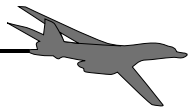
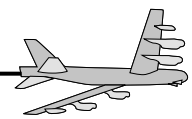
DEPARTMENT OF THE AIR FORCE



Realistic Bomber Training Initiative

Final
Environmental Impact Statement **January 2000**
Volume I

In cooperation with the Federal Aviation Administration



The NEPA Process

NEPA – the National Environmental Policy Act of 1969 – is our national charter for protecting the environment. The goals of NEPA are to consider all appropriate environmental factors when making decisions, not basing decisions solely on technical and economic factors, involve the affected and interested public early in the environmental analysis process, seek less environmentally damaging ways to do our jobs, and document in plain language for the decisionmaker (in this case the Air Force) and the public the environmental process we used for RBTI. The product that we use to document our analyses is the Environmental Impact Statement, or EIS. This is the highest level of analysis prepared under NEPA and we are using it for RBTI. Compliance with NEPA guidance for our EIS preparation involved several critical steps:

1. *Announce that an EIS will be prepared*. For this EIS, a Notice of Intent was published on December 19, 1997, in the Federal Register.

2. *Conduct scoping*. This was the first major step in identifying the relevant issues to be analyzed in depth and eliminating the issues that were not relevant. Within this process we were very active in soliciting comments from the public, local governments, federal and state agencies, tribes, and environmental groups to ensure their concerns and issues about the proposed project were included in the analyses. For RBTI, the Air Force held scoping meetings in January and February 1998 in New Mexico, Texas, Arkansas, and Colorado. In addition, in December 1997, the Air Force sent over 100 Intergovernmental Interagency Coordination of Environmental Planning (IICEP) letters to announce the Air Force's proposal and planned scoping meetings and to request input from government agencies.

3. *Prepare a draft EIS.* The first comprehensive document for public and agency review was the draft EIS. This document examined the environmental impacts of the proposed project determined to be relevant from our scoping initiatives and analyzed all reasonable alternatives, as well as a No-Action alternative. Over 900 copies of the draft EIS were distributed to agencies, the public that had requested copies, and numerous repositories to ensure the widest dissemination possible. The draft EIS was also placed on a web site. After the notice of availability of the draft EIS was filed in the Federal Register and the document was distributed, we began a 90-day public comment period that extended to June 16, 1999.

4. *Have a public comment period.* Our goal during this process was to solicit oral and written comments about the draft EIS. We accomplished this by receiving comments through the mail as well as conducting public hearings. The public hearings were held at 11 communities in Texas, New Mexico, Colorado, and Arkansas. The hearings provided a feedback mechanism for the public and agencies to orally address or submit written comments directly to the Air Force. A total of 1,541 written and oral comments on the draft EIS were received by the Air Force. In the final EIS, we have provided written responses to all substantive oral and written issues submitted during the public comment period. As appropriate, clarification regarding substantive issues has been included in the final EIS. All of the issues documented as part of this phase are disclosed to the decisionmaker as part of the administrative record.

5. *Prepare a final EIS.* Following the public comment period, a final EIS was prepared. This document is a revision of the draft EIS, includes all public and agency comments and the Air Force's responses, and provides the decisionmaker a comprehensive review of the alternatives and their environmental impacts.

6. *Issue a Record of Decision (ROD).* The final step in the NEPA process is the ROD. It identifies which alternative has been selected by the decisionmaker and what measures will be carried out by the Air Force to reduce adverse impacts to the environment.

REALISTIC BOMBER TRAINING INITIATIVE

FINAL ENVIRONMENTAL IMPACT STATEMENT

Volume I

JANUARY 2000

COVER SHEET
ENVIRONMENTAL IMPACT STATEMENT
COVERING THE PROPOSED ALTERNATIVES
FOR THE REALISTIC BOMBER TRAINING INITIATIVE

a. *Responsible Agency:* U.S. Air Force.

b. *Cooperating Agencies:* Federal Aviation Administration (FAA) Southwest Region, Fort Worth Air Route Traffic Control Center (ARTCC), and Albuquerque ARTCC.

c. *Proposals and Actions:* This Environmental Impact Statement (EIS) evaluates the environmental effects associated with alternatives addressing the need to establish an Electronic Scoring Site (ESS) system to support realistic B-52 and B-1 bomber training operations within approximately 600 nautical miles of Barksdale and Dyess Air Force Bases (AFBs). The four Realistic Bombing Training Initiative (RBTI) alternatives consist of Alternative A: No-Action, Alternative B: IR-178/Lancer MOA, Alternative C: IR-178/Texon MOA, and Alternative D: IR-153/Mt. Dora MOA. Under the No-Action Alternative, bombers would continue to use existing airspace and existing Electronic Scoring Sites at current levels. Alternatives B, C, and D would each involve: (1) changes in structure and use of airspace; (2) closure of the Electronic Scoring Sites at Harrison, Arkansas, and La Junta, Colorado; and (3) construction of ten new emitter sites and two Electronic Scoring Sites. Airspace modifications include some new and eliminated airspace. Alternatives B and C lie almost wholly in western Texas, while Alternative D is located in northeastern New Mexico. Alternative B is both the Air Force's preferred alternative and the environmentally preferred alternative.

d. *For Additional Information:* Ms. Brenda Cook, RBTI EIS Project Manager, HQ ACC/CEVP, 129 Andrews Street, Suite 102, Langley AFB VA 23665-2769. Telephone inquiries may be made to the Dyess AFB Public Affairs office at (915) 696-2863.

e. *Designation:* Final Environmental Impact Statement.

f. *Abstract:* This final EIS has been prepared in accordance with the National Environmental Policy Act. This document includes analyses of the potential environmental consequences of the four RBTI alternatives to airspace and aircraft operations, land management and use, biological resources, cultural resources, socioeconomics, environmental justice, and soils and water. For the three action alternatives (B, C, and D), the findings indicate that impacts to airspace management, air safety, socioeconomics, environmental justice, cultural resources, and soils and water resources would be negligible to minimal. Alternative B would consist of approximately 85 percent existing airspace, Alternative C would be about 80 percent existing airspace, and Alternative D about 90 percent existing airspace. Aircraft noise levels would undergo an increase of 2 to 13 decibels in some parts of the proposed Military Training Routes associated with Alternative B and C airspace and 1 to 18 decibels in portions of the proposed Military Training Route for Alternative D airspace. Land management and use would not be affected, but Alternatives B and C would overfly two, and Alternative D thirteen special use land management areas (e.g., state parks, wild and scenic rivers) and expose these areas and their users to increased noise levels. Minimal acreage of Prime Farmland and Conservation Reserve Program land would be affected under all three action alternatives although it would not result in an irreversible change in land use. Negligible to minimal effects on biological resources would occur under Alternatives B and C. Both alternatives would result in continued and increased low-altitude overflights over estimated aplomado falcon historic range. The potential for an aircraft to disturb an aplomado falcon would be negligible, however, since 11 have been observed in the region since 1991. Alternative D would result in continued and increased low-altitude overflights of known or suspected habitat for federally listed threatened or endangered bird species: Mexican spotted owl and bald eagles. No cumulative impacts are expected. The Air Force has defined measures to mitigate impacts and management actions to address concerns raised by the public and agencies.

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Organization Of This Environmental Impact Statement

Our goal is to provide you with a document that is reader-friendly coupled with an in-depth, accurate analysis to help you fully understand all of our alternatives and their environmental impacts as they affect you. To ensure you understand all of the alternatives and their environmental impacts, we have synthesized the analysis in a concise document. We have also provided separate volumes for the appendices, supporting administrative documentation, and scientific data that are referenced throughout this document, as well as comments on the draft EIS and responses to those comments.

In addition, we have incorporated topical environmental analyses and their impacts into each resource area discussion as it applies—such as within airspace and aircraft operations or land management and use. The consolidation of all these external and internal influences that affect a resource area as it is discussed will hopefully provide you a concise understanding of each area in its entirety before reading the next resource area of discussion.

Throughout the document we have also introduced a sidebar column to pull out pertinent information or definitions that will allow you to remain focused while you read. Our sidebars will help to minimize the amount of flipping between definition pages or appendices, focus attention to key facts, and ultimately enhance the flow of this document. For your convenience, a glossary and a keyword index are found in Chapters 9 and 11, respectively.

For readers who want to quickly review and compare the impacts from the different alternatives, there are summary tables at the end of Chapter 2 and at the end of each resource discussion in Chapter 4.

Comments submitted by the public and agencies during the comment period and the Air Force's responses to these comments are in Volume II. An index allows each reader to review the responses to the comments he or she submitted. The appendices are contained in Volume III.

This EIS focuses on the resources potentially affected by the RBTI proposal. Additionally, we addressed issues raised by the public and agencies during the scoping and public comment processes. Based on these issues, the EIS includes the following sections:

EIS Section	Title	Resources/Topics Covered
4.1	Airspace and Aircraft Operations	Airspace management and use; aircraft noise; aircraft safety; aircraft emissions and air quality
4.2	Land Management and Use	Land use; land ownership; recreation; visual resources; special use land management areas
4.3	Biological Resources	Vegetation; habitat; wildlife; threatened and endangered species; livestock
4.4	Socioeconomics and Environmental Justice	Employment; revenue; population
4.5	Cultural Resources	Archaeological and historic sites; Native American traditional resources; Indian reservations and pueblos
4.6	Soils and Water Resources	Erosion; water use, availability, and quality; fugitive dust

In response to public and agency input, and due to review of Air Force requirements, the final EIS includes the following noteworthy clarification and changes:

EIS Section	Title	Clarification/Change
2.2	Description of Study Area	Elimination of MTR IR-102/141 and its sortie-operations from baseline and projected conditions.
2.4	Action Alternatives	Summary of the preferred alternative and environmentally preferred alternative.
2.6	Measures to Address Environmental Effects and Community/Agency Concerns	Listing of proposed mitigation measures and management actions to address public and agency concerns.
4.1	Airspace and Aircraft Operations	Refinement of data on noise levels resulting from elimination of IR-102/141 and its sortie-operations.
4.3	Biological Resources	Clarification of FWS consultation, addition of information on data sources used in the biological resources analysis, and enhancement of the discussion of overflight effects on wildlife.
Appendix B	Sortie-Operations	Elimination of MTR IR-102/141 and its sortie-operations from baseline and projected conditions.
Appendix E	Field Survey Results	Clarification of survey methods for Candidate Emitter Sites and Electronic Scoring Sites.
Appendix G	Noise	Additional description of overflight effects on wildlife and livestock.
Appendix H	Biological Support Documentation	Updating Federally listed threatened, endangered, and sensitive species table with the most current information.
Appendix K	Preferred Alternative Selection	Methods for identification of preferred and environmentally preferred alternatives.

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

This Environment Impact Statement (EIS) evaluates the environmental effects associated with a proposal to establish realistic bomber training assets within approximately 600 nautical miles (nm) of Barksdale AFB in Louisiana and Dyess AFB in Texas. The Realistic Bomber Training Initiative, or RBTI, proposes to establish linked military airspace and ground-based assets to support realistic training. For this proposal, the training airspace and ground-based assets would be arranged to provide a sequence of training activities that mirror combat missions. The Air Force proposes to use existing assets and establish new assets in either western Texas or northeastern New Mexico to support aircrews from Barksdale and Dyess AFBs. Aircrews currently cannot conduct needed training without flying long distances and wasting valuable training time. Existing airspace and other training components closer to these bases lack realism and do not allow realistic, integrated training. RBTI would allow B-52 and B-1 aircrews to receive needed combat training and maximize combat training time.

Clarifications and Changes in the EIS

This final EIS is a revision of the draft EIS. The clarifications and changes in this final EIS stem from three sources. First, the Air Force reexamined its requirements for B-52 and B-1 training to ensure the EIS reflected the most up-to-date concepts for training. Second, the Air Force evaluated recent changes to the expected structure and eliminated use of secondary military training routes (MTRs) (IR-102/141) that interact with RBTI primary airspace. Third, the Air Force made clarifications and changes in response to public and agency comments on the draft EIS. The following highlights these clarifications and changes in the EIS.

The most substantive set of clarifications and changes is related to secondary MTRs, IR-102/141. In Section 2.2 of the draft EIS, the Air Force anticipated that changes to the structure and use of IR-102/141 would occur, so it reflected these changes under baseline conditions. As secondary MTRs, IR-102/141 overlapped or intersected 12 segments of IR-178 and added almost 1,100 sortie-operations in the affected areas for Alternatives A, B, and C. The Air Force, subsequent to the public comment period, withdrew the proposed changes to IR-102/141. This means that IR-102/141 reverts to its current structure. Currently, the charted location of IR-102/141 overlaps or intersects with five segments, but it has never supported any aircraft sortie-operations.

The final EIS reflects the reversion of IR-102/141 to its currently charted structure and eliminates 1,094 sortie-operations from baseline and projected conditions. Zero sortie-operations are attributed to IR-102/141 and total sortie-operations for IR-178 under alternative A (segments AB-KL and CDCE), B (segments AB-KL and ST), and C (segments AB-KL and ST) have been reduced. These reductions in total sortie-operations also result in decreases in cumulative noise levels, air emissions, numbers of average daily overflights, and other potential impacts. All topics affected by the changes to IR-102/141 have been updated in the final EIS.

In accordance with NEPA and Council on Environmental Quality (CEQ) guidelines, the Air Force identified preferred and environmentally preferred alternatives. Section 2.4 of this final EIS incorporates a summary of the methods used to identify these alternatives and the results of the process. Appendix K, which details the identification process, has been added to the supporting documentation for the EIS.

Certain topics concerning biological resources (section 4.3) also received clarification. Additional information on the data sources used in describing the affected environment is now incorporated into the EIS. Similarly, additional information on past studies of overflight effects on wildlife and livestock is included in section 4.3 and Appendix G.

Purpose and Need for the Realistic Bomber Training Initiative

During the Cold War, the primary combat mission of B-52 and B-1 bombers was long-range, nuclear strategic attack. Today, the bombers' role has changed; the primary mission is worldwide tactical operations, including attacks into enemy territory, support of ground troops, neutralizing enemy air defenses, and supporting maritime operations. This shift in emphasis has broadened the requirements for bomber aircrew mission readiness and training.

The Air Force's philosophy is to match training to meet the diversified demands of any future conflicts. To ensure that bomber aircrews possess the skills and readiness for combat, they must conduct realistic training that: 1) mirrors activities used in combat, 2) links a realistic sequence of training activities into a cohesive mission, and 3) hones aircrew teamwork. To conduct realistic training that emphasizes teamwork and combat situations, bomber aircrews need linked airspace and ground-based assets collectively defined as an Electronic Scoring Site (ESS) system composed of:

- Ground-based assets known as electronic emitters that simulate enemy threats from surface-to-air missiles, anti-aircraft artillery, and radar;
- Ground-based assets called Electronic Scoring Sites that can score simulated ordnance delivery and the effectiveness of electronic combat measures performed by aircraft; and
- Training airspace, principally composed of a military training route (MTR) and a military operations area (MOA) with an overlying Air Traffic Control Assigned Airspace (ATCAA), where aircrews perform their required training activities at high, medium, and low altitudes.

In short, bomber aircrews need the proper training assets arranged and sequenced in a way that provides realism and is located close enough to the using base to ensure wise use of valuable flying time.

Current training opportunities for the bombers from Barksdale and Dyess AFBs do not fulfill these needs. Three problems exist with the airspace and training components available to the bombers from these bases. First, electronic training facilities close to the bases lack an MTR that provides the terrain variability for effective terrain following and avoidance training. Second, the two ESS systems within the United States that provide linked, sequenced combat training are so distant and require such long transit times that the amount of training received versus flight time expended makes their daily use impractical. Third, training assets within reasonable distance of the bases are not linked in a system that allows realistic sequencing of events. This makes it necessary to fly to several locations of varying distances to complete mission requirements and results in piecemeal, unrealistic training interspersed with low-value transit time.

The Air Force has proposed RBTI to overcome these problems and provide the realistic, integrated training necessary to develop the combat skills bomber crews need now and will need in the future.

Meeting the Need for Realistic Bomber Training: the Proposed Action

The proposed action is to establish a set of linked training assets comprising an ESS system to provide realistic bomber training close enough to Barksdale and Dyess AFBs to efficiently use limited flying hours. This ESS system would be located within approximately 600 nm of Barksdale and Dyess AFBs and would involve the following components:

- Creating an MTR that offers variable terrain for use in terrain following and terrain avoidance, overlies lands capable of supporting electronic threat emitters and electronic scoring sites, permits flights down to 300 feet above ground level (AGL) in some segments and links to a MOA.

- Creating a MOA measuring at least 40 by 80 nm with a floor altitude of 3,000 feet AGL and extending to 18,000 feet above mean sea level (MSL) used for simulated attacks and avoiding simulated threats.

- Creating an ATCAA above the MOA at 18,000 to 40,000 feet MSL to be used for high-altitude training.

- Establishing a set of five locations (15 acres each) for placing electronic threat emitters under or near the MTR corridor and five locations (15 acres each) for placing electronic emitters under or near the MOA that would simulate the variety of realistic threats expected in combat.

- Constructing two Electronic Scoring Sites co-located with operations and maintenance centers, one under or near the MTR corridor and the other en route from the bases to the MTR and MOA.

- Decommissioning two existing Electronic Scoring Sites in Harrison, Arkansas, and La Junta, Colorado.

There are three alternative locations that could fulfill the need defined under the proposed action. *Alternative B: IR-178/Lancer MOA* and *Alternative C: IR-178/Texon MOA* are almost entirely in western Texas with only a small portion of airspace extending into New Mexico. *Alternative D: IR-153/Mt. Dora MOA* is located primarily in northeastern New Mexico with portions of the MTR extending into northwestern Texas. All three action alternatives (B, C, and D) predominantly coincide with existing MTR or MOA airspace; little area not currently exposed to overflights would be affected. Under *Alternative A: No-Action*, the Air Force would continue using existing assets and airspace would remain unchanged. All three action alternatives meet operational goals defined for RBTI. Based on the analysis presented in this EIS, agency input, and public comments, the Air Force deemed Alternative B to be preferable to Alternatives C and D. Alternative B meets all operational requirements with somewhat less potential for environmental impacts than Alternatives C and D. Therefore, Alternative B has also been identified as the Air Force's environmentally preferred alternative. Appendix K presents the methods and results of the process used for identifying the preferred and environmentally preferred alternatives.

Environmental Consequences

This EIS presents the existing environmental and potential environmental consequences that could result from each alternative. Public involvement focused the analysis on six resource categories. Issues of primary concern to agencies and

the public included potential impact of noise on humans, livestock, and wildlife from aircraft overflight; conflict with local aviation; potential degradation of aircraft safety; and the potential to alter the quality of life. Each of the six resources and the anticipated environmental consequences are summarized below. Table 2.6-1 in Chapter 2 presents a detailed comparison of alternatives for all resources.

Potential Effects of RBTI Alternatives

EIS Section	*Resource*	*Alternative A*	*Alternative B*	*Alternative C*	*Alternative D*
4.1	Airspace and Aircraft Operations	⊗	♦	♦	♦♦[1]
4.2	Land Management and Use	⊗	♦	♦	♦♦
4.3	Biological Resources	⊗	⊗	⊗	♦
4.4	Socioeconomics and Environmental Justice	⊗	⊗	⊗	⊗
4.5	Cultural Resources	⊗	⊗	⊗	⊗
4.6	Soils and Water Resources	⊗	⊗	⊗	⊗

⊗ = Negligible/inconsequential effects
♦ = Potential adverse effects
♦♦ = Magnitude of potential adverse effects
[1] = Applies to noise

Analysis indicates that the potential exists for impacts within three resource categories: Airspace and Aircraft Operations, Land Management and Use, and Biological Resources.

Airspace and Aircraft Operations

Airspace use is regulated and managed by the Federal Aviation Administration (FAA) through the use of air traffic control procedures and separation criteria, flight rules, and airspace use designations. Historically, the affected airspace has been able to accommodate aircraft overflights, military flight training activities, and civil aviation. Existing airspace would be used to the maximum extent possible for proposed MTRs and MOAs; however, under all action alternatives some airspace would be eliminated and new airspace added. Under action Alternatives B and D, airspace management would remain similar to that found today. The potential for conflicts with civil aviation would not be significant, although coordinating with cloud seeding, crop dusting, and other similar management activities would require increased attention and resources. FAA input revealed Alternative C to have substantive conflicts with federal jet routes. These conflicts would require changes in airspace management and could reduce the proposed Texon MOA's usefulness for training.

Operations within military airspace would increase under all action alternatives. However, for Alternatives B and C, average daily overflights would range from 1 to 10, depending upon the segment of the MTR. This would not represent a substantial increase (1 to 6 sortie-operations) from recent or historic airspace use. Under Alternative D, average daily overflights would range from 1 to 24 (depending upon the segment) per day with an increase of 1 to 10 sortie-operations. Noise levels would range from less than 45 to 61 DNL for Alternative A, from 46 to 61 DNL for Alternatives B and C, and from less than 45 to 64 DNL for Alternative D. DNL, the Day-Night Average Sound Level, is used to assess aircraft noise and is the most widely accepted metric for this purpose. There would be a 1 to 18 dB increase in noise levels in the Alternative D affected area with a 2 to 13 dB increase in Alternatives B and C. Effects from aircraft emissions and the potential for aircraft mishaps would be inconsequential for all alternatives.

Results of the noise analysis indicate an increase in the potential for the percentage of people highly annoyed by aircraft noise under all three action alternatives. For Alternatives B and C, the percentage of highly annoyed people could rise to a maximum of 8 percent; for Alternative D, it could increase to a maximum of 11 percent for some affected segments. While this analysis suggests that roughly 90 percent of the population would potentially not be highly annoyed, individual responses to aircraft noise vary. Under the proposed MOAs, approximately 1 percent of the people could be highly annoyed.

Land Management and Use

Land management and use focus on designated land use, recreation, and the visual setting. Overall, there would be no likely effects to land use, recreation, or visual resources for any of the alternatives. Increases in noise levels from aircraft could be perceived by some people as affecting their quality of life. Six communities under Alternative B would experience increases in noise levels of 2 to 8 dB; five communities under Alternative C would have increases of 4 to 5 dB; and four communities under Alternative D would have increases of 10 to 16 dB. Estimated populations under the proposed airspace vary for each alternative: Alternative B-50,300 people; Alternative C-22,800 people; and Alternative D-11,900 people. Under Alternative D, 13 special use land management areas, including the Rio Grande Wild and Scenic River, would experience increases in noise levels of 4 to 17 dB. Under Alternatives B and C, no special use land management areas would have increases in noise levels of more than 3 dB.

Biological Resources

The biological resources section addresses potential impacts on vegetation and wildlife, including threatened, endangered, and sensitive plant and animal species. Consultations with regional wildlife experts and literature reviews were conducted to collect biological baseline data. Potential effects to biological resources could occur from aircraft overflights or from construction or ground operations. However, field surveys at the candidate emitters and Electronic Scoring Sites did not identify any threatened, endangered, or sensitive plant or animal species; therefore, construction and ground operations would not impact these species. Total acreage disturbed by construction under Alternatives B, C, and D is less than 20 acres for each alternative.

Under all three action alternatives, segments of MTRs would exist over regions with the potential to support threatened, endangered, or sensitive species. Under Alternatives B and C, increased overflights would occur over estimated historic aplomado falcon habitat, but only 11 aplomado falcons have been observed in the region since 1991. For Alternative D, segments of MTR airspace would lie over regions that support a number of threatened and endangered species, including wintering and nesting bald eagles and potential habitat for Mexican spotted owls and mountain plovers. The Air Force has consulted with the U.S. Fish and Wildlife Service (FWS) on the Endangered Species Act issues associated with RBTI. After discussion with the FWS, the Air Force has determined that aircraft flights on portions of MTRs associated with the action alternatives may affect, but are not likely to adversely affect threatened and endangered bird species, and is currently seeking FWS concurrence with that determination.

Socioeconomics and Environmental Justice

The analysis of socioeconomics consists of an examination of the social and economic activities associated with the human environment. Economic activity includes employment, personal income, and population. The economic activities in the counties where the Electronic Scoring Sites would be constructed and the existing Electronic Scoring Sites decommissioned were analyzed. Socioeconomic

impacts in the affected counties from decommissioning existing Electronic Scoring Sites or constructing new emitters and Electronic Scoring Sites would be minimal (less than 1 percent). The effects of flying activities are not expected to produce measurable impacts on the economic value of the land since this area has been generally overflown since the 1940s. Other factors, such as drought, market prices, community amenities, and proximity to urban areas, are more likely to affect land values than military aircraft overflights.

The environmental justice analysis established that no adverse impact would occur because none of the proposed airspace exceeds a noise level over 65 DNL. The use of 65 DNL as a guideline for the evaluation of environmental justice issues is consistent with the intent of Executive Order 12898. This noise measure comprised one of several criteria considered individually and collectively to assess effects on environmental justice. Because there would be no adverse impact from noise, employment, or facility-related actions, no further environmental justice analysis was necessary.

Cultural Resources

Cultural resources include prehistoric or historic districts, sites, buildings, or objects important to a culture or community. Cultural resources are classified as archaeological sites, architectural resources, and traditional cultural properties. Field surveys of all candidate emitters and Electronic Scoring Sites identified cultural resources potentially affected by construction and ground operations. One archaeological site could be affected under Alternative B, two under Alternative C, and five under Alternative D. However, impacts to these sites could be avoided in most cases or mitigated through completion of the Section 106 process of the National Historic Preservation Act. Existing research and consultation with appropriate Native American tribes provided information on resources within the affected airspace. Although 6 to 15 National Register-listed properties could be overflown, overflights would occur in areas already subject to military aircraft overflights and aircraft would not create a new visual or audible feature in an otherwise historic or traditional landscape. Under Alternative D noise levels over National Historic Landmarks would increase by 1 to 17 dB. Noise would not reach levels likely to damage structures. Therefore, the effects of visual or audible intrusions or damage from noise or vibrations would be negligible. Additional cultural resources under the airspace may be eligible for the National Register. To have the potential to be affected by the noise and visual intrusions of airspace use, the setting of such resources must be an integral characteristic of its eligibility. Since the analysis demonstrated that RBTI would not affect these characteristics of resources already listed on the National Register, it may be presumed that other eligible resources would also be unaffected.

Soils and Water Resources

The soils and water resources section addresses soil and bedrock materials, including paleontological resources, as well as surface and groundwater resources. Estimated soil loss during construction would not exceed 5 tons per candidate emitter or Electronic Scoring Site on any of the action alternatives. Fugitive dust would not exceed 0.4 tons for emitter sites and 2.0 tons for Electronic Scoring Sites. Proper management would be followed to reduce effects of any potential short-term wind and water erosion of surface soils to insignificant levels. Landowners would retain control of any mineral or water rights. No long-term impacts to water resources would occur as a result of construction or use of the Electronic Scoring Sites or emitters.

Cumulative Effects

Past, present, and future actions that could result in cumulative effects with RBTI include several Air Force actions. These past and present actions involve use of airspace either directly included in, overlapping, or intersecting one of the RBTI action alternatives. Flight operations of each of these actions have been incorporated into the analysis in this EIS as part of the conditions in the affected airspace environment for the relevant action alternative and then incorporated into the analysis for each alternative. The cumulative effects analysis indicates that none of the future actions would add to the impacts resulting from RBTI.