.L.G.L.
Signature

4/30/07
Date

Debra M Wacker Sec./Treas.
Printed Name

For Shasta Lake Gateway Library

* Confirmation - 5/1/07

at email address
attn: John Wallin
Could not send email.

I do not have access to a Fax - MW

Wallin, John

From: Crisologo, Rosemarie
Sent: Monday, May 14, 2007 12:45 PM
To: Wallin, John
Subject: SR 300/301 Admin Record

For the record, thus far ONE notification letter (notif re public mtg) has been returned as No Such Number/Unable to Forward/Return to Sender:

Anthony Smokey, Chairman
Dresslerville Community Council
585 Watasheamu Road
Gardnerville, NV 89410

Also, someone marked it with "89460" as the correct zip code, but it still was returned.

Rosemarie Crisologo
PARSONS
100 W. Walnut St.
Pasadena CA 91124
Phone: (626) 440-6048
Mobile: (626) 660-6421
Toll Free: (800) 883-7300 ext. 6048
Fax: (626) 440-6200



**PUBLIC MEETING
PROPOSED CONVERSION OF SLOW ROUTES 300 AND 301
TO INSTRUMENT ROUTES
TRAVIS AIR FORCE BASE, CALIFORNIA**

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, the 60th Air Mobility Wing, Travis Air Force Base (AFB), California is proposing to convert Slow Routes (SR) 300/301 to Instrument Routes (IR) and to transfer the scheduling and coordinating responsibilities for the IRs from an Air National Guard unit at Moffett Federal Airfield, California to Travis AFB. Travis AFB C-17 aircrews would fly the converted IRs as many as 300 times per year (25 times per month). Additionally, C-130s would continue to fly the route about five times a year (1.4 times per month). Approximately 25 percent of the operations would occur during the evening (7:00 p.m. to 10:00 p.m.), while 25 percent would occur during the nighttime (10:00 p.m. to 7:00 a.m.).

As part of the Air Force Environmental Impact Analysis Process (EIAP), the Air Force is preparing an Environmental Assessment (EA) for this action. The EA will evaluate the potential impacts of the Proposed Action and No Action Alternative on the environment. The Draft EA is available at the Fairfield-Suisun, Vacaville, South Lake Tahoe, Shasta Lake Gateway, Lodi City and Alpine County public libraries, the Mitchell Memorial Library on Travis AFB, and at <http://public.travis.amc.af.mil/enviro>

The public is invited to attend a public meeting to obtain information, and provide input, on the potential environmental impacts of this action:

**Thursday, May 10, 2007 at 6:00 p.m.
Northern Solano County Association of Realtors Office
3690 Hilborn Road, Fairfield, California**

Written comments may be mailed to:

**Department of the Air Force
Attn: Mr. Rudy Pontemayor
60 CES/Environmental Flight
411 Airman Drive
Travis AFB, CA 94535**

All written comment letters must be postmarked by **May 30, 2007**. Comments may also be faxed to the attention of Mr. Pontemayor at (707) 424-5105. Faxed comments must be received by close of business on May 30, 2007. Emailed comments will not be accepted. Should you have any questions, please contact Mr. Pontemayor at (707) 424-7517.



**PUBLIC MEETING
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AFFIDAVIT OF PUBLICATION

STATE OF NEVADA

County of Douglas } ss.

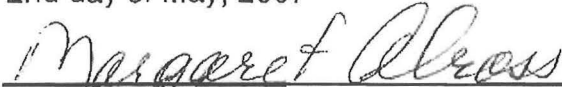
Margaret A. Cross, being duly sworn, says that she is the Clerk of THE RECORD-COURIER, a twice weekly newspaper printed and published in Gardnerville, State of Nevada, and that the annexed is a full, true and correct copy of # 921278 attached advertisement.

Public Meeting – Proposed conversion of slow Routes 300 and 301 to Instrument Routes Travis Air Force Base, California

which was published in said newspaper once a week for 1 week, and that the notice was published in the regular and entire edition of every number of paper during the time and period of publication in the newspaper proper and not in a supplement; and said notice was published as follows, to-wit:

The Record Courier - 5/2/07

Subscribed and sworn to before me this
2nd day of May, 2007

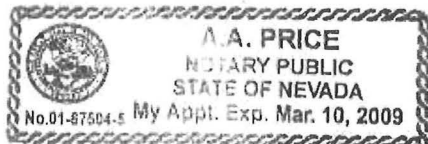


Margaret A. Cross, Clerk



A.A. Price Notary Public

My commission expires March 10, 2009



Jennifer Gokhman
 Panorama Page Editor
 369-7035 ext. 211
 E-mail: jenniferg@lodinews.com

Panorama

www.lodinews.com/features



PUBLIC MEETING PROPOSED CONVERSION OF SLOW ROUTES 300 AND 301 TO INSTRUMENT ROUTES TRAVIS AIR FORCE BASE, CALIFORNIA

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, the 60th Air Mobility Wing, Travis Air Force Base (AFB), California is proposing to convert Slow Routes (SR) 300/301 to Instrument Routes (IR) and to transfer the scheduling and coordinating responsibilities for the IRs from an Air National Guard unit at Moffett Federal Airfield, California to Travis AFB. Travis AFB C-17 aircrews would fly the converted IRs as many as 300 times per year (25 times per month). Additionally, C-130s would continue to fly the route about five times a year (1.4 times per month). Approximately 25 percent of the operations would occur during the evening (7:00 p.m. to 10:00 p.m.), while 25 percent would occur during the nighttime (10:00 p.m. to 7:00 a.m.).

As part of the Air Force Environmental Impact Analysis Process (EIAP), the Air Force is preparing an Environmental Assessment (EA) for this action. The EA will evaluate the potential impacts of the Proposed Action and No Action Alternative on the environment. The Draft EA is available at the Fairfield-Suisun, Vacaville, South Lake Tahoe, Shasta Lake Gateway, Lodi City and Alpine County public libraries, the Mitchell Memorial Library on Travis AFB, and at <http://public.travis.af.mil/enviro>

The public is invited to attend a public meeting to obtain information, and provide input, on the potential environmental impacts of this action:

Thursday, May 10, 2007 at 6:00 p.m.
Northern Solano County Association of Realtors Office
3690 Hillborn Road, Fairfield, California

Written comments may be mailed to:

Department of the Air Force
Attn: Mr. Rudy Pontemayor
60 CES/Environmental Flight
411 Alrman Drive
Travis AFB, CA 94535

All written comment letters must be postmarked by **May 30, 2007**. Comments may also be faxed to the attention of Mr. Pontemayor at (707) 424-5105. Faxed comments must be received by close of business on May 30, 2007. Emailed comments will not be accepted. Should you have any questions, please contact Mr. Pontemayor at (707) 424-7517.



**PUBLIC MEETING
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AND 301
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