ENHANCED TRAINING IN IDAHO

Final
Environmental Impact Statement

Preface

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Introduction

This Preface constitutes the first volume of the four-volume Final EIS for ETI. The inside cover of this volume briefly outlines the contents of each volume.

At all levels, the Air Force is committed to continue to work with federal, state, and local agencies; the Shoshone-Paiute Tribes; ranchers; and interested organizations and individuals to form partnerships and to co-exist with other users of public lands in southwest Idaho. The Air Force, as an organization, and Air Force personnel, as individuals, have worked to demonstrate this continuing commitment during all phases of planning and analysis of ETI.

What Is Enhanced Training in Idaho?

ETI is the Air Force proposal to enhance training for aircrews of the 366th Wing based at Mountain Home AFB.

U.S. military aircrews have been training in southwest Idaho for over 50 years. Although air combat has witnessed substantial changes over this time, the facilities and training space used by the Air Force today in southwest Idaho have remained relatively unchanged. In fact, new tactics, missions, and technology permitted the Air Force to reduce the original size of SCR from 420,000 acres to the 110,000-acre range it is today. The training space consists of military airspace and SCR under the northeast corner of that airspace, where aircrews practice delivery of non-explosive training ordnance. This airspace configuration, and agreements to avoid the Duck Valley Reservation, concentrate aircraft training activity in a few areas of southwest Idaho. The limited approach to the targets and the airspace structure do not allow the Air Force to vary flight patterns or to address seasonal avoidance areas in response to public and agency concerns.

This enhanced training proposal will provide Mountain Home-based aircrews with varied, realistic training that is essential to enable them to effectively combat the evolving and complex threats to U.S. security expected in the 21st century. ETI also offers the flexibility to adjust existing and proposed training to address the needs and expectations of others who manage and use the resources of southwest Idaho.

The proposed ETI tactical air-to-ground training range consists of the following components:

- Constructing a 300-acre primary ordnance impact area where aircraft will drop 25-pound non-explosive training ordnance on tactical targets.
- Withdrawing from public access approximately 12,000 acres surrounding the 300-acre impact area to ensure public safety.
- Constructing one 640-acre and four 5-acre “no-drop” targets where no training ordnance will be delivered. These no-drop target sites are 5 to 30 miles from the 12,000-acre site. These sites would also be withdrawn.
- Grading and gravelling 10 one-acre fenced and 20 one-quarter-acre unfenced emitter sites. On a normal

workday, trucks with emitters that simulate threat radars will be located on five to eight of the sites to permit varied and realistic training, while flexibly addressing the seasonal needs of environmental resources.

- Building of road, bridge, and culvert improvements to provide adequate access to target and emitter sites.

- Expanding existing MOA airspace, to the north in Idaho and southeast in Nevada, so that training flights are not concentrated in an east-west corridor over the Owyhee canyonlands and just north of the Duck Valley Reservation. The existing airspace would also be changed to a uniform 18,000-foot altitude.

- Manning the range and emitter sites on a typical workday with up to 30 Air Force and contractor personnel to operate ground-based equipment.

- Increase training aircraft flights or sortie-operations in any given MOA from an average of 28 to 31 daily. Each sortie-operation in a MOA is usually less than one hour.

What Information Is Contained in the ETI Final EIS?

The ETI Final EIS is prepared in four sections, consisting of a preface and three volumes. Each section is briefly described below.

EIS Preface. This Preface contains the following:

- A summary of the results of the EIS analysis.

- A brief summary of changes to each volume of the Final EIS as a result of public comments and agency input to the Draft EIS.

- A recommendation of the Air Force's preferred alternative, which is the alternative proposed by the public and agencies during scoping and identified as having the fewest environmental impacts.

- A summary of design, avoidance, and operational mitigations.

EIS Volume 1. This volume incorporates the changes made to Volume 1 of the Draft EIS in response to public comments and agency input. It contains the EIS Chapters 1.0 through 6.0.

EIS Volume 2. This volume contains comments on the Draft EIS. The Draft EIS was distributed for public and agency review and comment on May 9, 1997. Seven public hearings were held at six locations from June 3 through June 13, 1997. Public and agency comments were received at the public hearings, and additional comments were received until the close of the 123-day public comment period on September 8, 1997. All comments received are included in Volume 2 of the EIS, *Comments and Response to Comments*.

EIS Volume 3. This volume contains Chapters 7.0 through 11.0 and Appendices A through N. This information was originally contained in Volume 2 of the Draft EIS. Changes were made throughout this volume, particularly Chapter 7,

References; Appendix B, *Statement of Public Participation*; Appendix H, *Economic Impact Report*; and Appendix N, *Airspace Use and Environmental Effects: 1992 Through the Present*.

What Changes Have Been Made to the EIS in Response to Public and Agency Input?

The following changes are included in this Final EIS as a result of public and agency input:

- A table describing proposed mitigations to be taken, from initial design through operations, to minimize potential environmental impacts and public and agency concerns (Preface and section 2.6, Table 2.6-1).
- Re-emphasis on the Air Force's goal to co-exist with other users of public lands that includes measures designed to demonstrate that commitment (Preface).
- Expanded detail regarding how cumulative impacts have been incorporated throughout the EIS to promote biodiversity and reduce the potential for habitat fragmentation (sections 3.0, 4.0, and throughout the Final EIS).
- Addressing Shoshone-Paiute concerns regarding confidentiality, sovereignty, and traditional cultural resources (sections 3.9, 4.9, and throughout the Final EIS).
- An expansion of socioeconomics to present a more regional view rather than a focused view on specific grazing operations (sections 3.12, 4.12).
- Expanded discussion of the use of defensive flares and chaff during aircrew training and steps taken to reduce potential impacts from chaff and flares (sections 3.3, 4.3).
- Expanded details on a less than one-acre above-ground reservoir to enhance Air Force and interagency fire suppression capabilities (Chapter 2.0 and throughout the Final EIS).
- Commitment to work closely with other agencies to reduce habitat fragmentation and control the spread of weedy species (sections 2.6, 4.8).
- Additional details on aircraft overflights and associated reactions of humans and animals (section 4.2).
- Additional discussion and clarification of noise model results and the implications of range operation noise to sensitive receptors (sections 3.2, 4.2).
- Actions proposed to be taken to reduce potential and / or perceived impacts upon recreational activities, including Wilderness Study Areas (WSAs) (sections 2.6, 3.10).
- Actions proposed to be taken to reduce potential or perceived impacts to regionally sensitive species such as Bighorn sheep, sage grouse, and raptors (section 2.6).
- Further explanation of numerous Air Force activities designed to enhance biological resources with special emphasis on Bighorn sheep, shrub-obligate birds, and sagebrush restoration (sections 3.8, 4.8).

- Additional details on steps to reduce disruption to ranching operations, including fencing, water pipelines, and access on lands potentially affected by a new training range (section 4.12).
- Recommendation for a preferred action alternative and a summary of the reasons for that recommendation (Preface).
- A commitment to prepare a Memorandum of Agreement to foster continued collaboration among the Air Force, the BLM, and the State of Idaho (Preface and section 2.6).

What Is the Purpose of this EIS?

This EIS was prepared to meet the requirements of NEPA with respect to federal actions involved in the selection of an alternative to enhance training. The EIS also meets the requirements of FLPMA with respect to documenting the environmental consequences associated with the proposed land withdrawal. The Air Force, as the proponent for the proposed action, was the lead agency for the preparation of the EIS. Cooperating agencies are the BLM, the FAA, and the State of Idaho.

BLM has responsibility, under FLPMA, to make recommendations to Congress regarding the Air Force's application to withdraw land from BLM administration for a training range. The steps for the withdrawal process are being integrated as part of the ETI environmental impact analysis process (EIAP).

This EIS will provide input for decisions to be made by the Air Force, BLM, FAA, the State of Idaho, and Congress regarding ETI. The Air Force will make decisions concerning selection of an alternative, either No-Action or one of the three enhanced training range alternatives.

If the Air Force selects one of the training range alternatives, the EIS will be used by the BLM and Department of Interior (DOI) to make decisions concerning the following:

- Changing the land status of the selected alternative from BLM to Air Force management.
- Granting rights-of-way for use, improvement, or construction of roads and electronic emitter sites.
- Developing a legislative package for submittal to Congress.

The State of Idaho will also use information in the EIS to make decisions concerning lease of State of Idaho school endowment lands for use as part of a selected alternative.

The FAA will use the EIS to make decisions concerning approval of airspace modifications associated with a selected alternative.

Congress will use the EIS and other documents to make decisions concerning the content and enactment of legislation withdrawing public lands associated with a selected alternative.

What Are the ETI EIS Results?

This presentation of EIS results briefly describes the major characteristics of ETI and summarizes the anticipated environmental consequences of ETI.

Summary of EIS Chapter 1: Purpose and Need for the Proposed Action

The 366th Wing, stationed at Mountain Home AFB, is the Air Force's only operational air expeditionary wing. It is trained as a single unit and lives, deploys, and fights together. With its unique combination of fighter, bomber, and support aircraft, the 366th Wing is capable of performing most Air Force combat roles. These include air superiority, suppression of enemy air defenses, close air support, deep interdiction, and refueling. As an air expeditionary wing, the 366th Wing is designed to be deployed rapidly anywhere in the world to provide an immediately effective response to a threat to U.S. national security. Such missions require high levels of skill, coordination, motivation, and readiness that can be achieved only from frequent, high-quality, realistic training.

Since its inception, the 366th Wing has trained at the SCR and in the associated military airspace over southwest Idaho. The quality of training provided by the existing SCR and this airspace, however, is limited.

Additionally, the six MOAs used in conjunction with SCR are characterized by different ceiling altitudes that create an unrealistic, inefficient airspace environment.

To compensate for existing training limitations, the 366th Wing travels to distant ranges that provide some of the training advantages that SCR lacks. As a result, aircrews spend much of their available training time and resources flying to distant ranges, rather than in productive training. Remote ranges also have other missions and priorities that do not always accommodate the 366th Wing's needs.

ETI would augment the existing SCR by providing a modern, local range that would maximize training hours and limit travel time. It would provide the 366th Wing with consistency, quality, and realism in training and would allow for variety and complexity in maneuvering and airspace use. These enhancements would ensure that aircrews receive efficient and effective high-quality training from their limited training hours. Implementation of enhanced training would substantially strengthen the 366th Wing's ability to ensure readiness to perform its assigned mission.

This proposal would meet four key objectives for the Air Force:

- Provide effective training and maximize use of available training hours.
- Support the unique missions of the Air Force's only rapid-response air expeditionary wing.
- Accommodate competing demands for Idaho's airspace and land while enhancing the 366th Wing's training capability.

- Provide for flexibility in training to accommodate environmental and cultural resources to the maximum extent possible.

Summary of EIS Chapter 2: Proposed Action and Alternatives

The proposed action is to construct and operate an enhanced tactical training range in southwest Idaho. Each of the range development alternatives presented in the Draft EIS for public and agency review was designed to enhance the local training capabilities of the 366th Wing by providing increased realism, flexibility, and quality in training. The No-Action Alternative (Alternative A) is also comprehensively analyzed.

Each action alternative met the operational and environmental screening criteria applied by Air Force planners. The three action alternatives are Clover Butte (Alternative B), Grasmere (Alternative C), and Juniper Butte (Alternative D). Each alternative makes use of the existing SCR and incorporates the components described on pages 2 and 3 of this Preface.

ETI proposes a northern MOA expansion that includes part of an area currently controlled by Mountain Home AFB Radar Approach Control. This airspace is currently used for transit to and from Mountain Home AFB. Additionally, ETI proposes a southern airspace expansion to permit high-altitude transit into the range support MOAs. Altitude of airspace would be a uniform 18,000 feet. The aircraft flights or sortie-operations in a typical MOA increase from an average of 28 to 31 daily. Each sortie-operation is usually less than one hour. Flights would be more evenly distributed throughout the MOAs to avoid concentration of flights north of the Duck Valley Reservation and over the Owyhee canyonlands.

The search for alternatives for range development began with interagency and intergovernmental discussions among the Air Force, the DOI, the State of Idaho, the Shoshone-Paiute Tribes, and the Idaho Congressional delegation. Selection of candidate alternatives, no-drop sites, and emitter sites were based on operational, environmental, ranching, and Native American considerations. Operational considerations required that the training range provides a 360-degree axis of attack on targets, accommodates establishment of restricted airspace, consists of approximately 12,000 acres of land for a safety buffer, ensures flexibility and realism in use of target and emitter sites, permits simultaneous use of SCR, offers relatively flat terrain, and provides near year-round access. Environmental considerations required that the land-based components avoid special use land management areas (WSAs and Areas of Critical Environmental Concern [ACECs]) and consider concerns of the Shoshone-Paiute tribes.

Eight candidate alternative sites were initially identified. Through the process of public scoping, three additional candidate sites were identified, for a total of 11 candidate range development alternatives. Further evaluation of environmental and operational characteristics resulted in the narrowing of these candidates to the No-Action Alternative and three action alternatives.

Under one of the Clover Butte, Grasmere, or Juniper Butte action alternatives, the Air Force proposes to withdraw public lands within the selected 12,000-acre training range, the no-drop targets, and the larger (one-acre) emitter sites. For use of the smaller (one-quarter-acre) emitter sites and access roads located on public lands, the Air Force proposes to obtain rights-of-way from BLM. For use of sites located on state lands, the Air Force proposes to enter into lease agreements with the State of Idaho's Department of Lands. Use of some access roads may require coordination with Owyhee County or the Three Creek Good Roads Highway District.

Under the No-Action Alternative, no additional range sites, emitter sites, or airspace would be developed. This alternative would not involve any changes in existing land management authorities or any modification to special use airspace. Aircrews would continue to perform the training activities they currently conduct including supersonic maneuvers, use of chaff and flares, composite wing training, and ordnance delivery at SCR and remote ranges.

Summary of EIS Chapter 3: Existing Environment, and Chapter 4: Environmental Consequences

This EIS presents the existing environment and potential environmental consequences that would result from each alternative. Mitigation by avoidance and mitigation by design were incorporated into early planning to avoid or minimize environmental consequences as a result of implementing ETI.

Scoping comments focused the analysis on 12 environmental resource categories. Each of the resources and the anticipated environmental consequences to these resources are summarized below.

Airspace

Airspace use is regulated and managed by the FAA through the use of air traffic control procedures and separation criteria, flight rules, and airspace use designations. The FAA delegated and designated the airspace around Mountain Home AFB to meet both civil and military requirements. The airspace has been able to accommodate air traffic operations at both the Boise Airport and Mountain Home AFB, aircraft overflights transiting the region, and military flight training activities without prompting the FAA to impose any significant restrictions or limitations on either civil or military aircraft operations.

Changes in airspace associated with the ETI proposal would result in a net decrease of existing restricted airspace by nearly 50 percent. New restricted airspace would be designated in conjunction with a selected 12,000-acre tactical training range.

Public comments and agency input focused on noise impacts associated with the northern airspace expansion.

Noise

Noise is perhaps the most identifiable concern associated with aircraft operations. Although noise levels in most of the airspace would decline, noise levels over Little Jacks Creek in the north would increase as would noise in the restricted airspace associated with the selected training range. Noise levels over the

Bruneau-Jarbidge River area and over the Owyhee canyonlands would generally decrease depending upon the alternative selected. The overall reduction in noise levels would result from greater dispersion of aircraft operations.

Public concerns about noise included noise associated with existing operations, potential increases in noise, and the Air Force method for analyzing noise associated with readiness training.

Safety

The EIS addresses fire, ground, flight, and explosive safety. The primary public concerns for fire safety focus on potential fire risks associated with aircraft accidents and the use of non-explosive training ordnance and flares in the airspace. Non-explosive training ordnance would not exceed 25 pounds and would use "cold spots," which create a small cloud, rather than "hot spots," which create a small charge that poses an increased potential for fire. This change to "cold spots" is expected to reduce the risk of fire for all alternatives.

Releasing defensive flares above 2,000 feet would also reduce fire risk. A low increased fire risk would result from construction, daily operations, and maintenance activities associated with development of a range. This risk would be somewhat higher at Grasmere, based on the presence of specific fuel types at this site.

A water supply at one location on the 12,000-acre range and an additional joint-use water supply recommended during the Draft EIS review at another location on Clover Butte or Juniper Butte sites would enhance fire response times.

Electronic emitters, communication radio frequency emissions, and targeting lasers pose a minimal safety risk because safe separation distances would be established during operation. Risks of aircraft accidents and of bird-aircraft strikes would be low. Overall, total training ordnance use throughout the airspace would decrease.

Hazardous Material and Solid Waste Management

An increase in maintenance and construction activities associated with any alternative would increase the potential for minor spills, accidental releases of fuels, and related hazardous materials or waste in the area. Designs for spill containment and Air Force management of these activities according to federal, state, and local guidelines are projected to ensure environmental protection.

Public comments dealt with the cold spot chemicals and whether strafing with 30 millimeter ammunition would be conducted. Strafing would not occur at any ETI tactical training range alternative. Cold spot chemical quantities are insufficient to create even minor health concerns or impacts to wildlife or cattle.

Earth Resources

Geologic resources of the area consist of soil and bedrock materials, including paleontological resources. No mineral deposits, significant landforms, or tectonic features would be affected by construction or maintenance of a range alternative. Comments focused on ensuring that no

paleontological resources would be impacted.

Proper management of construction activities would reduce the potential for short-term wind and water erosion of surface soils to insignificant levels.

Water Resources

No long-term impacts to water resources are anticipated as a result of construction of a range alternative. Short-term impacts are projected for the bridge replacement at Clover Creek for any action alternative. Scheduling of this construction during low water levels would reduce impacts to an insignificant level. Proper management of construction activities would further reduce the potential for effects to water resources to insignificant. Compensation in-kind for disruptions of ranching operations would include relocation of water pipelines and construction of a less than one-acre above-ground reservoir at either the Clover Butte or Juniper Butte alternatives. This water source would be available for ranching and enhanced fire response.

Public commentors questioned whether water wells would be constructed. The Air Force would make no claim to water rights associated with ETI. No wells are proposed as part of ETI.

Air Quality

Construction activity associated with the alternatives would increase fugitive dust levels by less than 0.1 percent of the National Ambient Air Quality Standards (NAAQS) for particulate matter. Emissions from aircraft operations are expected to decrease from existing levels in each of the MOAs. None of these levels would exceed NAAQS, and all are in full conformity with applicable state implementation plans.

Biological Resources

The biological resources analysis considers species that are protected and those that are afforded special management status by wildlife or land management agencies. Consultations with regional wildlife experts and literature reviews were conducted to collect biological baseline data, identify data gaps, and design survey methodologies. Field surveys were conducted to supplement existing data. Biological resources, including terrestrial and aquatic vegetation, terrestrial wildlife, aquatic animals, and threatened, endangered, and sensitive plant and animal species, were assessed by combining the existing data, results of field surveys, and expert consultations.

The primary sources of potential impacts to biological resources are ground disturbance, human presence, and noise. The cumulative effects of these sources were evaluated for appropriate biological resources.

Construction of an alternative would result in the loss of approximately 500 to 700 acres of native vegetation. Within the 12,000-acre withdrawn area, indirect impacts to 4,170 acres of native vegetation could occur with the Clover Butte Alternative, 7,230 acres with the Grasmere Alternative, or 1,710 acres with the Juniper Butte Alternative. The Clover Butte 12,000-acre site contains no rare plant species and Grasmere contains five populations of three rare plant species. Juniper Butte contains a portion of one population of slick spot peppergrass, a

BLM-sensitive species. Approximately 7.3 acres of habitat are within the primary training ordnance impact area. The Air Force has identified mitigation measures to minimize impacts to rare plants.

Potential indirect impacts to wetlands range from 33 acres at Grasmere to 1.2 acres at Clover Butte and none at Juniper Butte. Roads and construction would directly impact 49 intermittent streams with the Clover Butte Alternative, 56 intermittent streams with the Grasmere Alternative, or 58 intermittent streams with the Juniper Butte Alternative. The Clover Creek crossing bridge would be reconstructed with any action alternative.

Wildlife impacts are generally expected to be negligible to low, especially with the implementation of mitigation measures. Exceptions include potential indirect impacts to the diversity and abundance of wildlife species associated with the various habitats within each of the training ranges. Clover Butte has the second most varied habitat with large stands of sagebrush. Grasmere possesses the most varied, diverse, and locally abundant habitat including canyons, riparian and wetland areas, and contiguous stands of native vegetation. Juniper Butte is the least varied, surrounds a portion of Juniper Draw, and is adjacent to the East Fork of the Bruneau River.

Human presence may have a moderate impact on disturbance-sensitive species with selection of any of the alternatives. Clover Butte species that are known to be easily disturbed include sage grouse and loggerhead shrikes. Grasmere species include California bighorn sheep, sage grouse, ferruginous hawks, prairie falcons, golden eagles, and bats. Juniper Butte species include bats, golden eagles, and ferruginous hawks.

Potential overflight and noise impacts to bighorn sheep and sage grouse were noted by several commentors. Population fluctuations in both species are habitat and resource dependent. Concern for these animals, raptors, and other species has led to potential seasonal avoidance mitigations proposed as part of this EIS.

Cultural Resources

Cultural resources are defined as any early Native American or historic district, site, building, structure, or object considered to be important to a culture, subculture, or community for scientific, traditional, religious or any other reason. Potential sources of impacts to cultural resources include ground disturbance; noise, vibrations, and visual intrusions; and access-related impacts. The individual and cumulative effects of these sources were analyzed for the EIS.

Cultural resources that are eligible or potentially eligible for inclusion in the National Register warrant consideration with regard to adverse impacts resulting from a federal action. Some Native American resources of traditional importance may not meet National Register criteria. These resources may be protected according to consultation provisions of various regulations. Under this consideration, the Air Force has maintained government-to-government relations with the Shoshone-Paiute Tribes in part to learn of tribal concerns about the effects of the proposed action on traditional use areas and sacred sites. The Air Force is also

supporting long-term ethnographic studies for the Shoshone-Paiute Tribes.

Shoshone-Paiute and agency input on cultural resources focused on consultation, government-to-government relations, and confidentiality.

Ground disturbance associated with the Clover Butte Alternative could potentially affect some National Register-eligible archaeological resources and traditional cultural resources. A very low potential for disturbance exists for other National Register-eligible sites and traditional cultural resources for this alternative.

Ground disturbance associated with the Grasmere Alternative could affect twice as many potentially eligible archaeological resources and traditional cultural resources as Clover Butte. A very low potential for disturbance also exists for twice as many other National Register-eligible sites and other traditional cultural resources.

Ground disturbance associated with the Juniper Butte Alternative probably would not affect any National Register-eligible archaeological sites and a very low potential exists for disturbance to very few traditional cultural resources compared to Clover Butte.

One potential National Register-eligible archaeological resource could be impacted in the no-drop target areas associated with the Grasmere or Juniper Butte alternatives. Impacts could potentially occur to one cultural resource with archeological, architectural, and traditional components as a result of a proposed bridge replacement that would occur under any action alternative. Impacts to archaeological resources from increased overflight activity and changes in noise levels would be minimal.

Little or no change in impacts is expected on traditional cultural resources from ETI activities. The Air Force intends to work with the Shoshone-Paiute tribal council to develop monitoring procedures for sensitive sites associated with ETI.

Land Use and Transportation

Withdrawal of public lands for an action alternative would change land management status. Approximately 11,864 acres would shift from BLM to Department of Defense with selection of Clover Butte, 9,264 acres with selection of Grasmere, and 11,269 acres with selection of Juniper Butte.

Land use would change in some areas that include military activity. Recreation would be excluded from the 12,000-acre withdrawal site. Grazing would be permitted in all but the 300-acre primary ordnance impact area, the 5-acre no-drop targets, and the one-acre emitter sites. Changes in landholdings, fencing, access, and pipelines are designed to mitigate impacts to ranching operations.

Public comments and agency input dealt with special land use areas, access, potential accumulation of chaff on public lands, and the potential for defensive flares to cause fires. ETI facilities were sited to avoid special land use areas such as WSAs, canyonlands, and other ACECs. No change in management or activity in any special-use area is expected. Proposed road improvements would slightly benefit travel without significantly increasing traffic. Access to withdrawn lands would be

managed by the Air Force. Chaff is released as bundles of hair-like strands and very rarely accumulates on the ground. Release of defensive flares above 2,000 feet above ground level (AGL) in the MOAs reduces fire risk. They burn out after descending about 325 feet after release. A Resource Management Plan would be developed for a selected alternative.

Recreation and Visual Resources Management

In response to public comments, the recreation analysis focuses on outdoor activities such as hiking, hunting, nature viewing, camping, and float boating. Attributes used to assess recreational use include the number of visitors and the activities available in the area from south of the Snake River to the Nevada border. The EIS analysis also uses the BLM's Recreational Opportunity Spectrum.

Visual resources consist of the natural and man-made features of an area that provide its aesthetic qualities. The BLM's visual resource management (VRM) classification system was used to identify the existing visual character of the landscape and define the visual management objectives for the landscape.

Public comments emphasized primitive recreation opportunities, access, and the number of users of the area. Most roads in the area would remain unchanged and accessible. Some roads would be upgraded and travel on these roads could increase, although the destinations of these roads would be sites for Air Force training, rather than recreation sites. Under each alternative, one primitive road would be closed to public use. Depending on weather conditions, each primitive road is not used more than a few times a year. Alternative access routes to public lands exist in each case.

Dispersed sortie-operations throughout most of the airspace would reduce impacts to the visual experience in some areas. Some range components will contrast with the surrounding area. The development of the proposed ETI facilities would not necessarily change the VRM classification. The Air Force's intent is to develop facilities that would not result in a change in the VRM class.

Expansion of the MOA over portions of Big and Little Jacks Creek WSAs is expected to increase noise in these areas and changes in overflights are expected to decrease noise over the majority of the Bruneau-Jarbidge and Owyhee canyonlands.

Socioeconomics

Socioeconomics consists of the social and economic activities associated with the human environment. In Owyhee County the dominant industry is agriculture and ranching. Economic activity includes employment, personal income, and population, as well as housing availability and public services.

The 30 Air Force and contract employees operating equipment during a typical workday would be expected to commute from Mountain Home. Short-term increases in employment would be generated by range construction. Long-term economic effects would be negligible or non-existent for employment, population, housing, public services, and public finance.

Separate agreements are in place that establish altitude and operational restrictions over the Duck Valley Reservation. The reduction in training overflights in most of the airspace and the increase in training overflights in two areas that would result from any action alternative are not expected to impact the recreation industry. No economic minority would be disproportionately affected by changes in training associated with ETI.

There would be quantifiable and unquantifiable disruptions to the individual ranching operations associated with a selected alternative. The Air Force is committed to compensation in-kind to make affected grazing permittees operationally functional on a comparable basis as presently exists.

The economic consequences of ETI on the regional agricultural industry were calculated based on a total loss of approximately 1,000 acres of grazing land. This would result in a total regional reduction of approximately $4,000 in annual agricultural business activity. This total represents the sum of all economic impacts to all agricultural industries associated with grazing, including trucking, feed, equipment, and veterinary medicine.

How Was the Preferred Alternative Identified?

Each action alternative achieves ETI operational goals. The differences among the action alternatives were identified during the NEPA process. Recommendation of a preferred alternative followed review of the environmental technical results, comments received from the public, input from agencies, and information provided by the Shoshone-Paiute Tribes.

The process for recommending a preferred alternative from among the three action alternatives consisted of a two-part screening. A coarse screening was conducted, followed by a fine screening.

Step 1: Coarse Screening. The coarse screening reviewed the Draft EIS and comments to see if it were possible to differentiate the overall potential for environment impacts among the alternatives. An analysis of the Draft EIS, public comments, and agency input demonstrated that Alternative C, Grasmere, was not environmentally preferable.

Grasmere has the greatest diversity of biological organisms, density of native vegetation, and density of cultural sites. Specific comments submitted during the public comment period suggested that Alternative C was the least preferred alternative due to its location near the Duck Valley Reservation and its diversity of environmental resources.

Alternative B, Clover Butte, and Alternative D, Juniper Butte, each had the potential for fewer environmental impacts than Alternative C. At this coarse level of consideration, Clover Butte and Juniper Butte had approximately equal potential for being recommended as the preferred alternative.

Step 2: Fine Screening. Clover Butte and Juniper Butte were then addressed in detail to determine the extent to which environmental differences had been identified by the technical analysis, agency input, or public or Shoshone-Paiute comments.

This second level of screening addressed each environmental resource individually and cumulatively to determine if there were environmental discriminators between the two alternatives. Although no dramatic differences were identified either from the Draft EIS analysis or from comments, the detailed interdisciplinary review did reveal the relative environmental differences presented below.

Airspace. Both alternatives include modification of airspace to the north and south of the existing airspace. The eastern boundary of the airspace would need to be extended if Juniper Butte were selected. The additional eastern airspace would not be required if Clover Butte were selected. Therefore, Clover Butte was determined to be environmentally preferable for this resource.

Noise. Noise in most of the airspace is projected to decrease with any of the three action alternatives. The majority of the comments on noise addressed existing Air Force training activities or expansion of the airspace over Jacks Creek. Public and agency comments did not express substantial concern about noise associated with the eastern airspace change. One property owner near Clover Butte expressed opposition to the site because of additional noise in restricted airspace associated with the 12,000-acre site. In addition, Shoshone-Paiute representatives expressed a desire to move training operations as far away from the Duck Valley Reservation as possible. Although Clover Butte and Juniper Butte are approximately equivalent, Juniper Butte was deemed to be marginally environmentally preferable from the perspective of noise.

Safety. Fire safety was an area of public and agency concern. The use of cold spot training ordnance, a fire management plan, and a crew trained for firefighting on the selected range would result in low fire risk for any alternative. The 12,000 acres of land proposed to be withdrawn for Juniper Butte is bordered on the west by Three Creek-Clover Creek Road and on the east by the East Fork of the Bruneau Canyon. These man-made and natural barriers serve as a fire break if a fire were to occur on Juniper Butte. Clover Butte does not have similar topographical features proximate to the proposed withdrawal area. This makes Juniper Butte environmentally preferable from the perspective of safety.

Hazardous Wastes, Earth Resources, Water Resources, and Air Quality. No substantive differences were identified between the alternatives during the screening.

Cultural Resources. The density of cultural resources is lower at Juniper Butte than at Clover Butte. Juniper Butte was determined to be environmentally preferable for this resource, based upon field surveys conducted by the Air Force and BLM, and public comments and agency input.

Recreation and Visual Resources. Special land use areas have been identified along the main Jarbidge and Bruneau rivers. Clover Butte is closer to these areas than Juniper Butte. Juniper Butte is closer to the East Fork of the Bruneau Canyon which is not a primary recreational site, and Air Force facilities would be set back from the canyon. From an environmental perspective, Juniper Butte was determined to be marginally preferable for these

resources.

Land Use/Transportation. Clover Butte disrupts two ranching operations and Juniper Butte, one. Juniper Butte requires relocation of one road along the East Fork of the Bruneau Canyon. All other transportation effects are essentially the same for both alternatives. Land Use/Transportation does not discriminate between the two alternatives.

Socioeconomics/Ranching. The two alternatives have no regional economic differences. Ranching operations on the two sites have some differences. Two ranchers would be affected if Clover Butte were selected, and a main water line is located within the 12,000-acre area proposed to be withdrawn. Relocation of the water line at Clover Butte could disturb approximately 8 to 10 miles of soil and vegetation. One rancher would be affected by selection of Juniper Butte, and a spur water line on that property would need to be relocated. Less native vegetation would be disturbed by the relocation than at Clover Butte. Location of fencing to ensure access for ranching operations would be easier at Juniper Butte than at Clover Butte. Juniper Butte was determined to be environmentally preferable from the perspective of socioeconomics and ranching.

Biological Resources. Clover Butte has the potential to indirectly impact up to 4,197 acres of native sagebrush habitat and 1.2 acres of wetlands. Juniper Butte has the potential to indirectly impact 1,875 acres of native vegetation, of which 840 acres consists of sagebrush habitat, and no wetlands.

Neither site has any listed threatened or endangered species. Juniper Butte will impact approximately 7.3 acres of slick spot peppergrass habitat, which is a BLM-sensitive species. Mitigation measures to protect significant populations of slick spot peppergrass on withdrawn lands include protective fencing and participation in interagency programs to propagate the species. Contingent on the availability of funds, the Air Force and BLM would test procedures to reestablish slick spot peppergrass on suitable habitat within the remaining acreage of the 12,000-acre withdrawal. Relocation of the main water line, noted in Socioeconomics above, would have the potential for greater disturbance of wildlife habitat at the Clover Butte Alternative.

Neither alternative stands out dramatically as environmentally preferable from a biological perspective. The greater diversity of native vegetation and wildlife habitat at Clover Butte creates different potential impacts from the greater disruption of a sensitive species at Juniper Butte. If mitigations adopted at Juniper Butte protect sensitive species, Juniper Butte would be marginally preferable from the perspective of biological resources.

The Preferred Alternative

All three action alternatives meet Air Force operational goals for enhanced training in Idaho. Based upon analysis in the Draft EIS, agency input, and public and Shoshone-Paiute comments, Clover Butte and Juniper Butte were deemed to be preferable to the Grasmere Alternative. In addition, Juniper Butte can achieve all operational requirements associated with ETI with somewhat less potential for environmental impacts than Clover Butte. Juniper Butte, the alternative that was added in response to public comments during the scoping process, has been recommended as the Air Force's preferred alternative.

What Mitigations Are Proposed?

Potential mitigations were identified in two major ways:

- The Air Force's EIAP began to identify mitigation measures at the earliest stages of the project. By incorporating a multidisciplinary approach, which included collaboration with cooperating agencies during the concept development stage of the project, environmental concerns were considered and incorporated into project design. Maintaining this approach through concept design, alternative development, site narrowing, site selection, and resource analysis for each alternative provided the basis for many design and avoidance mitigation measures.
- The Air Force's public outreach initiatives, as part of the EIAP, were successful in establishing coordination and dialogue with resource management agencies and the public. Comments, issues, and concerns expressed in verbal and written comments provided valuable input for additional mitigations.

Mitigation Measures Incorporated into the Project

The following measures were designed into the project to reduce or eliminate potential impacts to one or more resources.

1. The Air Force will continue government-to-government dialogue with the Shoshone-Paiute Tribes in accordance with the Presidential Memorandum (29 April 1994) and ensure the Tribes are granted access to sacred and ceremonial sites in accordance with Executive Order 13007, Indian Sacred Sites.
2. Flares will not be used below 2,000 feet AGL except over SCR exclusive use area. The minimum release altitude at SCR exclusive use area is 700 feet AGL. Flares will continue to be used in MOAs in accordance with the Inter-Department Memorandum of Agreement among Mountain Home AFB and BLM State Offices in Idaho, Nevada, and Oregon, dated 31 March 1993.
3. Fire potential will be reduced by using "cold spot" or "no-spot" training ordnance, no-drop target areas, and on-site fire suppression capabilities.

4. The 366th Wing will ensure contractors use erosion control measures (e.g., water, conveyance, energy dissipation structures) and sediment retention measures (e.g., basins, tarps, barriers) to minimize movement of soil to reduce impacts resulting from wind or water erosion at construction sites.

5. The Air Force will reduce potential affects to wildlife by using eagle-safe utility poles for the above-ground electrical transmission system and wildlife-safe fencing.

6. The Air Force's Military Radar Unit will provide air traffic advisories to civilian aviation transiting the MOAs.

7. Non-explosive training ordnance on the proposed training range will consist of 25-pound BDU-33s or equivalent to minimize the amount of land required and ground disturbance. Used non-explosive training ordnance will be periodically removed from the range.

8. MOA airspace will be adjusted to disperse flight activities and reduce associated noise under most of the airspace.

9. Known critical or crucial habitat for threatened, endangered, or special status species will be avoided to the extent practicable. Specific mitigation will be developed for instances where such habitat cannot be avoided.

10. Range project components will be sited to avoid or minimize potential effects on recreation activities, access, or special land use management areas.

11. Electronic emitter sites will be dispersed to enhance the Air Force's ability to address agency and public seasonal environmental concerns.

12. Range project components will be sited to avoid privately owned lands. The public will be informed of range activities by the placement of signs at all facilities.

13. Road improvements and new road construction will be designed to avoid negative impacts to soil and visual resources.

14. Livestock grazing will be accommodated to the greatest extent practicable on federal lands withdrawn or state lands leased for project facilities.

15. Range facilities will be painted with non-contrasting desert colors to reduce visual impacts.

16. The potential for environmental contamination will be reduced by using double-walled above-ground diesel fuel storage tanks with secondary containment. Hazardous waste accumulation at training sites will be minimized.

17. Existing drainage grade to Clover Creek will be reestablished following bridge replacement.

Mitigation Measures to Address Concerns

The following measures are proposed to address concerns expressed by cooperating agencies, the public, Shoshone-Paiute Tribes, and ranchers during the NEPA process.

19. The 366th Wing will develop a range support agreement with the BLM that will include a fire management plan for ETI.

20. The Air Force will work with the Shoshone-Paiute Tribes and BLM to develop monitoring procedures to protect sensitive cultural resources in the vicinity of ETI range components.

21. Military aircraft will be restricted to above 10,000 feet mean sea level, approximately 5,000 feet AGL over the Little Jacks Creek WSA on Friday through Monday during the months of May and June of each year. This voluntary flight restriction will be observed absent compelling national security circumstances, military contingencies, or hostilities.

22. The Air Force, BLM, and the State of Idaho will meet at least semiannually in accordance with a Memorandum of Agreement developed to address the needs and expectation of managers and users of resources in southwest Idaho.

23. The training airspace controlled by Mountain Home AFB will be closed to military training activities except for transiting aircraft during weekends associated with Memorial Day, Labor Day, and the 4th of July holidays. This voluntary flight restriction will continue in place absent compelling national security circumstances, military contingencies, or hostilities.

24. During the first floating season after the ETI Record of Decision (ROD), the Air Force will institute a two-week flight restriction during the optimum floating period over the main Bruneau Canyon north of the confluence of the Jarbidge River to the northern edge of the airspace. Low-altitude sorties below 5,000 feet AGL will only cross perpendicular to the canyon with no parallel flights within one mile of the canyon. Parallel flights would be above 5,000 feet AGL if within one mile of the canyon. The optimum floating season and modifications to restrictions for subsequent years will be determined through consultation with the BLM.

25. The Air Force will train emitter site crew members to identify sage grouse and raptors. The individuals will be instructed to inspect ETI emitter sites for the presence of the birds before use. The Air Force will have a biologist inspect ETI emitter sites at critical times of the year and recommend when certain sites will be available or unavailable for use. Specific procedures for training emitter site crew members and inspecting ETI emitter sites will be based on consultation with the Idaho Department of Fish and Game (IDFG) and the BLM.

26. The Air Force will consult with the IDFG and BLM annually to determine critical California bighorn sheep lambing areas, lambing periods, and avoidance criteria in the Owyhee canyonlands. The 366th Wing is prepared to avoid lambing areas in specific locations throughout the training airspace, during critical lambing periods, absent compelling national security circumstances, military contingencies, or hostilities. Information from ongoing studies will be provided for use in the consultation.

27. The Air Force will supplement the IDFG annual survey in 1998 to determine baseline populations for sage grouse and California bighorn sheep in areas where there are ground and airspace changes as a result of ETI.

28. The Air Force, BLM, and the State of Idaho agree that the Air Force will work collaboratively with BLM, the State of Idaho, and appropriate sage grouse working groups established according to the IDFG *Idaho Sage Grouse Management Plan* (August, 1997).

29. The 366th Wing will publicize to civilian aviation and other interested individuals, via telephone and the internet, the airspace schedule of the MOAs controlled by Mountain Home AFB.

30. The Air Force will execute an Interagency Support Agreement with Owyhee County and the Three Creek Good Roads Highway District for use and maintenance of specific roads associated with range operations.

31. The 366th Wing will ensure that transient training aircrews are informed of mitigation measures contained in this EIS and agreed to during semiannual meetings with the BLM and the State of Idaho.

Mitigation Measures to Minimize Defined Impacts

The following measures are to be implemented as part of the environmental process to minimize the environmental consequences of siting project components in areas or settings known to contain environmental or cultural resources that could be significantly affected.

32. The Air Force will provide in-kind compensation to ranching operations for disruption to and loss of grazing on withdrawn acreage. This will consist of grazing permits or a combination of grazing permits and cash, fencing the lands associated with the new permits, extending existing water pipelines onto the lands associated with the new permits, and constructing a less than one-acre above-ground water reservoir in the corner of the withdrawn lands and associated with a water pipeline, for Alternative B or D. Should the Air Force decide to outlease all or part of the withdrawn land for grazing, each existing permit holder would have first right of refusal.

33. The 366th Wing will conduct construction activities so as to minimize the loss of slick spot peppergrass, a BLM-sensitive species. Measures will be taken to protect significant populations on withdrawn lands, participate in interagency ecosystem program goals designed to propagate and protect the species (e.g., establish additional plant groups on suitable slick spot habitats), and facilitate increased knowledge of the species by providing outside agency access to the protected habitat. Contingent on the availability of funds, the Air Force and BLM would test procedures to reestablish slick spot peppergrass on suitable habitat that could be impacted within the 12,000-acre withdrawal area during ETI construction or operation.

34. Prior to bridge reconstruction at Clover

Creek crossing, the Air Force will comply with Section 106 of the National Historic Preservation Act and consult with the State Historic Preservation Officer and the Shoshone-Paiute Tribes to identify ways to reduce adverse effects to cultural resources at Clover Creek Crossing.

35. The Air Force will conduct site-specific surveys for spotted frogs, northern leopard frogs, and western toads at Clover Creek crossing; if these species are found, bridge design will be modified to the extent practicable to minimize loss of amphibian breeding habitat. Construction of the dam at Clover Creek crossing will take place in the autumn when potential impacts to amphibian populations will be lowest.

What Will Ensure That the Air Force Will Continue to Balance Readiness Training with the Environment and Traditional Land Uses?

The Air Force is committed to continue to collaborate with the BLM and the State of Idaho to address the needs and expectations of those who manage and use the resources of southwest Idaho. Representatives from the three agencies will meet semiannually to review mitigation measures included in the ETI ROD and make adjustments as needed to minimize environmental impacts. Specific details will be contained in a Memorandum of Agreement among these agencies. This agreement and the interagency collaboration it fosters will be designed to:

- Maintain values inherent in Owyhee County for ranching, recreational opportunities, and traditional resources.
- Promote multiple use of public lands in a safe manner.
- Minimize impacts to the environment while providing opportunities for realistic aircrew training.
- Maximize opportunities for seasonal adjustments to training activities in order to accommodate multiple use of public lands.
- Make effective and efficient use of public funds and agency resources.
- Utilize an ecosystem approach to planning and managing public lands.

In addition to the proposed Memorandum of Agreement, the Air Force will continue government-to-government collaboration and cooperation with the Shoshone-Paiute Tribes.