Expeditionary Readiness Training (ExpeRT) Course Expansion
Final Environmental Assessment

Creech Air Force Base
June 2006

ACRONYMS AND ABBREVIATIONS

ACC	Air Combat Command
AEF	Air and Space Expeditionary Force
AETC	Air Education and Training Command
AFB	Air Force Base
AFI	Air Force Instruction
AFMC	Air Force Materiel Command
AIRFA	American Indian Religious Freedom Act
AMC	Air Mobility Command
ANG	Air National Guard
ARPA	Archaeological Resources Protection Act
ATC	Air Traffic Control tower
BAQ	Bureau of Air Quality
BMP	Best Management Practices
BO	Biological Opinion
BRAC	Base Closure and Realignment
CAA	Clean Air Act
CAAA	Clean Air Act Amendments
CATEX	Categorical Exclusion
CATM	Combat Arms Training and Maintenance
CCHD	Clark County Health Department
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CO	Carbon Monoxide
CRMP	Cultural Resources Management Plan
CWA	Clean Water Act
DAQEM	Department of Air Quality and Environmental Management
DNWR	Desert National Wildlife Range
DoD	Department of Defense
DU	Depleted Uranium
EA	Environmental Assessment
EIAP	Environmental Impact Analysis Process
EO	Executive Order
EOD	Explosive Ordnance Disposal
ESA	Endangered Species Act
ExpeRT	Expeditionary Readiness Training
FONSI	Finding of No Significant Impact
FWPCA	Federal Water Pollution Control Act
FY	Fiscal Year
gpy	gallons per year
HAZMAT	Hazardous Materials
HMMWV	High Mobility Multipurpose Wheeled Vehicle
HQ ACC	Headquarters Air Combat Command
HTTC	High Technology Training Complex
IICEP	Intergovernmental and Interagency Coordination for Environmental Planning
MAJCOM	Major Command
MCL	Maximum Contaminant Level
MOUT	Military Operations in Urban Terrain
NAAQS	National Ambient Air Quality Standards
NAC	Nevada Administrative Code
NAFB	Nellis Air Force Base
NAGPRA	Native American Graves Protection and Repatriation Act
National Register	National Register of Historic Places
NDEP	Nevada Division of Environmental Protection
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NO_2	Nitrogen Dioxide
NO_x	Nitrogen Oxide
NTI	Nevada Training Initiative
NTTR	Nevada Test and Training Range
O_3	Ozone
Pb	Lead
P.L.	Public Law
PM_{10}	Particulate Matter Less than 10 Microns
PSD	Prevention of Significant Deterioration
RCRA	Resource Conservation and Recovery Act
RTA	Regional Training Area
RTC	Regional Training Center
SDCC	Southern Desert Correctional Center
SDWA	Safe Drinking Water Act
SF	Security Forces
SFA	Silver Flag Alpha
SHPO	State Historic Preservation Office(r)
SIP	State Implementation Plan
SO_2	Sulfur Dioxide
SO_x	Sulfur Oxide
SPY	Students per year
SWPPP	Storm Water Pollution Prevention Plan
TSCA	Toxic Substances Control Act
USACE	United States Army Corps of Engineers
USCB	United States Census Bureau
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
VOC	Volatile Organic Compound

FINDING OF NO SIGNIFICANT IMPACT

1.0 NAME OF THE PROPOSED ACTION

Expeditionary Readiness Training Course Expansion (ExpeRT)

2.0 DESCRIPTION OF THE PROPOSED ACTION AND NO ACTION ALTERNATIVE

The U.S. Air Force (Air Force), Headquarters Air Combat Command (ACC) proposes to increase the number of Security Forces personnel trained at the Regional Training Center (RTC) at Silver Flag Alpha and Creech Air Force Base (AFB), Nevada, from an existing 2,520 to 6,000 students per year (SPY). Implementation of the proposal is a four-phase process that gradually increases the student throughput while building infrastructure and facilities.

Under the proposed action, the Air Force would construct academic and laundry/shower/latrine facilities, improve five small-arms training ranges, and upgrade infrastructure items such as septic/sewage, electrical power, and water sources at Silver Flag Alpha on the Nevada Test and Training Range (NTTR). While training and lodging would also continue to increase at Creech AFB, no construction or upgrades would be required at that location. The proposed action would permit training for up to 500 students per class, and would be implemented in four phases:

- Phase 1 (Summer 2006) – 250 students per ExpeRT class
  (14 classes per year; 3,500 SPY)
- Phase 2 (Fall 2006) – 300 students per ExpeRT class
  (14 classes per year; 4,200 SPY)
- Phase 3 (Spring 2007) – 360 students per ExpeRT class
  (14 classes per year; 5,040 SPY)
- Phase 4 (Winter 2008) – 500 students per ExpeRT class
  (12 classes per year; 6,000 SPY)

Under the no-action alternative, the Air Force would not increase student throughput nor make facility or infrastructure improvements to the current RTC facilities at Silver Flag Alpha. The RTC could continue to accommodate an average of only 210 students per class. If this alternative were chosen, a viable rotation schedule to support the Air and Space Expeditionary Force concept would not be met nor would the required number of Security Forces personnel needed to face the current threat be trained.

3.0 SUMMARY OF ENVIRONMENTAL CONSEQUENCES

The Environmental Assessment provides an analysis of the potential environmental impacts resulting from implementing the proposed action. The Air Force assessed numerous resources that, in accordance with Council on Environmental Quality (CEQ) regulations, warranted no further examination. Those resources reviewed but not analyzed in detail in this assessment include: airspace management and use; noise; socioeconomics; environmental justice and protection of children; land management and use, recreation, and visual resources; health and safety; hazardous materials and waste; and transportation.

Four resource areas were evaluated in detail to identify potential environmental consequences: air quality; soils and water resources; biological resources; and cultural resources. As summarized below, implementation of the proposed action or the alternatives would not result in any significant impacts.

Air Quality. There would be no perceptible change to air quality under the proposed action. Emissions during the construction and infrastructure improvement period would not increase by more than 0.57 tons for any one of the five measured criteria pollutants during a given year. These emissions would be temporary in nature and end when the construction and upgrade activities are complete. In general, fugitive dust and combustive emissions would produce localized, short-term, elevated air pollutant concentrations which would not result in any long-term impacts on the air quality in Clark County where Silver Flag Alpha is located. Because Silver Flag Alpha is located in a nonattainment area for three of the criteria pollutants (particulate matter [PM_{10}], carbon monoxide [CO], and 8-hour ozone), emissions from construction and infrastructure improvement projects were cumulatively measured to ensure that no criteria pollutant *de minimus* thresholds were exceeded in any given year. No *de minimus* levels would be exceeded under this proposal. The temporary contribution of any of the five measured criteria pollutants of less than 0.001 percent to area emissions would not represent a regional significance. Therefore, this proposed action would not constitute a significant impact and would conform to regional standards.

Soils and Water Resources. Potential impacts to soils would be negligible from the proposed action, differing little from existing conditions. No surface waters are located near the proposed action construction, improvements, or upgrades. Standard best management practices (e.g., watering, erosion control, and sediment retention measures and silt fencing) would be employed to reduce the chance of sediment transport.

The impact to groundwater recharge would be minimal given the low average annual precipitation and the lack of year-round surface waters in the proposed locations. Infiltration historically has been a minimal source of recharge. Therefore, no impacts would occur to water resources if the proposed action were implemented.

Biological Resources. Proposed projects would occur in previously developed or disturbed areas resulting in insignificant impacts to biological resources. Potential impacts to wildlife from construction noise would be short-term and not be expected to affect wildlife that are already exposed to flight activities. Road improvements and target placement could adversely impact wildlife habitats although the impacts would not be significant since all of the construction, upgrades, and/or improvements occur in predominantly disturbed habitats. No adverse impacts to rare plant species would be expected. If during any ground disturbing activity in Silver Flag Alpha, the presence of desert tortoise is observed, the Air Force would comply with the requirements of the 2003 USFWS Biological Opinion for the protection of the species. Arroyos and washes, which may be considered jurisdictional waters, may be impacted; evaluation and identification of these jurisdictional waters would occur prior to construction and upgrade activities and a Section 404 permit would be obtained if jurisdictional waters are identified. Under the proposed action, no significant impacts to biological resources would occur.

Cultural Resources. Under the proposed action facilities would be built, infrastructure upgraded, and a road improved. There are no National Register-eligible sites associated with the proposed action and no traditional cultural properties are known to occur. The Air Force will implement the procedures found in 36 CFR 800 for all projects described in this EA. These procedures would include (as appropriate) mitigation, consultation with tribal representatives, and review by the State Historic Preservation Officer and the Advisory Council for Historic Preservation prior to implementation. For the most part, construction would take place on existing improved or previously disturbed areas; however, undisturbed areas would be examined by a professional archaeologist prior to construction.

4.0 CONCLUSION

On the basis of the Environmental Assessment, which is hereby incorporated by reference, I find no significant impact to human health or the natural environment would be expected from implementation of the proposed action. Therefore, issuance of this Finding of No Significant Impact is warranted, and preparation of an Environmental Impact Statement, pursuant to the National Environmental Policy Act of 1969 (Public Law 91-190) is not required.

MARYANN H. CHISHOLM
Colonel, USAF
Chief, Programs Division

20 Jun 06
Date

EXPEDITIONARY READINESS TRAINING COURSE EXPANSION
FINAL ENVIRONMENTAL ASSESSMENT (EA)

Responsible Agency: United States Air Force, Air Combat Command

Proposed Action: The Air Force proposes to expand the Expeditionary Readiness Training (ExpeRT) course student capacity at the Security Forces (SF) Regional Training Center (RTC) based at the Nevada Test and Training Range (NTTR), Nevada. Currently, components of the ExpeRT course occur at Silver Flag Alpha on NTTR and at nearby Creech Air Force Base (AFB). Under the proposed action, the Air Force would increase the number of students trained by the SF from an existing 2,520 students per year (SPY) to 6,000 SPY by the winter of fiscal year 2008. The proposed action would also include constructing academic facilities, upgrading five small-arms training ranges, and improving infrastructure at Silver Flag Alpha in the South Range of NTTR.

Written comments and inquiries regarding this document should be directed to:

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In addition, the document can be viewed on, and downloaded from, the World Wide Web at http://www.nellis.af.mil/pa.htm.

Designation: Final Environmental Assessment

Abstract: The role of U.S. military forces is evolving to reflect the concern which Congress expressed that U.S. military services were not sufficiently emphasizing urban warfare training. This urban warfare training is particularly essential to SF. In addition to defending airbase facilities during conflicts, they are now charged with force protection, humanitarian, and anti-terrorism actions as well. The purpose of the expanded ExpeRT course capacity is to ensure the Air Force can adequately train sufficient numbers of SF personnel prior to deployment to combat areas, and to sustain their continuation training needs in an environment that simulates realistic and current combat conditions. To accomplish this, the proposed action would implement a four-phase plan to incrementally increase training at the current SF RTC at Silver Flag Alpha and Creech AFB. To support this increase, the Air Force proposes to provide infrastructure improvements (leach field, water storage tank, and communication, water, and power lines) to the existing tent complex, Military Operations in Urban Terrain (MOUT) training site, and other facilities; upgrade four existing small arms training ranges; construct two academic facilities; and provide for a Convoy Combat Training route all on Silver Flag Alpha. Although training would continue to occur at both Creech AFB and Silver Flag Alpha, this proposed action does not call for any new construction or upgrades of facilities at Creech AFB associated with SF training. Under the no action alternative, the Air Force would not increase student throughput for the ExpeRT course, nor make changes to the current RTC at Silver Flag Alpha. This EA analyzes the potential environmental consequences of the proposed action and no-action alternative and are addressed for: air quality, soils and water resources, biological resources, and cultural resources. Findings indicate that the proposed action would not adversely impact any resource area. The proposed action would increase water use and wastewater discharge; however, the impact would not be adverse due to the available water allotment. There are no significant cumulative impacts from the interaction of the ExpeRT course expansion and other past, present, or reasonably foreseeable actions.

Expeditionary Readiness Training (ExpeRT) Course Expansion Final Environmental Assessment

Creech Air Force Base

June 2006

EXECUTIVE SUMMARY

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This Environmental Assessment (EA) analyzes the potential environmental consequences resulting from the United States Air Force (Air Force) proposal to expand Expeditionary Readiness Training (ExpeRT) course student capacity at the Security Forces (SF) Regional Training Center (RTC) at Nevada Test and Training Range (NTTR), Nevada. Currently, components of the ExpeRT course occur at Silver Flag Alpha on NTTR and at nearby Creech Air Force Base (AFB). Under the proposed action, the Air Force would increase the number of students trained by the SF from an existing 2,520 students per year (SPY) to 6,000 SPY at the end of the fourth phase of implementation in the winter of 2008. To support this increase, the Air Force proposes to provide infrastructure improvements (a laundry/shower/latrine, leach field, water storage tanks, and communication, water, and power lines) to the existing tent complex, Military Operations in Urban Terrain (MOUT) training site, and other facilities; upgrade five existing small-arms training ranges; construct two academic facilities; and provide for a Convoy Combat Training route on existing road A-1—all on Silver Flag Alpha. Although training would continue to occur at both Creech AFB and Silver Flag Alpha, this proposed action does not call for any new construction or upgrades of facilities at Creech AFB associated with SF training.

This EA has been prepared by the Air Force, Headquarters Air Combat Command (HQ ACC) in accordance with the requirements of the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations, and AFI 32-7061 the Environmental Impact Analysis Process (EIAP), as promulgated in Title 32 of the Code of Federal Regulations (CFR) Part 989.

PURPOSE AND NEED FOR EXPANDED EXPEDITIONARY READINESS TRAINING

Congress, in the National Defense Authorization Act (Fiscal Year [FY] 2000), expressed its concern that U.S. military services have not sufficiently emphasized urban warfare training. Especially with ongoing operations in Iraq and Afghanistan, meeting operational requirements for missions in these urban environments present a set of challenges to the Air Force that need to be addressed through training in realistic, variable contexts. By investing in better and more appropriate training facilities, technologies, and education the Air Force can generate substantial advantages over enemies in an urban terrain while avoiding civilian loss of life, damage to humanitarian missions, (e.g., medical and aid facilities and religious centers), and destruction of private property. In addition, SF need to be prepared to respond to terrorist or small commando assaults on airbase environments with little or no collateral damage or civilian loss of life in both wartime and peacetime missions.

The purpose of the expanded ExpeRT course capacity is to ensure the Air Force can adequately train sufficient numbers of SF personnel prior to deployment to combat areas, and to sustain their continuation training needs in an environment that simulates realistic and current combat conditions. With current deployments, demands on personnel, and evolving tactics, sufficient SF forces from all Air Force major

commands must be able to receive appropriate quality training. To accomplish these goals, the proposed action would implement a phased plan to incrementally increase training at the current SF Regional Training Center at Silver Flag Alpha and Creech AFB. This plan would support an increase from the existing annual student throughput of 2,520 SPY to a potential annual capacity of 6,000 SPY. Given the existing facilities and infrastructure, the current course capacity at Silver Flag Alpha is inadequate to meet the robust SF requirements.

A need exists to expand ExpeRT student throughput. SF personnel require continuation training to maintain peak combat efficiency skills. These skills erode and decay without appropriate use. Air Force Instruction (AFI) 36-2225, *Security Forces Training and Standardization Evaluation Programs*, requires SF continuation training every 3 years. This is essential training, building on the skills received during technical training.

The ExpeRT course at the RTC was established in April 2001. Currently, each 16-day course supports up to 210 students, and the course is held 12 times per year (2,520 students annually). Available amounts of training for SF are inadequate to meet current and future requirements. In order to respond to significant changes in the focus and magnitude of threats to Air Force personnel worldwide, training opportunities for SF personnel need to be expanded. Such an expansion would provide for continuation training to maintain perishable combat skills to support the Air Force's Integrated Base Defense capability and other missions.

Existing facilities at Silver Flag Alpha represent the only site for training SF currently available in Air Combat Command (ACC). However, the training area and infrastructure supporting SF at Silver Flag Alpha are inadequate for the number of SF personnel that require the training. The existing Silver Flag Alpha site needs more classroom facilities; water, waste, and power infrastructure upgrades; improved and expanded firing ranges; and a convoy combat training route to accommodate all the SF trainees that must receive the necessary training.

The currently ExpeRT course offers insufficient capacity to meet the requirements of ACC and other partnering major commands. The proposed action, providing for increased capacity, would ensure appropriate pre-deployment SF training and support the AEF concept and ongoing operations worldwide.

PROPOSED ACTION AND NO-ACTION ALTERNATIVE

The Air Force determined that expanded student capacity for the ExpeRT training course was needed. To meet this goal, the proposed action would implement a four-phase expansion of infrastructure and facilities to support increased student participation.

Under the proposed action, the Air Force would construct academic facilities, upgrade small-arms training ranges, and improve infrastructure items such as septic/sewage, electrical power, and water sources at Silver Flag Alpha. While training and lodging would also continue and increase at Creech AFB, no construction or upgrades would be required at that location. The proposed action would permit training for up to 500 students per class, and would be implemented in four phases:

- Phase 1 (Summer 2006) – 250 students per ExpeRT class
  (14 classes per year; 3,500 SPY)
- Phase 2 (Fall 2006) – 300 students per ExpeRT class
  (14 classes per year; 4,200 SPY)
- Phase 3 (Spring 2007) – 360 students per ExpeRT class
  (14 classes per year; 5,040 SPY)
- Phase 4 (Winter 2008) – 500 students per ExpeRT class
  (12 classes per year; 6,000 SPY)

Under the no-action alternative, the Air Force would not increase student throughput for the course, nor make changes to the current RTC at Silver Flag Alpha. The RTC could continue to accommodate an average of 210 students per class. This would not allow SF personnel to maintain the critical skills necessary to support the AEF concept and provide the required number of SF personnel needed to face the current threat.

MITIGATION MEASURES

In accordance with 32 CFR 989.22, Nellis AFB must indicate if any mitigation measures would be needed to implement the proposed action or any alternative selected as the preferred alternative under this environmental assessment. For purposes of this EA (to increase the student throughput at Silver Flag Alpha, construct two academic facilities, improve existing ranges, install a Convoy Combat Training route, and improve infrastructure to the existing Military Operations in an Urban Terrain [MOUT] facilities and tent city), no mitigation measures would be needed to arrive at a finding of no significant impact if the proposed action were selected for implementation.

SUMMARY OF POTENTIAL ENVIRONMENTAL IMPACTS

According to the analysis in this EA, implementation of the proposed action or alternatives would not result in significant impacts in any resource category. Implementing the proposed action would not adversely impact existing conditions at Silver Flag Alpha.

Air Quality. There would be no perceptible change to air quality under the proposed action. Emissions during the construction and infrastructure period would not increase by more than 0.57 tons for any one of the five criteria pollutants measured during a given year. These emissions would be temporary in nature

and end when the construction and upgrade activities are complete. In general, fugitive dust and combustive emissions would produce localized, short-term, elevated air pollutant concentrations which would not result in any long-term impacts on the air quality in Clark County where Silver Flag Alpha is located. Because Silver Flag Alpha is located in a nonattainment area for three out of the five measured criteria pollutants (particulate matter [PM_{10}], carbon monoxide [CO], and 8-hour ozone [as measured by its precursor of volatile organic compounds and nitrogen oxides]), emissions from construction and infrastructure improvement projects were cumulatively measured to ensure that no criteria pollutant *de minimus* thresholds were exceeded in any given year. No *de minimus* levels would be exceeded under this proposal. The temporary contribution of any of the five measured criteria pollutants of less than 0.001 percent to area emissions would not represent a regional significance. Therefore, this proposed action would conform to regional standards.

Soils and Water Resources. Potential impacts to soils would be negligible from the proposed action, differing little from existing conditions. No surface waters are located near the proposed action construction, improvements, or upgrades. Standard best management practices (e.g., watering, erosion control, and sediment retention measures and silt fencing) would be employed to reduce the chance of sediment transport.

The impact to groundwater recharge would be minimal given the low average annual precipitation and the lack of year-round surface waters in the proposed locations. Infiltration historically has been a minimal source of recharge. Therefore, no impacts would occur to water resources if the proposed action were implemented.

Biological Resources. Proposed projects would occur in previously developed or disturbed areas resulting in insignificant impacts to biological resources. Potential impacts to wildlife from construction noise would be short-term and not be expected to affect wildlife that are already exposed to flight activities. All of the construction, upgrades, and/or improvements occur in predominantly disturbed habitats; no adverse impacts to rare plant species would be expected. If during any ground disturbing activity in Silver Flag Alpha, the presence of desert tortoise is observed, the Air Force would comply with the requirements of the 2003 USFWS Biological Opinion for the protection of the species. Arroyos and washes, which may be considered jurisdictional waters, may be impacted; evaluation and identification of these jurisdictional waters would occur prior to construction and upgrade activities and a Section 404 permit would be obtained if jurisdictional waters are identified. Under the proposed action, no adverse impacts to biological resources would occur.

Cultural Resources. Under the proposed action facilities would be built, infrastructure upgraded, and a road improved. There are no National Register-eligible sites associated with the proposed action and no traditional cultural properties are known to occur. The Air Force will implement the procedures found in 36 CFR 800 for all projects described in this EA. These procedures would include (as appropriate)

mitigation, consultation with tribal representatives, and review by the State Historic Preservation Officer and the Advisory Council for Historic Preservation prior to implementation. For the most part, construction would take place on existing improved or previously disturbed areas; however, undisturbed areas would be examined by a professional archaeologist prior to construction.

TABLE OF CONTENTS

TABLE OF CONTENTS

EXECUTIVE SUMMARY ES-1

1.0 PURPOSE AND NEED FOR THE PROPOSED ACTION 1-1
1.1 INTRODUCTION 1-1
1.2 LOCATION OF THE PROPOSED ACTION 1-3
1.3 BACKGROUND 1-3
1.3.1 Security Forces Mission 1-3
1.3.2 Previous Environmental Documentation 1-4
1.4 PURPOSE FOR EXPANDED EXPERT COURSE CAPACITY 1-5
1.5 NEED FOR THE EXPANDED EXPERT COURSE CAPACITY 1-5

2.0 DESCRIPTION OF THE PROPOSED ACTION AND NO-ACTION ALTERNATIVE ... 2-1
2.1 ALTERNATIVE IDENFICATION PROCESS 2-1
2.2 PROPOSED ACTION 2-2
2.3 NO-ACTION ALTERNATIVE 2-6
2.4 ENVIRONMENTAL IMPACT ANALYSIS PROCESS 2-6
2.5 OTHER REGULATORY AND PERMIT REQUIREMENTS 2-7
2.6 MITIGATION MEASURES 2-9
2.7 SUMMARY OF POTENTIAL ENVIRONMENTAL IMPACTS 2-9

3.0 DESCRIPTION OF THE AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES 3-1
3.1 ANALYSIS APPROACH 3-1
3.2 AIR QUALITY 3-5
3.2.1 Affected Environment 3-6
3.2.2 Environmental Consequences 3-7
3.3 SOILS AND WATER RESOURCES 3-9
3.3.1 Affected Environment 3-10
3.3.2 Environmental Consequences 3-11
3.4 BIOLOGICAL RESOURCES 3-12
3.4.1 Affected Environment 3-13
3.4.2 Environmental Consequences 3-20
3.5 CULTURAL RESOURCES 3-21
3.5.1 Affected Environment 3-22
3.5.2 Environmental Consequences 3-22

4.0 CUMULATIVE EFFECTS AND IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES 4-1
4.1 CUMULATIVE EFFECTS 4-1
4.2 SCOPE OF CUMULATIVE EFFECTS ANALYSIS 4-1
4.3 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES 4-4

5.0 REFERENCES CITED 5-1

6.0 PERSONS AND AGENCIES CONTACTED 6-1

7.0 LIST OF PREPARERS AND CONTRIBUTORS 7-1

APPENDICES

APPENDIX A INTERGOVERNMENT AND INTERAGENCY COORDINATION FOR ENVIRONMENTAL PLANNING CORRESPONDENCE A-1

APPENDIX B AIR QUALITY ANALYSIS B-1

List of Figures

Figure 1-1 Proposed Action Vicinity Map 1-2
Figure 2-1 Proposed Action Facility Map 2-4
Figure 3-1 Desert Tortoise Survey Sites 3-17

List of Tables

Table 2-1 Proposed Facility, Training, and Infrastructure Needs 2-3
Table 2-2 Convoy Combat Training Exercises 2-6
Table 2-3 Other Major Environmental Statutes, Regulations, and Executive Orders Applicable to Federal Projects 2-7
Table 3-1 Resources Considered in the Environmental Impact Analysis Process 3-2
Table 3-2 Baseline Air Emissions (tons/year) 3-6
Table 3-3 Projected Pollutant Emissions (tons/year) 3-8

CHAPTER 1

PURPOSE AND NEED FOR THE PROPOSED ACTION

CHAPTER 1
PURPOSE AND NEED FOR THE PROPOSED ACTION

1.1 INTRODUCTION

The United States Air Force (Air Force) proposes to expand the Expeditionary Readiness Training (ExpeRT) course student capacity at the Security Forces (SF) Regional Training Center (RTC) based at the Nevada Test and Training Range (NTTR), Nevada. Currently, components of the ExpeRT course occur at Silver Flag Alpha on NTTR and at nearby Creech Air Force Base (AFB). Under the proposed action, the Air Force would increase the number of students trained by the SF from an existing 2,520 students per year (SPY) to 5,040 SPY by May 2007 (phase three); a fourth phase would also be implemented if the SF operations tempo increases or if the two regional training centers within the U.S. consolidate. Under this scenario, student throughput would be 6,000 SPY by the winter of 2008. This higher level of operational tempo is evaluated under the proposed action to ensure maximum flexibility for the SF. To support this increase, the Air Force proposes to provide infrastructure improvements (a laundry/shower/latrine facility, leach field, water storage tanks, and communication, water, and power lines) to the existing tent complex, Military Operations in Urban Terrain (MOUT) training site, and other facilities; upgrade five existing training ranges; construct two academic facilities; and provide for a Convoy Combat Training route all on Silver Flag Alpha (Figure 1-1). Although training would continue to occur at both Creech AFB and Silver Flag Alpha, this proposed action does not call for any new construction or upgrades of facilities at Creech AFB associated with SF training.

The Air Force is conducting this analysis to determine the potential environmental impact of the proposed action and no-action alternative. Under the no-action alternative, no student increase would be instituted and neither academic facilities nor infrastructure upgrades would be implemented at Silver Flag Alpha. Other action alternatives were evaluated in previous NEPA documentation; further discussion of these alternatives is presented in sections 1.3 and 2.1.

The Air Force, Headquarters Air Combat Command (HQ ACC) prepared this EA in compliance with the National Environmental Policy Act (NEPA), the Council on Environmental Quality (CEQ) regulations implementing NEPA, Air Force Instruction (AFI) 32-7061 Environmental Impact Analysis Process (EIAP), as promulgated in Title 32 of the Code of Federal Regulations (CFR) Part 989, and other applicable federal and state-delegated environmental legislation.

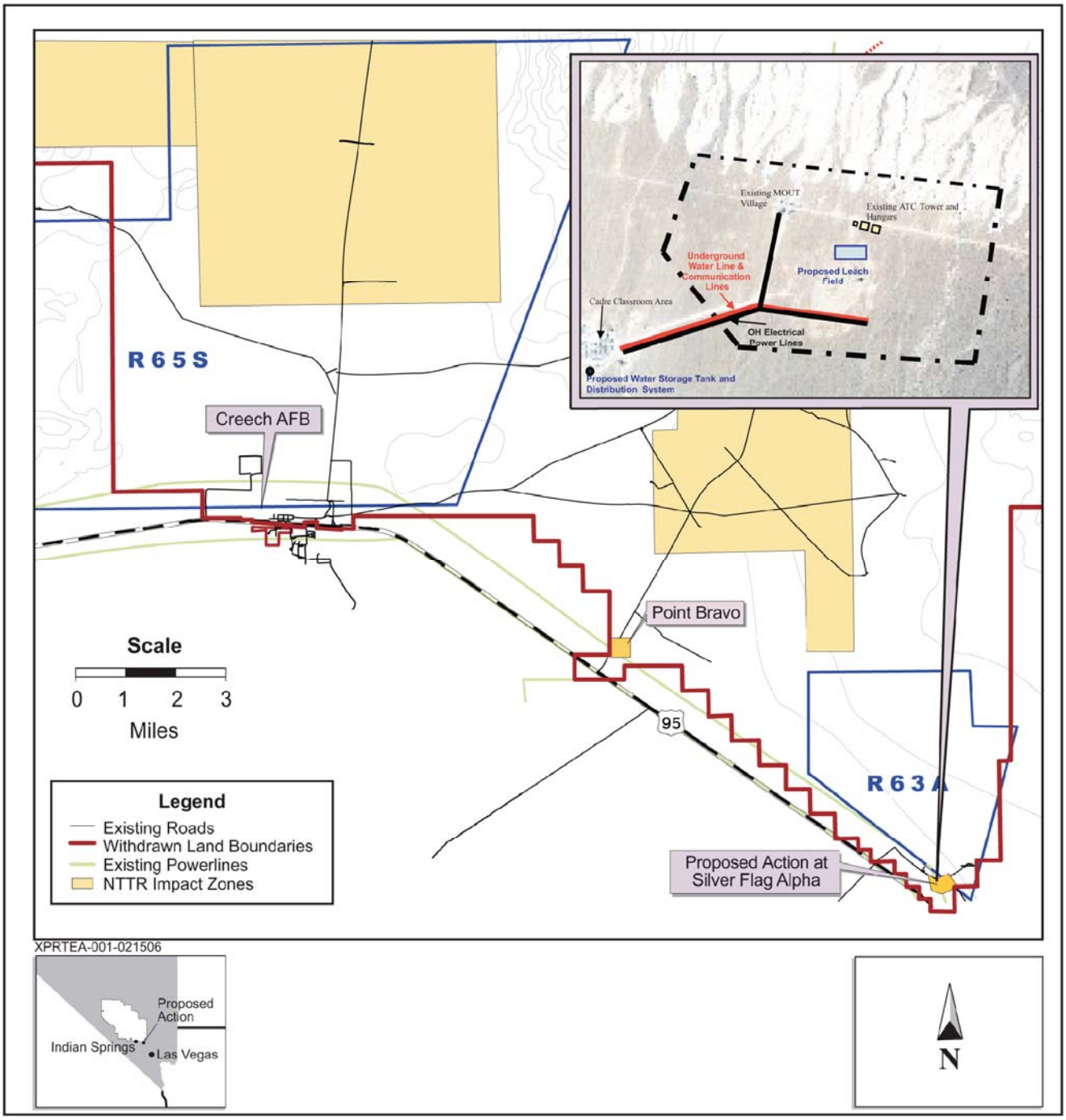

Figure 1-1 Proposed Action Vicinity Map

1.2 LOCATION OF THE PROPOSED ACTION

The proposed action would expand current SF facilities located at Silver Flag Alpha, approximately 12 miles east-southeast of Creech AFB and Indian Springs, Nevada. Silver Flag Alpha is located within NTTR which is composed of approximately 2.9 million acres in southern Nevada. This area was withdrawn from public use as a national test and training area for military equipment and personnel under Public Law (PL) 106-65. NTTR contains two functional areas: the North Range and South Range, both of which are further divided into subranges. Silver Flag Alpha lies on the southern edge of the South Range and is located on the north side of Interstate 95, roughly 33 miles northwest of Las Vegas. The SF RTC supports three main areas: a MOUT site and simulated air base, classrooms, and training ranges. In the northeast, a MOUT site and airbase complex provide realistic warfare training including shoot houses, air traffic control tower, hangar, and numerous other buildings simulating an urban environment. South of this location lies an area that supports classrooms and a tent city (currently being upgraded from a more primitive site to one that supports the ExpeRT students on a more permanent basis). Thirteen firing ranges form the third sector of Silver Flag Alpha. These ranges, which extend west, parallel Interstate 95 for approximately 1 mile and support small arms, machine gun, grenade, and mortar training.

Creech AFB (the administrative site for SF training) is located adjacent to the town of Indian Springs, Nevada, approximately 45 miles northwest of Las Vegas, along Interstate 95. Air Force facilities are found on both the north and south side of the interstate, with the majority of assets located to the north (e.g., runways; hangars; and maintenance, administrative, and operational facilities). While SF administrative duties and some training are carried out at Creech AFB, the base's primary mission is to provide an emergency divert airfield for military aircraft training in NTTR airspace and support the flying operations of the Air Force Thunderbirds, 57th Wing, other Air Force units, Navy, Marine Corps and allied air forces. Creech AFB provides basing for the Predator Unmanned Aerial Vehicle and is home to the 11th, 15th, and 17th Reconnaissance Squadrons flying the Predator M/RQ-1B Remotely Piloted Aircraft.

1.3 BACKGROUND

1.3.1 Security Forces Mission

Since the end of the Cold War and the "monolithic" threat from the Soviet Union, U.S. military forces face new and evolving combat scenarios; that includes the role of Security Forces. SF must maintain a secure environment at airbases by detecting and engaging enemy forces that threaten sustained air operations. Hostile occupation of an air traffic control tower or wing headquarters could effectively terminate aircraft operations and affect the prosecution of missions throughout a theater of operations. SF are charged with the mission of defending and, if necessary, recapturing occupied facilities on airbases.

Typical facilities on an airbase include a runway, control tower, operations building, hangars, fueling facilities, ordnance storage, and streets.

However, SF missions are evolving beyond only defending airbase facilities during conflicts. Their missions have expanded to include force protection, humanitarian, and anti-terrorism actions as well. Their job, as currently found in Iraq and Afghanistan, ensures that airbases and associated facilities are secure and that U.S. and Allied air forces can undertake their combat mission. In addition, SF ensures that supplies are delivered (from aircraft such as the C-17 and C-130s) to areas outside of airbases that are safe and secure, protected from hostile incursions.

1.3.2 Previous Environmental Documentation

The Air Force has evaluated certain aspects of increases in student throughput in two previous environmental assessments: *Regional Training Area (RTA) Expansion, U.S. Air Force 99th Ground Combat Training Flight, Indian Springs Air Force Auxiliary Field* [now renamed Creech AFB] *Final Environmental Assessment* (Nellis AFB 1997) and the *Nevada Training Initiative (NTI) Final Environmental Assessment* (Nellis AFB 2003a), the RTA EA and NTI EA, respectively. The RTA EA evaluated increasing student capacity at both Silver Flag Alpha and Creech AFB to approximately 5,000 students. To do this, the EA evaluated the potential impacts of improving existing facilities at Creech AFB, and on Silver Flag Alpha constructing a more permanent tent city (in an area already supporting a more primitive tent city for Air Force training activities), improving ranges, and upgrading existing rough roads (including road A-1). A Finding of No Significant Impact (FONSI) was issued for all alternatives identified in the EA.

The NTI EA evaluated construction of academic and lodging/dining facilities at Creech AFB at two alternative locations—either side of Interstate 95. No significant impacts were identified for either facility location and a FONSI was signed. In addition, a new dining hall (at Creech AFB) was evaluated as part of the proposal for the *Predator Force Structure Changes at Indian Springs Air Force Auxiliary Field Final Environmental Assessment* (Nellis AFB 2003b). A FONSI was issued for all alternatives. Therefore, the dining facility that is being constructed at Creech AFB could accommodate an increase in SF students if the space was eventually needed and NEPA requirements would have been fulfilled. Because of the level of analysis provided by these previous EAs, Nellis AFB was also able to Categorically Exclude (CATEX) several subsequent construction projects at Silver Flag Alpha.

In aggregate, previous environmental documentation prepared for Silver Flag Alpha, Creech AFB, and SF activities provided substantial coverage of numerous proposed construction projects under NEPA. As such, components of these past proposals can support the current ExpeRT proposed action and be implemented without further NEPA compliance. These actions are incorporated by reference here, and, therefore, not carried forward for further evaluation in this EA.

1.4 PURPOSE AND NEED FOR EXPANDED EXPERT COURSE CAPACITY

Congress, in the National Defense Authorization Act (Fiscal Year [FY] 2000), expressed its concern that U.S. military services have not sufficiently emphasized urban warfare training. With ongoing operations in Iraq and Afghanistan, meeting operational requirements for missions in these urban environments present a set of challenges to the Air Force that need to be addressed through training in realistic, variable contexts. By investing in better and more appropriate training facilities, technologies, and education the Air Force can generate substantial advantages over enemies in an urban terrain while avoiding civilian loss of life, damage to humanitarian missions, (e.g., medical and aid facilities and religious centers), and destruction of private property. In addition, SF need to be prepared to respond to terrorist or small commando assaults on moving convoys with little or no collateral damage or civilian loss of life in both wartime and peacetime missions.

The purpose of the expanded ExpeRT course capacity is to ensure the Air Force can adequately train sufficient numbers of SF personnel prior to deployment to combat areas, and to sustain their continuation training needs in an environment that simulates realistic and current combat conditions. With current deployments, demands on personnel, and evolving tactics, sufficient SF forces from all Air Force major commands must be able to receive appropriate quality training. To accomplish these goals, the proposed action would implement a phased plan to incrementally increase training at the current SF Regional Training Center at Silver Flag Alpha and Creech AFB. This plan would support an increase from the existing annual student throughput of 2,520 SPY to a potential annual capacity of 6,000 SPY. Given the existing facilities and infrastructure, the current course capacity at Silver Flag Alpha is inadequate to meet the robust SF requirements.

1.5 NEED FOR THE EXPANDED EXPERT COURSE CAPACITY

A need exists to expand RTC student output. Security Forces personnel require continuation training to maintain peak combat efficiency skills. These skills erode and decay without appropriate use. Air Force Instruction (AFI) 36-2225, *Security Forces Training and Standardization Evaluation Programs,* requires SF continuation training every 3 years and before each deployment. This is essential training, building on the skills received during technical training.

The ExpeRT course at the RTC was established in April 2001. Currently, each 16-day course supports up to 210 students, and the course is held 12 times per year (2,520 students annually). Available amounts of training for SF are inadequate to meet current and future requirements. In order to respond to significant changes in the focus and magnitude of threats to Air Force personnel worldwide, training opportunities for SF personnel need to be expanded. Such an expansion would provide for continuation training to maintain perishable combat skills to support the Air Force's Integrated Base Defense capability and other missions.

Existing facilities at Silver Flag Alpha represent the only site for SF pre-deployment training currently available in Air Combat Command (ACC). However, the training area and infrastructure supporting SF at Silver Flag Alpha are inadequate for the number of SF personnel that require the training. The existing Silver Flag Alpha site needs more classroom facilities; water, waste, and power infrastructure upgrades; improved and expanded firing ranges; and a convoy combat training route to accommodate all the SF trainees that must receive the necessary training.

Only two RTCs within the contiguous United States (CONUS) provide the required ground combat training for SF units. One consists of ACC's ExpeRT Training Center at Creech AFB. The other, Air Force Materiel Command's (AFMC) Brave Defender, is located at Eglin AFB, Florida. Combined, these regional training centers lack the capacity to provide enough course opportunities for the increasing demand from ACC and AFMC, as well as the other Major Commands (MAJCOM) which do not own/operate an RTC, such as Air Education and Training Command (AETC), Air Mobility Command (AMC), and the Air National Guard (ANG).

The MAJCOMs that do not own and/or operate an RTC can provide funding to ACC's ExpeRT or AFMC's Brave Defender to increase training capacity and cost share training of their forces. While ACC has been approached to partner with AETC, AMC, and the ANG for SF training, the existing RTC at Silver Flag Alpha needs to be upgraded now to accommodate existing and anticipated additional students.

Currently, the Creech AFB ExpeRT course offers a capacity of 2,520 SPY. To meet the requirements of ACC and other partnering MAJCOMs, the capacity needs to increase in phases to a total of 6,000 SPY. Providing for this capacity would ensure appropriate pre-deployment SF training and support the AEF concept.

Under this proposed action to accommodate increased student throughput, half the students would train, lodge, and dine at Creech AFB for about 8 days out of the 16-day course, while the other half would train, lodge, and dine at Silver Flag Alpha. Existing and planned facilities at Creech AFB would be able to accommodate the increased student capacity, and the tent city (which will support both lodging and dining capacity), as well as the proposed upgrade to facilities at Silver Flag Alpha would accommodate the increased student throughput at this location. Half-way through the 16-day course, the students would switch locations and thereby obtain their site-specific training at the other site. Expanded needs for lodging and dining facilities at Creech AFB as well as a more permanent tent city at Silver Flag Alpha are evaluated in other EAs.

Under the no-action alternative, the Air Force would not increase student throughput for the ExpeRT course, nor make changes to the current RTC at Silver Flag Alpha. This would not allow SF personnel to maintain the critical skills necessary to support the AEF concept nor provide the required number of SF personnel needed to face the current threat.

CHAPTER 2

DESCRIPTION OF THE PROPOSED ACTION AND NO-ACTION ALTERNATIVE

CHAPTER 2

DESCRIPTION OF THE PROPOSED ACTION AND NO-ACTION ALTERNATIVE

This chapter describes the Air Force proposal to increase the SF ExpeRT course student capacity at the RTC at Silver Flag Alpha and Creech AFB, Nevada. Under the proposal the Air Force would increase the number of students trained by the SF, in four phases, from an existing 2,520 SPY to 6,000 SPY by the winter of 2008. Training and use of facilities would continue at both Creech AFB and Silver Flag Alpha. While Creech AFB contains facilities adequate to support its portion of the increased student activities, the Silver Flag Alpha complex currently requires upgrades and additions. To support the student increase at Silver Flag Alpha, the Air Force proposes to provide infrastructure improvements (a laundry/shower/latrine facility, leach field, water storage tanks, and communication, water, and power lines) to the existing tent complex and MOUT training site, upgrade five existing small-arms training ranges, and construct two academic facilities and a convoy combat training route. In conformance with NEPA and CEQ regulations, the EA also evaluates the no-action alternative. Under the no-action alternative, the Air Force would not increase student throughput nor construct facilities and infrastructure upgrades to support the ExpeRT course student expansion.

2.1 ALTERNATIVE IDENTIFICATION PROCESS

As established by the purpose and need, the facilities construction and upgrades infrastructure are needed to meet the proposed increased student capacity for ground combat sustainment training in the ExpeRT course. Without this increase, SF personnel risk mission failure of force protection of Air Force personnel and assets, including aircraft, in combat zones. In addition to ensuring adequate and realistic training for all deploying SF personnel from ACC, other partnering MAJCOMs that do not own and/or operate their own facilities would receive training at the ExpeRT course. Moreover, this type of training is limited, with the RTC at Creech AFB and Silver Flag Alpha comprising one of only two such facilities in CONUS capable of training SF personnel. The services available at the MOUT site, ranges, and associated airbase facilities are state-of-the-art urban terrain training facilities that, because of the time-critical nature of the training requirement, cannot be built from scratch elsewhere. The on-going hostilities in Iraq and Afghanistan necessitate expedient expansion of existing facilities to accommodate the training for deploying SF personnel and partnering MAJCOMs. For this reason, an alternative location for ExpeRT was not viable. Furthermore, shifting the increased student throughput to the other Air Force RTC at Eglin AFB would not accommodate the necessary personnel due to capacity issues.

With these criteria, the Air Force identified the proposed action to support student expansion at Silver Flag Alpha. Other means of providing the required facilities alternatives, such as constructing academic, lodging, and dining facilities at Creech AFB have been evaluated in the following: *Regional Training*

Area (RTA) Expansion, U.S. Air Force 99th Ground Combat Training Flight, Indian Springs Air Force Auxiliary Field Final Environmental Assessment (Nellis AFB 1997) and the *Nevada Training Initiative (NTI) Final Environmental Assessment* (Nellis AFB 2003a), the RTA EA and NTI EA, respectively. As presented in Chapter 1, the RTA EA evaluated the potential impacts of improving existing facilities at Creech AFB (lodging and dining), and on Silver Flag Alpha constructing a more permanent tent city (in an area already supporting a more primitive tent city for NTTR training activities), improving ranges, and upgrading existing rough roads (including road A-1 that would be upgraded for combat convoy training under this proposal). The NTI EA evaluated construction of academic and lodging/dining facilities at Creech AFB at two alternative locations—either side of Interstate 95. In the *Predator Force Structure Changes at Indian Springs Air Force Auxiliary Field* (Nellis 2003b), a new dining hall was evaluated as part of that proposal. In summary, these actions would constitute alternatives under this action but have already been evaluated in foregoing NEPA documentation, are incorporated by reference here, and, therefore, not carried forward for further evaluation in this EA.

Under the no-action alternative, no increase in training capacity would occur at this time, nor would the associated training facilities and infrastructure upgrades occur.

2.2 PROPOSED ACTION

In accordance with NEPA and CEQ guidelines, this section describes the proposed action and compares it to the no-action alternative.

Area proposed for water storage tanks

The Air Force has determined that the current level of SF personnel training at the ACC ExpeRT course is inadequate to prepare SF personnel for deployment to combat zones. To meet this goal, the proposed action would implement an increase in the student capacity of the ExpeRT courses and support this increase by providing infrastructure improvements (constructing a leach field, two water storage tanks, and installing new communication, water, and power lines) to the tent complex and MOUT training site; upgrading five existing small-arms training ranges; constructing two academic facilities; and providing for a 1-mile Convoy Combat Training route all on Silver Flag Alpha. The increase in student throughput would also facilitate a viable rotation schedule to support the AEF concept and ongoing operations worldwide.

Under the proposed action, the Air Force would increase student capacity in four phases:

- Phase 1 (Summer 2006) – 250 students per ExpeRT class
  (14 classes per year; 3,500 students per year)
- Phase 2 (Fall 2006) – 300 students per ExpeRT class
  (14 classes per year; 4,200 students per year)
- Phase 3 (Spring 2007) – 360 students per ExpeRT class
  (14 classes per year; 5,040 students per year)
- Phase 4 (Winter 2008) – 500 students per ExpeRT class
  (12 classes per year; 6,000 students per year)

Table 2-1 lists the facilities and upgrades needed to support the proposed expansion on Silver Flag Alpha; Figure 2-1 presents their proposed location. Each project directly ties to the need to train more students.

Table 2-1 Proposed Facility, Training, and Infrastructure Needs

Name	*Size**	*Year Construction Begins*
Two 70,000-gallon capacity Water Storage Tanks (1) potable water (2) fire suppression	1,000 sf	FY06/ 4th Quarter
Underground communication and water lines to tent city	2,600 ft	FY06/ 4th Quarter
Overhead power lines to tent city	3,600 ft	FY06/ 4th Quarter
1-acre leach field and 10,000 gallon capacity septic/holding tank	2 acres	FY06/ 4th Quarter
Laundry/Shower/Latrine Facility	4,000 sf	FY07/1st Quarter
Combat Arms Training and Maintenance (CATM) Academic Facility	8,000 sf	FY07/ 2nd Quarter
Virtual Combat Convoy Training Facility	6,400 sf	FY07/ 3rd Quarter
Convoy Combat Training Route	1 mile	FY07/ 1st Quarter
Upgrade Firing Ranges 1, 3, 5, 6, 10	6.47 acres	FY06/ 4th Quarter – FY07

** ft=feet, sf=square feet.*

To support the increased number of students at the existing tent city, the Air Force would need to construct: two water storage tanks; laundry/shower/latrine facility, water, communication, and power lines; a leach field and septic/holding tank; and a 600-KWT generator used temporarily until the 3-phase power line is installed in about the Fall of 2007. To accommodate their training needs the Combat Arms Training and Maintenance (CATM) and Virtual Combat Convoy facilities would be constructed and the five ranges upgraded. With the exception of some portions of the ranges, all facilities and upgrades would occur on previously disturbed areas.

Area for CATM and Virtual Convoy Training Facility, Range 1 in the background, to the left

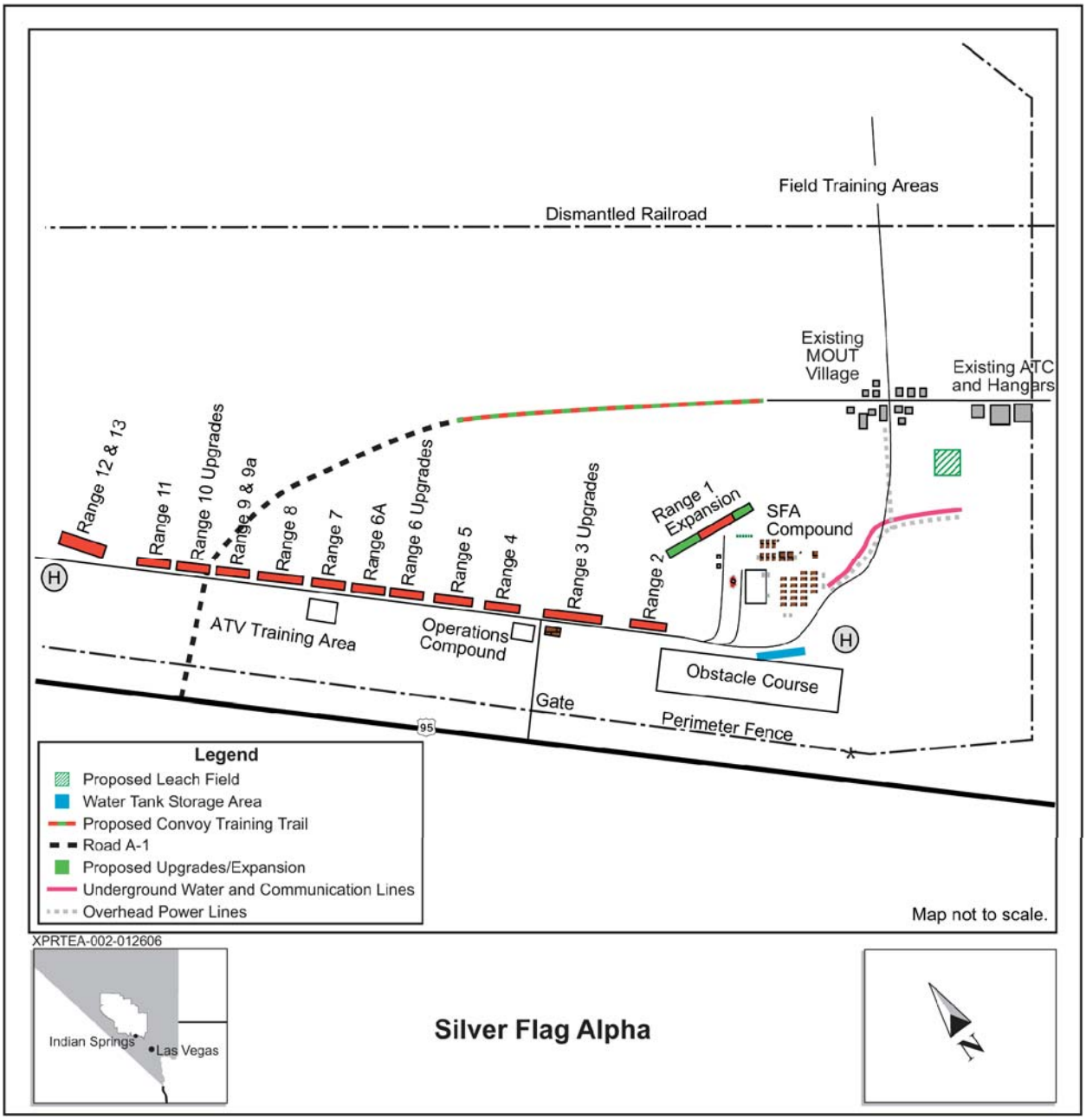

Figure 2-1 Proposed Action Facility Map

Range 1 in background

Range 1 would be expanded from 28 to 56 firing points. This would require soil disturbance to level ground, build earthen mounds, and drill shallow holes to place target stands. Total area to be disturbed is 53,540 sf. Range 3 is currently a rifle range, and would be upgraded in FY06 as fully automated 28-lane record fire range. This would require soil disturbance to remove old underground wiring and target lifters, and to install new underground wiring, target lifters, and earthen mounds around the lifters. Old target lifters and other hardware would be reused on other ranges to replace damaged parts. None of the old system parts are considered Hazardous Materials (HAZMAT). Total area to be disturbed is 127,480 sf. Range 5 would be upgraded to an assault firing range and involve 63,890 sf of disturbance.

Range 6 would be upgraded to handle live grenades. Each ExpeRT student would hand-throw two live grenades for training purposes. Currently, only dummy or practice grenades are used. Clean up of these munitions would be handled by the explosives division and disposed of through the processes already established at NTTR for such munitions. Ground disturbance for replacement of wiring and target lifters is similar to Range 3. Total area to be disturbed is 14,000 sf. Range 10 would also be upgraded as a precision engagement, or sniper range. This would require soil disturbance to level ground surfaces, and to install underground wiring, target lifters, and earthen mounds around lifters. Total area to be disturbed is 18,762 sf.

The construction of the Convoy Combat Training route would upgrade the existing two-track, dirt road (A-1) for approximately 1 mile. This upgrade would consist of grading the existing road to about 14 feet wide, and inserting culverts with gravel to secure the culvert to areas where the existing road is washed out. No further upgrades or graveling is planned. The expansion would improve road A-1 (previous upgrades were analyzed in the RTA EA) that runs from the existing MOUT village to the east for about 1 mile, to Range 6 (refer to Figure 2-1).

The frequency of Convoy Combat Training route exercises increases with the expansion of ExpeRT student course capacity (Table 2-2). The convoy will use two high-mobility multipurpose wheeled vehicles (HMMWVs) and two M-35s (2.5-ton diesel trucks) for each exercise, traveling 5 miles/hour on road A-1. The moving convoy will train by shooting at hardened targets (e.g., old metal tanks and/or personnel carriers currently being warehoused on NTTR) placed north of the convoy trail in a manner that simulates realistic combat situations. Safety fans will be created for these targets and the types of small-arms munitions fired from the moving convoy according to Air Force Manual 91-201 (*Explosives Safety*

Standards). The safety fans will adhere to established safety footprints for the types of munitions fired during these training activities and will remain within NTTR boundaries. All ranges will continue to be maintained, cleaned, and spent munitions disposed of by Nellis AFB under existing procedures already used at the SFA ranges.

Table 2-2 Convoy Combat Training Exercises

Phase	***Exercise Number per Year***
Phase 1 (Summer 2006) – 250 students per class (14 classes per year; 3,500 students per year)	532 (19 squads x 2 runs x 14 ExpeRT classes per year)
Phase 2 (Fall 2006) – 300 students per class (14 classes per year; 4,200 students per year)	644 (23 squads x 2 runs x 14 ExpeRT classes per year)
Phase 3 (Spring 2007) – 360 students per class (14 classes per year; 5,040 students per year)	784 (28 squads x 2 runs x 14 ExpeRT classes per year)
Phase 4 (Winter 2008) – 500 students per class (12 classes per year; 6,000 students per year)	912 (38 squads x 2 runs x 12 ExpeRT classes per year)

2.3 NO ACTION ALTERNATIVE

Under the no-action alternative, the Air Force would not increase student throughput nor make facility or infrastructure improvements to the current RTC facilities at Creech AFB and Silver Flag Alpha. If this alternative were chosen, a viable rotation schedule to support the AEF concept would not be met nor would the required number of SF personnel needed to face the current threat be trained.

2.4 ENVIRONMENTAL IMPACT ANALYSIS PROCESS

This EA examines the affected environment for the ExpeRT course student expansion, considers the current conditions of the proposed action, and compares those to conditions that might occur under the no-action alternative. The following steps are involved in the preparation of this EA.

1. *Conduct Intergovernmental and Interagency Coordination of Environmental Planning (IICEP).* Within this process comments are solicited from the public in the region local to the proposed action. This includes those individuals who had expressed interest in previous Nellis AFB actions, local governments, federal and state agencies, American Indian tribes, and interest groups to ensure their concerns and issues about this proposal are included in the analysis. In January 2006, the Air Force sent IICEP letters to these individuals and agencies announcing the Air Force's proposed action and to request input from government agencies (see Appendix A for the list of people and agencies contacted). The following comments were received from the State of Nevada: the Nevada Division of State Lands requested the Air Force utilize "dark sky" lighting where possible. The Air Force would employ these measures to the greatest extent possible. The State Historic Preservation Office reminded the Air Force of its Section 106 responsibilities under the National Historic Preservation Action of 1966, as amended. The Division of Water Resources commented on well-owner responsibilities and the Nevada Natural

Heritage Program Department of Conservation and Natural Resources provided a list of special-status species that could be found in and around the project area. These comment letters are provided in Appendix A.

2. *Prepare a draft EA.* The first comprehensive document for public and agency review is the draft EA. This document examines the environmental impacts of the proposed action as well as the no-action alternative.

3. *Announce that the Draft EA has been prepared.* An advertisement, in the *Las Vegas Review Journal*, was posted on April 5, 2006 notifying the public of the draft EA's availability for review in local libraries and at two web sites: http://www.nellis.af.mil/pa and www.a7zpintegratedplanning.org. After the draft EA was distributed, a 30-day public comment period begins.

4. *Provide a public comment period.* The goal during this process was to solicit comments concerning the analysis presented in the draft EA. Comments were received from federal, state, and county agencies: the Bureau of Land Management, Nevada State Historic Preservation Office, and Clark County Departments of Comprehensive Planning and Air Quality and Environmental Management. Copies of these comments are attached in Appendix A. All comments have been considered and addressed as appropriate.

5. *Prepare a final EA.* Following the public comment period, a final EA is prepared. This document is a revision (if necessary) of the draft EA, includes consideration of public comments, and provides the decisionmaker with a comprehensive review of the proposed action and the potential environmental impacts.

6. *Issue a Finding of No Significant Impact (FONSI).* The final step in the NEPA process for the EA is a FONSI, if the analysis supports this conclusion.

2.5 OTHER REGULATORY AND PERMIT REQUIREMENTS

The NEPA process is intended to assist the decision makers in understanding the environmental consequences and in taking appropriate actions that protect, restore, and enhance the environment. Other federal statutes that may apply to the proposed action are listed in Table 2-3.

Table 2-3 Other Major Environmental Statutes, Regulations, and Executive Orders Applicable to Federal Projects	
Environmental Resource	***Statutes***
Air	Clean Air Act (CAA) of 1970 (PL 95-95), as amended in 1977 and 1990 (PL 91-604); USEPA, Subchapter C-Air Programs (40 CFR 52-99)
Noise	Noise Control Act of 1972 (PL 92-574) and Amendments of 1978 (PL 95-609); USEPA, Subchapter G-Noise Abatement Programs (40 CFR 201-211)
Water	Federal Water Pollution Control Act (FWPCA) of 1972 (PL 92-500) and Amendments; Clean Water Act (CWA) of 1977 (PL 95-217); USEPA, Subchapter D-Water Programs (40 CFR 100-145); Water Quality Act of 1987 (PL 100-4); USEPA, Subchapter N-Effluent Guidelines and Standards (40 CFR 401-471); Safe Drinking Water Act (SDWA) of 1972 (PL 95-923) and Amendments of 1986 (PL 99-339); USEPA, National Drinking Water Regulations and Underground Injection Control Program (40 CFR 141-149)
Biological Resources	Migratory Bird Treaty Act of 1918; Fish and Wildlife Coordination Act of 1958 (PL 85-654); Sikes Act of 1960 (PL 86-97) and Amendments of 1986 (PL 99-561) and 1997 (PL 105-85 Title XXIX); Endangered Species Act of 1973 (PL 93-205) and Amendments of 1988 (PL 100-478); Fish and Wildlife Conservation Act of 1980 (PL 96-366); Lacey Act Amendments of 1981 (PL 97-79)
Wetlands and Floodplains	Section 401 and 404 of the Federal Water Pollution Control Act of 1972 (PL 92-500); USEPA, Subchapter D-Water Programs 40 CFR 100-149 (105 ref); Floodplain Management-1977 (EO 11990); Emergency Wetlands Resources Act of 1986 (PL 99-645); north American Wetlands Conservation Act of 1989 (PL 101-233)
Cultural Resources	National historic Preservation Act (NHPA) of 1966 (16 USC 470 et seq.) (PL 89-865) and Amendments of 1980 (PL 96-515) and 1992 (PL 102-575); Protection and Enhancement of the cultural Environment-1971 (EO 11593); Indian Sacred Sites-1966 ((EO 13007); American Indian Religious Freedom Act (AIRFA) of 1978 (PL 94-341); Antiquities Act of 1906; Archaeological Resources Protection Act (ARPA) of 1979 (PL 96-95); Native American Graves Protection and Repatriation Act (NAGPRA) of 1990 (PL 101-601)
Solid/Hazardous Materials and Waste	Resource Conservation and Recovery Act (RCRA) of 1976 (PL 94-5800), as Amended by PL 100-582; USEPA, subchapter I-Solid Wastes (40 CFR 240-280); Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980 (42 USC 9601) (PL 96-510); Toxic Substances Control Act (TSCA) (PL 94-496); USEPA, Subchapter R-Toxic Substances Control Act (40 CFR 702-799); Federal Insecticide, Fungicide, and Rodenticide Control Act (40 CFR 162-180); Emergency Planning and Community Right-to-Know Act (40 CFR 300-399)
Environmental Justice	EO 12898-Federal Action to Address Environmental Justice in Minority Populations and Low-Income Populations; Protection of Children from Environmental Health Risks and Safety Risks (EO 13045)

2.6 MITIGATION MEASURES

In accordance with 32 CFR 989.22, Nellis AFB must indicate if any mitigation measures would be needed to implement the proposed action or any alternative selected as the preferred alternative under this environmental assessment. For purposes of this EA (to increase the student throughput at Silver Flag Alpha, construct two academic facilities, improve existing ranges, install a Convoy Combat Training route, and improve infrastructure to the existing MOUT and tent city), no mitigation measures would be needed to arrive at a finding of no significant impact if the proposed action were selected for implementation.

2.7 SUMMARY OF POTENTIAL ENVIRONMENTAL IMPACTS

This EA provides an analysis of the potential environmental consequences resulting from implementation of the proposed action and no-action alternative. Four resource categories were analyzed to identify potential impacts: air quality, soils and water; biological; and cultural. The following summarizes and highlights the results of the analysis by resource category.

Air Quality. There would be no perceptible change to air quality under the proposed action. Emissions during the construction and infrastructure period would not increase by more than 0.57 tons for any one of the measured criteria pollutants during a given year. These emissions would be temporary in nature and end when the construction and upgrade activities are complete. In general, fugitive dust and combustive emissions would produce localized, short-term, elevated air pollutant concentrations which would not result in any long-term impacts on the air quality in Clark County where Silver Flag Alpha is located. Because Silver Flag Alpha is located in a nonattainment area for three out of the five measured criteria pollutants (particulate matter [PM_{10}], carbon monoxide [CO], and 8-hour ozone), emissions from construction and infrastructure improvement projects were cumulatively measured to ensure that no criteria pollutant *de minimus* thresholds were exceeded in any given year. No *de minimus* levels would be exceeded under this proposal. The temporary contribution of any of the five criteria pollutants of less than 0.001 percent to area emissions would not represent a regional significance.

Soils and Water Resources. Potential impacts to soils would be negligible from the proposed action, differing little from existing conditions. No surface waters are located near the proposed action construction, improvements, or upgrades. Standard best management practices (e.g., watering, erosion control, and sediment retention measures and silt fencing) would be employed to reduce the chance of sediment transport.

The impact to groundwater recharge would be minimal given the low average annual precipitation and the lack of year-round surface waters in the proposed locations. Infiltration historically has been a minimal source of recharge.

Biological Resources. Proposed projects would occur in previously developed or disturbed areas resulting in insignificant impacts to biological resources. Potential impacts to wildlife from construction noise would be short-term and not be expected to affect wildlife that are already exposed to flight activities. All of the construction, upgrades, and/or improvements occur in predominantly disturbed habitats; no adverse impacts to rare plant species would be expected. If during any ground disturbing activity in Silver Flag Alpha, the presence of desert tortoise is observed, the Air Force would comply with the requirements of the 2003 USFWS Biological Opinion for the protection of the species. Arroyos and washes, which may be considered jurisdictional waters, may be impacted; evaluation and identification of these jurisdictional waters would occur prior to construction and upgrade activities and a Section 404 permit would be obtained if jurisdictional waters are identified.

Cultural Resources. Under the proposed action facilities would be built, infrastructure upgraded, and a road improved. There are no National Register-eligible sites associated with the proposed action and no traditional cultural properties are known to occur. The Air Force will implement the procedures found in 36 CFR 800 for all projects described in this EA. These procedures would include (as appropriate) mitigation, consultation with tribal representatives, and review by the State Historic Preservation Officer and the Advisory Council for Historic Preservation prior to implementation. For the most part, construction would take place on existing improved or previously disturbed areas; however, undisturbed areas would be examined by a professional archaeologist prior to construction.

CHAPTER 3

DESCRIPTION OF THE AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

CHAPTER 3
DESCRIPTION OF THE AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

3.1 ANALYSIS APPROACH

NEPA requires focused analysis of the areas and resources (e.g., air quality) potentially affected by an action or alternative. It also indicates that an environmental assessment should consider, but not analyze in detail, those areas or resources not potentially affected by the proposal. Therefore, an EA should not be encyclopedic; rather, it should try to be succinct. This EA focuses on those resources that would be affected by the proposed construction activities at the SF RTC for expansion of the ExpeRT course student capacity.

CEQ regulations (40 CFR Parts 1500-1508) for NEPA also require an EA to discuss impacts in proportion to their significance and present only enough discussion of other than significant issues to show why more study is not warranted. The analysis approach in this EA considers the current conditions of the affected environment and compares those to conditions that might occur should either the proposed action or the no-action alternative be implemented.

Evaluation and analysis of the potential impacts at Silver Flag Alpha reveal that construction and improvement projects (refer to Table 2-1) define the affected environment for the SF ExpeRT student expansion at Silver Flag Alpha. Construction would be short-term and would be site specific. No new permanent employees would be based in conjunction with the proposed action at the SF RTC; generally, students and instructors are on temporary assignment and would not be permanent employees or residents at Silver Flag Alpha. SF training already conducted at the RTC would not be modified, only expanded to accommodate the additional student load. Ground operations and maintenance would also be consistent with current activities.

Resource Analysis

Table 3-1 presents the results of the process of identifying the resources considered in this EA. For purposes of this assessment, air quality; soil and water resources; biological resources; and cultural resources are evaluated. Due to the nature of the proposed action, other resources would either not be affected by construction and modifications are sufficiently analyzed in previous documents. These documents include the: *NTI EA* (Nellis AFB 2003a), *Predator Force Structure Changes at Indian Springs Air Force Auxiliary Field Nevada* (Nellis AFB 2003b), *Renewal of the Nellis Air Force Range Land Withdrawal Legislative Environmental Impact Statement* (Air Force 1999), *Integrated Natural*

Resources Management Plan Nellis AFB, Nellis AFR (Nellis AFB 1999), and *RTA EA* (Nellis AFB 1997a), and can be incorporated by reference.

Table 3-1 Resources Considered in the Environmental Impact Analysis Process

Resources	***Potentially Affected by***		***Analyzed in this EA***	
	Construction	**Operations**	**Yes**	**No**
Air Quality	✓	✓	✓	
Soils and Water Resources	✓	✓	✓	
Biological Resources	✓		✓	
Cultural Resources	✓		✓	
Airspace Management and Use				✓
Noise				✓
Socioeconomics				✓
Environmental Justice and Protection of Children				✓
Land Management and Use, Recreation, and Visual Resources				✓
Health and Safety				✓
Hazardous Materials and Waste				✓
Transportation				✓

Resources Eliminated from Further Analysis

The Air Force assessed numerous resources (refer to Table 3-1) that, in accordance with CEQ regulations, warranted no further examination in this EA.

Airspace Management and Use. Airspace management would not be affected by the proposed action. No part of the action employs or influences airspace operations or air traffic management in Range 63A (the airspace overlying Silver Flag Alpha); all action elements would occur on the ground and ordnance deployment would not conflict with overlying airspace activities, so they would not impact either the management or use of airspace. For this reason, airspace management was eliminated from further analysis.

Noise. Noise is often defined as any sound that is undesirable because it interferes with communication, is intense enough to damage hearing, diminishes the quality of the environment, or is otherwise annoying. Response to noise varies by the type and characteristics of the noise source, distance from the source, receptor sensitivity, and time of day. Noise can be intermittent or continuous, steady or impulsive, and it may be generated by stationary or mobile sources. Noise generated from construction activities associated with the proposed action remains confined to the remote area of Silver Flag Alpha. Noise from increased SF training activities would result from vehicles and small arms firing. This temporary noise would also remain confined to Silver Flag Alpha, an area already affected by louder, more consistent

noise from aircraft operations overhead. No new noise sources would be introduced to new areas. Therefore, this resource has been eliminated from further analysis.

Socioeconomics. Socioeconomics focuses on the general features of the local economy that could be affected by the proposed action. Because no new jobs would be created or eliminated by implementation of the proposed action, nor would the affected area experience any economic growth or loss through implementation of the proposed expansion projects at Silver Flag Alpha, this resource has been eliminated from further discussion. Costs for the ExpeRT expansion would remain negligible (i.e., approximately $4 million over a 2-year time period) in comparison to the billions of dollars generated in the Las Vegas region.

Environmental Justice and Protection of Children. Environmental justice addresses the disproportionate effect a federal action may have on low-income or minority populations. Executive Order (EO)12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* ensures the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Because children may suffer disproportionately from environmental health risks and safety risks, EO 13045, *Protection of Children from Environmental Health Risks and Safety Risks*, requires the identification and assessment of environmental health risks and safety risks that may affect children, and ensures that federal agency policy, programs, activities, and standards address environmental risks and safety risks to children.

The proposed action would not pose a risk to communities or population centers nor disproportionately impact low income or minority populations because there are no communities or population centers within a 12-mile radius of Silver Flag Alpha. In addition, the proposed action would not pose environmental and safety risks to children due to the fact that construction would be limited to Silver Flag Alpha. Therefore, because no minority, low-income groups, or children would be affected disproportionately or placed at risk by implementation of the proposed action, environmental justice and protection of children resources were eliminated from further analysis.

Land Management and Use, Recreation, and Visual Resources. The affected environment for the ExpeRT expansion on Silver Flag Alpha is found on withdrawn military lands of NTTR. Land management and use would not change from existing military-related activities, and would not be impacted by the proposed projects. Recreation resources would not be affected by the proposed action because recreational use of these lands is restricted at Silver Flag Alpha and would continue to be restricted under the proposed action. Visual resources would not be affected because NTTR and Silver Flag Alpha currently support military activities and no new visual aspects would be introduced other than the current types of training and equipment. Therefore, visual resources would remain consistent with existing conditions. In summary, no impacts would occur to land management and use, recreation, and

visual resources under the proposed action; therefore, no further analysis is warranted. The Nevada Division of State Lands requested the Air Force utilize "dark sky" lighting to reduce the affect of light pollution. To the fullest extent possible, the Air Force would use minimal nighttime lighting. This can be done since no large overhead lighting is required, no training would take place at night, and the minimal lighting that would be required (for the living quarters) would only be used when students are at SFA (about 120 days out of the year).

Health and Safety. Effects to human health and safety related to construction as well as ground operations and maintenance would be minimal and no different from standard, on-going activities occurring at Silver Flag Alpha. There are no specific aspects of construction, operations, or maintenance that would create any unique or extraordinary safety issues. All facilities used for weapons firing at Silver Flag Alpha would be on withdrawn military lands, be contained within prescribed safety zones, and would not endanger civilian populations (which are more than 12 miles away). These types of activities are currently undertaken at Silver Flag Alpha and existing safety procedures would be followed and continued under the proposed action. Aircraft safety would not be an issue since current operations and safety procedures in the overlying airspace of Range 63A would not change.

Hazardous Materials and Waste. Effects from hazardous materials and waste associated with construction, infrastructure upgrades, and operations related to this Air Force proposal would be negligible to nonexistent. Existing environmental programs (e.g., Environmental Restoration Program) at NTTR have identified any hazardous materials and/or waste that might be found on NTTR and these areas would be avoided when locating any of the proposed facilities at Silver Flag Alpha. During construction, use of hazardous substances (e.g., gasoline) for fueling and equipment maintenance would be handled using existing Air Force instructions, policies, and procedures; as well as applicable federal and state laws regulating hazardous materials and waste. Adherence to policies relating to hazardous storage and use during operation would be monitored under the Air Force's Environmental Compliance Assessment Management Program, which requires both internal audits and examination by independent reviewers. Existing Spill and Pollution Prevention Plans would be adhered to in accordance with Air Force regulations and continued clean up of spent ordnance would continue. Given the enforced requirement to ensure safe handling of materials and the minimal amounts of materials likely to be used, the probability of an effect on the environment would be negligible; therefore, further analysis in this EA is unwarranted.

Transportation. Construction-related traffic would be short-term and temporary, and take place on Interstate 95. This road system can accommodate the anticipated level of traffic associated with construction equipment and employees. Transportation onto the range by approved personnel for use and maintenance of Silver Flag Alpha and its associated facilities would increase; however, this increase would be limited to 12 times per year and would not adversely impact existing transportation patterns or resources; effects of the proposed action on existing transportation resources would not be measurable or

noticeable. Since transportation resources would be insignificant, this resource has been eliminated from further analysis.

3.2 AIR QUALITY

Understanding air quality for the affected area requires knowledge of: 1) applicable regulatory requirements; 2) types and sources of air quality pollutants; and 3) location and context of the affected area.

Regulatory Requirements. Air quality in a given location is described by the concentration of various pollutants in the atmosphere. The significance of the pollutant concentration is determined by comparing it to the federal and state ambient air quality standards. The Clean Air Act (CAA) and its subsequent amendments (CAAA) established the National Ambient Air Quality Standards (NAAQS) for six "criteria" pollutants: ozone (O_3) (the precursors of which are volatile organic compounds), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter less than 10 microns (PM_{10}), and lead (Pb). These standards (see Appendix B) represent the maximum allowable atmospheric concentrations that may occur while ensuring protection of public health and welfare, with a reasonable margin of safety. The Nevada Division of Environmental Protection (NDEP), Bureau of Air Quality (BAQ) has adopted the NAAQS, with some exceptions and additions (see Appendix B). For purposes of this analysis, all criteria pollutants (with the exception of lead because no lead-generating activities are proposed) are evaluated.

Based on measured ambient criteria pollutant data, the U.S. Environmental Protection Agency (USEPA) designates all areas of the U.S. as having air quality better than (attainment) or worse than (nonattainment) the NAAQS. An area that is currently in attainment, but was formerly a nonattainment area is termed a maintenance area. An area is often designated as unclassified when there are insufficient ambient criteria pollutant data for the USEPA to form a basis for attainment status. Unclassified areas are typically rural or remote, with few sources of air pollution.

The CAA requires each state to develop a State Implementation Plan (SIP) which is its primary mechanism for ensuring that the NAAQS are achieved and/or maintained within that state. According to plans outlined in the SIP, designated state and local agencies implement regulations to control sources of criteria pollutants. The CAA provides that federal actions in nonattainment and maintenance areas do not hinder future attainment with the NAAQS and conform with the applicable SIP (i.e., Nevada SIP). There are no specific requirements for federal actions in unclassified or attainment areas. However, all federal actions must comply with all state and local regulations.

The CAA also establishes a national goal of preventing degradation or impairment in any federally-designated Class I area. As part of the Prevention of Significant Deterioration (PSD) program,

mandatory Class I status was assigned by Congress to all national parks, national wilderness areas, memorial parks greater than 5,000 acres and national parks greater than 6,000 acres. In Class I areas, visibility impairment is defined as a reduction in visual range and atmospheric discoloration. Stationary sources, such as industrial complexes, are typically an issue for visibility within a Class I PSD area. The closest Class I Area to Silver Flag Alpha on NTTR is Death Valley National Park, which overlaps the California/Nevada border. However, this park is more than 60 miles from Silver Flag Alpha.

Types and Sources of Air Quality Pollutants. Pollutants considered in the analysis for this EA include the criteria pollutants measured by state and federal standards. These include SO_2 and other compounds (i.e., oxides of sulfur or SO_x), volatile organic compounds (VOCs), which are precursors to (indicators of) O_3; nitrogen oxides (NO_x), which are also precursors to O_3 and include NO_2 and other compounds; CO and PM_{10}. These criteria pollutants are generated by the types of activities (e.g., construction) associated with the proposed action. Airborne emissions of lead and hydrogen sulfide are not included because there are no known significant hydrogen sulfide or lead emissions sources in the region or associated with the proposed action.

3.2.1 Affected Environment

Silver Flag Alpha lies within Clark county, approximately 33 miles northwest of Las Vegas, and falls within the Hydrographic Basin 212. This basin officially defines the boundaries of the Las Vegas Valley. Currently, portions of Clark County are in serious nonattainment for CO and PM_{10}; in addition, the Las Vegas Valley (defined by the boundaries of Hydrographic Area 212 and in which Silver Flag Alpha is found), is in basic (subpart 1) nonattainment for 8-hour Ozone (precursors of this pollutant include VOCs) (DAQEM [Nevada Department of Air Quality and Environmental Management] 2004). In accordance with federal requirements, the Clark County Board of Commissioners has developed both a carbon monoxide SIP (CCHD 2000) and a PM_{10} SIP (CCHD 2001) for nonattainment areas of the county; a SIP for 8-hour Ozone has not yet been adopted. Because Silver Flag Alpha and Creech AFB are located in Clark County, they are both regulated under permits to operate by the Clark County Department of Air Quality Management (DAQEM) (Nellis AFB 2004). Table 3-2 summarizes the baseline emissions for Creech AFB, which includes Silver Flag Alpha and Clark County. As illustrated below, the percent contribution to air emissions, due to Air Force activities, represents less than 0.01 percent to the regional area and do not represent a significant contributor to regional emissions.

Table 3-2 Baseline Air Emissions (tons/year)*

	CO	***VOCs***	***NO_x***	***SO_x***	***PM_{10}***
Creech AFB	0.109	8.197	0.506	0.931	0.035
Clark County	487,741	65,574	82,956	47,273	69,899
% Contribution	0.000	0.0125	0.0006	0.0020	0.0001

Sources: 2004 Air Emissions Inventory (Nellis AFB 2004) for Creech AFB (formerly Indian Springs AFAF and includes Silver Flag Alpha and Point Bravo); Clark County 1999 Emissions (USEPA 2005).
**Note*: $PM_{2.5}$ was regulated in 2005 and is not reflected in these inventories.

Air emissions from ground operations facilities on the NTTR result primarily from on-range facilities, equipment, and ground maintenance. Air emissions from these range activities and operations do not adversely affect public health and safety in this very sparsely populated portion of Nevada. Silver Flag Alpha lies within NTTR, which is withdrawn land and, as such, does not allow nonmilitary access without permission or local development of any kind.

3.2.2 Environmental Consequences

Proposed Action

Air quality in Clark County is regulated and enforced by the Clark County DAQEM. Prior to any construction activities, Clark County DAQEM requires permits in order to implement the statewide fugitive dust regulation (DAQEM 2006).

Silver Flag Alpha lies within the boundaries of the Las Vegas Valley CO and PM_{10} nonattainment areas. As such, construction activities under the proposed action would be subject to the General Conformity Rule promulgated by the CAAA. This rule prohibits federal agencies from supporting actions that do not conform to an EPA-approved SIP. Under this rule, certain activities are explicitly given exemptions from preparing conformity determinations while others are assumed to be in conformity if the total annual project emissions are below *de minimis*. These *de minimis* levels are represented in tons per year and vary according to pollutant and the severity of the nonattainment classification. *De minimis* levels for serious nonattainment areas are 100 and 70 tons per year for CO and PM_{10}, respectively.

The DAQEM requires a "Dust Control Permit" and the submittal of a Dust Mitigation Plan for any soil disturbing or construction project greater than 0.25 acres in size. For projects that are greater than 10 acres in size, the DAQEM requires a "Site-Specific Dust Mitigation Plan" that incorporates enforceable permit conditions, drawn from construction activities best management practices, into the Dust Control Permit.

Other applicable requirements for sources in Clark County include compliance with the DAQEM rules and regulations including:

- Section 90 – Fugitive Dust from Open Areas and Vacant Lots
- Section 91 – Fugitive Dust from Unpaved Roads, Unpaved Alleys and Unpaved Easement Roads
- Section 92 – Fugitive Dust from Unpaved Parking Lots
- Section 93 – Fugitive Dust from Paved Roads and Street Sweeping Equipment
- Section 94 – Permitting and Dust Control for Construction Activities

As mentioned above, for projects that disturb more than 10 acres, the regulations in Section 94 require a "Site-Specific Dust Mitigation Plan" which incorporates enforceable permit conditions, drawn from

Construction Activities Best Management Practices (see Section 94 Handbook), into the Dust Control Permit. An authority to construct permit that rolls into an operating permit would be acquired by Nellis AFB for the temporary 600-KWT generator, until the 3-phase permanent power line is installed.

Additional personnel vehicle trips would elevate operational emissions; however, the impact would be negligible. Insignificant amounts of combustion emissions may result from heating in the occupied buildings. The majority of emissions resulting from implementing the proposed action would be generated by construction activities and would be temporary in nature. Construction emissions include fugitive dust (PM_{10}) and combustion (primarily CO and NO_x, but small amounts of VOCs, SO_x, and PM_{10}) from heavy-duty diesel construction equipment exhaust. Estimation of the construction emissions was based on conservative assumptions and assumed that site grading activities (generating fugitive dust) would be occurring on about 25 percent of the affected acreage on any working day throughout the entire year (see Appendix B). Table 3-3 summarizes projected construction emissions and convoy combat training exercises under the proposed action.

Table 3-3 Projected Pollutant Emissions (tons/year)

Year	***CO***	***VOCs***	***NO_x***	***SO_x***	***PM_{10}***
FY06	0.02	0.01	0.05	0.01	0.00
FY07	0.05	0.19	0.57	0.06	0.22
Clark County	487,741	65,574	82,956	47,273	69,899

The maximum annual (FY07) emissions from construction would be well below the *de minimis* (70 tons/year $PM_{10,}$ and 100 tons/year CO) thresholds established by the federal conformity rule and represent a temporary increase in emissions of less than 0.0001 percent increase to the regional air emissions. In FY07, construction would generate less than 0.22 tons of PM_{10} and CO. Emissions as a result of implementing the proposed action would conform with the PM_{10} and CO SIPs and would not affect regional air quality; therefore no conformity analysis would be required.

Emissions from both fugitive dust and construction vehicle exhaust would be temporary and localized. These emissions represent negligible ground-level releases with little initial dispersion and/or buoyancy, so their effects would remain in the immediate vicinity (less than 1 mile). Therefore, visibility impacts within Class I areas would not be anticipated.

No-Action Alternative

Under the no-action alternative, the Air Force would not increase the number of students at Silver Flag Alpha. No construction activities associated with the proposed expansion would be implemented. Impacts to this resource would not be expected since baseline emissions (as described under the affected

environment section 3.2.1) would remain unchanged; therefore, implementing the no-action alternative would not result in any change of effects to the regional air quality.

3.3 SOILS AND WATER RESOURCES

The principal factors influencing stability of structures are soil and seismic properties. Soil, in general, refers to unconsolidated earthen materials overlying bedrock or other parent material. Soil structure, elasticity, strength, shrink-swell potential, and erodibility all determine the ability for the ground to support structures and facilities. Relative to development, soils typically are described in terms of their type, slope, physical characteristics, and relative compatibility or limitations with regard to particular construction activities and types of land use.

Water resources include surface and ground water. Lakes, rivers, and streams comprise surface water resources that are important for economic, ecological, recreational, and human health reasons. Groundwater is used for potable water consumption, agricultural irrigation, and industrial applications. Groundwater properties are often described in terms of depth to aquifer, aquifer or well capacity, water quality, and surrounding geologic composition. Attributes of water resources considered in this EA include hydrologic setting, availability, use, quality (including protection zones), floodplains, flood hazard, and adjudicated claims to water rights for both surface and groundwater. The Clean Water Act (CWA) of 1972 is the primary federal law that protects the nation's waters, including lakes, rivers, and aquifers. The primary objective of the Act is to restore and maintain the integrity of the nation's waters. Jurisdictional waters of the U.S. are regulated resources and are subject to federal authority under Section 404 of the CWA. This term is broadly defined to include navigable waters (including intermittent streams), impoundments, tributary streams, and wetlands.

Criteria for water quality within the State of Nevada are contained in the Nevada Administrative Code (NAC), Chapter 445A.119, and apply to existing and designated beneficial uses of surface water bodies. Water quality standards are driven by the beneficial uses of specific water bodies. Beneficial uses include agriculture (irrigation and livestock watering), aquatic life, recreation (contact and non-contact), municipal or domestic supply, industrial supply, and wildlife propagation. There is a three-tiered system of beneficial use designation of surface water resources within the NAC depending upon the size of the water body.

1. Major water bodies or rivers are specifically designated by name (in some cases by reach) and are assigned numeric standards (NAC Sections 445A.145 to 445A.225) or thresholds as well as anti-degradation criteria.
2. Smaller water bodies are classified (i.e., Class A, B, C, and D) as to the condition of the waters "as affected by discharges relating to the activities of man." Water quality standards are specified for each of the water classifications (NAC Sections 445A.124 to 445A.127).

3. Other surface waters are protected by generic standards that apply to all waters of the state (NAC Section 445A.121).

Due to the transient occurrence of surface water within the arid region of NTTR, there are no bodies of surface water present that are designated as to specific beneficial uses (i.e., categories 1 or 2 above). All surface water (e.g., ephemeral streams) within the range are regulated and protected under the standards applicable to all waters of the state (i.e., category 3). However, the regulations allow for the classification of a body of public water not currently classified in the NAC if there is a permit request to discharge into that body of water. Additionally, beneficial uses of surface water on NTTR (e.g., livestock or wildlife watering, domestic supply, etc.) would be subject to water quality criteria or standards specific to the use (e.g., drinking water standards for domestic supply).

The State of Nevada has adopted drinking water standards established by the USEPA, under the Safe Drinking Water Act. The Nevada Department of Health regulates drinking water quality for public supply systems. Drinking water standards consist of maximum contaminant levels (MCLs) established for various water quality constituents. Primary MCLs are established to protect against adverse health effects and are enforced for public drinking water supplies. Secondary MCLs are established for aesthetic reasons such as taste, color, or odor and are not enforceable on public drinking water supplies. Thresholds are established for selected constituents that, if exceeded by a specified percentage of samples (based on the number of people served), require treatment of the water source prior to distribution to users of the supply system.

3.3.1 Affected Environment

Silver Flag Alpha is located in the southern portion of Three Lakes Valley. Due primarily to the western winds, the western sides of the mountains in the area are commonly flanked by dunes on top of deep alluvial fans (Nellis AFB 1999). Soils in the vicinity of Silver Flag Alpha have not been mapped in detail and information for the area is based on general descriptions from various resource surveys, geologic studies in adjacent areas, and general observations. Soils in the area are aridisols developed in carbonate parent material from local mountains (Nellis AFB 1999). Aridisols generally have poorly developed A horizons with clear B and C horizons and are sandy, loose, and prone to erosion in areas not protected by desert pavement. Soils can form anywhere that sediments accumulate; however, soils develop very slowly in desert environments and are easily disturbed. Much of the area has a surface crust known as desert pavement, which is an armored surface crust of packed angular to sub-rounded rock fragments covering the soils surface. Desert pavement is common to arid environments and acts as a shell to softer, more vulnerable soils below. Lenses of caliche (sediment cemented together with sodium salts) and clay are also known to be present at depth (USACE [United States Army Corps of Engineers] 2003). The locations for proposed construction activities are areas with slopes ranging from 0 to 5 percent.

The scarcity of surface water resources on NTTR is attributed to a dry regional climate characterized by low precipitation, high evaporation, low humidity, and wide extremes in daily temperatures. Average precipitation depends mainly on elevation and ranges from 4 inches on the desert floor to 16 inches in the mountain areas. With the exception of locally intense thunderstorms that can produce flash flooding, much of the warm weather precipitation is lost to the atmosphere through evaporation and transpiration. Within the arid area of NTTR, the availability of moisture in excess of evaporation and transpiration is so limited that few perennial surface water features are present. With the exception of man-made ponds and catchments, the only perennial surface water comes from springs that form where ground water intersects the surface. The springs flow for short distances on the ground surface, which is underlain by bedrock. Most surface water is temporarily present as a result of ponding in low permeability playas and as ephemeral channel flow from infrequent precipitation and snowmelt runoff. Playas are not major recharge zones due to the low infiltration potential. Most surface water that reaches the playas is lost through evaporation.

Groundwater in the region is high in total dissolved solids at levels of 500-1,000 milligrams per liter and rich in calcium and magnesium bicarbonate; however, the groundwater is well within the USEPA standards for drinking water quality (Nellis AFB 2002a). Water is provided to SF at Silver Flag Alpha (SFA) via SFA well. The well is monitored for compliance with drinking water standards on a regular basis by personnel from the Bio-environmental Group at Nellis AFB (personal communication, Lora 2006). While Creech AFB is not directly analyzed in this EA (because impacts due to expansion activities located at this site are found in both the NTI and RTA EAs), the General Plan does identify the current water supply at Creech AFB as adequate (Nellis AFB 2003c).

The Air Force has authorization from the State of Nevada Engineer to pump 1.5 million gallons per year (gpy) from the SFA well. In 2005, a total of 324,000 gpy were consumed totaling nearly 22 percent of the total authorized usage (personal communication, Roe 2006).

3.3.2 Environmental Consequences

Proposed Action

Construction and ground-disturbing activities would occur on approximately 8 acres on Silver Flag Alpha. The soil erosion potential from water and wind would be generally slight to moderate due to the type of soil as well as slight slope found at the proposed location. Construction activities would involve removal of a minimal amount of vegetation and soils as well as grading. These activities would expose underlying soil to wind and water erosion and could result in sedimentation in surface impoundments. However, best management practices such as proper grading, stabilization, culverts to channel storm water runoff, and watering construction sites to limit fugitive dust, and sediment retention fences would minimize adverse effects.

Expanded operations for the ExpeRT course would change significantly from current levels. The number of trainees would more than double, from 2,520 students per year, to 6,000 students per year. This expansion would be phased in over a period of 2 years. For the most part, these trainees would be on temporary duty assignment for the duration of the training program, and the instructors would be permanently assigned to Nellis AFB. Potential impacts to public utilities from increased SF training activities at Silver Flag Alpha would be minor, due to the rustic, camp-like tent complex facilities. Water use and wastewater discharge would increase substantially; however the impact would be within the existing capacity in drinking water (in 2005, only 22 percent of the water allotment was used) and two water storage tanks would be built to store the water; a new septic/sewage system would also be constructed to manage waste water.

No-Action Alternative

Under the no-action alternative, ongoing activities at Silver Flag Alpha would continue operating at current levels; expansion of the ExpeRT course student capacity and associated construction and improvement projects would not be implemented. Soils and water resources would continue to be managed in accordance with state and federal regulations. Therefore, conditions would remain similar to those found at this time.

3.4 BIOLOGICAL RESOURCES

Biological resources incorporate living, native, or naturalized plant and animal species and the habitats within which they occur. For purposes of this impact analysis, these resources will be divided into four major categories: 1) vegetation, 2) wetlands, 3) wildlife, and 4) threatened, endangered, or sensitive species. This analysis of biological resources addresses each category separately, and examines the impacts from implementing the proposed action and no-action alternative.

Vegetation includes all existing upland terrestrial plant communities with the exception of wetlands or special-status species. The affected environment for vegetation includes those areas subject to ground disturbance activities.

Wetlands and Waters of the United States. Wetlands are considered special category sensitive habitats and are subject to regulatory authority under Section 404 of the Clean Water Act and Executive Order 11990 *Protection of Wetlands.* They include jurisdictional and non-jurisdictional wetlands. Jurisdictional wetlands are those defined by the USACE and USEPA as those areas that meet all the criteria defined in the USACE's 1987 *Wetlands Delineation Manual* and under the jurisdiction of the USACE (USACE 1987). Wetlands are generally associated with drainages, stream channels, and water discharge areas

(natural and man-made). The discussion on wetlands pertains to the potential to affect wetlands due to construction or demolition activities under the proposed action.

Wildlife. Wildlife includes all vertebrate animals with the exception of those identified as threatened, endangered, or sensitive. Wildlife includes fish, amphibians, reptiles, birds, and mammals. For the purposes of this EA wildlife includes all vertebrate animals (i.e., fish, amphibians, reptiles, birds, and mammals) with the exception of those identified as threatened, endangered, or sensitive. Wild horses and burros are also included and protected by Public Law 92-195, *Wild Free-Roaming Horse and Burro Act of 1971*, as amended. Wildlife potentially affected by demolition and construction activities and construction noise will be discussed.

Special-Status Species. Special-status species are defined as those plant and animal species listed as threatened, endangered, or proposed as such by the USFWS. The federal Endangered Species Act (ESA) protects federally listed, threatened, and endangered plant and animal species. Species of concern are not protected by the ESA; however, these species could become listed and protected at any time. Their consideration early in the planning process could avoid future conflicts that might otherwise occur. The discussion of special-status species focuses on those species with the potential to be affected by demolition, construction, and construction-related noise.

3.4.1 Affected Environment

The affected area for biological resources is Silver Flag Alpha within the NTTR South Range. Only those areas directly affected by ground-disturbing activities such as construction or infrastructure development were assessed.

Vegetation. The South Range lies in the northeastern portion of the Mojave Desert, and SFA at approximately 3,100 feet elevation. Creosote bush-white bursage and saltbush communities are the most common vegetation communities on the South Range and SFA. Where soils are especially alkaline and clay-rich, as on the margins of dry lake beds (playas) at the lowest elevations, saltbush species including four-wing saltbush (*Atriplex canescens*), cattle-spinach (*A. polycarpa*), and shadscale (*A. confertifolia*) dominate the vegetation. Saltbush communities, especially near playas, may consist exclusively of these species. Vast areas of the basins and bajadas in the Mojave Desert, below approximately 3,900 feet, support plant communities dominated by creosote bush and whitebursage. Saltbush species, ephedras (*Ephedra* spp.), brittlebush (*Enceliavirginensis*), desert mallow (*Sphaeralcea ambigua*), cacti (especially prickly pears and chollas [*Opuntia* spp.]), and Mojave yucca (*Yucca shidigera*) may also occur in this community (Nellis AFB 1999). Vegetation at the project area for the SF RTC expansion is highly disturbed, creosote habitat; much of the vegetation has previously been removed or disturbed. Vegetation found within these areas is limited to landscaping and weedy species.

Wetlands and Waters of the United States. Wetlands are considered sensitive and protected by Section 404 of the Clean Water Act (CWA). Jurisdictional wetlands consist of those that meet the three criteria defined in the *Corps of Engineers Wetlands Delineation Manual* (1987) and are under the jurisdiction of the U.S. Army Corps of Engineers. Wetlands are generally associated with drainages, stream channels, and water discharge areas (natural and man-made). Arroyos, playas, ephemeral channels, and wetlands constitute waters of the U.S. and may be subject to regulations under Section 404 of the CWA if their use, degradation or destruction could affect interstate or foreign commerce.

Surface water resources are extremely limited on NTTR. The surface water resources present on the range, consist of seeps, springs, ponds (both natural and artificial), and one intermittent stream (Breen Creek). The Air Force evaluated these resources in 1996 (Nellis AFB 1997b). Most of these water resources occur in the North Range and those few in the South Range lie within the mountains or are man-made. Not all playas and other potentially seasonally or ephemerally wet areas have been systematically investigated. However, as these sites are largely unvegetated, they would not qualify as jurisdictional wetlands. Most of NTTR's surface waters have been subjected to modification by humans and heavily impacted by wild horses, limiting their value to wildlife (Nellis AFB 1997b). The primary function of these surface waters on NTTR is wildlife habitat, providing a limiting critical resource for wildlife species living in or migrating through this arid environment.

A range-wide survey (Nellis AFB 1997b) has been conducted and there are no known water sources or wetlands, or waters of the U.S. located within the affected areas for the proposed action at NTTR. However, the USACE does not recognize this study as a delineation of jurisdictional waters, any project (i.e., this ExpeRT expansion) with the potential of affecting jurisdictional waters would require delineation and a Section 404 permit.

Wildlife. Wildlife within the South Range includes species that are primarily associated with Mojave Desert scrub and woodland habitats. Common mammals of the South Range include coyote (*Canis latrans*), badger (*Taxidea taxus*), black-tailed jackrabbit (*Lepus californicus*), and desert kit fox (*Vulpes macrotis)*. These species can be found in all habitat types in low numbers, predominately in areas without heavy human disturbance. Desert bighorn sheep prefer the roughest and remotest habitat on or near the mountain tops, although this species will move farther down the slopes during the winter. Wild burros, which escaped or were released periodically over the last 200 years, are found in low numbers within the creosote bush scrub habitat. Mule deer (*Odocoileus hemionus*), mountain lion (*Felis concolor*), and bobcat (*Lynx rufus*) occur in the mountains of the South Range, although these large mammals are more numerous on the North Range (Nellis AFB 1999). Common small mammals include whitetailed antelope squirrel (*Ammospermophilus leucurus*), Merriam's kangaroo rat (*Dipodomys merriami*), long-tailed pocket mouse (*Chaetodipus formosus*), cactus mouse (*Peromyscus eremicus*), and southern grasshopper mouse (*Onychomys torridus*). These rodent species are normally found in loose sandy soils in areas with

creosote bushes whereas the canyon mouse (*Peromyscus crinitus*) and desert woodrat (*Neotoma lepida*) are associated with rocky soils, canyons, and Joshua trees.

A bird survey in 1996 documented the presence of 114 avian species on NTTR (Nellis AFB 1999). These species range from common ravens (*Corvus corax)* and cactus wrens (*Campylorhynchus brunneicapillus*) to raptors, including peregrine falcons (*Falco peregrinus*). The report summarized avian use of the desert scrub and higher elevation woodland communities as relatively low through much of the year, particularly for wintering and breeding. Springs and ponds supported the greatest number of birds, although the wetland habitat makes up only a small proportion of NTTR.

Reptiles are especially adapted to drought conditions and extreme temperatures and are, therefore, well represented in the South Range. The most notable reptile species found in the Mojave creosote scrub habitat is the desert tortoise (*Gopherus agassizii*). Lizard species include side-blotched lizard (*Uta stansburiana*), California whiptail *(Aspidoscelis tigris munda)*, and others. Snakes include the coachwhip (*Masticophis flagellum*), gopher snake (*Pituophis melanoleucus deserticola)*, and the Mojave green rattlesnake *(Crotalus scutulatus scutulatus*). The limited surface water habitat and desert springs habitat within the South Range provide extremely valuable resources for wildlife species. Two species of amphibians, the western spadefoot toad *(Spea hammondii)*, and the western toad (*Bufo boreas*) may occur near natural or man-made bodies of water. There are no native fish populations on NTTR.

No site-specific wildlife surveys were performed for any of the potentially affected areas; however, species potentially found near or on the sites would be similar to previously surveyed nearby locations. Additional SF RTC facilities would be constructed on disturbed, creosote shrubland and habitat is very limited at these sites due to previous, heavy land disturbance. Wildlife found within these areas is limited to transients or species adapted to co-habitation with humans.

Special-Status Species. Habitat on the existing lands for the expansion of SF RTC is highly disturbed creosote shrubland, but falls within the overall range of desert tortoise habitat. The desert tortoise is the only federally-listed wildlife species known to occur within the areas of NTTR potentially affected by this Air Force proposal. Due to the disturbed nature of the habitat at all of these locations, threatened, endangered, or other species of concern are unlikely to be resident or transient.

The Mojave Desert population of the desert tortoise, whose general distribution includes portions of NTTR, was listed as threatened by the USFWS on April 2, 1990. The USFWS attributes the decline of this species to disease, predation from increased raven populations, collecting, vehicle mortalities, and habitat degradation, destruction, and fragmentation. The species' range in this region lies primarily within the Mojave desert scrub habitat at elevations below 4,000 feet. Desert tortoise home ranges vary with location and year, but may cover from 25 to 200 acres. Basic habitat requirements include the quality of forage species, shelter from predators and environmental extremes, suitable soil types for

burrowing, nesting and over-wintering, vegetation for cover and shelter, and adequate area for movement and dispersal. These requirements may be met in a variety of plant communities including Joshua tree, Mojave yucca, creosote bush, and saltbush scrub. Tortoises are herbivorous, with the most important food apparently being desert annuals, cacti, and grasses. Desert tortoise mating starts with emergence of Spring and may continue until Fall dormancy. Nesting occurs from May to July. Females dig nests, deposit eggs, and abandon the nest; incubation varies from 90 to 120 days (Revegetation Innovations 1992). Desert tortoise habitat and burrows are most commonly found within creosote bush scrub communities on flat areas or gently sloping areas, washes, bajadas within valley floors. However, they may also be found in steeper, rockier areas. Soil structure is an important limiting factor for tortoise habitat. Soils must be firm enough to hold burrows, but soft enough to allow digging. A variety of soil types, from sandy to sandy-gravely, may be used.

For NTTR, desert tortoise habitat occurs in the areas of the South Range consisting of Mojave desert scrub. This area within the South Range represents a small percentage of the available desert tortoise habitat within the Northeastern Mojave Recovery Unit (refer to Figure 1-1). The South Range lies within the extreme northern limits of desert tortoise geographical range. The NTTR falls within the Coyote Spring Desert Wildlife Management Area (DWMA), which has been designated as part of the recovery units based on the *Desert Tortoise (Mojave Population) Recovery Plan* (1994). However, the NTTR is not part of the designated critical habitat areas (USFWS 1994). Designated recovery units contain both "suitable" and "unsuitable" habitat. Some areas within NTTR are located in areas that are considered "unsuitable" or are highly disturbed and do not contain nesting, sheltering, or foraging habitat (USFWS 1994).

The low to very low probability of desert tortoise within the affected areas is supported by the several desert tortoise surveys that have been conducted on the NTTR South Range. These surveys (Figure 3-1) have shown that the proposed affected areas in Silver Flag Alpha clearly lie near the northern limits of the desert tortoise range. In this area, population densities are generally lower and populations tend to be "patchy." Surveys of the South Range have shown a range of density from 1 to 45 desert tortoise per square mile (USFWS 1994), but the areas potentially affected by the proposed action were found to support a very low (0 tortoise per square mile) to low (1 to 3 tortoise per square mile) population density. The following details the methods and results of these surveys.

The most extensive survey was completed during 1992 (Revegetation Innovations 1992) covering approximately 459 square miles and including all areas below 3,600 feet in the Indian Springs Valley, and

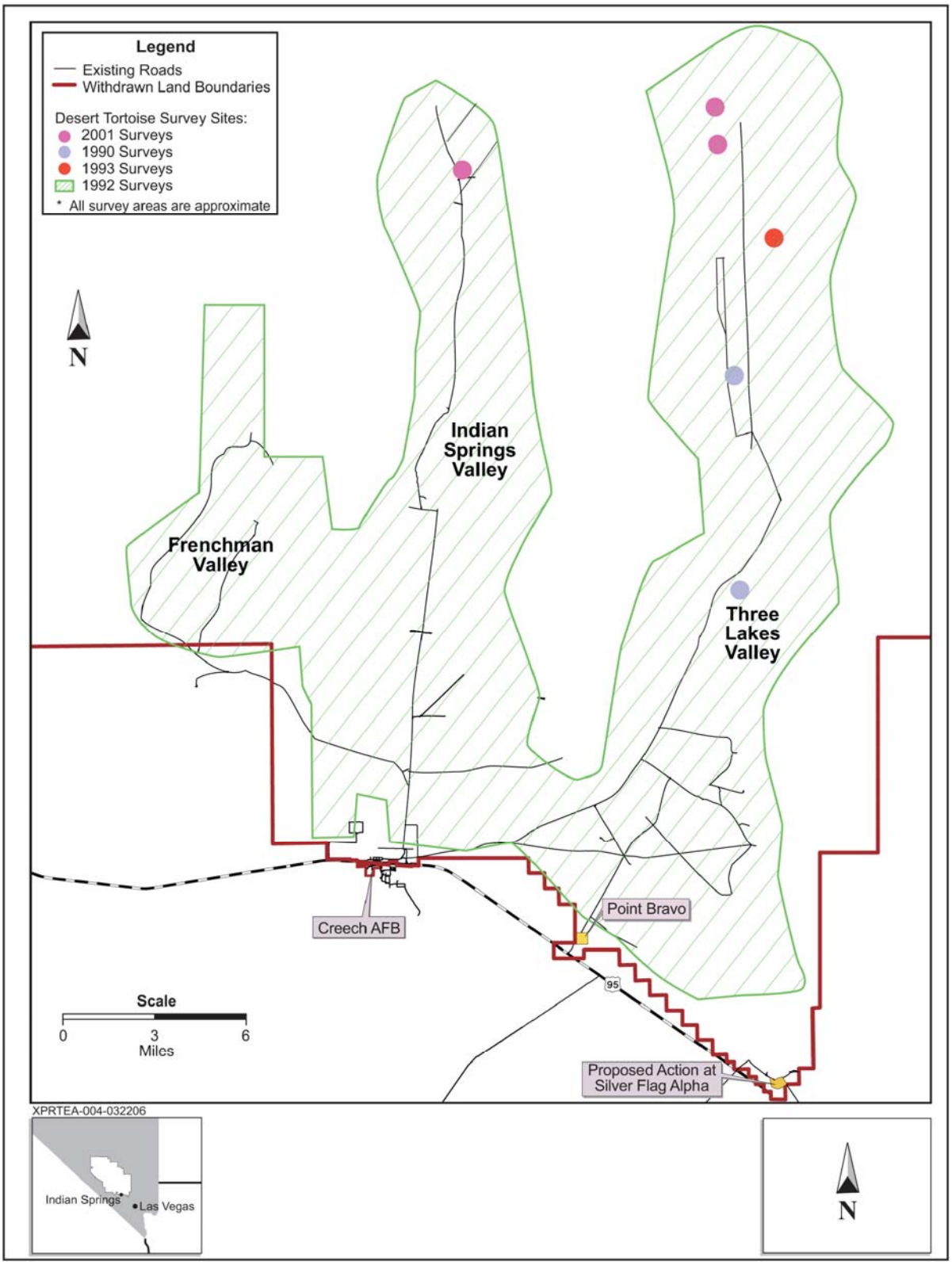

Figure 3-1 Desert Tortoise Survey Sites

below 4,000 feet in the Three Lakes Valley, the eastern fringes of Frenchman Valley, and the Nellis Small Arms Ranges in the Las Vegas Valley.

These areas encompass land north of the potentially affected areas. Surveyors recorded any evidence of tortoise or tortoise activity (tracks, eggshells, burrows, carcasses, scat). This survey found desert tortoise population densities within these areas to be very low (0 tortoise per square mile) to low (1 to 3 tortoise per square mile), relative to other parts of the tortoise's range (USFWS 1997). Only 110 of 431, or 25 percent, of the transects showed any sign of (burrows, carcasses, scat) or actual presence of the desert tortoise.

In 1990, three surveys, covering 890 acres were preformed: 1) a 100-percent survey of 560 acres along the southwestern edge of Dog Bone Lake located 5 desert tortoises, 25 active burrows, 3 carcasses, and 26 inactive burrows; 2) another survey of 260 acres did not locate any sign of or actual presence of tortoise; and 3) seven 10-acre sites in Indian Springs and Three Lake Valleys, found no desert tortoise or desert tortoise signs.

A 1993 survey of approximately 70 acres east of Dog Bone Lake, within the impact zone in R62, located 2 desert tortoises, 13 active burrows, 6 carcasses, 6 scat, and 24 inactive burrows. This survey used transects similar to those in the 1992 survey of four 40-acre plots. Sixteen additional 10-acre surveys were conducted at sites located within Indian Springs (Range 64) and Three Lakes Valleys (Range 62). No desert tortoise or sign of tortoise was located at any of these sites.

In 2001, a 100-percent coverage survey was completed for a 7.5-mile corridor proposed for road construction. Three corridor segments were surveyed: two segments totaling approximately 6 miles extended along the west side of Dog Bone Lake within an impact zone. The remaining section was located in the northern portion of Indian Springs Valley. This survey did not locate any desert tortoise or active burrows and noted evidence of previous disturbance from training activities. Five inactive tortoise burrows were located (Nellis AFB 2002b).

The most recent documented survey conducted in June 2002, consisted of a 100-percent presence/absence survey in portions of the South Range. Three live tortoises were observed in burrows along with fresh tracks of a fourth tortoise. A total of 41 burrows, 14 potential burrows, 13 pallets, 14 scats, 2 carcasses, and 2 sets of desert tortoise tracks were also observed during the June 2002 survey. The survey did not locate any desert tortoise or active burrows in the areas examined in Range 64 (USFWS 2003).

The USFWS issued a programmatic Biological Opinion (BO) on June 17, 2003 (amending an earlier BO issued February 5, 1997). The 2003 BO concluded that training activities at NTTR would not jeopardize the continued existence of the desert tortoise or destroy or adversely modify critical habitat (USFWS

2003). The Opinion also indicated measures to be taken to minimize desert tortoise mortality or harassment and destruction of habitat. These measures include:

- a maximum speed limit of 25 miles per hour for all regular vehicle travel
- no off-road travel with the exception of Explosive Ordnance Disposal (EOD);
- removal of desert tortoise from areas of impact by a qualified biologist;
- development of an approved vegetation rehabilitation plan.
- a tortoise education program shall be given to employees working in tortoise habitat

On June 30, 2004, the USFWS accepted a Nellis AFB request to modify Term and Condition 1.A. and 1.D. of the 2003 Biological Opinion (USFWS 2004). The modification requires that new proposed projects in the area of the NTTR South Range be cleared of desert tortoise as determined by the Nellis AFB Natural Resources Manager and the USFWS in lieu of project perimeter fencing based on the quality of desert tortoise habitat and the likelihood of desert tortoise appearing on the project site. A desert tortoise monitor would remain onsite throughout all construction activities. Desert tortoise removed from the site could be fitted with radio telemetry devices to obtain monitoring data during or until completion of project construction. All data collected would be provided to the USFWS.

Additional state and federal species of concern may occur on NTTR (Nellis AFB 1999). This status category does not confer any specific legal protection, but the Nellis Environmental Management Flight gives consideration to species of concern in ongoing management of NTTR and as part of NEPA compliance. Species of concern and BLM-sensitive species that are known or likely to occur on NTTR include seven species of mammals (six of which are bats), eight species of birds, and two species of reptiles. The majority of these avian species are expected to occur on NTTR only seasonally in small numbers. The phainopepla is the only common year-round resident, and burrowing owl and ferruginous hawk may breed on NTTR in small numbers.

No formal surveys for pygmy rabbits have been conducted on the NTTR. During cursory investigations of certain seeps and springs, pygmy rabbit droppings and burrows were observed in sage brush habitats located on the east side of the Kawich Mountain Range in the far north portion of NTTR. Pygmy rabbit habitat is big sage associated with the Great Basin and is not known to occur in Mojave creosote vegetation communities. The extent of distribution and population density of pygmy rabbits on the NTTR is unknown at this time (personal communication, Turner 2005). A bat survey report (Nellis AFB 1999) documents the presence of three sensitive species of bats on NTTR, Townsend's big-eared bat, fringed myotis, and long-legged myotis. Other bat species such as the western small-footed myotis, spotted bat, and the long-eared myotis have been observed on the Department of Energy's Nevada Test Site and are likely to occur on NTTR.

The accumulated results of these surveys establish that the affected areas under the proposed action have a minimal (at most) potential to support desert tortoise. Most of the habitat is already disturbed, and that

over the 10-year period of surveys, no evidence has shown improvement of the habitat quality or increase in tortoise population density. As such, the surveys support the USFWS 2003 Biological Opinion that continued training activity at NTTR would not jeopardize the continued existence of the desert tortoise and would not be likely to destroy or adversely modify designated critical habitat

In summary, there are no federally-listed threatened or endangered plant species known or likely to occur within NTTR's South Range. However, there are 38 state- or federally-listed plant and animal species of concern occurring or potentially occurring within the affected environment of NTTR (USFWS 2001). The only known-federally listed wildlife species known to occur on NTTR is the desert tortoise which is only found in the southern portion of the South Range. Measures as described above and included in the 2003 BO would be implemented to minimize desert tortoise mortality or harassment and destruction of habitat (USFWS 2003).

3.4.2 Environmental Consequences

Proposed Action

Approximately 8 acres would be impacted through expansion of the ExpeRT course. Impacts would be negligible as the areas have already been disturbed. Impacts to wildlife from habitat loss and construction noise would be negligible, due to the previously developed and disturbed nature of the proposed construction sites.

The only portion of the proposed action which has the potential for impacting jurisdictional waters or waters of the U.S. is the convoy combat training route and associated targets. The A-1 road crosses washes that could be considered jurisdictional, therefore a determination will be made prior to any construction, and if applicable, obtain a USACE Section 404 permit. The targets would be placed in a way that would minimize overall impacts and avoidance of jurisdictional waters could place the targets in areas containing biological or cultural resources and vise versa. Because the site selection may not be able to avoid all sensitive resources, appropriate provisions for the resources affected would be implemented. For example, a tortoise monitor would be used during all target placement and convoy combat training route upgrades; however, jurisdictional waters might not be able to be completely avoided or cultural resources may need surveying and State Historic Preservation Office consultation would be required. All appropriate permitting, surveys, and sensitive species avoidance would be undertaken to avoid significant impacts to these resources. To protect birds under the Migratory Bird Treaty Act, a survey of the areas to be disturbed would be conducted prior to land clearing.

Potential impacts to wildlife from construction noise would be temporary, and limited to the vicinity of construction sites. Individual animals may be affected for a short time by noise disturbance. Reactions may vary, but could include leaving the immediate vicinity or coming out of hibernation. Due to the

small nature of the area disturbed and the low number of wildlife currently in the region of these sites, or in immediately surrounding habitat, impacts would be minimal. Vehicle traffic on SFA access roads (e.g., I-95) would increase temporarily during construction and upgrade activities. Since these roads already exist, the temporary increase would not likely affect wildlife already habituated to the presence of a road. Long-term operations would increase traffic on I-95 and internal SFA roads; however, it would occur on existing roads and in previously disturbed areas and therefore would have a minimal impact on wildlife.

As noted above, the affected areas consist of previously developed and disturbed locations. These locations are very unlikely to support threatened or endangered species or species of concern. Impacts to such species would be negligible to non-existent. In addition, implementing the proposed action would not be expected to adversely affect desert tortoise populations or their recovery. Several factors support this assessment: while the area potentially affected falls within the habitat range of the desert tortoise, the USFWS does not consider this area to be critical habitat due to disturbance from training activities (USFWS 2003). Modification of Terms 1.A and 1.D of the USFWS 2003 opinion would ensure desert tortoise are removed from project sites of proposed construction activities and a desert tortoise monitor would remain onsite for the duration of construction and upgrade activities as well as target placement (USFWS 2004). The Air Force would comply with the requirements and modifications of the 2003 BO.

No-Action Alternative

Under the no-action alternative there would be no change to current baseline conditions. No new construction or upgrades to existing infrastructure would occur. There would be no change in the level of impacts to vegetation. Wetland and waters of the U.S. would not be impacted because no upgrades to road A-1 would occur. No impacts to threatened, endangered, or special-status species (i.e., desert tortoise) would occur since new construction or upgrades would not be implemented.

3.5 CULTURAL RESOURCES

Cultural resources management is directed by federal laws. Section 106 of the *National Historic Preservation Act of 1966* requires that federal agencies take into account the effects of their undertakings on historic properties which are locations, features, and objects older than 50 years and determined eligible for nomination to the *National Register of Historic Places*. Cultural resources are sites, buildings, structures, or objects that are over 50 years old. Locations with significant importance to a group are traditional properties.

Resources and locations are recorded and evaluated by archaeologists and historians. Those that meet one or more criteria in 36 CFR 60.4 are determined by the Air Force as eligible for nomination to the *National Register of Historic Places*. An Area of Potential Effect includes eligible properties that could be affected

by the action even if not within the region of influence (or affected environment), such as a shelter cave that is visible to construction personnel who have the potential to conduct visits and remove artifacts. If the federal action has potential for adverse effects to eligible sites, the Air Force makes a determination of adverse effect; if no eligible properties are present, the determination is either no historic properties present or no adverse affects. The Area of Potential Effect for this action is defined as the region of influence, or affected environment.

Section 106 of the *National Historic Preservation Act of 1966* requires that federal agencies take into account the effects of their undertakings on historic properties which are locations, features, and objects older than 50 years and determined eligible for nomination to the *National Register of Historic Places*. Methods for inventory and evaluation are described in the NTTR Cultural Resources Management Plan (Nellis AFB 1998). Efforts to identify and evaluate cultural resource properties for this project according to 36 CFR 800.4 were initiated in 1978 and continue to the present. Nellis AFB initiated a Native American Program in 1996 as a foundation for government-to-government consultation. Activities have included Annual Meetings, NTTR field trips, participation in professional meetings, and the formation in 1999 of a Document Review Committee which reads and comments on cultural resources reports and environmental assessments prior to SHPO reviews.

3.5.1 Affected Environment

The area of potential effect for cultural resources includes the areas proposed as locations for potential projects (water tower construction, road improvements, leach area, and areas for target improvements, and building construction). These areas include previously disturbed and improved areas on Silver Flag Alpha, a portion of the NTTR South Range.

3.5.2 Environmental Consequences

Procedures for assessing adverse effects to cultural resources are discussed in regulations for 36 CFR Part 800 of the NHPA. An action results in adverse effects to a cultural resource eligible to the National Register when it alters the resource characteristics that qualify it for inclusion in the register. Adverse effects are most often a result of physical destruction, damage, or alteration of a resource; alteration of the character of the surrounding environment that contributes to the resource's eligibility; introduction of visual, audible, or atmospheric intrusions out of character with the resource or its setting; and neglect of the resource resulting in its deterioration or destruction; or transfer, lease, or sale of the property. In the case of the proposed action, potential effects to cultural resources could result from ground disturbing activities associated with construction.

Proposed Action

Under the proposed action, the ExpeRT course would be expanded and construction of two new academic facilities and infrastructure upgrades would occur. An archaeological inventory was conducted at the airbase complex (located to the east of the existing MOUT) in 2001; no archaeological sites or isolated artifacts were recorded within this heavily disturbed area (Nellis AFB 2001). No archaeological survey has been conducted within the proposed project areas (at the ranges and adjacent to road A-1) and no archaeological resources have been recorded within these areas. However, the two academic facilities and leach field would be constructed on existing disturbed sites, graveled parking areas, or along rough roads.

The Air Force will implement the procedures found in 36 CFR 800 for all projects described in this document. For the most part, construction would take place on existing improved or previously disturbed areas. Undisturbed areas would be examined by a professional archaeologist prior to construction (Nellis AFB 1998).

This EA will also be reviewed by the Native American Document Review Committee. American Indian involvement would be active in field situations where American Indian sites, traditional cultural properties, or other American Indian properties are involved. Nellis AFB would ensure that consultation with American Indian representatives is conducted throughout the project.

No-Action Alternative

Under the no-action alternative, no facilities would be constructed or infrastructure upgraded. There would be no impacts to NRHP-eligible or listed resources.

CHAPTER 4

CUMULATIVE EFFECTS IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

CHAPTER 4
CUMULATIVE EFFECTS AND IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

4.1 CUMULATIVE EFFECTS

A cumulative effects analysis should consider the potential environmental impacts resulting from "the incremental impacts of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions" (40 CFR 1508.7). Assessing cumulative effects involves defining the scope of the other actions and their interrelationship with the proposed actions if they overlap in space and time. Cumulative effects are most likely to arise when a proposed action(s) is related to other actions that could occur in the same location or at a similar time. Actions geographically overlapping or close to the proposed actions would likely have more potential for a relationship than those farther away. Similarly, actions coinciding in time with the proposed actions would have a higher potential for cumulative effects.

To identify cumulative effects, the analysis needs to address three questions:

1. Could affected resource areas of the proposed actions interact with the affected resource areas of past, present, or reasonably foreseeable actions?
2. If one or more of the affected resource areas of the proposed actions and another action could interact, would the proposed actions affect or be affected by impacts of the other action?
3. If such a relationship exists, are there any potentially significant impacts not identified when the proposed actions are considered alone?

4.2 SCOPE OF CUMULATIVE EFFECTS ANALYSIS

The scope of the cumulative effects analysis involves both the geographic extent of the effects and the time in which the effects could occur. This cumulative effects analysis includes the boundaries of the affected areas for the proposed action, Creech AFB, Silver Flag Alpha in the NTTR South Range, and Range 63A airspace overlying Silver Flag Alpha. Actions not occurring within or near these areas are not considered in the analysis. The time frame for cumulative effects starts in 2006 when phased construction activities under the proposed action would start. For purposes of this analysis, public documents prepared by federal, state, and local government agencies were the primary sources of information for identifying reasonably foreseeable actions.

Past and Present Actions

Nellis AFB is an active military installation that undergoes continuous change in mission and in training requirements. This process of change is consistent with the United States defense policy that the Air Force must be ready to respond to threats to American interests throughout the world. The following summarizes past and present actions occurring within the NTTR and in proximity to Range 63A:

- In 1997, the Air Force expanded combat ground and security forces training at Silver Flag Alpha (Ranges 63A, 63, and 65S) and Creech AFB (formerly Indian Springs Air Force Auxiliary Field. Areas of disturbance were limited to previously disturbed areas on the ranges (Nellis AFB 1997a).
- In 2002, the Air Force approved construction of military operations in urban terrain (MOUT) facility encompassing approximately 97 acres at Silver Flag Alpha, with additional facilities constructed at Creech AFB in Indian Springs, Nevada (Nellis AFB 2003a). The MOUT training complex provides a simulated urban airbase environment for SF ground training. The existing MOUT village was upgraded and an air base (ATC and hangars) constructed and completed in 2005. Academic and lodging/dining facilities were evaluated as part of this proposal but have not been funded.
- In 2003, construction of a high-technology test and training complex (HTTC) encompassing 946 acres on Range 62 was approved by the Air Force (Nellis AFB 2003a). The HTTC provides a realistic urban environment for United States and allied aircrew training. Construction of the HTTC began in 2004 and is scheduled to conclude in 2008.
- In 2003, the Air Force implemented a force structure change that adds up to 48 medium- and high-altitude (MQ-1 and MQ-9) Predator unmanned aerial vehicles to the current inventory of 40 predators at Creech AFB and add 143 personnel to Nellis AFB (Nellis AFB 2003b). Part of this proposal includes construction of a new dining facility that would support increased student levels proposed by the ExpeRT proposal.
- In 2005, the Air Force implemented a suite of tools to dispose of Depleted Uranium (DU)-contaminated targets and Target Debris Munitions Residue from Target 63-10 and the DU library at NTTR (Nellis AFB 2005). This action includes strict handling, transport, and disposal measures which are defined by permits, regulations, and guidelines from the Air Force, Department of Energy, Nuclear Regulatory Commission, Department of Transportation, DoD, USEPA, and transport requirements for the State of Nevada.
- The Air Force proposes to implement a full Wing Infrastructure Development Outlook program of infrastructure improvements for Nellis AFB. The proposed action consists of implementing 631 WINDO projects at Nellis AFB, NTTR and associated facilities, Creech AFB, and Tonapah Test Range that include repair, maintenance, installation, renovation, construction, and demolition (Nellis AFB 2006).

All past actions at NTTR resulting from Air Force activities involving use of the range and airspace would not change from those described in the *Nellis Renewal Legislative Environmental Impact Statement* (Air Force 1999) No known past and present actions were identified, that when combined with the proposed action (located within the southern border of the over 3-million acre Nevada Test and Training Range) would result in adverse cumulative effects.

Reasonably Foreseeable Actions

Actions potentially relating to the cumulative effects for the proposed expansion of the ExpeRT course student capacity and associated facility construction and upgrade projects at the SF facilities at Silver Flag Alpha could include those of the DoD, Department of Energy, Department of the Interior, and local counties.

DoD Actions

The Air Force proposes to beddown 36 F-35 aircraft at Nellis AFB to establish the F-35 Force Development Evaluation testing and Weapons School. The beddown would begin in fiscal year 2009 reaching the full complement in 2019. An increase of annual airfield operations at Nellis AFB and munitions, chaff, and flare utilization in NTTR airspace would occur under the F-35 proposal.

The 2005 DoD Base Closure and Realignment (BRAC) Commission has recommended realignment of aircraft for Nellis AFB. The base will have a net gain of five aircraft (loss of 13 F-16s and a gain of 18 F-15s). This realignment of aircraft must be complete by 2007 and will be evaluated under EIAP and addressed as the actions occur. There would be no noticeable increase in annual airfield operations at Nellis AFB or munitions, chaff, and flare utilization in NTTR airspace as a result of the BRAC realignment.

Department of Energy Actions

The Department of Energy completed an environmental impact statement for the Nevada Test Site in Nye County and in July 2002, President Bush signed a bill for development of the Yucca Mountain site as a repository for disposal of spent nuclear fuel and high-level radioactive waste. Following Nuclear Regulatory Commission review and approval, construction could be completed and operations could commence by 2010. While the Nevada Test Site underlies NTTR airspace, the activities associated with the Yucca Mountain site are not likely to impact NTTR operations, and would thus not result in any cumulative impacts when combined with the proposed action.

Most of these actions have been analyzed previously in the *Nellis Renewal Legislative Environmental Impact Statement* (Air Force 1999). The activities, when evaluated with the proposed action would not

generate additive cumulative effects to the region. Because implementation of the proposed action would result in temporary or very minor impacts to the resources analyzed, it is not anticipated that the proposed action, when combined with other future proposed actions, would have a negative cumulative effect on other resources.

4.3 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

NEPA requires that environmental analysis include identification of "…any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented." Irreversible and irretrievable resource commitments are related to the use of nonrenewable resources and the effects this use could have on future generations. Irreversible effects primarily result from the use or destruction of a specific resource (e.g., energy and minerals) that cannot be replaced within a reasonable time frame. Irretrievable resource commitments involve the loss in value of an affected resource that cannot be restored as a result of the action (e.g., extinction of a threatened or endangered species or the disturbance of a cultural resource).

For the ExpeRT expansion proposal, most resource commitments are neither irreversible nor irretrievable. Most impacts are short-term and temporary, or longer lasting, but negligible. Those limited resources that may involve a possible irreversible or irretrievable commitment are discussed below.

Personal and contract vehicles used by personnel at Silver Flag Alpha, as well as those maintaining the targets and associated facilities, would consume fuel, oil, and lubricants. The amount of these materials used would not likely exceed that currently used by these individuals maintaining similar equipment for NTTR facilities. As such, the proposed action would not increase consumption of these resources. In addition, quantities of materials used in construction would be committed under the proposed action. The increase in the use of these materials would be minimal.

The Air Force would continue to comply with all requirements of the USFWS 2003 Biological Opinion and subsequent modifications to minimize desert tortoise mortality, harassment, or habitat destruction. Construction would occur on previously disturbed areas and could impact native habitat. The areas of disturbance would be miniscule in relation to the near 2.9-million acres of land on NTTR. Construction would avoid significant cultural resources. Any discoveries of cultural resources during construction or infrastructure upgrades, would evoke an investigation and evaluation according to procedures in 36 CFR Part 60 and the Nellis AFB Cultural Resources Management Plan to ensure preservation of the resources.

While construction of new facilities would incur soil disturbance and loss, use of best management practices (e.g., watering roads while undertaking construction, building culverts to channel stormwater) would localize and minimize soil loss.

CHAPTER 5

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CHAPTER 6

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CHAPTER 6
PERSONS AND AGENCIES CONTACTED

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Biaggi, Allen. Administrator, Nevada Division of Environmental Protection. Carson City, Nevada. 2006.

Birger, Dick. Project Leader, Desert National Wildlife Refuge Complex Office. Las Vegas, Nevada. 2006.

Boggs McDonald, Lynette. Clark County Board of Commissioners. Las Vegas, Nevada. 2006.

Bricker, Felton. Tribal Representative, For Mojave Tribe. Mohave Valley, Arizona. 2006.

Caron-Jake, Vivienne. Tribal Representative, Kaibab Band of Southern Paiutes. Fredonia, Arizona. 2006.

Carver, Roberta. Nye County Board of Commissioners. Round Mountain, Nevada. 2006.

Collins, Tom. Clark County Board of Commissioners. Las Vegas, Nevada. 2006.

Cox, Patricia. Nye County Board of Commissioners. Pahrump, Nevada. 2006.

Crawfoth, Terry. Administrator, Nevada Department of Wildlife. Reno, Nevada. 2006.

Eastley, Joni. Nye County Board of Commissioners. Tonopah, Nevada. 2006.

Frank-Churchill, Maurice. Tribal Representative, Yomba Shoshone Tribe. Austin, Nevada. 2006.

Goodman, Mayor Oscar. Las Vegas, Nevada. 2006.

Hollis, Gary. Nye County Board of Commissioners. Pahrump, Nevada. 2006.

Indian Springs Town Advisory Board. Indian Springs, Nevada. 2006.

James, Ronald. State Historic Preservation Office. Carson City, Nevada. 2006.

Lora, SSgt Jovan. Bioenvironmental. 99 AMDS/SGPB. Nellis AFB, Nevada. 2006.

Maxfield, Chip. Clark County Board of Commissioners. Las Vegas, Nevada. 2006.

Montandon, Mayor Michael. North Las Vegas, Nevada. 2006.

Moose, Gaylene. Tribal Representative, Bishop Paiute Indian Tribe. Big Pine, California. 2006.

Morse, Mark. Office Manager, Bureau of Land Management Las Vegas Field Office. Las Vegas, Nevada. 2006.

Myhrer, Keith. Archaeologist. 99 CES/CEVN. Nellis AFB, Nevada. 2006.

Nevada Department of Wildlife. 2006.

Nevada Division of Emergency Management. 2006.

Patras, Rick. Environmental Analysis. 99 CES/CEVN. Nellis AFB, Nevada. 2006.

Reid, Rory. Clark County Board of Commissioners. Las Vegas, Nevada. 2006.

Reilly, Thom. Clark County Manager. Las Vegas, Nevada. 2006.

Roe, John. Environmental Engineer. 99 CES/CEVC. Nellis AFB, Nevada. 2006.

Rose, Gregory. City Manager. North Las Vegas, Nevada. 2006.

Selby, Douglas. City Manager. Las Vegas, Nevada. 2006.

Sprunger-Allworth, Amy. Desert National Wildlife Refuge Complex Office. Las Vegas, Nevada. 2006.

Stafford, Michael. Nevada State Clearinghouse Department of Administration. Carson City, Nevada. 2006.

Trummell, Candice. Nye County Board of Commissioners. Pahrump, Nevada. 2006.

Turner, Bob. Natural Resources Manager. 99 CES/CEVN. Nellis AFB, Nevada. 2006.

Turnipseed, R. Michael. Director, Department of Conservation and Natural Resources. Carson City, Nevada. 2006.

Williams, Myrna. Clark County Board of Commissioners. Las Vegas, Nevada. 2006.

Williams, Robert. U.S. Fish and Wildlife Service Nevada Ecological Field Office. Reno, Nevada. 2006.

Woodbury, Bruce. Clark County Board of Commissioners. Las Vegas, Nevada. 2006.

CHAPTER 7

LIST OF PREPARERS AND CONTRIBUTORS

CHAPTER 7
LIST OF PREPARERS AND CONTRIBUTORS

Christina Cummings, *Production Coordinator*
A.A.S., Administrative Office Technology, Boise State University, 1999
Years of Experience: 5

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B.A., Chemistry, Mary Baldwin College, 1988
Years of Experience: 15

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B.S., Biology, Christopher Newport University VA, 1999
Years of Experience: 7

Edie Mertz, *Graphics*
A.A. General Education, Cerro Coso College, CA, 1994
Years of Experience: 13

Kevin J. Peter, *Program Director*
B.A., Anthropology, Pomona College, 1975
M.A., Anthropology, Washington State University, 1986
Years of Experience: 24

Kathy L. Rose, *Project Manager*
B.A., Political Science/German, University of Massachusetts/Amherst, 1980
M.A., International Relations, George Washington University, 1983
M.S., Forest Resource Management, University of Idaho, 1996
Years of Experience: 10

Teresa Rudolph, *Cultural Resources*
B.A., Anthropology, Florida State University, 1975
M.A., Anthropology, Southern Illinois University, 1981
Years of Experience: 23

APPENDIX A

INTERAGENCY AND INTERGOVERNMENTAL COORDINATION FOR ENVIRONMENTAL PLANNING CORRESPONDENCE

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS AIR COMBAT COMMAND
LANGLEY AIR FORCE BASE, VIRGINIA

JAN 11 2006

MEMORANDUM FOR: The Honorable Oscar Goodman
Mayor of Las Vegas
City Hall
400 E. Stewart Ave
Las Vegas NV 89101

FROM: HQ ACC/A7ZP
129 Andrews St., Suite 102
Langley AFB VA 23665-2969

SUBJECT: Modification to the Current Expeditionary Readiness Training (ExpeRT) Center Creech Air Force Base, Nevada

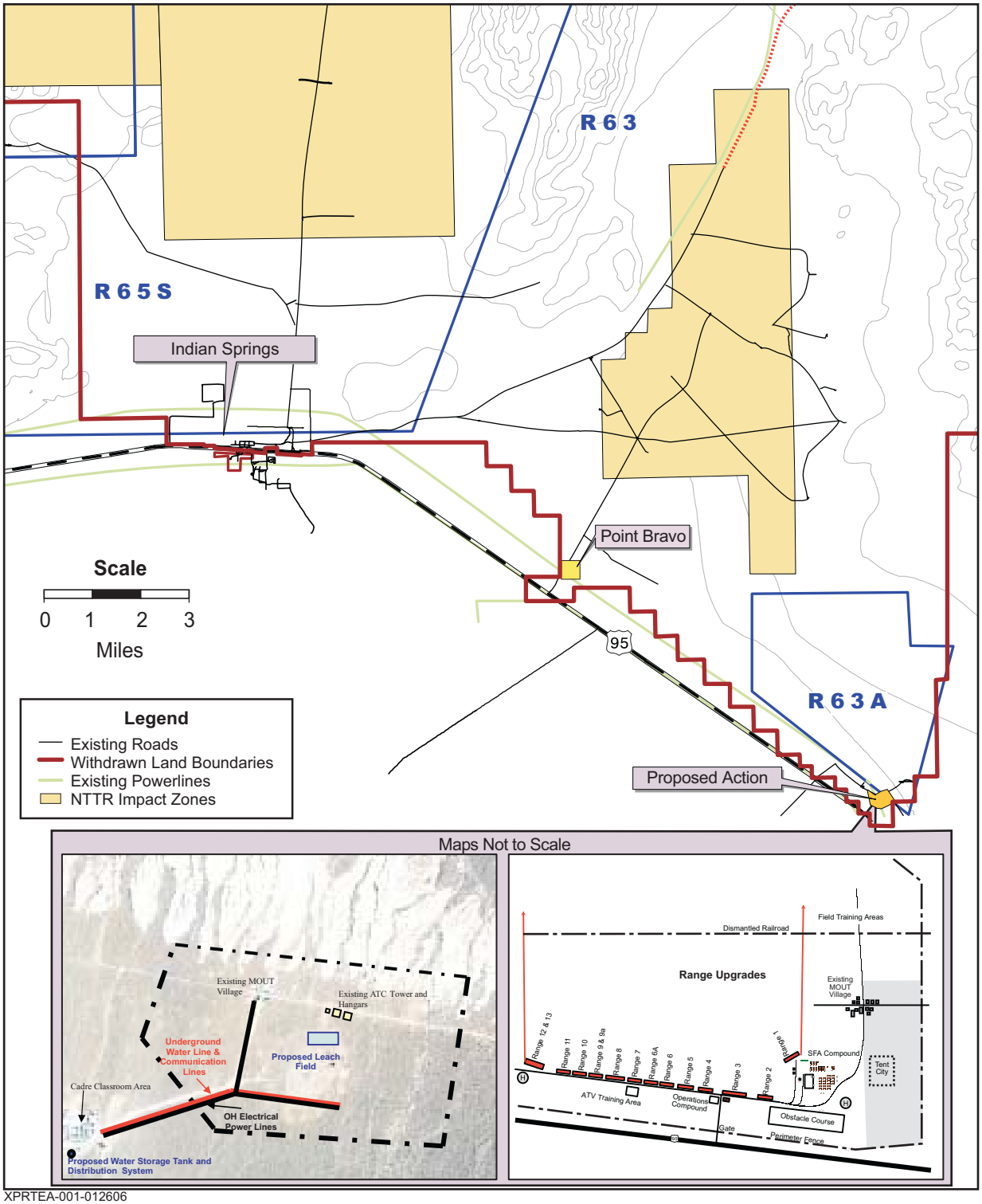
1. The United States Air Force Air Combat Command (Air Force) is preparing an Environmental Assessment (EA) to assess the potential environmental impacts of a proposal to modify the ExpeRT Center at Creech AFB, NV. In support of this process, we request your input in identifying general or specific issues or areas of concern you feel should be addressed in the environmental analysis. This action is being proposed because the current status of the ExpeRT Center is inadequate to meet the current requirements of the Security Forces (SF) community.

2. Currently, the Creech AFB ExpeRT course training capacity is 2,520 students per year. To meet the requirements of the Air Force, this proposal would increase capacity to 6,000 students per year. The proposed action would involve improving and constructing academic and administrative facilities as well as supplying/improving infrastructure items such as sewage, septic, electrical power, and water sources. Additionally the EA will analyze the potential environmental impacts of upgrading four live firing ranges.

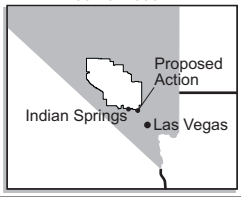
3. Please forward any identified issues or concerns to Mr. Mike Jones, the ExpeRT Project Manager, at the above address. Though we will consider comments received at any time during the environmental process to the extent possible, we'd appreciate comments by 3 March 2006.

LARRY H. DRYDEN P.E.
Chief, Planning Branch (A7ZP)

Attachment:
Vicinity Map



XPRTEA-001-012606



NTTR
South Range

N

Expeditionary Readiness Training Expansion Environmental Assessment
IICEP Distribution List

The preceding letter was also sent to the following individuals:

The Honorable Michael Montandon
Mayor of North Las Vegas
City Hall
2200 Civic Center Drive
North Las Vegas, NV 89030

Mr. Douglas Selby, City Manager
City of Las Vegas
400 E. Stewart Ave.
Las Vegas, NV 89101

Mr. Gregory Rose, City Manager
City of North Las Vegas
2200 Civic Center Drive
North Las Vegas, 89030

Clark County Board of Commissioners
Attn: Ms. Yvonne Atkinson Gates, Commissioner
P.O. Box 551601
Las Vegas, NV 89155

Clark County Board of Commissioners
Attn: Mr. Tom Collins, Commissioner
P.O. Box 551601
Las Vegas, NV 89155

Clark County Board of Commissioners
Attn: Ms. Lynnette Boggs McDonald, Commissioner
P.O. Box 551601
Las Vegas, NV 89155

Clark County Board of Commissioners
Attn: Mr. Chip Maxfield, Commissioner
P.O. Box 551601
Las Vegas, NV 89155

Clark County Board of Commissioners
Attn: Mr. Rory Reid, Commissioner
P.O. Box 551601
Las Vegas, NV 89155

Clark County Board of Commissioners
Attn: Mr. Bruce Woodbury, Commissioner
P.O. Box 551601
Las Vegas, NV 89155

Clark County Manager
Attn: Mr. Thom Reilly
Clark County Government Building
500 S. Grand Central Parkway, 6th Floor
Las Vegas, NV 89155

Clark County Board of Commissioners
Attn: Ms. Myrna Williams, Commissioner
P.O. Box 551601
Las Vegas, NV 89155

Indian Springs Town Advisory Board
P.O. Box 12
Indian Springs, NV 89018

Nye County Board of Commissioners
Attn: Ms. Roberta Carver, Commissioner
HCR 60, Box 5400
Round Mountain, NV 89045

Nye County Board of Commissioners
Attn: Ms. Patricia Cox, Commissioner
1510 E. Basin
Pahrump, NV 89060

Nye County Board of Commissioners
Attn: Ms. Joni Eastley, Commissioner Vice-Chair
P.O. Box 1729
Tonopah, NV 89049

Nye County Board of Commissioners
Attn: Mr. Gary Hollis, Commissioner
1510 E. Basin
Pahrump, NV 89060

Nye County Board of Commissioners
Attn: Ms. Candice Trummell,
Commissioner Chairperson
1510 E. Basin
Pahrump, NV 89060

Nevada State Clearinghouse Department of Administration
Attn: Mr. Michael Stafford
209 E. Musser St., Room 200
Carson City, NV 89701

Nevada Division of Environmental Protection, Capitol Complex
Attn: Mr. Allen Biaggi, Administrator
333 W. Nye Lane, Room 138
Carson City, NV 89706

Nevada Division of Emergency Management
2525 S. Carson St.
Carson City, NV 89711

Nevada Department of Conservation and Natural Resources
Attn: Mr. R. Turnipseed, Director
123 W. Nye Lane, Room 230
Carson City, NV 89706

Nevada Department of Wildlife
4747 Vegas Drive
Las Vegas, NV 89108

Bureau of Land Management, Las Vegas Field Office
Attn: Mr. Mark Morse, Office Manager
4701 Torrey Pines Drive
Las Vegas, NV 89130

Nevada Department of Wildlife, Reno Headquarters
Attn: Mr. Terry Crawfoth, Administrator
1100 Valley Road
Reno, NV 89512

U.S. Fish and Wildlife Service, Nevada Ecological Field Office
Attn: Mr. Robert Williams, State Supervisor
1340 Financial Blvd., Suite 234
Reno, NV 89502

Desert National Wildlife Refuge Complex Office
Attn: Mr. Dick Birger, Project Leader
4701 N. Torrey Pines Drive
Las Vegas, NV 89130

Desert National Wildlife Refuge Complex Office
Attn: Ms. Amy Sprunger-Allworth
HCR 38, Box 700
Las Vegas, NV 83124

Mr. Richard Arnold
Tribal Chairman, Pahrump Paiute Tribe
P.O. Box 3411
Pahrump, NV 89041

Mr. Felton Bricker
Tribal Representative, Fort Mojave Tribe
10489 McDowell Circle
Mohave Valley, AZ 86440

Ms. Vivienne Caron-Jake
Tribal Representative, Kaibab Band of Southern Paiutes
P.O. Box 68
Fredonia, AZ 86022

Mr. Maurice Frank-Churchill
Tribal Representative, Yomba Shoshone Tribe
HC 61, Box 6208
Austin, AZ 89310

Ms. Gaylene Moose
Tribal Representative, Bishop Paiute Indian Tribe
P.O. Box 173
Big Pine, CA 93513

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS AIR COMBAT COMMAND
LANGLEY AIR FORCE BASE, VIRGINIA

JAN 31 2006

MEMORANDUM FOR: Historic Preservation Office
Attn: Mr. Ronald James
100 Stewart Street Capitol Complex
Carson City NV 89701-4285

FROM: HQ ACC/A7ZP
129 Andrews St., Suite 102
Langley AFB VA 23665-2969

SUBJECT: Modification to the Current Expeditionary Readiness Training (ExpeRT) Center Creech Air Force Base, Nevada

1. The United States Air Force Air Combat Command (Air Force) is preparing an Environmental Assessment (EA) to assess the potential environmental impacts of a proposal to modify the ExpeRT Center at Creech AFB, NV. In support of this process, we request your input in identifying general or specific issues or areas of concern you feel should be addressed in the environmental analysis. This action is being proposed because the current status of the ExpeRT Center is inadequate to meet the current requirements of the Security Forces (SF) community.

2. Currently, the Creech AFB ExpeRT course offers a capacity of 2,520 students per year. To meet the requirements of the Air Force, the capacity needs to increase in phases to a total of 6,000 students per year. The proposed action would involve improving and constructing academic and administrative facilities as well as supplying/improving infrastructure items such as sewage, septic, electrical power, and water sources. Additionally the EA will analyze the potential environmental impacts of upgrading four live firing ranges.

3. Please help us initiate the Section 106 process of the National Historic Preservation Act of 1966. Please view the enclosed map to see the potentially affected area. Our EA will consider the proposal's potential impacts on historic or culturally significant properties, and we will coordinate related information with your office according to the steps outlined in 36 CFR 800.3 through 36 CFR 800.7. In order to help expedite your review, please refer to the previous EA covering the ExpeRT area: (Nevada Training Initiative EA, July 2003). This document covers the same location as our current project.

4. Please forward any identified issues or concerns to Mr. Mike Jones, the ExpeRT Project Manager, at the above address. Though we will consider comments received at any time during the environmental process to the extent possible, we'd appreciate comments by 3 March 2006.

LARRY H. DRYDEN P.E.
Chief, Planning Branch (A7ZP)

Attachment:
Vicinity Map

DEPARTMENT OF THE AIR FORCE

HEADQUARTERS 99TH AIR BASE WING (ACC)
NELLIS AIR FORCE BASE, NEVADA

Colonel Walter D. Givhan
Commander
4430 Grissom Ave, Ste 101
Nellis AFB NV 89191-6520

The Honorable Shelley Berkley
U.S. House of Representatives
2340 Paseo Del Prado, Bldg D, Ste 10
Las Vegas NV 89102

Dear Congresswoman Berkley

The United States Air Force's Air Combat Command is preparing an environmental assessment to analyze the potential environmental impacts of a proposal to modify the Expeditionary Readiness Training Center at Creech Air Force Base, Nev. We request your input in identifying general or specific areas of concern you feel should be addressed in the environmental analysis. This action is being proposed because the current status of the ExpeRT Center is inadequate to meet the current desert combat training requirements of the Security Forces community.

Currently, the Creech AFB ExpeRT course training capacity is 2,520 students per year. To meet the requirements of the Air Force, this proposal would increase capacity to 6,000 students per year. The proposed action would involve improving and constructing academic and administration facilities as well as supplying and improving infrastructure items such as sewage, septic, electrical power, and water sources. Additionally, the environmental assessment will analyze the potential environmental impacts of upgrading four live firing ranges.

Please forward any issues or concerns you may have to Mr Mike Estrada, 99ABW/PA, 4430 Grissom Ave, Ste 107, Nellis AFB NV 89191. While we will consider comments received at any time during the environmental process to the extent possible, we would appreciate comments by 3 March 2006. We will also send you a copy of the draft environmental assessment when it becomes available for public review later this year.

Sincerely

WALTER D. GIVHAN
Colonel, USAF

Attachment:
Vicinity Map

Global Power For America

DEPARTMENT OF THE AIR FORCE

HEADQUARTERS 99TH AIR BASE WING (ACC)
NELLIS AIR FORCE BASE, NEVADA

Colonel Walter D. Givhan
Commander
4430 Grissom Ave, Ste 101
Nellis AFB NV 89191-6520

The Honorable Jon Porter
U.S. House of Representatives
2501 N Green Valley Pkwy, Ste 112D
Henderson NV 89014

Dear Congressman Porter

The United States Air Force's Air Combat Command is preparing an environmental assessment to analyze the potential environmental impacts of a proposal to modify the Expeditionary Readiness Training Center at Creech Air Force Base, Nev. We request your input in identifying general or specific areas of concern you feel should be addressed in the environmental analysis. This action is being proposed because the current status of the ExpeRT Center is inadequate to meet the current desert combat training requirements of the Security Forces community.

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NELLIS AIR FORCE BASE, NEVADA

Colonel Walter D. Givhan
Commander
4430 Grissom Ave, Ste 101
Nellis AFB NV 89191-6520

The Honorable Jim Gibbons
U.S. House of Representatives
600 Las Vegas Blvd South, Ste 680
Las Vegas NV 89101

Dear Congressman Gibbons

The United States Air Force's Air Combat Command is preparing an environmental assessment to analyze the potential environmental impacts of a proposal to modify the Expeditionary Readiness Training Center at Creech Air Force Base, Nev. We request your input in identifying general or specific areas of concern you feel should be addressed in the environmental analysis. This action is being proposed because the current status of the ExpeRT Center is inadequate to meet the current desert combat training requirements of the Security Forces community.

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HEADQUARTERS 99TH AIR BASE WING (ACC)
NELLIS AIR FORCE BASE, NEVADA

Colonel Walter D. Givhan
Commander
4430 Grissom Ave, Ste 101
Nellis AFB NV 89191-6520

The Honorable John Ensign
U.S. Senate
333 Las Vegas Blvd, Ste 8203
Las Vegas NV 89101

Dear Senator Ensign

The United States Air Force's Air Combat Command is preparing an environmental assessment to analyze the potential environmental impacts of a proposal to modify the Expeditionary Readiness Training Center at Creech Air Force Base, Nev. We request your input in identifying general or specific areas of concern you feel should be addressed in the environmental analysis. This action is being proposed because the current status of the ExpeRT Center is inadequate to meet the current desert combat training requirements of the Security Forces community.

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DEPARTMENT OF THE AIR FORCE

HEADQUARTERS 99TH AIR BASE WING (ACC)
NELLIS AIR FORCE BASE, NEVADA

FEB 7 2006

Colonel Walter D. Givhan
Commander
4430 Grissom Ave, Ste 101
Nellis AFB NV 89191-6520

The Honorable Harry Reid
U.S. Senate
333 Las Vegas Blvd, Ste 8016
Las Vegas NV 89101

Dear Senator Reid

The United States Air Force's Air Combat Command is preparing an environmental assessment to analyze the potential environmental impacts of a proposal to modify the Expeditionary Readiness Training Center at Creech Air Force Base, Nev. We request your input in identifying general or specific areas of concern you feel should be addressed in the environmental analysis. This action is being proposed because the current status of the ExpeRT Center is inadequate to meet the current desert combat training requirements of the Security Forces community.

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Sincerely

WALTER D. GIVHAN
Colonel, USAF

Attachment:
Vicinity Map

Global Power For America

Nevada Natural Heritage Program

Department of Conservation and Natural Resources
901 South Stewart Street, Suite 5002 * Carson City, Nevada 89701-5245
voice: (775) 684-2900 fax: (775) 684-2715 web: www.heritage.nv.gov/

21 February 2006

Mike Jones
Department of the Air Force
HQ ACC/A7ZP
129 Andrews St., Suite 102
Langley AFB VA 23665-2969

RE: Data request received 13 February 2006

Dear Mr. Jones:

We are pleased to provide the information you requested on endangered, threatened, candidate, and/or at risk plant and animal taxa recorded within or near the Modification to the Current Expeditionary Readiness Training Center Creech Air Force Base, Nevada project area. We searched our database and maps for the following, from map provided a five kilometer radius around, including

Township 16S	Range 57E	Section all
Township 16S	Range 58E	Section all
Township 17S	Range 57E	Section all
Township 17S	Range 58E	Section all

The enclosed printout lists the taxa recorded within the given area. Please be aware that habitat may also be available for: the chuckwalla, *Sauromalus ater*, a Nevada Bureau of Land Management (BLM) Sensitive Species; halfring milkvetch, *Astragalus mohavensis* var. *hemigyrus*, a Nevada BLM Special Status Species; the banded Gila monster, *Heloderma suspectum cinctum*, a Nevada BLM Sensitive Species; and the white bearpoppy, *Arctomecon merriamii*, a Nevada BLM Sensitive Species. We do not have complete data on various raptors that may also occur in the area; for more information contact Ralph Phenix, Nevada Division of Wildlife at (775) 688-1565. Please note that all cacti, yuccas, and Christmas trees are protected by Nevada state law (NRS 527.060-.120), including taxa not tracked by this office.

Please note that our data are dependent on the research and observations of many individuals and organizations, and in most cases are not the result of comprehensive or site-specific field surveys. Natural Heritage reports should never be regarded as final statements on the taxa or areas being considered, nor should they be substituted for on-site surveys required for environmental assessments.

Thank you for checking with our program. Please contact us for additional information orfurther assistance.

Sincerely,

Eric S. Miskow
Biologist III/Data Manager

At Risk Taxa Recorded Near the ExpeRT Center Creech Air Force Base, Nevada Project Area

Compiled by the Nevada Natural Heritage Program for the Department of the Air Force

21 February 2006

Scientific name	Common name	Usfws	Blm	Usfs	State	Srank	Grank	Lat	Long	Prec	Last observed
Plants											
Eriogonum heermannii var. *clokeyi*	Clokey buckwheat		N	S		S2	G5T2	362525N	1153249W	G	1976-PRE
Reptiles											
Gopherus agassizii	desert tortoise (Mojave Desert pop.)	LTNL	S	T	YES	S2S3	G4	362812N	1152902W	S	1987-1990
Gopherus agassizii	desert tortoise (Mojave Desert pop.)	LTNL	S	T	YES	S2S3	G4	363015N	1152848W	M	1991-POST
Birds											
Empidonax traillii extimus	Southwestern Willow Flycatcher	LE	S	E	YES	S1B	G5T1T2	362712N	1152252W	G	1962

U. S. Fish and Wildlife Service (Usfws) Categories for Listing under the Endangered Species Act:

- LE — Listed Endangered - in danger of extinction in all or a significant portion of its range
- LT — Listed Threatened - likely to be classified as Endangered in the foreseeable future if present trends continue
- NL — Not Listed (no status) in a portion of the species' range

Bureau of Land Management (Blm) Species Classification:

- S — Nevada Special Status Species - USFWS listed, proposed or candidate for listing, or protected by Nevada state law
- N — Nevada Special Status Species - designated Sensitive by State Office

United States Forest Service (Usfs) Species Classification:

- S — Region 4 (Humboldt-Toiyabe NF) sensitive species
- E — Region 4 and/or Region 5 Endangered species
- T — Region 4 and/or Region 5 Threatened species

Nevada State Protected (State) Species Classification:

Fauna:

- YES — Species protected under NRS 501.

Precision (Prec) of Mapped Occurrence:

Precision, or radius of uncertainty around latitude/longitude coordinates:

- S — Seconds: within a three-second radius
- M — Minutes: within a one-minute radius, approximately 2 km or 1.5 miles
- G — General: within about 8 km or 5 miles, or to map quadrangle or place name

Nevada Natural Heritage Program Global (**Grank**) and State (**Srank**) Ranks for Threats and/or Vulnerability:

- G — Global rank indicator, based on worldwide distribution at the species level
- T — Global trinomial rank indicator, based on worldwide distribution at the infraspecific level
- S — State rank indicator, based on distribution within Nevada at the lowest taxonomic level
  - 1 — Critically imperiled and especially vulnerable to extinction or extirpation due to extreme rarity, imminent threats, or other factors
  - 2 — Imperiled due to rarity or other demonstrable factors
  - 3 — Vulnerable to decline because rare and local throughout its range, or with very restricted range
  - 4 — Long-term concern, though now apparently secure; usually rare in parts of its range, especially at its periphery
  - 5 — Demonstrably secure, widespread, and abundant
    - A — Accidental within Nevada
    - B — Breeding status within Nevada (excludes resident taxa)
    - H — Historical; could be rediscovered
    - N — Non-breeding status within Nevada (excludes resident taxa)
    - Q — Taxonomic status uncertain
    - U — Unrankable
    - Z — Enduring occurrences cannot be defined (usually given to migrant or accidental birds)
    - ? — Assigned rank uncertain

USAF2006mjl, 1st

KENNY C. GUINN
Governor

JOHN P. COMEAUX
Director

STATE OF NEVADA

DEPARTMENT OF ADMINISTRATION
209 E. Musser Street, Room 200
Carson City, Nevada 89701-4298
Fax (775) 684-0260
(775) 684-0213

March 3, 2006

Mike Jones

Langley Air Force Base
129 Andrews St., Suite 102
Langley AFB, VA 23665-2969

Re: SAI NV # **E2006-289** Reference:

Project: **Modification of the Current Expeditionary Readiness Training (Expert) Center Creech A.F.B., Nevada.**

Dear Mike Jones:

Enclosed are comments from the agencies listed below regarding the above referenced document. Please address these comments or concerns in your final decision.

Division of State Lands
Division of Water Resources
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,

Zosia Targosz
Nevada State Clearinghouse Coordinator/SPOC

Enclosure

Skip Canfield

From: Clearinghouse [clearinghouse@budget.state.nv.us]
Sent: Wednesday, February 08, 2006 2:40 PM
To: Skip Canfield
Subject: E2006-289 Modification of the Current Expeditionary Readiness Training (ExpeRT) Center Creech A.F.B., Nevada. - Langley Air Force Base

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: February 8, 2006

Division of State Lands

Nevada SAI # E2006-289
Project: Modification of the Current Expeditionary Readiness Training (ExpeRT) Center Creech A.F.B., Nevada.

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/2006/E2006-289.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 Wednesday, March 1, 2006.

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? Zosia Targosz, Clearinghouse Coordinator, (775) 684-0209 or mailto:clearinghouse@budget.state.nv.us.

____No comment on this project ____Proposal supported as written

AGENCY COMMENTS: PLACEMENT OF "DARK SKY" LIGHTING FIXTURES WHEREVER POSSIBLE WOULD BENEFIT USERS OF NEARBY PUBLIC LANDS AS WELL AS DRIVERS ON US 95.

Signature: [signature] Date: 2/24/06

Distribution:
Sandy Quilici, Department of Conservation & Natural Resources Division of Emergency Management Division of Emergency Management Alan Di Stefano, Economic Development Kathy Dow, Economic Development Chad Hastings, Fire Marshal Stan Marshall, State Health Division Skip Canfield, AICP, Division of State Lands Michael J. Stewart, Legislative Counsel Bureau John Walker, Division of Environmental Protection David Pulliman, Department of Wildlife, Director's Office Roy Leach, Department of Wildlife, Fallon Steve Foree, Department of Wildlife, Elko D. Bradford Hardenbrook, Department of Wildlife, Las Vegas Robert Martinez, Division of Water Resources James D. Morefield, Natural Heritage Program 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 Alisa Huckle, UNR Library Zosia Targosz, zzClearinghouse Reese Tietje, zzClearinghouse -Reese

2/23

Rebecca Palmer

From: Clearinghouse [clearinghouse@budget.state.nv.us]
Sent: Wednesday, February 08, 2006 2:40 PM
To: Rebecca Palmer
Subject: E2006-289 Modification of the Current Expeditionary Readiness Training (ExpeRT) Center Creech A.F.B., Nevada. - Langley Air Force Base

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: February 8, 2006

State Historic Preservation Office

Nevada SAI # E2006-289
Project: Modification of the Current Expeditionary Readiness Training (ExpeRT) Center Creech A.F.B., Nevada.

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/2006/E2006-289.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 Wednesday, March 1, 2006.

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? Zosia Targosz, Clearinghouse Coordinator, (775) 684-0209 or mailto:clearinghouse@budget.state.nv.us.

____No comment on this project ____Proposal supported as written

AGENCY COMMENTS: The SHPO reminds the Air Force of its Section 106 responsibilities under the NHPA of 1966 as amended.

Signature: Rebecca A Palmer Date: 2/27/06

Distribution:
Sandy Quilici, Department of Conservation & Natural Resources Division of Emergency Management Division of Emergency Management Alan Di Stefano, Economic Development Kathy Dow, Economic Development Chad Hastings, Fire Marshal Stan Marshall, State Health Division Skip Canfield, AICP, Division of State Lands Michael J. Stewart, Legislative Counsel Bureau John Walker, Division of Environmental Protection David Pulliman, Department of Wildlife, Director's Office Roy Leach, Department of Wildlife, Fallon Steve Foree, Department of Wildlife, Elko D. Bradford Hardenbrook, Department of Wildlife, Las Vegas Robert Martinez, Division of Water Resources James D. Morefield, Natural Heritage Program 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 Alisa Huckle, UNR Library Zosia Targosz, zzClearinghouse Reese Tietje, zzClearinghouse -Reese

Zofia Alicja Targosz

From: Sue Gilbert
Sent: Thursday, February 09, 2006 3:16 PM
To: Zofia Alicja Targosz
Subject: E2006-289

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: February 8, 2006

Division of Water Resources

Nevada SAI # E2006-289
Project: Modification of the Current Expeditionary Readiness Training (ExpeRT) Center Creech A.F.B., Nevada.

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/2006/E2006-289.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 Wednesday, March 1, 2006.

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? Zosia Targosz, Clearinghouse Coordinator, (775) 684-0209 or mailto:clearinghouse@budget.state.nv.us.

____No comment on this project ____Proposal supported as written

AGENCY COMMENTS:
Any water used on the described lands should be provided by an established utility or under permit issued by the State Engineer's Office. All waters of the State belong to the public and may be appropriated for beneficial use pursuant to the provisions of Chapters 533 and 534 if the Nevada Revised Statutes (NRS), and not otherwise. Any water, or monitor wells, or boreholes that may be located on the subject lands are the ultimate responsibility of the owner of the property at the time of the transfer and must be plugged and abandoned as required in Chapter 534 of the Nevada Administrative Code. If artesian water is encountered in any well or borehole it shall be controlled as required by NRS 534.060(3)

William McCullars	Division of Water Resources	Feb 9, 2006
Signature	Department	Date

BLM STAFF COMMENTS ON ExpeRT EA

Carrie Ronning Comments:

Globally: There are numerous discussions of levels of significance throughout this EA. BLM has a Nevada State Director IM that states we can not make determinations of significance in our EA's, as the FONSI is where all those determinations are made.

Pages 2-9 and 2-10, Sections 2.6 and 2.7: These sections contain summaries of analysis. This should be removed. Chapter 3 and the FONSI already contain it. This is the proposed action section.

Page 3-13, paragraph 1, line 5: "burrow" should be changed to "burro" in two places.

Page 3-14, paragraph 2: Will any modifications be made to the wash on the northwest side of Silver Flag Alpha? I believe that the wash is part or a tributary to the Las Vegas Wash, a jurisdictional Waters of the US. You are only discussing the greater NTTR not on site specifically.

Page 3-19, paragraph 3, line 7: BLM does not have data supporting the statement that phainopepla are year round residents of southern Nevada. They arrive in January, to start nesting. If Nellis AFB has records showing year round residency, the BLM would like to get a copy so we can incorporate the information into our conservation management strategy.

Page 3-20, paragraph 4: The wash mentioned that should be analyzed for Waters of the US is not mentioned in Section 3.4.1.

Page 3-21, paragraph 1: Would construction be timed so vegetation removal would occur out of migratory bird nesting season? If during nesting season, a survey should be conducted and nests avoided and protected with an adequate buffer to ensure that construction activities do not result in nesting failure.

Page 3-21, paragraph 1: Recommend adding a statement such as, "If not noticed and avoided, desert tortoises could be either injured or killed (by crushing) during construction and operations. Desert tortoises encountered in harm's way of project activities may be harassed to move them out of harm's way, in accordance with the terms and conditions of the biological opinion.

Page 3-21, paragraph 2: Are there other terms and conditions of the biological opinion that would minimize impacts to the species? The BLM generally incorporates or references in our EAs the specific terms and conditions in the biological opinion that covers incidental take associated with the action.

Page 4-4, paragraph 1: Do not discuss any specific cumulative impacts to resources in this section. Just say there may be "temporary or very minor impacts to the resources analyzed." Which resources and what impacts?

Lisa Christiansen Comments:

3.0 Summary of Environmental Consequences

The 1970 amendments to the Clean Air Act (CAA) required the Environmental Protection Agency (EPA) to set National Ambient Air Quality Standards (NAAQs) for certain pollutants known to be hazardous to human health and the environment.

EPA has identified and set standards to protect human health for six (6) criteria pollutants: ozone, carbon monoxide, total suspended particulates, sulfur dioxide, lead, and nitrogen oxide. The term, "criteria pollutants" derives from the requirement that EPA must describe the characteristics and potential health effects of these pollutants. It is on the basis of the criteria that standards are set or revised.

Note: Change five criteria pollutants to six and use the term Ozone (O_3) rather than VOCs. Volatile Organic Compounds (VOCs) mixed with sunlight has the potential to create O_3 however it's not a given O_3 will be created at any particular time or under any certain circumstances.

Also, conformance regional standards are important, but more site specific pollutant measures must conform to Department of Air Quality and Environmental Management (DAQEM) State Implementation Plans (SIP) regulations.

The report is correct in its assumptions that no impacts will to air quality will occur within the proposed action.

Summary of Potential Environmental Impacts, page ES-3

Same language as above. Adjust information on criteria pollutants and include discussion of NAAQs (see 3.0 Summary notes).

2.7 Summary of Potential Environmental Impacts – Air Quality

Utilize same information in this section as outlined in main summary page and adjust criteria pollutant information and include basic discussion on NAAQs for consistency and accuracy of the process.

3.2.1 Affected Environment

Clark County is currently in serious non-attainment for PM10, however has not experienced an exceedance of the standard for CO in nearly six (6) years and is currently seeking a re-designation by EPA to a maintenance status for CO.

Regarding the Ozone SIP, the current studies are underway in Clark County to determine various scientific questions and DAQEM is also currently preparing a SIP for EPA signature for (2009).

Corrected acronyms for this EA should be:

NDEP - Nevada Department of Environmental Protection

DAQEM – Department of Air Quality and Environmental Management

CCHD – Clark County Health District – Note, CCHD is has been renamed to Southern Nevada Health District (SNHD) and is not the compliance oversight for air quality. DAQEM is the compliance oversight for Clark County.

Note: Any ground disturbances equal to or greater than .25 acres, regardless of attainment of non-attainment for PM10, is required to apply for a dust control permit, prior to any ground disturbing activities.

Note: Please adjust notations of CO and PM10 throughout the document to be in one order or another, but not a mixture of the two. This keeps the information consistent and provides an added measure of clarity for the reader. CO should be de-emphasized for the purposes of this EA, as there have been no exceedances of the standard in Clark County for approximately six (6) years and DAQEM is seeking EPA re-designation to a maintenance status.

It is unclear where emissions calculations have been derived, however there is a state of the art, EPA approved monitoring system owned and operated by Clark County for all criteria pollutants.

Regarding the discussion on page 3-7 of the EA, second paragraph should be completely re-written to support that the proposed action is in compliance with all SIPs associated with criteria pollutants in this area and is not subject to General Conformity Regulations, not by exemption, but because the proposed action conforms with SIPs for PM10 and CO.

As long as the proposed action has a current dust control permit and all conditions of the permit are in accordance with permit conditions for the duration of the project, the proposed action does meet the conformity rule and should be stated so in the positive.

Upon reading this paragraph, it could be construed that the proposed action would be "subject to general conformity," however this is not true. The former is true. The action meets SIPs regulation and is not subject to the conformity rule. Please re-word this paragraph, as on page 3.8, second to last paragraph in this section, the sentence reads, "No conformity analysis would be required and no significant impact would occur." This is a true statement however a convoluted way of arriving at the statement occurred. Recommend a review and edit for clarity and flow of information.

The issue raised regarding Class 1 areas is immaterial to this EA, as the site location is well beyond the scope of notable distances to a Class 1 area. Remove this discussion or note the proposed action is not within the regulatory boundary of a Class 1 area.

Jeffrey G. Steinmetz Comments:

General Comments – I ditto Carries comment on determinations of significance in the text of an EA. We have specific guidance from our past State Director in an Instruction Memorandum not to make any such determination. Since we are required not be pre-decisional and should let the public make up their own minds on the analysis completed in the EA, this makes complete sense.

We do not want to be considered as leading the public by making a statement that this impact analyzed in this EA is noted as not being significant even before the FONSI is completed.

With EA size getting larger and larger, we worked with CEQ a while ago to reduce the size of EA's and their guidance was clear remove anything that is not required. The executive summary although good information is not required in an EA, it is in an EIS. CEQ had us remove the entire affected environment section as it is not required in an EA. I think the entire EA reads better with the AE section so we usually include one for most projects. The irreversible …. Commitments section is not required in an EA, but is in an EIS. Unless you have specific program guidance to include this section it can be dropped. The EA we worked with CEQ on started at 45 pages and it was reduce to 15 pages to meet the requirements stated in NEPA of 15 page EAs. The summary of Potential Impacts is not needed in the Alternatives section. It is good information that should be in the impacts section. One last thing you can do to reduce the size of the EA is on page 3-2, you list rationale for not doing analysis of impacts to resources that are not impacted. You can just list the resource and if you have to defend that in the future it is easy to defend.

Page ES-3: Here you are telling the public before any they have a chance to read the impacts section that there are no significant impacts in any resource category. As a reader I want to make that determination on my own.

Page 3-11 – Typo 3.3.2 second sentence "wind during would"???

Cumulative Impacts section:

There are many out there that consider any impact to be cumulative. On page 4-3 last sentence it states that most of these actions were analyzed in the withdrawal EIS. This may be true at a programmatic level but most likely not at a site-specific level. The statement does not say this action was actually covered. I did not check the Withdrawal EIS but the action was withdrawal for military purposes for 25 years I believe.

I believe the statement that the proposed action would not generate additive cumulative effects is incorrect. The recent action to increase the targets in the NTTR added 200+ acres into a target range, which was additive and cumulative.

IN the NTTR RMP the BLM estimated there was approximately 130,000 acres of disturbance, so anything added to that total is cumulative and should be addressed as such. An increase in habitat disturbance or removal of habitat is a cumulative impact no matter how small.

So the cumulative impacts section needs some work, but not a lot of work. If you can quantify the impacts you are better off based on a number of recent 9th Circuit Court decisions. The key is not to just add up numbers, but to also state what the impact is to the plants, animals and environment even if it is a small impact. By doing this you can easily support the FONSI when you assess the Context and Intensity of the impacts of the proposed action.

Jones Michael H Civ ACC/A7ZP

From: Estrada Michael F GS-12 99 ABW/PA
Sent: Wednesday, May 10, 2006 1:35 PM
To: Jones Michael H Civ ACC/A7ZP
Subject: FW: EA Silver Alpha
Attachments: John Mendoza1.vcf

Mike

Here is the first comment, sort of.

Mike Estrada

From: John Mendoza [mailto:mendoza@co.clark.nv.us]
Sent: Monday, April 24, 2006 8:47 AM
To: Estrada Michael F GS-12 99 ABW/PA
Subject: EA Silver Alpha

Expeditionary Readiness Training (ExpeRT) Course Expansion Environmental Assessment.

Please inform me if the Environmental Assessment continues on to an EIS. If it does please add me to the list to receive the Record of Decision (and FEIS).

Sincerely,

John Mendoza, Senior Planner
Department of Air Quality and
Environmental Management
PO Box 555210
500 S. Grand Central Pky.
(702) 455-0287
Las Vegas, NV. 89155

Jones Michael H Civ ACC/A7ZP

From: Estrada Michael F GS-12 99 ABW/PA
Sent: Wednesday, May 10, 2006 2:03 PM
To: Jones Michael H Civ ACC/A7ZP
Subject: FW: Attention Michael Estrada Expeditionary Readiness Training (ExpeRT) Course Expansion EA
Attachments: John Mendoza.vcf

Mike

My mistake. John Mendoza actually sent two comments in separate e-mails. Here is the other one.

Mike Estrada, GS-12, DAF

Deputy Chief of Public Affairs

From: John Mendoza [mailto:mendoza@co.clark.nv.us]
Sent: Wednesday, April 12, 2006 4:12 PM
To: Estrada Michael F GS-12 99 ABW/PA
Subject: Attention Michael Estrada Expeditionary Readiness Training (ExpeRT) Course Expansion EA

Mr. Estrada the following comments are provided for the above project:

1. Page 3-7, Section 3.2.2 Environmental Consequences. The required permits and regulations as stated in Section 3.2.2 shall be obtained prior to project commencement. Contact Clark County Department of Air Quality and Environmental Management (DAQEM) for permit information (702) 455-5942 or web page http://www.accessclarkcounty.com/air_quality/regs.htm .
2. It's recommended the project use energy efficient HVAC and water heating units to reduce energy consumption which reduces emissions from the burning of fossil fuels.

For more information please dial (702) 455-0287.

Sincerely,

John Mendoza, S. Planner
Department of Air Quality & Environmental Management
500 S. Grand Central Pky
Las Vegas, NV. 89155

Department of Comprehensive Planning

500 S Grand Central Pky • Ste 3012 • PO Box 551741 • Las Vegas NV 89155-1741
(702) 455-4314 • Fax (702) 385-8940

Barbara Ginoulias, Director

May 4, 2006

Mr. Mike Estrada
Nellis AFB Office of Public Affairs
4430 Grissom Avenue, Suite 107
Nellis AFB, NV 89191

Subject: Draft Environmental Assessment for Expeditionary Readiness Training (ExpeRT) Course Expansion at Creech AFB, Nevada

Dear Mr. Estrada:

Through the Southern Nevada Regional Planning Coalition, Clark County's Department of Comprehensive Planning has received a copy of the Draft Environmental Assessment for Expeditionary Readiness Training (ExpeRT) Course Expansion at Creech AFB, Nevada dated April 2006.

Staff review of the document has not identified any significant concerns. Our only input is in regard to possible inconsistencies in location references made to the site of the proposed action (Silver Flag Alpha) and, then based on those references, estimates made regarding the distance of residents (population centers, communities, etcetera) from the proposed action.

The following are specific passages that seem possibly inconsistent to us:

> "The proposed action would expand current SF facilities located at Silver Flag Alpha, approximately 12 miles east-southeast of Creech AFB and Indian Springs, Nevada." (Page 1-3, first sentence of the first paragraph of Section 1.2, Location of the Proposed Action.)

> "Silver Flag Alpha lies on the southern edge of the South Range and is located on the north side of Interstate 95, roughly 33 miles northwest of Las Vegas." Page 1-3, fifth sentence of the first paragraph of Section 1.2, Location of the Proposed Action.)

BOARD OF COUNTY COMMISSIONERS
RORY REID, Chairman • MYRNA WILLIAMS, Vice Chair
TOM COLLINS • YVONNE ATKINSON GATES • CHIP MAXFIELD • LYNETTE BOGGS McDONALD • BRUCE L. WOODBURY
THOM REILLY, County Manager

"The proposed action would not pose a risk to communities or population centers nor disproportionately impact low income or minority populations because there are no residents within a 20-mile radius of Silver Flag Alpha." (Page 3-3, first sentence of the second paragraph of the Subsection titled Environmental Justice and Protection of Children of Section 3.1, Analysis Approach.)

"All facilities used for weapons firing at Silver Flag Alpha would be on withdrawn military lands, be contained within prescribed safety zones, and would not endanger civilian populations (which are more than 20 miles away)." (Page 3-4, third sentence of the Subsection titled Health and Safety of Section 3.1, Analysis Approach.)

"Silver Flag Alpha lies within Clark county, approximately 20 miles northwest of Las Vegas, ..." (Page 3-6, first sentence of Section 3.2.1 Affected Environment.)

We appreciate the opportunity to participate in the review of this draft document. If you have any questions please feel free to contact me.

Sincerely,

Jon Wardlaw
Assistant Planning Manager

JWdk

cc: Barbara Ginoulias
Charles Pulsipher
Mario Bermudez

KENNY C. GUINN
Governor

JOHN P. COMEAUX
Director

STATE OF NEVADA

DEPARTMENT OF ADMINISTRATION
209 E. Musser Street, Room 200
Carson City, Nevada 89701-4298
Fax (775) 684-0260
(775) 684-0213

May 5, 2006

Mike Estrada

Nellis Air force Base
4430 Grissom Avenue
Suite 107
Nellis AFB, NV 89191-7007

Re: SAI NV # **E2006-352** Reference:

Project: **DEA for the Expeditionary Readiness Training Courses.**

Dear Mike Estrada:

Enclosed are comments from the agencies listed below regarding the above referenced document. Please address these comments or concerns in your final decision.

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,

Zosia Targosz
Nevada State Clearinghouse Coordinator/SPOC

Enclosure

OPTIONAL FORM 99 (7-90)

FAX TRANSMITTAL # of pages ▸ 3

To Michael Jones	From Mike Estrada
Dept./Agency ACC/A72P	Phone # Nellis PA
Fax # DSN 574-1975	Fax #

NSN 7540-01-317-7368 5099-101 GENERAL SERVICES ADMINISTRATION

Rebecca Palmer

From: Clearinghouse [clearinghouse@budget.state.nv.us]
Sent: Wednesday, April 12, 2006 11:55 AM
To: Rebecca Palmer
Subject: E2006-362 Draft EA for the Expeditionary Readiness Training (ExpeRT) Course Expansion at Creech AFB, Nevada. - Nellis Air force Base

RECEIVED
MAY 0 5 2006
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: April 12, 2006

State Historic Preservation Office

Nevada SAI # E2006-362
Project: Draft EA for the Expeditionary Readiness Training (ExpeRT) Course Expansion at Creech AFB, Nevada.

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/2006/E2006-362.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, May 5, 2006.

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? Zosia Targosz, Clearinghouse Coordinator, (775) 684-0209 or mailto:clearinghouse@budget.state.nv.us.

____No comment on this project ____Proposal supported as written

AGENCY COMMENTS:

Signature: See Attached Maps Date: 5/4/06

Distribution:
Sandy Quilici, Department of Conservation & Natural Resources Stephanie Martensen, Division of Emergency Management Alan Di Stefano, Economic Development Kathy Dow, Economic Development Chad Hastings, Fire Marshal Stan Marshall, State Health Division Skip Canfield, AICP, Division of State Lands Michael J. Stewart, Legislative Counsel Bureau John Walker, Division of Environmental Protection David Pulliman, Department of Wildlife, Director's Office D. Bradford Hardenbrook, Department of Wildlife, Las Vegas Robert Martinez, Division of Water Resources James D. Morefield, Natural Heritage Program 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 Alisa Huckle, UNR Library Zosia Targosz, zzClearinghouse Reese Tietje, zzClearinghouse -Reese Maud Naroll, zzClearinghouse-Maud

MEMORANDUM

To: Zosia Targosz, Clearinghouse Coordinator
From: Rebecca Lynn Palmer RLPalmer
Subject: Draft EA for the Expeditionary Readiness Training (ExpeRT) Course Expansion at Creech AFB, Nevada. Clearinghouse Nevada SAI # E2006-362.
Date: May 4, 2006

The SHPO has reviewed the subject document and has the following comments:

Executive Summary (ES-4 and ES-5) and Pages 2-10, 3-23:

The SHPO reminds the U.S. Air Force that all undertakings that have the *potential* to affect historic properties (if present in the area of potential effects) need to be reviewed by our office, not just those that will affect National Register eligible properties. Please correct this sentence to be consistent with the existing regulations. For example, the paragraph could have the following words removed "If an unanticipated discovery of archaeological materials is made, or if a project would affect a known National Register-eligible site or structure, procedures in accordance with 36 CFR 60 and the Nellis AFB Cultural Resources Management Plan would be implemented" and simply state "U.S. Air Force will implement the procedures found in 36 CFR 800 for all projects described in this document."

Cultural Resources Section 3.5:

This section references Appendix I of the 2006 Integrated Cultural Resources Management Plan (Nellis AFB 2006) for a description of the methods that will be used for inventory and evaluation of cultural resources. Has this office reviewed this document? This office has no record of ever receiving or reviewing this document. In order to comment on the methods described in Appendix I the SHPO requires a copy of the document referenced.

Page 2-8:

This document states that the U.S. Air Force has initiated informal consultation with this office. The SHPO has no record of consultation for this undertaking, please elaborate on this cryptic statement.

If you have any questions concerning this correspondence, please contact me by phone at (775) 684-3443 or by E-mail at rlpalmer@clan.lib.nv.us.

APPENDIX B

AIR QUALITY ANALYSIS

APPENDIX B
AIR QUALITY ANALYSIS

Air Quality Standards

As described in Section 3.2, Air Quality in a given location is described by the concentration of various pollutants in the atmosphere. The significance of the pollutant concentration is determined by comparing it to the federal and state ambient air quality standards. These standards (Table B-1) represent the maximum allowable atmospheric concentrations that may occur while ensuring protection of public health and welfare, with a reasonable margin of safety. The Nevada Division of Environmental Protection, Bureau of Air Quality has adopted the NAAQS, with the following exceptions and additions: 1) state annual SO_2 standard is more stringent than the national standard; 2) a new 8-hour CO standard specific to elevations greater than 5,000 feet above mean seal level; and 3) new standards for visibility. The state ambient air quality standards are also summarized in Table B-1.

The air quality analysis in this EA examined impacts from air emissions associated with the proposed action. As part of the analysis, emissions generated from construction and infrastructure upgrade activities (including truck and equipment emissions) were examined for carbon monoxide (CO), nitrogen oxides (NO_X), sulfur dioxide (SO_X), Ozone (O_3) (which volatile organic compounds [VOCs] are precursors), and particulate matter (PM_{10}). Currently, Clark County is in serious nonattainment for CO and PM_{10}; however, the county has not experienced an exceedance of the CO standard in nearly 6 years and is currently seeking a re-designation by EPA to a maintenance status for CO. In addition, a portion of Clark County, the Las Vegas Valley in which Nellis AFB is found, is in basic (subpart 1) nonattainment for 8-hour ozone (precursors of this pollutant include NO_x and VOCs) (DAQEM 2004). This means that at Silver Flag Alpha certain *de minimus* thresholds may not be exceeded in any given year. These thresholds are: CO (100 tons/year), PM_{10} (70 tons/year), and VOCs (100 tons/year). In summary, combined construction and upgrade activities, for any new projects at Silver Flag Alpha, in any one year, would not exceed threshold levels.

Table B-1 State and National Ambient Air Quality Standards

	Nevada Standards[A]		*National Standards*[B]	
	AVERAGING TIME	CONCENTRATION CENTER	PRIMARY CENTER[C,D]	SECONDARY CENTER[C,E]
Ozone	1 Hour	235 μg/m^3 (0.12 ppm)	235 μg/m^3 (0.12 ppm)	Same as Primary
Ozone	8 Hours		157 μg/m^3 0.08 ppm	Same as Primary
Carbon Monoxide less than 5,000 ft above MSL	8 Hours	10 mg/m^3 (9.0 ppm)	10 mg/m^3 (9.0 ppm)	None
Carbon Monoxide at any elevation	1 Hour	40 mg/m^3 (35 ppm)	40 mg/m^3 (35 ppm)	
Nitrogen Dioxide	Annual Arithmetic Mean	100 μg/m^3 (0.05 ppm)	100 μg/m^3 (0.05 ppm)	Same as Primary
Sulfur Dioxide	Annual Arithmetic Mean	80 μg/m^3 (0.03 ppm)	80 μg/m^3 (0.03 ppm)	None
	24 Hours	365 μg/m^3 (0.14 ppm)	365 μg/m^3 (0.14 ppm)	
	3 Hours	1,300 μg/m^3 (0.5 ppm)	None	1,300 g/m3 (0.5 ppm)
Particulate Matter as PM_{10}	Annual Arithmetic Mean	50 μg/m^3	50 μg/m^3	Same as Primary
	24 Hours	150 μg/m^3	150 μg/m^3	
Particulate Matter[f] as $PM_{2.5}$	Annual		15 μg/m^3	Same as Primary
	24 Hours		65 μg/m^3	---
Lead (Pb)	Quarterly Arithmetic Mean	1.5 μg/m^3	1.5 μg/m^3	Same as Primary
Visibility	Observation	In sufficient amount to reduce the prevailing visibility to less than 30 miles when humidity is less than 70%	--	--

Notes:(a) 235 μg/m^3" means micrograms per cubic meter. 3, (b) "ppm" means part per million by volume.
Note A: These standards must not be exceeded in areas where the general public has access.
Note B: These standards, other than for ozone and those based on annual averages, must not be exceeded more than once per year. The ozone standard is attained when the expected number of days per calendar year with a maximum hourly average concentration above the standard is equal to or less than one.
Note C: Concentration is expressed first in units in which it was adopted and is based upon a reference temperature of 25° C and a reference pressure of 760 mm of mercury. All measurements of air quality must be corrected to a reference temperature of 25° C and a reference pressure of 760 mm of Hg (1,013.2 millibars); ppm in this table refers to ppm by volume, or micromoles of regulated air pollutant per mole of gas.
Note D: National primary standards are the levels of air quality necessary, with an adequate margin of safety, to protect the public health.
Note E: National secondary standards are the levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a regulated air pollutant.
Note F: Final regulatory procedures were announced in 2004, the entire state of Nevada is in attainment for this criteria pollutant. However, all air emissions inventory for 2003 do not include calculation of this criteria pollutant since no ruling had been reached.

FY06

Concrete Slab Construction for 70,000-gallon Water Storage Tank — **1,000 sf X 2 ft = 4,000 cu ft**

Equipment	*Number*	*Hr/day*	*# days*	*Hp*	*LF*	VOC g/hp-hr	CO g/hp-hr	NOx g/hp-hr	SO2 g/hp-hr	PM g/hp-hr	VOC lb	CO lb	NOx lb	SO2 lb	PM lb
Skid steer loader	1	8	4	67	0.23	0.5213	2.3655	5.5988	0.93	0.473	0.6	2.6	6.1	1.0	0.5
Concrete truck	8	2	2	250	0.21	0.68	2.7	8.38	0.89	0.402	2.5	10.0	31.0	3.3	1.5
Dump truck	8	2	2	275	0.21	0.68	2.7	8.38	0.89	0.402	2.8	11.0	34.1	3.6	1.6
Delivery truck	2	1	3	180	0.21	0.68	2.7	8.38	0.89	0.402	0.3	1.4	4.2	0.4	0.2
Backhoe/loader	1	8	3	98	0.21	0.99	3.49	6.9	0.85	0.722	1.1	3.8	7.5	0.9	0.8
Small generator	1	2	3	10	0.43	0.7628	4.1127	5.2298	0.93	0.4474	0.0	0.2	0.3	0.1	0.0
										Subtotal	7.3	29.0	83.3	9.4	4.7

Trenching for Underground Communication and Water Lines to Tent City — **2,600 ft X 2 ft** — **900 ft/day**

Equipment	*Number*	*Hr/day*	*# days*	*Hp*	*LF*	VOC g/hp-hr	CO g/hp-hr	NOx g/hp-hr	SO2 g/hp-hr	PM g/hp-hr	VOC lb	CO lb	NOx lb	SO2 lb	PM lb
Trencher	1	8	3	115	0.21	0.5213	2.3655	5.5988	0.93	0.473	0.7	3.0	7.2	1.2	0.6
Backhoe/loader	1	8	3	98	0.21	0.99	3.49	6.9	0.85	0.722	1.1	3.8	7.5	0.9	0.8
										Subtotal	1.7	6.8	14.7	2.1	1.4

Dig Post Holes for Overhead Power Lines to Tent City — **3,600 ft linear, 330 ft between poles - 11 poles total**

Equipment	*Number*	*Hr/day*	*# days*	*Hp*	*LF*	VOC g/hp-hr	CO g/hp-hr	NOx g/hp-hr	SO2 g/hp-hr	PM g/hp-hr	VOC lb	CO lb	NOx lb	SO2 lb	PM lb
Skid steer loader w/auger	1	8	2	115	0.21	0.5213	2.3655	5.5988	0.93	0.473	0.4	1.1	0.7	0.3	0.0

Construct 1-acre Leach Field and Dig Trench for 10,000-gallon Capacity Septic/Holding Tank — **1000 ft X 2 ft**

Equipment	*Number*	*Hr/day*	*# days*	*Hp*	*LF*	VOC g/hp-hr	CO g/hp-hr	NOx g/hp-hr	SO2 g/hp-hr	PM g/hp-hr	VOC lb	CO lb	NOx lb	SO2 lb	PM lb
Trencher	1	10	1	115	0.21	0.5213	2.3655	5.5988	0.93	0.473	0.3	1.3	3.0	0.5	0.3
Backhoe/loader	1	8	3	98	0.21	0.99	3.49	6.9	0.85	0.722	1.1	3.8	7.5	0.9	0.8
										Subtotal	1.4	5.1	10.5	1.4	1.0

	VOC ton	CO ton	NOx ton	SO2 ton	PM ton
FY06 Annual Totals	0.01	0.02	0.05	0.01	0.00

FY07

Construct and Pour Slab for Combat Arms Training and Maintenance Academic Facility — **8000 sf**

Equipment	*Number*	*Hr/day*	*# days*	*Hp*	*LF*	VOC g/hp-hr	CO g/hp-hr	NOx g/hp-hr	SO2 g/hp-hr	PM g/hp-hr	VOC lb	CO lb	NOx lb	SO2 lb	PM lb
Skid steer loader	2	4	4	67	0.23	0.5213	2.3655	5.5988	0.93	0.473	0.6	2.6	6.1	1.0	0.5
Concrete truck	8	2	2	250	0.21	0.68	2.7	8.38	0.89	0.402	2.5	10.0	31.0	3.3	1.5
Dump truck	8	2	4	275	0.21	0.68	2.7	8.38	0.89	0.402	5.5	22.0	68.3	7.3	3.3
Delivery truck	2	1	4	180	0.21	0.68	2.7	8.38	0.89	0.402	0.5	1.8	5.6	0.6	0.3
Backhoe/loader	1	8	8	98	0.21	0.99	3.49	6.9	0.85	0.722	2.9	10.1	20.0	2.5	2.1
Small generator	2	2	4	10	0.43	0.7628	4.1127	5.2298	0.93	0.4474	0.1	0.6	0.8	0.1	0.1
										Subtotal	12.1	47.1	131.8	14.8	7.7

Construct and Pour Slab for Virtual Combat Convoy Training Facility — **6400 sf**

Equipment	*Number*	*Hr/day*	*# days*	*Hp*	*LF*	VOC g/hp-hr	CO g/hp-hr	NOx g/hp-hr	SO2 g/hp-hr	PM g/hp-hr	VOC lb	CO lb	NOx lb	SO2 lb	PM lb
Skid steer loader	2	4	3	67	0.23	0.5213	2.3655	5.5988	0.93	0.473	0.4	1.9	4.6	0.8	0.4
Concrete truck	8	2	2	250	0.21	0.68	2.7	8.38	0.89	0.402	2.5	10.0	31.0	3.3	1.5
Dump truck	8	2	3	275	0.21	0.68	2.7	8.38	0.89	0.402	4.2	16.5	51.2	5.4	2.5
Delivery truck	2	1	3	180	0.21	0.68	2.7	8.38	0.89	0.402	0.3	1.4	4.2	0.4	0.2
Backhoe/loader	1	8	6	98	0.21	0.99	3.49	6.9	0.85	0.722	2.2	7.6	15.0	1.9	1.6
Small generator	2	2	3	10	0.43	0.7628	4.1127	5.2298	0.93	0.4474	0.1	0.5	0.6	0.1	0.1
										Subtotal	9.7	37.8	106.6	11.9	6.2

Convoy Trail and Range Improvements

Grader working 2 miles of dirt road, 20 ft wide. 2 working days total. Grader #1 working 6.47 acres range improvements, 10 workings days total.
Trencher working 10 days for upgrades at ranges

Equipment	*Number*	*Hr/day*	*# days*	*Hp*	*LF*	**VOC** g/hp-hr	**CO** g/hp-hr	**NOx** g/hp-hr	**SO2** g/hp-hr	**PM** g/hp-hr	**VOC** lb	**CO** lb	**NOx** lb	**SO2** lb	**PM** lb
Trencher	1	8	10	115	0.21	0.5213	2.3655	5.5988	0.93	0.473	2.2	10.1	23.8	4.0	2.0
Grader	2	8	12	150	0.59	0.68	2.7	8.38	0.93	0.402	25.5	101.1	313.9	34.8	15.1
										Subtotal	27.7	111.2	337.8	38.8	17.1

Equipment	*Number*	*Hr/day*	*# days*	*Hp*	*[1]LF*	**VOC** g/hp-hr	**CO** g/hp-hr	**NOx** g/hp-hr	**SO2** g/hp-hr	**PM** g/hp-hr	**VOC** lb	**CO** lb	**NOx** lb	**SO2** lb	**PM** lb
Water Truck	2	8	20	180	0.21	0.68	2.7	8.38	0.89	0.402	18.1	72.0	223.5	23.7	10.7

Fugitive dust emissions:

PM tons/acre/mo	Acres	Days of Disturbance	Controls Reduction	Uncontrolled Total	Controlled Total
1.2	8.28	2	0.8	0.66	0.13

Convoy Trail Vehicle Ops

Traversing dirt road (1 mile in length, so 2 miles RT), 5 MPH, 468 trips per year

High Mobility Multi-Purpose Wheeled Vehicle (HMMWV) 2 total

Equipment	*Number*	*Hr/day*	*# days*	*Hp*	*LF*	**VOC** g/hp-hr	**CO** g/hp-hr	**NOx** g/hp-hr	**SO2** g/hp-hr	**PM** g/hp-hr	**VOC** lb	**CO** lb	**NOx** lb	**SO2** lb	**PM** lb
HMMWV	2	2	12	190	0.21	0.68	2.7	8.38	0.89	0.402	2.9	11.4	35.4	3.8	1.7

M-35 Cargo Truck - 2.5 T capacity 2 total

Equipment	*Number*	*Hr/trip*	*# trips*	*Hp*	*LF*	**VOC** g/hp-hr	**CO** g/hp-hr	**NOx** g/hp-hr	**SO2** g/hp-hr	**PM** g/hp-hr	**VOC** lb	**CO** lb	**NOx** lb	**SO2** lb	**PM** lb
M-35	2	0.4	468	210	0.21	0.68	2.7	8.38	0.89	0.402	24.8	98.3	305.0	32.4	14.6

Unpaved Road PM_{10} Emissions: $E = \{[k(s/12)^a(S/30)^d]/(M/0.5)^c\}-C$

Vehicle	W in tons	k	a	c	d	C	S	s	M	E in lb per mi	miles per trip	Annual Emissions
HMMWV	2.25	1.5	0.9	0.2	0.5	0.00047	5	16	0.2	0.95	5	57.15
M-35	2.5	1.5	0.9	0.2	0.5	0.00047	5	16	0.2	0.95	5	57.15
										Total PM_{10} in tons		0.06

	VOC ton	**CO** ton	**NOx** ton	**SO2** ton	**PM** ton
FY07 Annual Totals	0.05	0.19	0.57	0.06	0.22

PM conservatively assumed as PM10 for exhaust and fugitive dust calculations.
PM_{10} for unpaved roads does not account for natural mitigation, e.g. rainfall, etc.

References:

Exhaust and Crankcase Emission Factors for Nonroad Engine Modeling—Compression-Ignition , EPA Report No. NR-009c, April 2004.
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Conversion Factors for Hydrocarbon Emission Components, EPA 420-P-04-001, NR-002b, April 2004.
Nonroad Engine and Vehicle Emission Study--Report , EPA 460/3-91-02, November 1991.
Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Sources, Chapter 13, *Miscellaneous Sources,* Section 13.2.2, *Unpaved Roads,* December 2003.
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