FINAL ENVIRONMENTAL ASSESSMENT FOR OTA TRAINING RANGE ADDITIONS AND OPERATIONS (11B, 17, 18, 22, 28, 29, AND 29A)

IDAHO ARMY NATIONAL GUARD

ADA COUNTY, IDAHO

Department of the Army

Idaho Army National Guard

3489 W. Harvard Street

Boise, Idaho 83705

September 2010

Idaho Army National Guard
Joint Environmental Management Office
Orchard Training Area, Idaho

Proposed Action: Training Range Additions (11b, 17, 18, 22, 28, 29, and 29a**)** within the Impact Area of the Orchard Training Area (OTA).				**EA No:** DOI-BLM-ID-B011-2010-0005-EA
State: **Idaho**	County: **Ada**	Range: **Boise**	Project Proponent: **Instillation Support Unit (ISU)**	Authority: **NEPA**
Prepared By: **IDARNG/BLM**	Title: **OTA Training Range Additions (11b, 17, 18, 22, 28, 29, and 29a)**			Report Date: **9-9-10**

LANDS INVOLVED

Meridian	Township	Range	Sections	Total Area
Boise	**T-3S**	**R-2E**	**S-1, 2, and 12**	**-5,325 acres** **-61 acres Impacted**
		R-3E	**S-21, 22, 23, 25, 26, 27, and 28**	
		R-4E	**S-17, 18, 19, 20, and 30**	
	T-2S	**R-3E**	**10 and 11**	

Consideration of Critical Elements	N/A or Not Present	Applicable or Present, No Impact	Discussed in EA
Air Quality			X
Areas of Critical Environmental Concern (ACEC)	X		
Cultural Resources			X
Environmental Justice (E.O. 12898)		X	
Farm Lands (prime or unique)	X		
Floodplains	X		
Invasive, Nonnative Species			X
Livestock Grazing			X
Migratory Birds		X	
Native American Religious Concerns		X	
Recreation		X	
Social and Economic			X
Threatened or Endangered Species			X
Upland Vegetation			X
Waste, Hazardous or Solid			X
Water Quality (Drinking/Ground)	X		
Wetlands, Riparian Zones	X		
Wildfire			X
Wildlife-Terrestrial			X
Wildlife-Aquatic	X		
Wild and Scenic Rivers (Eligible)	X		
Wilderness Study Areas	X		

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EXECUTIVE SUMMARY AND SIGNATURE PAGE

LEAD AGENCY: Bureau of Land Management, Boise District-Four River Field Office, Idaho

COOPERATING AGENCIES: Idaho Army National Guard, Boise, Idaho

TITLE OF PROPOSED ACTION: OTA Training Range Additions (11b, 17, 18, 22, 28, 29, and 29a)

AFFECTED JURISDICTION: Ada County, Idaho, U.S.A.

POINT OF CONTACT: Charles Baun, Natural/Cultural Resource Manager, Idaho Army National Guard's Joint Environmental Management Office

APPOVED BY:

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Patricia Roller

Bureau of Land Management,
NCA Manager, Boise, Idaho

APPROVED BY:

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Joel Price, LTC

Idaho Army National Guard,
Compliance Branch Manager,
Joint Environmental Management Office

DOCUMENT DESIGNATION: Environmental Assessment (EA)

EXECUTIVE SUMMARY: The Idaho Army National Guard (IDARNG) proposes to construct and operate seven new modernized training facilities (Range 11b, 17, 18, 22, 28, 29, and 29a) within the Impact Area of the Orchard Training Area (OTA) to support the ongoing mission of the Idaho Army National Guard (Appendix A: Map 1). The OTA is a designated Brigade training center and mobilization site for the National Guard. The Proposed Action would be located in the southeastern and southwestern portions of the OTA, with additional soil disturbance in the north eastern portion for berm construction materials. The facilities and ranges (Appendix B) include:

- Live Fire Exercise Breach Facility (Proposed Range 11b);
- Squad Defense Range (Proposed Range 17);
- Heavy Sniper Range (Proposed Range 18);
- Engineer Qualification Range (Proposed Range 22);
- Field Artillery Direct Fire Range (Proposed Range 28);
- Hand Grenade Familiarization Range (proposed Range 29): and
- Hand Grenade Qualification Course (Proposed Range 29a).

These proposed facilities/ranges would modernize the training capability within existing training areas of the OTA Impact Area, and would serve as the primary readiness and training facilities for the IDARNG.

While the OTA is used for military training activities, it is entirely within the Morley Nelson Snake River Birds of Prey National Conservation Area (NCA). Use of the OTA as a training area by the IDARNG is authorized under the through a Memorandum of Understanding (MOU) between the IDARNG and Bureau of Land Management (BLM) (BLM et al. 2002) (Appendix C). For over 50 years, this public land has been used for military training as well as for livestock grazing and public recreation. The OTA has continued to provide quality military training and other military support missions in this unique terrain.

The proposed projects were identified in the 2009 Range Complex Master Plan for the IDARNG, and initiated in early 2010. Once the site specific locations and range layouts were determined the IDARNG Joint Environmental Management Office (JEMO) initiated a Record of Environmental Consideration (REC) in March of 2010 to consider the potential environmental and cultural effects of the Proposed Action, and to determine if the Proposed Actions could be considered under a Categorical Exclusion, per Appendix B of 32 CFR Part 651. The REC process determined that an EA was required based on the overall scope of the project and potential impacts to the human environment.

Cultural, wildlife, and botanical site clearances were initiated in March of 2010 and completed in June. Agency coordination with the Bureau of Land Management (BLM), U.S. Fish and Wildlife Services (USFWS), Idaho Department of Lands (IDL), the Idaho Department of Fish and Game (IDFG), and the regional Tribes (Shoshone-Paiute and Shoshone Bannuck) were initiated in May 2010, with public scoping initiated in June of 2010 (Appendix C). Key issues identified during internal and external scoping included:

- Potential impacts to air quality associated with dust emissions;
- Potential loss of soil associated with soil disturbing activities;
- Potential establishment of invasive or noxious weed species associated with soil disturbing activities;
- Potential noise impacts to surrounding area and wildlife species;
- Potential impacts to recorded and unrecorded cultural resources;
- Potential for wildfire and its impact on native plant communities, wildlife habitat, and special status plant/wildlife species that could be affected;
- Potential impacts to raptor and associated prey species;
- Potential impacts to livestock grazing operations and the availability of forage;
- Potential impacts to military personnel and the OTA associated with non-compliance with DoA training requirements; and
- Potential economic impact associated with expanded training facilities or the lack of theses facilities within the OTA.

Based on the proposed actions relative to the existing conditions and identified issues, as well as the best management practices (BMPs) incorporated into the design and implementation of the proposed project, it is unlikely that any mitigation actions need to be taken. For this reason, no mitigation measures beyond the BMPs listed below would be necessary. Construction of the ranges is proposed for mid to late September, with an estimated timeframe of 38 weeks.

Resource	BMPs
Air Quality	• During construction activities, application of dust suppressants or use of operational controls would be used to prevent excess fugitive emissions.
Noise	• Training activities resulting in high decibel levels would be restricted to daytime use to the extent possible to limit or reduce noise impacts to adjacent land owners. • Construction activities would be limited to daytime hours to minimize potential noise impacts.
Geology and Soils	• Site digging and grading would be limited to those activities required to construct the proposed facilities and associated infrastructure, and to provide any necessary protective berms for the facilities. • Soil stabilizing measures (seeding, use of geo-textiles, hydro-mulch, etc.) would be taken to limit or reduce loss of top soil associated with soil disturbing actions during construction and operations. The OTA seed mix is described in Appendix B (page 4).
Invasive Species	• Use of on-site materials to reduce establishment of new invasive or noxious weed species associated with off-site materials. • Control measures and site maintenance (mechanical, biological, chemical, or prescribed burns) would be conducted to limit or reduce the establishment or spread of invasive or noxious weed species (Appendix B).

Resource	BMPs
Vegetation	• Construction areas were carefully chosen and planned so that impacts to native sagebrush-bunchgrass habitat would be minimized. • Pre-construction surveys were, and will be conducted prior to soil disturbing activities to avoid special status plant species. • The IDARNG would continue to protect slickspot peppergrass (*Lepidium papilliferum)* (LEPA) by implementing the management guidelines outlined in the 2003 INRMP.
Wildlife	• Pre-construction surveys and grubbing during non-nesting periods would be conducted to avoid impacts to special status species, raptors, and migratory bird species. • Annual monitoring is conducted on all training ranges. In the event that an occupied nesting site is identified within the training areas or associated structures within the OTA, the site would be identified and military personnel would work with the JEMO staff to take appropriate measures.
Cultural Resources	• All culturally sensitive or known areas with cultural artifacts would receive appropriate protection as determined by the IDARNG archaeologist during construction of the facilities and ranges, as well as during any training activities thereafter. Consistent with IDARNG policies contained in the 2010 ICRMP, all construction sites would be surveyed for cultural resources prior to and during construction to avoid the potential for any impacts to cultural sites. • Construction areas were carefully chosen to avoid known cultural resources.
Public and Occupational Health and Safety	**Surface Danger Zone (SDZ)** • To ensure the public's safety, existing training guidelines and protocols would continue to be used to regulate entry to and training activities within the SDZs (which are inside the Impact Area). **Unexploded Ordnance (UXO)** • All construction activity would be restricted to non-dudded training areas within the Impact Area, i.e. no activity within the Core Impact Area. • To ensure the public's safety, the Impact Area (which might contain UXO) is off-limits to the public. Warning signs are posted around the Impact Area to prevent inadvertent exposure to UXO. **Fire Prevention and Suppression** • The IDARNG would continue to implement its fire management program, which would handle any fires that might occur. **Public Safety** • Safety and security at the proposed military facilities would be consistent with IDARNG security procedures. Appropriate signage and barriers would alert the public of construction activities related to the Proposed Action and any traffic pattern changes. **Occupational Health and Safety (OSHA)** • OSHA requirements and other applicable worker safety regulations would be followed during project construction and operation. Appropriate measures would be taken to limit unauthorized persons from accessing the area during construction.
Hazardous and Toxic Materials/Wastes	• Safety precautions would be taken by construction crews to minimize the potential for a hazardous spill. Under current procedures, all spills, regardless of size, are immediately reported to the Orchard Range Control.

Resource	BMPs
Hazardous and Toxic Materials/Wastes	The responsible unit works to contain the spill until personnel from Range Control or the Environmental Management Office arrive (ANL EAD, 2004). These protective measures would be implemented for the Proposed Action and would minimize the potential for impacts from hazardous and toxic materials.

This EA has been prepared in accordance with NEPA and the Council on Environmental Quality (CEQ) Regulations 40 Code of Federal Regulations (CFR) Parts 1500-1508, and 32 CFR Part 651 (Environmental Analysis of Army Actions). This EA assesses the purpose and need for the proposed action of constructing and operation of the proposed Ranges within the OTA Impact Area. The outline and content of the EA has been prepared in accordance with the guidelines provided in the BLM's NEPA Handbook H-1790-1 (2008a), as well as the National Guard Bureau (NGB) NEPA Handbook (National Guard Bureau, 2006).

Both processes were used based on the unique conditions associated with management of the OTA as a military training area using BLM-managed lands under a MOU. Based on the BLM administration of the lands, this document integrated components from the National Guard Bureau's NEPA process with the BLM's NEPA format. Specific BLM materials used in the development of the EA included the BLM EA template, scoping process and template, as well as associated Informational Memorandum's for the development of the EA and associated agency and public scoping.

Based on the unique management conditions of the OTA, the IDARNG could not work directly with the USFWS in regards to Endanger Species Act (ESA) Section 7 consultation process. Rather, the IDARNG developed the "No effect" documentation, which was supported by a letter of concurrence from the BLM, as the BLM is the federal manager of the lands associated with the project. The USFWS had no objection to this process.

This EA evaluates the direct, indirect, and cumulative effects of the Proposed Action and the No Action alternatives with respect to the natural/cultural resources and resources uses identified in the Consideration of Critical Elements above. The evaluation performed as the work product of this EA concluded that the overall impacts associated with the Proposed Action, either initially or cumulatively, would not have a significant adverse effect on the local environment or quality of life.

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Contents

ACRONYMS AND ABBREVIATIONS

ACB	Armored Cavalry Brigade
ACHP	Advisory Council on Historic Preservation
AFB	Air Force Base
AIRFA	American Indian Religious Freedom Act of 1978
AMF	Army Modular Force
ANL EAD	Argonne National Laboratory Environmental Assessment Division
AR	Army Regulation
ARFORGEN	ARNG Force Generation
ARNG	Army National Guard
ARPA	Archeological Resources Protection Act of 1979
AUM	Animal Unit Months
BLM	Bureau of Land Management
BMP	Best Management Practices
BVEP	Boise Valley Economic Partnership
C4	Composition C (plastic explosive)
CAA	Clean Air Act
CAB	Combined Arms Battalion
CACTF	Combined Arms Collective Training Facility
CCA	Candidate Conservation Agreement
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CEW	Covered Employment and Wages
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CO	Carbon Monoxide
COMPASS	Community Planning Association of Southwest Idaho
dB	Decibels
DoA	Department of Army
DoD	Department of Defense
E.O.	Executive Order
EA	Environmental Assessment
EPA	Environmental Protection Agency
ESA	Endangered Species Act
F	Fahrenheit
FLPMA	Federal Land Policy and Management Act
FONSI	Finding of No Significant Impact
HE	High Explosive
HB	Heavy Brigade
HBCT	Heavy Brigade Combat Team
HTMW	Hazardous and Toxic Materials and Waste
JEMO	Joint Environmental Management Office
IDARNG	Idaho Army National Guard
IDEQ	Idaho Department of Environmental Quality
IDFG	Idaho Department of Fish and Game
ICRMP	Integrated Cultural Resources Management Plan

IMD	Idaho Military Division
INRMP	Integrated Natural Resources Management Plan
FLPMA	Federal Land Policy and Management Act
m	Meter
MATES	Mobilization and Training Equipment Site
MOU	Memorandum of Understanding
MSA	Metropolitan Statistical Area
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act of 1990
NCA	National Conservation Area
NEPA	National Environmental Policy Act of 1969
NFA	No Further Action
NG	National Guard
NGB	National Guard Bureau
NHPA	National Historic Preservation Act of 1966
NO2	Nitrogen Dioxide
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
0^3	Ozone
ORTC	Operation Readiness Training Complex
OSHA	Occupational Safety and Health Administration
OTA	Orchard Training Area
Pb	Lead
PEA	Programmatic Environmental Analysis
PM	Particulate Matter
REC	Record of Environmental Consideration
RMP	Resource Management Plan
ROW	Right of Way
SHPO	State Historic Preservation Office
Shoot House	Live-Fire Shoot House
SDZ	Surface Danger Zone
SO2	Sulfur Dioxide
SONMP	State Operational Noise Management Plan
SOP	Standard Operating Procedures
SPCCP	Spill Prevention Control and Countermeasure Plan
TC	Training Circular
TMDL	Total Maximum Daily Loads
TOW	Tube-launched, Optically-tracked, Wire data link
UAC	Urban Assault Course
U.S.	United States
UAS	Unmanned Aerial System
USDA	United States Department of Agriculture
USDI	United States Department of the Interior
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Service
UXO	Unexploded Ordnance
(o)	Degrees

How to Read this Document

To read this Draft Environmental Assessment (EA) more effectively, review this page.

This document has been developed and organized to provide the reader with sufficient information to understand the issues to be addressed, the environment in which these issues arise, the range of alternatives that are available to address the issues, and the social and environmental consequences of these actions. The chapters are written so that nontechnical readers can understand the potential environmental, technical, and economic consequences of each of the alternatives.

- **Chapter 1** (Purpose of and Need the Proposed): Introduces the project area and describes the purpose and need for the EA. This chapter provides a brief description of the planning area and consistency with other plans, and relationships to statutes, regulations, the National Environmental Policy Act (NEPA), and other requirements.

- **Chapter 2** (Description of Alternatives): Introduces the alternative development process and describes the alternatives to be assessed, as well as those that were considered but not analyzed.

- **Chapter 3** (Affected Environment/ Environmental Consequences): Describes the existing environment within the project area that would affect or be affected by the alternatives. This information, in conjunction with best management practices (BMP) and general assumptions, is the baseline used to analyze the consequences of implementing each alternative, including the direct, indirect, short-term, long-term, and cumulative impacts, as well as the overall conclusion.

- **Chapter 4** (Consultation and Coordination): Provides information on the groups/ agencies consulted throughout the process, as well as the list of resources specialists involved in developing and editing the document.

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CHAPTER 1.0 INTRODUCTION TO THE PROPOSED ACTION

1.1 Introduction

The Army National Guard (ARNG), as a participant in the Total Army Force, has a federal mission to provide trained units that are available for active duty in time of war or national emergency. The Idaho Army National Guard (IDARNG) has a state mission to provide military units that are organized, equipped, and trained to function when necessary to protect life and property, and to preserve peace, order, and public safety, under competent orders from authorities of the State of Idaho.

The OTA is found completely within the boundaries of the NCA and is designated as a Brigade training center and mobilization site for the National Guard (NG). Public Law 103-64 section 1(B) specifically provides for "continued military use, consistent with the requirements of section 4(e) of this Act, of the OTA by reserve components of the Armed Forces.

The IDARNG was a heavy brigade (HB) unit, 116th Armored Cavalry Brigade (ACB), until it was re-designated as a Heavy Brigade Combat Team (HBCT) in 2005 to address current Department of Army (DoA) doctrine, which calls for more urban-specific capabilities associated with the HCBT and less heavy armor associated with the ACB. The ACB includes two armor battalions, one mechanized infantry battalion, one support battalion, and a headquarters unit. The HB has an authorized strength of about 3,300 soldiers.

The HCBT is a modular brigade containing two combined arms battalions (CAB), cavalry squadron, an artillery battalion, associated support for each and headquarters unit. Each CAB includes tanks, Bradleys, and infantry. The HCBT has an authorized strength of approximately 3,100 soldiers. The HBCT is a modular unit capable of adapting to changing world situations and tactics. While the HCBT is the current training emphasis, this could change at any time and the training site would be called on to adapt ranges to meet future training needs.

Based on the continuing shift from a HB to HCBT, the IDARNG is proposing the modernization of the Orchard Training Area (OTA) facilities and ranges located south of Boise, Idaho (Appendix A: Map 1). The Proposed Action would be located in the southeastern and southwestern portions of the OTA, with additional soil disturbance in the north eastern portion, and consist of constructing and operating seven training facilities/ranges. These proposed facilities/ranges would modernize the training capability within existing training areas of the OTA Impact Area, and would serve as the primary readiness and training facilities for the IDARNG.

Use of the OTA by the IDARNG as a training area is authorized under a MOU between the IDARNG and the Bureau of Land Management (BLM) (Appendix C). For over 50 years, this public land has been used for military training as well as for livestock grazing and public recreation. The OTA has continued to provide quality military training and other military support missions in this unique terrain.

This EA has been prepared in accordance with NEPA and the CEQ Regulations 40 CFR Parts 1500-1508, and 32 CFR Part 651 (Environmental Analysis of Army Actions). This EA assesses the purpose and need for the proposed action of constructing and operating the OTA Facilities

Development. The outline and content of the EA has been prepared in accordance with the guidelines provided in the BLM's NEPA Handbook H-1790-1, as well as the National Guard Bureau (NGB) NEPA Handbook (National Guard Bureau, 2006).

Both processes were used based on the unique conditions associated with management of the OTA as a military training area using BLM-managed lands under a MOU. Based on the BLM administration of the lands, this document used BLM standardized materials (Appendix C). These include the BLM EA template, scoping process and template, as well as associated Informational Memorandum's for the development of the EA and associated agency and public scoping.

The unique management conditions of the OTA also required a modified approach to the Endanger Species Act (ESA) Section 7 consultation process. The IDARNG did initiate informal and formal consultation with the USFWS (Appendix C). However, since the BLM is the federal manager of the lands associated with the project, i.e. Action Agency, the IDARNG could not work directly with the USFWS in regards to a "no effects" determination. Rather, the IDARNG developed the "no effect" documentation based on site–specific information and long-term data, which was supported by a letter of concurrence from the BLM (Appendix C). Per BLM Manual 6840.1F3 (USDI 2008c), based on the "no effect" determination there was no additional requirements for further consultation or concurrence from the USFWS.

1.2 Purpose of and Need for the Proposed Action

BLM is processing IDARNG's applications for ROW grants under the FLPMA, Title V. BLM is responsible for ensuring that use of public lands occurs in a manner consistent with FLPMA, and the applicable NCA's 2008 RMP. The FLPMA authorizes the use of public land for the public interest. The management direction contained in the RMP allows BLM to consider ROW applications in areas where ROWs are not specifically excluded if there is a demonstrated need and resource conflicts are low or can be mitigated.

As the lead federal agency, BLM determined that an EA would be required to identify potential resource impacts of the project pursuant to the NEPA of 1969 and the CEQ regulations implementing NEPA.

BLM may choose to accept the Proposed Action with or without modification, or develop and authorize a reasonable alternative. BLM also may choose to deny the ROW grant applications; this would constitute the No Action Alternative.

This EA presents an analysis of the potential environmental impacts that may result from implementation of the Proposed Action. The Authorized Officer will determine whether the Proposed Action is a "major federal action" requiring the development of an EIS by assessing the significance of the Proposed Action based on context and intensity (40 CFR 1508.27). Issuing the ROW authorization would allow IDARNG to implement the Proposed Action.

The overall purpose of the Proposed Action is to comply with requirements of the IDARNG in order to meet current DoA standards and to prepare for and ensure troop combat readiness in urban areas. Modernization and upgrade of the existing training capability is integral to ensuring urban assault and individual soldier skills and meeting mission requirements of the IDARNG. As

specified in Field Manual 3-06, *Urban Operations*, and Training Circular (TC) 25-8, *Training Ranges*, critical task training required for individual, crew, platoon, and company elements to be combat ready directly relates to the availability and capabilities of live-fire ranges. The Army's live-fire ranges provide training opportunities to help develop and improve individual soldiers and team competency in the use of sophisticated weaponry. The ranges also portray realistic combat conditions to mold the individuals and teams into an effective fighting unit.

To achieve these goals, the purpose of the proposed training sites is to provide suitable and readily accessible ranges and facilities for soldiers to implement current military training techniques. All of the activities that would be implemented under, and supported by, the Proposed Action are consistent with and support the ARNG Transformation and ARNG Force Generation (ARFORGEN). The ARFORGEN tool implements transformation strategies with a rapid capability to predict and synchronize U.S. Army resources with national and global mission requirements. Modernization and upgrade of the training capabilities on the OTA would contribute to ensuring troop combat readiness on both a national and global scale. In accordance with NEPA and 32 CFR 651, the Proposed Action must satisfy the requirements of the facilities while not resulting in significant environmental, cultural, physical, or socioeconomic impacts.

The need for the proposed facilities is based on continually changing nature of the geopolitical conflict associated with U.S. military activity world-wide, which currently is moving from large-scale war to small-scale contingencies that require mobility, rapid deployment, and an emphasis on strategic capabilities as opposed to sheer firepower. As such, IDARNG has undergone a Force Structure change as part of the Army Modular Force (AMF) model from an Armored Brigade to a Heavy Brigade Combat Team. Consequently, the training focus of IDARNG has shifted from primarily tracked vehicles to putting more emphasis on dismounted soldiers, specifically in an urban environment.

Facilities for training soldiers for modern urban combat in realistic settings, while incorporating recent warfare lessons-learned are required to provide the tactical and situational awareness training necessary for surviving and succeeding in urban battlefields. The proposed facility and ranges are needed by IDARNG units to conduct weekend training on a monthly basis and to train during a portion of each summer to ensure troop combat readiness in urban areas. IDARNG soldiers are required to perform a minimum series of training operations each year to fulfill current training requirements and local training objectives. These facilities also are needed by other reserve components of the Department of Defense (DoD) to train and ensure that urban assault and individual soldier skills align with current military training techniques. IDARNG does not currently possess adequate facilities suitable to provide the required training, and consequently is unable to meet new Army standards for urban warfare training.

1.3 Summary of Proposed Action

In order for the IDARNG to meet the training capabilities required by the DoA, they have identified the need for seven urban training facilities or ranges (Appendix B):

- Live Fire Exercise Breach Facility (Proposed Range 11b);
- Squad Defense Range (Proposed Range 17);
- Heavy Sniper Range (Proposed Range 18);

- Engineer Qualification Range (Proposed Range 22);
- Field Artillery Direct Fire Range (Proposed Range 28);
- Hand Grenade Familiarization Range (proposed Range 29): and
- Hand Grenade Qualification Course (Proposed Range 29a).

The proposed sites would be located within the OTA Impact Area south of range 15 on the eastern side of the OTA and south of rage 30 on the western side (Appendix A: Map 1). In addition to the training sites, soil required for berm construction on range 11b would be moved from existing berms located on range 6, and an existing buried power line would be extended from range 15 to the proposed range 18 (Appendix A: Map 1).

The Proposed Action would be constructed in accordance with range specification outlined in the DoA's TC 25-8 (*Training Ranges*). The total area associated with the seven ranges, soil transfer, and power line extension would be approximately 5,325 acres. However, the total area of disturbance, approximately 61 acres (1.2 percent of the project area), associated with the proposed ranges or related construction activity would be considerably smaller based on the limited area affected by localized construction activity and large buffer areas surrounding each range. Construction would take approximately 38 weeks and would begin in September of 2010. An expanded description of the project and proposed training facility/ranges can be found in Appendix B.

The Proposed Action would not expand the OTA range. Instead, it would change the focus of the existing training range by modernizing and upgrading existing training capabilities. As such, the IDARNG does not anticipate an increase in the number of soldiers training at the OTA or in the density of training population; rather existing training types would be redistributed.

1.4 Location and Setting

The Proposed Action is located in the southwestern and southeastern portions of the 143,000-acre OTA, which is approximately 13 miles south of Boise, Idaho. The proposed training sites and extended power line are found within Township 3-South; Ranges 2-East (Sections-1, 2, and 12), 3-East (Sections 21, 22, 23, 25, 26, 27, and 28), and 4E (Sections 17, 18, 19, 20, and 30), while the area associated with soil removal is located in Township 2-South, Range 3E, Sections 10 and 11.

The OTA is entirely within the NCA and falls primarily in Ada County, with a small area in the south in Elmore County. The City of Boise and its surrounding communities comprise the largest population center near the OTA. The City of Kuna lies to the northwest and Mountain Home to the southeast. The undeveloped lands adjacent to the OTA are primarily BLM public lands, some state lands, and small portions of privately owned agricultural lands and rangelands.

Land cover associated with the OTA lies within the regional landform and vegetation classification known as the Intermountain Sagebrush Province/Sagebrush-Steppe Ecosystem (Kuchler 1966, as cited in Bailey 1976). This regional landform is also identified as the Snake River Basin-High Desert and the Kuna Desert. This region as a whole contains a diverse combination of landforms, ranging from plateaus to mountains. However, the project area is a

relatively flat plateau between several prominent natural features: the Snake River to the south, the Boise Ridge at a distance to the north, and the Owyhee Mountains at a distance to the west.

Elevation of the OTA ranges from 3,000 to 3,500 feet above mean sea level, with lower elevations occurring along the southern and northeastern boundaries. The average temperatures on the OTA varies between approximately 20 degrees (º) and 90º Fahrenheit and annual precipitation ranges from only about 6.5 to 11 inches (U.S. Geological Survey [USGS] 2005).

Use of the OTA includes both active and passive recreation/education, livestock grazing, and military training. The Impact Area within the OTA is restricted from public access, but seasonal livestock grazing does take place. All existing approved uses within the OTA and the NCA have been identified in the 2008 NCA RMP (2008b) to be in compliance with Public Law 103-64.

1.5 Conformance with Land Use Plans, Policies, and Regional Assessments

This document is in conformance with the following land use plans, policies, and regional assessments:

- *BLM's NCA-Resource Management Plan* (RMP) (2008);
- *Ada County All Hazards Mitigation Plan* (2006);
- *Ada County, Idaho Wildland-Urban Interface Wildfire Mitigation Plan 2006 Update*;
- *2003 Candidate Conservation Agreement for Slickspot peppergrass (Lepidium papilliferum);*
- The IDARNG's 2003 Integrated Natural Resource Management Plan (INRMP);
- 2010 MOU Between the BLM and the IDARNG;
- The IDARNG's 2003 and updated 2010 Integrated Cultural Resource Management Plan (ICRMP);
- The IDARNG's 2006 Statewide Operational Noise Management Plan (SONMP);
- The IDARNG's 2008 Orchard Training Area Facilities Development EA and Finding of No Significant Impact (FONSI); and
- 2000 National Fire Plan (2007 Idaho Implementation Strategy for the National Fire Plan).

1.6 Relationship to Statutes, Regulations, National Environmental Policy Act, and Other Requirements

The following is a summary of the major laws and executive orders that apply to the Proposed Action.

1.6.1 National Environmental Policy Act

Under NEPA requirements and subsequent implementing regulations promulgated by the CEQ, any action conducted on federally-administered lands or action that utilizes Federal dollars, must be evaluated to determine if the Proposed Action might have significant economic, social, or environmental effects. The assessment must explore a reasonable range of alternatives and the associated potential environmental effects of the proposed actions. If there are no significant impacts, a FONSI can be signed to complete NEPA compliance. If potentially significant effects are identified, the proponent (IDARNG) must consider these, including potential for avoidance or mitigation in issuing its Record of Decision.

1.6.2 Federal Land Policy and Management Act

The Federal Land Policy Management Act (FLPMA) of 1976 mandates the BLM manage for multiple uses of Federal public lands. The FLPMA requires the BLM to execute its management powers under a land use planning process that is based on multiple use and sustained yield principles. The FLPMA provides for, but is not limited to, grazing on public lands, land sales, withdrawals, acquisitions, and exchanges.

1.6.3 Endangered Species Act

The Endangered Species Act (ESA) requires all Federal agencies to ensure their actions do not jeopardize the continued existence of listed species or adversely modify designated critical habitat. Pursuant to Section 7 of the ESA, the IDARNG requested relevant species lists from the USFWS and the National Oceanic and Atmospheric Administration. See Appendix C for copies of the list and USFWS's response for scoping.

It should be noted that the BLM is the administrator of all public lands within the NCA, including the OTA. As such, it is the responsibility of the BLM, not the IDARNG, to identify if Section 7 consultation with the USFWS is required or if a finding of "No effect" can be issued. See section 3.4.11 for an expanded description of the No effects determination by the IDARNG and concurrence from the BLM (Appendix C).

1.6.4 Executive Order 12898—Environmental Justice

Executive Order 12898 (February 11, 1994) provides that each Federal agency, to the greatest extent practicable and permitted by law, make achieving environmental justice part of its mission by addressing, as appropriate, disproportionately high and adverse human health or environmental effects on minority populations and low income populations.

1.6.5 Executive Order 13186—Migratory Birds

Executive Order 13186 (January 10, 2001) directs Federal land management agencies to ensure management actions conserve and protect migratory birds consistent with existing migratory bird conventions; the Migratory Bird Treaty Act (16 U.S.C. 703–711); the Bald and Golden Eagle Protection Act (16 U.S.C. 668–668d); the Fish and Wildlife Coordination Act (16 U.S.C. 661-666c), the ESA of 1973 (16 U.S.C. 1531–1544); and NEPA of 1969 (42 U.S.C. 4321–4347).

1.6.6 Section 313 of the Clean Water Act

Section 313 of the Clean Water Act of 1972 requires that "each department, agency, or instrumentality of the Federal Government having jurisdiction over any property or facility, or engaged in any activity resulting, or which may result, in the discharge or runoff of pollutants shall be subject to, and comply with, all Federal, State, interstate, and local requirements, administrative authority, and process and sanctions in a like manner as any non-governmental entity." The IDARNG is therefore required to comply with all Federal, State, interstate, and local requirements, administrative authority, and process and sanctions with respect to the control and abatement of water pollution. The Idaho Department of Environmental Quality (IDEQ) is responsible for implementing the Clean Water Act in Idaho and has promulgated State water quality rules to meet this responsibility in IDAPA 58.01.02—Water Quality Standards and Wastewater Treatment Requirements (IDEQ 1996). Waters are designated as impaired when there is a violation of water quality criteria and are placed on the §303(d) list. Section 303(d) of the Clean Water Act requires states to develop water quality improvement plans, referred to as total maximum daily loads (TMDLs), for water bodies that are not meeting their beneficial uses. A TMDL is only required when a pollutant can be identified and in some way quantified. The purpose of a TMDL is to set limits on pollutant levels, correct water quality impairments, and achieve beneficial uses of water bodies through attainment of water quality standards.

1.6.7 1993 Public Law 103-64

The establishment of the NCA for the purpose of conserving, protecting, and enhancing raptor populations and habitats, and the scientific, cultural, and educational resources and values of the public lands in the conservation area. Among other things, Public Law 103-64 "the Act" sets forth provisions for the Reserve and National Guard's (NG) use of the OTA for training purposes. Specifically to:

- Authorize military use of the OTA pursuant to the 2008 NCA RMP;
- Provide the Idaho Military Division (IMD) with continued long-term authorization, as required by Department of Defense and NG Bureau regulations, in order to allow for adequate amortization of developments and improvements;
- Provide for the continued use of the OTA by the IMD at a level that is compatible with the protection for raptor populations and habitats, and the scientific, cultural and educational resources and values of the public lands in the NCA; and
- Provide a mechanism for subsequent review of the MOU and to provide an amendment procedure to implement mutually acceptable modifications.

1.6.8 2010 OTA Training Authorization Memorandum of Understanding (MOU)

The 2010 MOU between the Governor of Idaho on behalf of the IMD and the Idaho State Director, BLM authorizes continued NG military training activities on the public lands now known as the OTA, with the following objectives:

- To continue military use of the public lands in the OTA consistent with Section 4(e) of the Act (see above).
- To provide BLM and IMD clear operating procedures, responsibilities, and limitations for the use and management of the OTA.
- To ensure the safety of the general public, BLM, and military units using the OTA.
- To provide for the authorization and protection of IMD facilities in the OTA.
- To provide for the rehabilitation of areas disturbed by military training or military training-related fires.
- To provide a means to control unauthorized use of the OTA.

1.6.9 National Historic Preservation Act

The National Historic Preservation Act of 1966 (NHPA) requires that prior to authorizing an undertaking, Federal agencies must take into account the effect of the undertaking on any properties eligible for or listed on the National Register of Historic Places (NRHP). Protection of historic properties (36 CFR 800) defines the process for implementing requirements of the NHPA, including consultation with the appropriate State Historic Preservation Office (SHPO)

and the Advisory Council on Historic Preservation (ACHP). Section 3.8 herein presents analysis and conclusions relevant to NHPA requirements.

1.6.10 Executive Order 13007—Indian Sacred Sites

Executive Order 13007 (May 24, 1996) instructs Federal agencies to promote accommodation of, access to, and protection of the physical integrity of American Indian sacred sites. Analysis related to this requirement is presented in Section 3.8.

1.6.11 Various Authorities—Native American Tribal Consultation

BLM is required to consult with Native American tribes to "help assure (1) that federally recognized tribal governments and Native American individuals, whose traditional uses of public land might be affected by a proposed action, would have sufficient opportunity to contribute to the decision, and (2) that the decision maker will give tribal concerns proper consideration" (U.S. Department of the Interior, BLM Manual Handbook H-8120-1). Additionally, the IDARNG is responsible under Executive Order 13175 to consult with federally recognized tribes on issues that directly involve military training activities that may affect cultural resources. Tribal coordination and consultation responsibilities are implemented under laws and executive orders that are specific to cultural resources which are referred to as "cultural resource authorities," and under regulations that are not specific which are termed "general authorities." Cultural resource authorities include: the NHPA of 1966, as amended; the Archaeological Resources Protection Act of 1979 (ARPA); and the Native American Graves Protection and Repatriation Act of 1990, as amended (NAGPRA). General authorities include: the American Indian Religious Freedom Act of 1979 (AIRFA); NEPA; FLPMA; Executive Order 13007-Indian Sacred Sites, and Department of Defense (DoD) Instruction 4710.02 *DoD Interactions with Federally Recognized Tribes* (DoD 2006), within which the DoD Annotated American Indian and Alaskan Native Policy is a component" of DoD14710.02. The proposed action is in compliance with the aforementioned authorities.

Southwest Idaho is the homeland of two culturally and linguistically related tribes: the Northern Shoshone and the Northern Paiute. In the latter half of the 19th century, a reservation was established at Duck Valley on the Nevada/Idaho border west of the Bruneau River. The Shoshone-Paiute Tribes residing on the Duck Valley Reservation today actively practice their culture and retain aboriginal rights and/or interests in this area. The Shoshone-Paiute Tribes assert aboriginal rights to their traditional homelands as their treaties with the United States, the Boise Valley Treaty of 1864 and the Bruneau Valley Treaty of 1866, which would have extinguished aboriginal title to the lands now federally administered, were never ratified.

Other tribes that have ties to southwest Idaho include the Shoshone-Bannock Tribes. Southeast Idaho is the homeland of the Northern Shoshone Tribe and the Bannock Tribe. In 1867 a reservation was established at Fort Hall in southeastern Idaho. The Fort Bridger Treaty of 1868 applies to BLM's relationship with the Shoshone-Bannock Tribes. BLM considers off-reservation treaty-reserved fishing, hunting, gathering, and similar rights of access and resource use on the public lands it administers for all tribes that may be affected by a proposed action.

1.7 Scoping and Development of Issues

The IDARNG Joint Environmental Management Office (JEMO) initiated a Record of Environmental Consideration (REC) in March of 2010 to consider the potential environmental and cultural effects of the Proposed Action, and to determine if the Proposed Actions could be considered under a Categorical Exclusion, per Appendix B of 32 CFR Part 651. RECs were developed for only two, Ranges 28 and 11b, of the seven proposed ranges. After review of theses RECs, and consideration of the timing, resources, and actions associated with the five other ranges, it was determined by JEMO and IDARNG staff that all the proposed ranges could not be independently assessed as separate projects. As such, an EA was required based on the overall scope of the project and potential impacts to the human environment. Based on the decision, a single REC was not completed for all seven proposed ranges as a single project.

Once the EA requirement was determined, the JEMO initiated external scoping with state and federal land use agencies, including the IDFG, USFWS, IDL; the regional Tribes (Shoshone-Paiute and Shoshone Bannuck), as well as the general public (Appendix C). Scoping letters with a full project description and information package were sent to the land use agencies on May 21, 2010, the tribes on May 25, 2010, with the intent to solicit comments on the key issues. In addition to scoping letters, the BLM consulted with the Shoshone-Paiute through the Wings and Roots process. The consultation was initiated on June 25, 2010, revisited for further consultation on July 17, 2010, and comment was given to the BLM on August 19, 2010.

Scoping comments were received from the IDFG on June 1, 2010, and from the USFWS on June 25, 2010 (Appendix C). The IDFG expressed they were in concurrence with the issues identified in the scoping document. The USFWS comments were generally associated with potential effects to Lepidium papilliferum (LEPA), slickspot micro-sites; distance to identified Element Occurrences (EO); soil stabilization on disturbed sites; and control/maintenance of invasive species. There were no comments received from the IDL.

A public notice was also sent out in the Idaho Statesman and Mountain Home News from June 10 through June 12, 2010, with a summery description of the project and directions to obtain a copy of the scoping/information package, which could be obtained through written correspondence with the IDARNG's JEMO; found at the Boise Public Library, 715 S. Capital Blvd., Boise, and the Mountain Home Public Library, 790 North, 10th East, Mountain Home; or an electronic copy could be downloaded from the IDARNG website http://emomil.state.id.us (Documents for Review), or the BLM website (https://www.blm.gov/epl-front-office/eplanning/nepa/nepa_register.do).

A second announcement was also issued to extend the timeframe for written or electronic comments on the proposed action. The timeframe was extended from June 18 to July 1, 2010. There have been only four responses from the public, three of which were neutral comments and one in support. Two were associated with potential noise impacts (neutral), one addressed potential impacts to raptors and associated prey base (neutral), and one generally supported the IDARNG and their associated mission and training actions. Agency, Tribal, and public scoping continued throughout the development of the EA to determine the desires, perspectives, and concerns of the public and local government.

All scoping documents, comments and notes can be found in Appendix C. This dialogue helped to develop the alternatives and identify key management issues that were addressed in the

preliminary Final EA. The primary resource or resource use issues identified during internal and external scoping with the IDARNG (including the JEMO staff), state and federal land use agencies, the Tribes, and the general public included:

- Potential impacts to air quality associated with dust emissions;
- Potential loss of soil associated with soil disturbing activities;
- Potential establishment of invasive or noxious weed species associated with soil disturbing activities;
- Potential noise impacts to surrounding area and wildlife species;
- Potential impacts to recorded and unrecorded cultural resources;
- Potential for wildfire and its impact on native plant communities, wildlife habitat, and special status plant/wildlife species that could be affected;
- Potential impacts to raptor and associated prey species;
- Potential impacts to livestock grazing operations and the availability of forage;
- Potential impacts to military personnel and the OTA associated with non-compliance with DoA training requirements; and
- Potential economic impact associated with expanded training facilities or the lack of theses facilities within the OTA.

CHAPTER 2.0 DESCRIPTION OF THE ALTERNATIVES

2.1 Alternative Development Process

NEPA and 32 CFR Part 651 require consideration of reasonable alternatives to the Proposed Action. Only alternatives that would reasonably meet the defined Purpose and Need for the Proposed Action and are "appropriate and reasonable" require detailed analysis in this EA per 40 CFR Parts 1500-1508, title 32, §651.34. As discussed in Section 1.1, Purpose and Need, the purpose of the Proposed Action is to comply with requirements of the IDARNG in order to meet current DoA standards and to prepare for and ensure troop combat readiness in urban areas. To fulfill this purpose, suitable and readily accessible ranges and facilities such as the proposed Live Fire Exercise Breach Facility, Squad Defense Range, Heavy Sniper Range, Engineer Qualification Range, Field Artillery Direct Fire Range, Hand Grenade Familiarization Range, and Hand Grenade Qualification Course must be available for soldiers to implement current military training techniques. In addition, the proposed power line extension and berm construction provide needed infrastructure required for the use of each facility or range.

During the alternatives development phase of this project, properties used by IDARNG in southwestern Idaho were evaluated as potential construction sites for the proposed facilities.

IDARNG applied specific criteria (see below) to consider and choose potential site locations for detailed analysis. Sites not meeting these criteria were eliminated from the assessment process. Alternative approaches of developing sites located on IDARNG lands in other parts of Idaho and acquiring/developing sites in southwestern Idaho not on IDARNG lands were eliminated from consideration and detailed analysis because they did not meet project purpose and need. Additionally, all proposed sites outside the OTA Impact Area were also excluded from further consideration because they could introduce potential safety issues related to a higher probability of civilian interaction.

2.1.1 Alternatives Considered but Not Anylized (Siting Criteria)

All potential sites were evaluated by personnel from the environmental, cultural, and engineering offices. Many of the sites considered early in the alternatives development and evaluation process for the Proposed Action were excluded if they did not meet the following minimum criteria:

- Historical, cultural, and sacred sites would not be impacted;
- There would be no safety issues for military personnel or civilians (for example, a site is not in a high explosive target area);
- There would be no conflicts with critical livestock grazing areas and development sites (water tanks, spring developments, pasture access);
- Human development (homes, public roads, recreation sites) would not be impacted;
- Use would be compatible with current military operations (for example, the location would provide minimal fuel use or travel time from other major training areas on the OTA, or proximity to existing ranges that directly support the new training operations or are in sequential training scenarios); and
- Federally listed species (specifically LEPA), candidate species, or critical habitat are not present or potentially present at the site.

If a site did not meet these criteria it was eliminated from consideration. For example, the proposed Live Fire Exercise Breach Facility was originally located just east of range five (Appendix A: Map 1). However, this site was eliminated because past observations of LEPA in the area presented possible conflicts. In contrast, if a site met these criteria, it was further evaluated based on the minimum criteria for military urban operations training sites:

- Sites that are already being used for military training activities;
- Undeveloped tracts of land that are of sufficient size to accommodate the construction of the proposed facilities;
- Sites that would have space for expansion if training requirements change;
- Sites were accessible for scheduling military training activities;

- Sites that were inside the OTA impact area (within Range Road); and

- Sites that do not have any sensitive environmental concerns such as wetlands, surface waters, protected species or their habitat, or contamination.

Once a potential site was identified that met all the minimum requirements, a two step evaluation process was used to determine the final location and layout. Step 1 evaluated each site to determine the best layout based on a set of pre-determined considerations: 1) Affect of SDZs from other ranges; 2) Affect of SDZs from new ranges on existing ranges; 3) Impact on future development; 4) Desire to keep similar ranges in the same area (i.e. small arms ranges in the same general vicinity). Step 2 generated SDZs for the potential ranges and determined grids based on SDZ size and orientation, verifying TC 25-8 requirements, and finally mapping the ranges on the ground.

Based on these evaluations, the only properties used by the IDARNG in the southwestern Idaho region that meet the screening criteria requirements are the project areas identified. As a result, no other range locations on the OTA or other properties used by the IDARNG are considered to be reasonable alternative sites for the Proposed Action. For these reasons, there are no practicable alternatives to the sites proposed under this EA.

2.2 Description of Proposed Action and Alternatives

2.2.1 Alternative A—No Action/Continue Current Management

The No Action Alternative would maintain existing conditions; that is, not construct and operate the Live Fire Exercise Breach Facility, Squad Defense Range, Heavy Sniper Range, Engineer Qualification Range, Field Artillery Direct Fire Range, Hand Grenade Familiarization Range, or Hand Grenade Qualification Course within the OTA or at any other location. While this action would meet management guidelines outlined in the BLM's NCA-RMP and the IDARNG's INRMP and ICRMP, the OTA would not provide the tactical and situational awareness training necessary for surviving and succeeding in urban battlefields, i.e. DoA urban training standards as outlined in TC 25-8. As the OTA does not currently meet all DoA training standards outlined in TC 25-8, these types of required training would have to be completed at alternative locations outside the State of Idaho. Based on the current training capabilities this Alternative would not meet the IDARNG's mission goals or the current Army urban warfare training standards.

2.2.2 Alternative B—Proposed Action

In order to meet the training requirements required by the IDARNG, they have identified the need for seven urban training facilities or ranges (Table 1 and Appendix B). The proposed sites would be located within the OTA Impact Area south of range 15 on the eastern side of the OTA and south of range 30 on the western side (Appendix A: Map 1). All proposed sites would be south of the livestock drift fence and would provide the tactical and situational awareness training necessary for surviving and succeeding in urban battlefields.

In addition to the training sites, an existing buried power line would be extended from range 15 to the proposed range 18 (Appendix B), and soil required for berm construction on range 11b would be moved from existing training berms located on range 6 (Appendix B: Map 2). Based on the presence of the sagebrush community and potential occurrence of woven spore lichen

Texosporium sancti-jacobi in the northern portion of range 6, a work plan has been developed to restrict any use or direct impact to the sagebrush community (Appendix B). An expanded and detailed description of the range construction, powerline extension, and operational activities can be found in Appendix B.

Based on the locations of the proposed ranges there would be little or no affect from UXO on public or military personnel. The IDARNG has trained on the OTA since 1953. Between 1943 and 1948 the southern portion was used by the AAF as a practice bombing range referred to as the Swan Falls bombing Range FUDS Property No. F10ID0134. That was cleared by USACE contractor Shaw Environmental in 2009. Since 1953 the NG has not recorded any dud-producing ammunition usage in any of the range construction areas.

The Proposed Action would not expand the OTA range. Instead, it would change the focus of the existing training range by modernizing and upgrading existing training capabilities. As such, the IDARNG does not anticipate an increase in the number of soldiers training at the OTA or in the density of training population; rather existing training types would be redistributed.

Table 1. Proposed Urban Training Facilities and Ranges.

UTF/Range	Range No.	Description
FCC 17880-Live Fire Exercise Breach Facility	11b	This breach facility is used to train soldiers on the technical aspects of breaching doors, windows, and different types of walls using various mechanical and light explosive devices.
FCC 17893 Squad Defense Range	17	This range is used to train individuals and squads on employing mutually supporting fires from defensive positions against stationary infantry targets.
FCC 17829 Heavy Sniper	18	This range is used to train and test soldiers on the skills necessary to detect, identify, engage, and defeat stationary and moving targets in a tactical array.
FCC 17889 Engineer Qualification Range	22	This range is used to train and test soldiers on the skills necessary to employ equipment and explosives to breach or create obstacles.
FCC 17855 Field Artillery Direct Fire Range*	28	The range is used to train field artillery crews on the skills necessary to apply fire mission data, engage, and hit stationary targets in the direct fire mode.
FCC 17883 Hand Grenade Familiarization Range	29	The range is used to train and test individual soldiers in the employment of live fragmentation hand grenades.
FCC 17882 Hand Grenade Qualification Course (Practice grenades not HE**)	29A	The Hand Grenade Qualification Course is used to train and test individual soldiers on the skills necessary to employ hand grenades against stationary target emplacements.

Direct Fire Range: Field artillery training that requires personnel to lower the barrels from normal high angle shooting to a flat "direct" shot similar to a tank.

HE (High-Explosive): These exercises are confined to the core impact area as they could produce duds (un-exploded ordinance). Non-HE equates to non dud-producing capability.

Note: All facility and range specifications are identified in the TC 25-8 (Training Ranges).

The Proposed Action would be constructed in accordance with range specification outlined in the DoA's TC 25-8 (*Training Ranges*). The total area associated with the seven ranges, soil transfer, and power line extension would be approximately 5,325 acres (Table 2). However, the total area of disturbance, approximately 61acres (1.2 percent of the project area), would be considerably smaller based on the limited area affected by localized construction activity (Table 3).

The large buffer areas surrounding each range were based on the boundaries used to complete the botanical, wildlife, and cultural clearance. Clearances are defined as site-specific surveys conducted to determine the presence or absence of specific resources, i.e. special status species clearances determine the presence of identified wildlife or botanical species of concern within the project area. The large clearance areas (project area) allow for flexibility in the site planning and specific locations of construction activity within each proposed range. Construction is estimated to take approximately 38 weeks and would begin in September of 2010.

Table 2. Project Area Boundaries*.

Range	6	11b	17	18	22	28, 29, and 29a	Extended Powerline	Total
Project Area (acres)	250	40	145	440	4,200	210	40	**5,325**
Note: Project areas include construction area, range, and estimated surface danger zone (SDZ).								

Table 3. Range/Construction Disturbance Area (acres).

Range	6	11b	17	18	22	28, 29, and 29a	Extended Powerline	Total
Roads	0.00	0.00	4.90	13.10	15.01	0.28	0.00	**33.29**
Pads	0.00	0.01	2.82	0.98	5.40	3.80	0.00	**13.01**
Target/ Berms	2.20	1.31	2.68	2.63	0.00	0.43	0.00	**9.25**
Power	0.00	0.02	0.40	0.40	0.00	0.00	4.10	**4.92**
Path	0.00	0.00	0.00	0.00	0.00	0.91	0.00	**0.91**
Total	**2.20**	**1.34**	**10.80**	**17.11**	**20.41**	**5.42**	**4.10**	**61.38**

2.2.3 Preferred Alternative

The Proposed Action (Alternative B) in this EA is the IDARNG's Preferred Alternative.

CHAPTER 3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

The affected environment describes the existing resource characteristics within the project area that would be affected by the alternatives. The description is based on the best available data. The environmental consequence analyzes the impact to each resource associated with implementing the action, including the direct, indirect, and cumulative impacts. Impacts analyses associated with the proposed action also consider the following general assumptions, as well as the BMP's identified in Table 4.

- All laws and regulations associated with transportation requirements (speed, following distance, vehicle type and weight, safety equipment), water rights (access, amount, and authorized use), air quality regulations, and right-of-way (ROW) authorizations would be adhered to by IDARNG operators during construction and operations at all times.

- There would be no net increase in training; rather the type of training and areas of use within the OTA would shift from heavy armored brigade to more urban-based combat. This is the current trend and may shift again in the future, but for the foreseeable future this is the existing trend and assumption.

Best Management Practices

Based on the proposed actions relative to the existing conditions and identified issues, as well as the best management practices (BMPs) incorporated into the design and implementation of the proposed project (Table 4), it is unlikely that any mitigation actions need to be taken. For this reason, no mitigation measures beyond the BMPs listed below would be necessary.

Table 4. BMPs Related to the Proposed Action.

Resource	BMPs
Air Quality	• During construction activities, application of dust suppressants or use of operational controls would be used to prevent excess fugitive emissions.
Noise	• Training activities resulting in high decibel levels would be restricted to daytime use to the extent possible to limit or reduce noise impacts to adjacent land owners. • Construction activities would be limited to daytime hours to minimize potential noise impacts.
Geology and Soils	• Site digging and grading would be limited to those activities required to construct the proposed facilities and associated infrastructure, and to provide any necessary protective berms for the facilities. • Soil stabilizing measures (seeding, use of geo-textiles, hydro-mulch, etc.) would be taken to limit or reduce loss of top soil associated with soil disturbing actions during construction and operations. The OTA seed mix is described in Appendix B (page 4). • Soil stabilizing measures would be implemented during construction to reduce dust on roads and minimize the potential for erosion from stormwater runoff.
Invasive Species	• Use of on-site materials to reduce establishment of new invasive or noxious weed species associated with off-site materials.

Resource	BMPs
Invasive Species	• Control measures and site maintenance (mechanical, biological, chemical, or prescribed burns) would be conducted to limit or reduce the establishment or spread of invasive or noxious weed species (Appendix B).
Vegetation	• Construction areas were carefully chosen and planned so that impacts to native sagebrush-bunchgrass habitat would be minimized. • Pre-construction surveys were, and would be conducted prior to soil disturbing activities to avoid special status plant species. • The IDARNG would continue to protect slickspot peppergrass (*Lepidium papilliferum)* (LEPA) by implementing the management guidelines outlined in the 2003 INRMP.
Wildlife	• Pre-construction surveys and grubbing during non-nesting periods would be conducted to avoid impacts to special status species, raptors, and migratory bird species. • Annual monitoring is conducted on all training ranges. In the event that an occupied nesting site is identified within the training areas or associated structures within the OTA, the site would be identified and military personnel would work with the JEMO staff to take appropriate measures.
Cultural Resources	• All culturally sensitive or known areas with cultural artifacts would receive appropriate protection as determined by the IDARNG archaeologist during construction of the facilities and ranges, as well as during any training activities thereafter. Consistent with IDARNG policies contained in the 2010 ICRMP, all construction sites would be surveyed for cultural resources prior to and during construction to avoid the potential for any impacts to cultural sites. • Construction areas were carefully chosen to avoid known cultural resources.
Public and Occupational Health and Safety	**Surface Danger Zone (SDZ)** • To ensure the public's safety, existing training guidelines and protocols will continue to be used to regulate entry to and training activities within the SDZs (which are inside the Impact Area). **Unexploded Ordnance (UXO)** • All construction activity would be restricted to non-dudded training areas within the Impact Area, i.e. no activity within the Core Impact Area. • To ensure the public's safety, the Impact Area (which might contain UXO) is off-limits to the public. Warning signs are posted around the Impact Area to prevent inadvertent exposure to UXO. **Fire Prevention and Suppression** • The IDARNG would continue to implement its fire management program, which would handle any fires that might occur. **Public Safety** • Safety and security at the proposed military facilities would be consistent with IDARNG security procedures. Appropriate signage and barriers would alert the public of construction activities related to the Proposed Action and any traffic pattern changes.

Resource	BMPs
Public and Occupational Health and Safety	**Occupational Health and Safety (OSHA)** • OSHA requirements and other applicable worker safety regulations would be followed during project construction and operation. Appropriate measures would be taken to limit unauthorized persons from accessing the area during construction.
Hazardous and Toxic Materials/Wastes	• Safety precautions would be taken by construction crews to minimize the potential for a hazardous spill. Under current procedures, all spills, regardless of size, are immediately reported to the Orchard Range Control. The responsible unit works to contain the spill until personnel from Range Control or the Environmental Management Office arrive (ANL EAD, 2004). These protective measures would be implemented for the Proposed Action and would minimize the potential for impacts from hazardous and toxic materials.
Infrastructure Solid Waste Disposal.	• Solid waste, including construction debris, gathered during the construction and operation phases of the facility and ranges would be disposed of offsite at a designated landfill.

The identified Area of Analysis encompasses the project areas (Table 2) as well as the site specific areas of impact associated with the Proposed Actions (Table 3). The project area for the Socioeconomics section was expanded to include Ada and Elmore Counties.

3.1 Air Quality

3.1.1 Affected Environment (Air Quality)

The U.S. Environmental Protection Agency (EPA) has established National Ambient Air Quality Standards (NAAQS) pursuant to Sections 109 and 301(a) of the Clean Air Act (CAA). These standards, expressed in micrograms per cubic meter, establish safe concentration levels for each criteria pollutant. NAAQS have been set for six pollutants: particulate matter (PM), sulfur dioxide (SO2), carbon monoxide (CO), nitrogen dioxide (NO2), ozone (O3), and lead (Pb) (EPA 2005).

The CAA divides the United States into attainment and non-attainment areas, usually by county or Metropolitan Statistical Area (MSA). Areas not meeting NAAQS are designated non-attainment for the specific pollutant. Each state is required to demonstrate compliance with NAAQS and other components of the CAA through a State Implementation Plan. The Implementation Plan for the Control of Air Pollution in the State of Idaho (IDEQ 2005) describes the non-attainment and air quality maintenance plans within Idaho.

There are currently five non-attainment and maintenance plans (Table 5) specifically developed for northern Ada County (that is, the City of Boise). However, the OTA and proposed range locations fall outside this area, i.e. the OTA does not fall within either a non-attainment area or a maintenance area. In addition, there are no records of exceedances for air quality standards within the OTA or within southern Ada or Canyon Counties. Current military training on the OTA focuses on mechanized activities, which generates only local fugitive dust and vehicle emissions.

Table 5. Air Quality Improvement Plans in Areas Adjacent to the OTA

Nonattainment Area Plans within the Project Area	Docket #	State Submittal and Effective Dates	EP Affective Date	FR Publication Date & Citation	CFR Paragraph/ Explanation
Boise N Ada County CO Attainment Plan	ID8-1-6600a	6/29/94 (S)	1/30/95	12/1/94 59 FR 61546	40 CFR 52.670(c) 29
N Ada County PM-10 Nonattainment Area Plan	ID-1-1-5528a	11/14/91 (S) 12/30/94 (S) 7/13/95 (S) 7/13/95(*)	7/29/96	5/30/96 61 FR 27019	40 CFR 52.670 (c)(31)
N Ada County CO Maintenance Plan	ID-02-001	1/17/02 (S)	12/27/02	10/28/2002 67 FR 65713	40 CFR 52.672
Northern Ada County (Boise) PM10 Maintenance Plan	ID-02-003	9/27/02 (S), 7/10/03 (S), & 7/21/03 (S)	11/26/03	10/27/2003 68 FR 61106	40 CFR 52.670 (c)(38)
N Ada County CO Maintenance Plan	ID-02-001	1/17/02(S)	12/27/02	10/28/2002 67 FR 65713	40 CFR 52.672

***Note:** in FR but not in CFR.*
FR: Federal Register
S: Submittal

3.1.2 Environmental Consequences (Air Quality)

3.1.2.1 Alternative A: No Action/Continued Current Management

The No Action Alternative would not result in changes to the existing air quality in the analysis area.

3.1.2.2 Alternative B: Proposed Action

Effects on air quality would be direct and short term, result from construction and training activities, and are not expected to cause changes in regional air quality. The analysis area for air quality impacts is limited to the vicinity of the proposed facility, ranges, and associated construction activity. Effects of the Proposed Action on air quality are expected to be similar for all facilities and ranges. Air quality impacts during project construction, including the effects of construction equipment operation, worker transportation vehicles, and fugitive dust, would be temporary and would not create regional changes in air quality. In addition, air quality related BMPs that comply with local, regional, state, and federal regulations are implemented with all construction activities on the OTA and would be implemented for the Proposed Action.

Operation of the facilities constructed for the Proposed Action might result in the localized generation of fugitive dust and vehicle emissions during personnel and vehicle training movements. However, the potential temporary and localized increases in fugitive dust and vehicle emissions during project construction and operation are expected to be minor. These effects would be temporary and generally similar to or less than the effects of current military training activities in the analysis area because training would shift from current mechanized activities, which generate much of the dust and vehicle emissions, to low-intensity, urban warfare activities under the Proposed Action. In addition, the overall potential for wildfire would decrease as the majority of fires within the impact area are associated with large caliber firing activities (see Noise Below). Therefore, ambient concentrations of pollutants are expected to remain in compliance with federal and state air quality standards.

3.2 Noise

3.2.1 Affected Environment (Noise)

The IDARNG currently operates under the 2006 Statewide Operation Noise Management Plan (SONMP). In addition, an Argonne National Laboratory Environmental Assessment Division (ANL EAD) publication (2004) provides a detailed examination of the greatest noise level areas within the OTA. Training activities associated with lower noise levels include small caliber weapons firing, small demolition charges and training grenades, military vehicle maneuvering; troop and equipment transport; and bivouacking (Appendix A; Map 3). Training activities that generally produce the highest noise levels are large caliber (greater than 20mm) weapons firing, projectile impact and munitions detonation, and helicopter training (Appendix A; Map 4). These types of training activities normally occur in late spring, summer, and early fall months.

According to the 2006 SONMP, the maximum decibel (dB) levels modeled for large caliber firing exercise (highest noise levels) relative to surrounding private property is between 62 and 70 dB. These peak sound levels (Pk15 met) factor in the statistical variations caused by weather, that are likely to be exceeded only 15% of the time (i.e., 85% certainty the sound level would be within this range). The highest noise levels are associated with large caliber firing ranges and detonation-related training exercises produced on Ranges 1, 2, 6, 10, and 30 (Appendix A: Map 1 and Map 4). The remaining ranges are associated with small caliber and very small demolition charges, with much low dB levels and small noise contours (Appendix A: Map 1 and Map 3). Overtime, as the training emphasis within the OTA shifts from heavy armor to more urban-based capabilities the overall amount and frequency of large caliber training noise has and would continue to shift away from high noise level producing exercises to more low level ones.

3.2.2 Environmental Consequences (Noise)

3.2.2.1 Alternative A: No Action/Continued Current Management

The No Action Alternative would not result in changes to the existing noise levels in the analysis area.

3.2.2.2 Alternative B: Proposed Action

The project area for noise-affected resources for the Proposed Action is limited to the general vicinity of the action areas, that is, within close proximity to the Proposed Action areas. Effects

of the Proposed Action on noise levels would be direct and short term, and overall are expected to be comparable with existing noise levels associated with similar training activities within the OTA. It is not likely that the overall amount or intensity of training would change from current seasonal training, but the types of training would shift from more wide-spread heavy military vehicle maneuvering to more localized weapons firing and projectile impact and munitions detonation. Therefore, the overall noise levels would be similar to or less than adjacent noise contours, and the source/area affected would be much more localized.

The IDARNG's SONMP (2006) 2006 identified the operational noise contours (small and large caliber) associated with existing training activities (Appendix A: Maps 3 and 4). It is very unlikely that construction activities associated with the proposed ranges and infrastructure would exceed those associated with small caliber contours. As such, noise impacts to surrounding private lands would be negligible.

The operation of Ranges 11b, 17, 18, 29, and 29a would all fall under the small caliber noise contours based on the type of activity and position relative to similar noise sources. These noise contours primarily fall within the boundary of the OTA or on federal/state lands with the exception of a small private parcel used for agriculture. Based on the limited affect to private lands associated with the proposed operational activities on these ranges the overall adverse impact would be negligible.

The operational noise contours associated with Ranges 22 and 28 would be associated with large caliber fire and munitions detonation. While the noise contours do fall outside the OTA boundary, the Ranges were positioned in the south and southwest corners of the Impact Area to limit the impact to surrounding private lands. In addition, the surrounding lands affected are primarily agricultural fields; therefore overall adverse impacts to residents would be negligible.

While there could be minimal adverse noise impacts associated with the new Ranges, there would also be an associated benefit relative to the overall reduction in the amount and frequency of large caliber firing. As the IDARNG's training emphasis shifts from heavy armored and large caliber operations to more urban-based small caliber training, the amount and frequency of noise associated with large caliber operations decreases. Specifically, training activities that occur within the OTA currently have approximately 30% less large caliber weapons firing and detonation-related noise associated with heavy armor brigades than existing training. While this trend may or may not change in the future, current and proposed training activities would indirectly result in reduced adverse impacts to adjacent private lands associated with large caliber training activities.

In addition, the proposed facility and ranges are not near any schools, hospitals, or facilities that would be impacted by construction noise or increased training noise when the facility is completed. As a result, future noise levels on the OTA are likely to be similar to or less than existing levels under current operations.

3.3 Soils

3.3.1 Affected Environment (Soils)

The affected environment related to geology and soils is discussed in the following sections:
• Physiography and Topography
• Geology
• Petroleum and Mineral Resources
• Soils

3.3.1.1 Physiography and Topography

The project area is within the western portion of the 20,000 square-mile physiographic feature known as the Snake River Plain. This area is characterized by gentle terrain with basalt ridges, buttes, and cinder cones (Collett 1980, as cited in Stout and Associates 2004). Elevation ranges from 3,000 to 3,500 feet above mean sea level. Snake River Plain lava flows are responsible for the gently rolling terrain of the OTA (Shallat 1994, as cited in Stout and Associates 2004). These basalt flows occurred during the Pleistocene or earlier and formed the underlying layer of Snake River Basalt. The Snake River Basalt layer ranges in depth from very shallow to thousands of feet deep (Collett 1980, as cited in Stout and Associates 2004).

3.3.1.2 Geology

Basalt ridges, buttes, cinder cones, and lava tubes occur throughout the low rolling hills of the OTA. Four large cinder cones occur within the OTA, but none is within the project area.

The Snake River Canyon, a deep gorge bisecting the Snake River Plain for more than 500 miles, is located 2.4 to 5.0 miles from the southern and western boundaries of the OTA. The Snake River Canyon varies from 300 to 800 feet deep and is not within the project area.

Faulting on the Snake River Plain usually parallels the east-west axis of the plain. However, there is no evidence of major faulting on the OTA (CH2M HILL 1988, as cited in Stout and Associates 2004). The 1985 Uniform Building Code lists the area as having only a minor seismic risk (Stout and Associates 2004).

3.3.1.3 Petroleum and Mineral Resources

The OTA has no known substantial mineral resources. Formerly, four cinder quarries located on the OTA were used by the IDARNG to obtain material for road surfacing and range firing pads. Two of these quarries are depleted and have been reclaimed. Cinder Cone Butte and one small quarry south of it are still available for use. However, neither of them is within the project area and the quality of cinders available has limited usefulness for roadbeds on the OTA.

3.3.1.4 Soils

Soils in the project area are described as aridosols that developed in loess or silty alluvium deposited mostly by wind over basalt plains (Stout and Associates 2004). These soils are young with weak definition of horizons, well drained, and vary from shallow to very deep (60 inches or deeper), depending on the depth of underlying bedrock (lava flows).

Soil surveys completed in 1999 by IDARNG and others indicate the OTA has bedrock-controlled topography that consists predominantly of level to rolling lava flows on an extensive

shield volcano grading to surrounding lava plains (Stout and Associates 2004). Most soil in the area was formed in alluvium that is derived from loess and volcanic ash. The soil is overlain by a thin mantle of loess. Durapans (silica-cemented hardpans) and Pleistocene basalt commonly are at a depth of less than 60 inches.

Soils in the project area (Appendix A: Map 5) were mapped from the Natural Resources Conservation Services (NRCS) soil mapping website (NRCS 2006). A summary of the soils within the project area is provided in Table 6 for each facility/range as well as the extended powerline right-of-way (ROW), and soils associated with the disturbance area on range 6. Expanded soil descriptions are found in Appendix D.

Table 6. Soil Types within the Project Area.

Range	Map Unit Name	Acres	Percent of Area
6	Chilcott-Catchell-Chardoton	120	48
	Catchell-Chilcott-Banbury	102	41
	Banbury-Mcpan-Rock Outcrop	28	11
Range 6 Sub-Total		***250***	***4.7****
11b	Chilcott-Purdam-Browns Complex	32	80
	Power-Purdam Complex	8	20
Range 11b Sub-Total		***40***	***0.7****
17	Purdam-Mcpan Complex	131	90
	Tadpole-Purdam-Trevino Complex	7	5
	Power-Purdam complex	7	5
Range 17 Sub-Total		***145***	***2.7****
18	Tadpole-Purdam-Trevino Complex	320	72
	Power-Purdam complex	80	18
	Purdam-Mcpan Complex	32	8
	Corder-Tadpole Complex	8	2
Range 18 Sub-Total		***440***	***8.2****
22	Tadpole-Corder Complex	3,370	80
	Tadpole-Purdam-Trevino Complex	630	15
	Corder-Tadpole Complex	155	4
	Tadpole Silt Loam, Saline	45	1
Range 22 Sub-Total		***4,200***	***78.9****
28, 29, and 29a	Tadpole-Purdam-Trevino Complex	210	100
Range 28, 29, and 29a Sub-Total		***210***	***3.9****
Powerline	Purdam-Mcpan Complex	23	58
	Chilcott-Purdam-Bowns Complex	8	20
	Chardoton Complex	4	11
	Power-Purdam complex	4	11
	Tadpole-Purdam-Trevino Complex	1	>1
Powerline Sub-Total		***40***	***0.8****
Project Area Total		**5,325**	**100***
Percentage of total project area.			

3.3.2 Environmental Consequences (Soils)

3.3.2.1 Alternative A: No Action/Continued Current Management

The No Action Alternative would not result in changes to the existing geology and soils associated with the analysis area.

3.3.2.2 Alternative B: Proposed Action

There would be direct, short-term and some long-term, adverse impacts to geologic and soils resources from the Proposed Action. These effects would be limited to the immediate construction area of the facilities (buildings and towers) and infrastructure (roads, building and parking pads, targets, berms, and utility trenches) (Table 7). These impacts would occur during the construction period and operation. Site digging and grading would be limited to only those activities required to construct the proposed facilities and infrastructure and to provide any necessary protective berms for the facilities and annual maintenance of the roads and roadside berms.

Table 7. Direct Disturbance by Range (Soils).

Range/Site	6	11b	17	18	22	28, 29, and 29a	Extended Powerline	Total
Disturbance (acres)	2.20	1.34	10.8	17.11	20.41	5.42	4.10	**61.38**

The impact from implementation of the Proposed Action on soils in the construction areas would be minor and short-term. Soil infiltration rates are high for all sites and soil erosion potential is low. These soil characteristics, when combined with the low slope on all sites, indicate there would be no long-term detrimental effects on the soils near the construction sites for any of the facilities. The IDARNG would implement BMPs during and after construction to reduce dust on roads and to minimize the potential for erosion from wind and storm water runoff. The long-term affect on approximately 61 acres of soils associated with the construction and operation would comprise a very small percentage (1.2 percent) of the project area or overall 143,000-acre OTA (.04 percent). Similarly, the Proposed Action would not impact the overall topography or the underlying geological structure of the analysis area, and there are no prime or unique farmlands in the analysis area or the OTA. Therefore, adverse impacts associated with the Proposed Action on these resources would be negligible.

3.4 Vegetation and Wildland Fire (Including Special Status Plants and Noxious Weeds)

3.4.1 Affected Environment (Vegetation and Wildland Fire)

3.4.1.1 Upland Vegetation and Noxious and Invasive Plants

Extensive expanses of sagebrush and native grass communities were found historically throughout large areas of southwestern Idaho, including the project area. The decline in native sagebrush-steppe plant communities began with the intensive grazing pressures of the late 1800s through the early 1900s, which removed grass and forbs and introduced exotic species. As a result, by the early 1900s substantial changes in the vegetation of the area had begun to occur. Many species of exotic annuals, introduced into the area in contaminated crop seed and in livestock feces, invaded the damaged rangeland. These species included cheat grass *(Bromus tectorum)* and several exotic mustards (Brassicaceae) (Yensen 1981; Piemeisel 1951). Winter annuals, such as cheat grass, often germinate in the fall, set seed early in the spring, and dry immediately afterwards. They are dry and in a more flammable stage during the summer than the native species they replaced, resulting in easier fire starts from lightning or other means. As

cheat grass invades larger areas, fires began to burn larger and larger areas and to re-burn the same area with far greater frequency than historically.

While seeds of exotic annuals survive fire well, many native species such as big sagebrush *(Artemisia tridentate)*, winterfat *(Ceratoides lanata)*, and shadscale *(Atriplex confertifolia)* are killed by fire and do not re-sprout. By 1980, average sizes of wildfire burns were much larger than historically, and the burn-re-burn interval of the Snake River Plain ecosystem, like that of much of the OTA, was altered. The once-vast stands of native shrubs were gone or fragmented, replaced by large stands of exotic annuals.

Along with the disappearance of sagebrush, many understory plants disappeared as well. In addition, non-native grass species, such as intermediate wheatgrass and crested wheatgrass, were planted to replace sagebrush-bunchgrass areas. These non-native grass species were planted because, at the time, they were considered to be better livestock forage or the seeds were easier to obtain than native seeds.

As shown in long-term vegetation inventories and monitoring by the JEMO of the IDARNG, plant communities associated with the project areas did not escape changes similar to those described above (Appendix A: Map 6). Currently, there are four general vegetation communities within the project areas, including: native grasslands and forbs, cheatgrass, exotic annual forbs/grasses, and isolated patches of native shrubs (Appendix A: Map 6 and Table 8). In addition, there are large areas of human disturbance associated with existing training activities.

Table 8. Mapped Plant Community Distribution (acres) within the Project Areas.

Range	6	11b	17	18	22	28, 29, and 29a	Extended Powerline	Total	% of Total
Native Shrubs	11.2	3.1	4.1	52.0	194.8	54.1	1.0	**320.3**	**6**
Native Grasslands/Forbs	132.6	4.1	12.3	180.6	1307.6	19.3	3.1	**1,659.6**	**31**
Cheatgrass	11.2	1.0	0.0	29.6	1859.5	0.0	0.0	**1,901.3**	**36**
Exotic Annual Forbs	2.0	11.2	125.5	171.4	723.2	37.7	10.2	**1,081.2**	**20**
Human Disturbance	92.8	20.4	3.1	6.1	115.3	98.9	26.0	**362.6**	**7**
Total	**249.9**	**39.8**	**144.9**	**439.7**	**4,200.3**	**210.1**	**40.0**	**5,325**	**100**

In addition to the general plant communities, there were three identified Idaho-listed plant species of concern (Table 9) that could potentially occur within the project area based on IDARNG, IDFG, and BLM records (Appendix A: Map 7 and Appendix E), and one identified T&E species within the region (see below). Site clearances were completed on all proposed ranges and no Idaho-listed plant species of concern were identified within the areas of direct disturbance.

Table 9. Special Status Plants with Potential Habitat in the Project Area Vicinity.

Common Name	Scientific Name	General Habitat Description and Phenology	State/BLM Rank
Wovenspore Lichen	*Texosporium sancti-jacobi*	On well decomposed humus, flat or north-facing slopes in especially old clumps of Sandberg's bluegrass *(Poa secunda),* on big sagebrush –Thurber's needlegrass *(Stipa thurberiana)* -bluebunch wheatgrass *(Pseudoroegneria spicata)* sites, from 880-1000 m elevation. Year round.	S2[1]/Type 2[a]
Davis' Peppergrass	*Lepidium davisii*	Mostly barren hard bottom playas, but sometimes with a few shadscale and silver sage plants, surrounded by big sagebrush, four-wing saltbush *(Atriplex canescens)* and Sandberg's bluegrass habitat, from 885-1800 m elevation. April to August.	S3[2]/ Type 3[b]
Desert Pincushion	*Chaenactis stevioides*	Open, usually sandy sites in salt desert shrub, primarily, big sagebrush, horsebrush *(Tetradymia glabrata)*, four-wing saltbrush and Indian ricegrass *(Oryzopsis hymenoides)* communities, to 1200 m elevation. April to June	S2[1]/ Type 4[c]

[1] S2: Imperiled: at risk because of restricted range, few populations (often 20 or fewer), rapidly declining numbers, or other factors that make it vulnerable to range wide extinction or extirpation.
[2] S3: Vulnerable: at moderate risk because of restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors that make it vulnerable to range wide extinction or extirpation.
[a] Type 2: These species are experiencing significant declines throughout their range with a high likelihood of being listed in the foreseeable future due to their rarity and/or significant endangerment factors.
[b] Type 3: These species are globally rare with moderate endangerment factors. Global rarity and inherent risks associated with rarity make these species imperiled.
[c] Type 4: These species are generally rare in Idaho with small populations or localized distribution with currently low threat levels. Due to small populations and habitat area, certain future land uses in close proximity could significantly jeopardize these species.

***Source*: Atwood and DeBolt 2004**

Site specific clearances were also conducted for the presence of LEPA and associated slickspots or micro-playa habitat. LEPA is a federally listed threatened plant species. It was listed by the USFWS in 2009 based on a number of reasons including its restricted geographic range, very specific habitat requirements, small fragmented populations, and absence of the species from most superficially suitable habitat. Threats to its continued survival include wildfire, weed invasion, livestock disturbance, and development, among other issues (Meyer et al. 2006; USFWS 2009).

Site clearances identified that no LEPA or associated slickspot habitat was present within the project areas. The closest known LEPA-occupied slickspots are found north of Range Road across from Range 6, approximately 1.2 miles north of the closest disturbance (Appendix A: Map 8). This is also the closest element occurrence, a specific geographical location containing the species as identified in the 2003 LEPA Candidate Conservation Plan by the USFWS, BLM, IDGF, IDARNG, and other cooperators. Based on the proximity of LEPA, a construction plan was developed to keep soil disturbing activities associated with soil disturbing activities to the

southern portion of Range 6, approximate 2 kilometers south of the closest know or observed LEPA population (Appendix B). In addition, the IDARNG has been implementing a number of proactive conservation measures (Table 10) specifically related to the protection of LEPA and LEPA habitat.

Table 10. IDARNG *Lepidium papilliferum* Management Policies Implemented.

Action	Year Implemented	Comments
During training events when firing on the ranges occurs, trained firefighters and fire trucks are present; all training stops when smoke is sighted; firefighters are dispatched at once; and training does not resume until fires are out.	1987/1987	Since 1987 the OTA has lost far fewer acres of sagebrush to wildland fire than surrounding lands, less than 150 acres, compared to tens of thousands of acres of sagebrush lost to fire in lands adjoining the training area.
When planning maneuver and bivouac exercises, military units must submit their plans to the IDARNG Natural Resources Staff; if the exercise might affect LEPA, Natural Resources Staff work with the units to re-locate the exercises.	About 1990	Maneuver and bivouac exercises are sited so as not to affect *Lepidium papilliferum* or its habitat.
Population centers of LEPA are placed off-limits to all military training, 5,167 acres.	1990, 1991, 1994, and 2001	Additional off-limits would be added as more populations of the species were found.
All areas proposed for construction, development, or change-of-use is first surveyed for LEPA; if the species is found, the area is not disturbed; the activity is re-located.	1991	Reduce direct impacts to species and habitat.
Newly documented populations of *LEPA* will be added either to the Level I Habitat Management Areas or to the Level II Habitat Management Area, depending upon evaluations of the populations and military use of the area, by the IDARNG natural resources staff.	1991	Proactive and long-term protection.
Maneuvering is not done in sagebrush stands; IDARNG is doing less and less heavy maneuvering.	1996	This was done to protect sagebrush stands from fragmentation and from invasion by exotic annuals.
All military vehicles coming to Orchard Training Area from outside the western Snake River Plain must first be washed at the high-pressure wash rack at the MATES before entering the training area.	1999	This was done to prevent the introduction of additional species of exotic annuals.

Source: IDARNG 2003 INRMP

A summary description of each proposed range, including general community description and presence/absence of Idaho-listed plant species of concern is found below. A list the common plant species associated with plant communities found throughout the OTA can also be found in Appendix E.

Powerline Extension: The area associated with and directly adjacent to the excavation trench is dominated by non-native invasive grass and forbs species, with only isolated patches of native

species, primarily native grass species. There are no special status species or associated habitat within are near the affected area.

Rage 6: This area has a large contiguous stand of big sagebrush in the northern portion of the project area (Appendix A: Map 6), with the potential occurrence of woven spore lichen. The rest of the area to the south, in which the soil excavation would occur, is dominated by exotic annuals. A site specific work plan has been developed to restrict any use or direct impact of the sagebrush community in the northern portion of the range (Appendix A: Map 2).

Range 11B: Approximately five percent of the project area is made up of isolated patches of native grasses and forbs with the residual 95 percent of the site dominated by cheat grass, bur-buttercup *(Ranunculus testiculatus)*, mustards, and other exotic annuals. There is no remnant big sagebrush community or special status species found within the project area.

Range 17: Approximately three percent of the project area is made up of isolated patches of native grasses and forbs with the residual 97 percent of the site dominated by mustards and bur-buttercup. Native forbs persist in some rocky outcrops and in draw bottoms. There were no special status species found within the project area.

Range 18: Approximately 30 percent of the project area is made up of native grasses and forbs, primarily Sandberg's bluegrass and globe mallow *(Sphaeralcea munroana)*. Native forbs communities are generally restricted to rocky outcrops and in draw bottoms. The residual 70 percent of the site is dominated by mustards and bur-buttercup, with patches of cheat grass throughout. There is no remnant sagebrush community, but Douglas pincushion *(Chaenactis douglassii)* has been present in prior years with adequate precipitation, but there were no occurrences identified this year. Areas associated with occurring special status species would be restricted from construction activity.

Range 22: The northeastern portion of the proposed project area, roughly 20 percent, has the highest percentage of native species, approximately 35 percent. The primary species is Sandberg's bluegrass with isolated patches of bud sage *(Artemisia spinescens)* and some small patches of winter fat. Residual native forbs still persist in the rocky areas of draws and hills as well, but these are small isolated populations. The rest of the northern portion of the area is dominated by exotic annuals. Douglas pincushion has been identified in the northeast portion of the project area in prior years with adequate precipitation, but there were no occurrences identified this year. Areas associated with occurring special status species would be restricted from construction activity. There is also a restricted playa in the same area with an occurrence of Davis' Peppergrass *(Lepidium davisii)*. This area is currently, and would continue to be restricted from any use.

Rang 28, 29, and 29a (28, 29, 29a): The site is generally dominated by exotic annuals (85-95 percent) with isolated patches of native grasses scattered throughout. There is no remnant sagebrush community or special status species found within the project area.

Exotic/Non-Native/Noxious Weeds

While the majority of the project area is composed of invasive annual species there is currently no identified Idaho-listed noxious weed species present. The IDARNG has implemented a procedure for preventing the introduction of exotic weed species into the OTA. Military vehicles

coming to the OTA from outside the Treasure Valley are required to undergo pressure washing at the MATES facility prior to entering the OTA. Each year, herbicides are used on noxious weed species introduced to the MATES facility at locations where out-of-area vehicles enter. Military vehicles exiting the OTA are also required to go through the MATES facility pressure wash. This IDARNG weed-prevention program was initiated in 2000 (Stout and Associates 2004).

3.4.1.2 Wildland Fire

Many factors, both historic and contemporary, have led to reductions in burn intervals within the OTA. Although wildland fire is a natural disturbance mechanism associated with shrub-steppe ecosystems, the establishment and spread of invasive annuals throughout the Impact Area of the OTA has increased the quantity and connectivity of fuels, resulting in an altered fire regime (i.e., greater frequency of wildland fires that affect larger and larger areas of native vegetation) (Peters and Bunting 1992). BLM data indicates that approximately 42 percent of the OTA, or 57,988 acres, have burned since 1957. Figure 1 summarizes fire occurrence by year and Figure 2 summarizes fire size by year. Map 9 of Appendix A shows the locations of wildfires within and adjacent to the OTA since 1957.

Figure 1: OTA fire occurrence since 1980

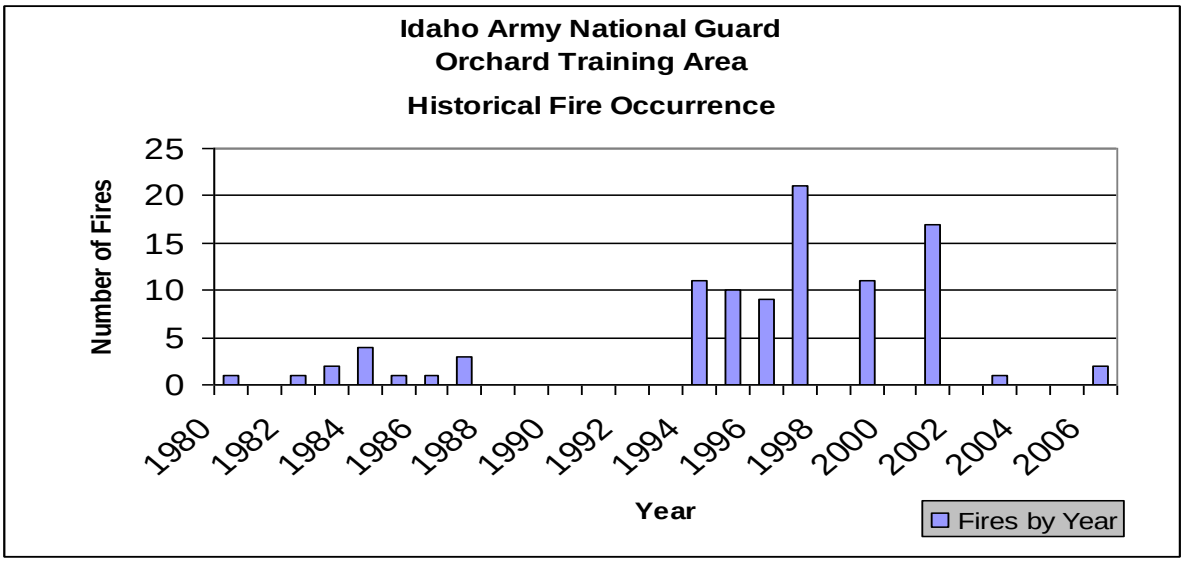
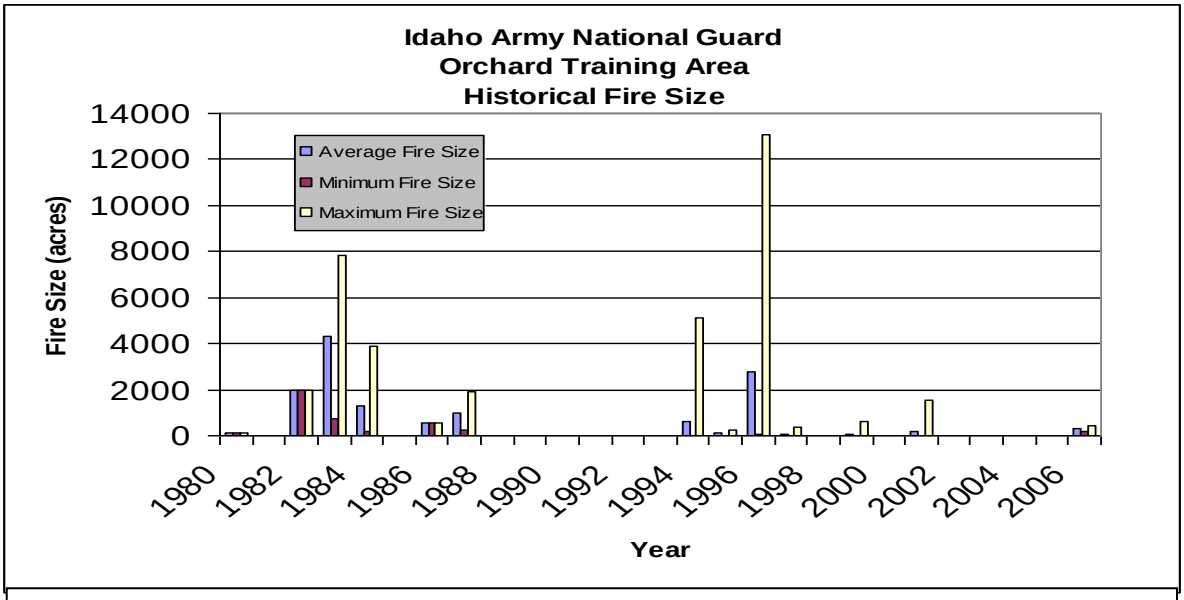


Figure 2: OTA fire size by year since 1980



Note: Dataset incomplete between 1950 and 1980.

3.4.2 Environmental Consequences (Vegetation and Wildland Fire)

3.4.2.1 Alternative A: No Action/Continued Current Management

The No Action Alternative would not result in changes to the existing vegetation or wildland fire regime associated with the analysis area.

3.4.2.1 Alternative B: Proposed Action

Upland Vegetation and Noxious and Invasive Plants

The Proposed Action was specifically designed to avoid native vegetation to the extent possible and protect remnant native vegetation to minimize direct (crushing and loss of reproductive capacity) and indirect (introduction of invasive species and increased probability of wildfire) impacts. Based on the identified locations of the facilities and associated infrastructure, approximately 61 acres of vegetation would be directly affected (Table 11). The Proposed Action has also been designed to minimize the impacts to remnant native plant communities (see BMP's and siting criteria), which make up approximately 15 acres or 25 percent of the impacted area, or 0.3 percent of the project area, with the greatest emphasis on protecting sagebrush communities, which make up approximately 2 acres or 3.3 percent of the impacted area, or 0.04 percent of the project area. Direct impacts would generally be long-term and adverse; however, they would be localized and only affect isolated patches of poor condition sagebrush. Adverse indirect impacts would also be localized and controlled via BMPs; therefore, the overall adverse impact would be minimal relative to similar actions in adjacent contiguous stands of sagebrush and other native communities.

In addition, the implementation of identified BMPs to stabilize soils and control invasive species in post-construction areas would further reduce the overall adverse impacts and could result in localized benefits. For example, based on the proposed actions and current condition of Range 6,

the implementation of the BMPs could actually have a long-term benefit by reestablishing native species in an area currently dominated by invasive species. While the short-term affect would be adverse, the long-term affect would be beneficial.

Indirect impacts to vegetation would generally be associated with the establishment and spread of invasive or noxious weed species that would compete for limited resources. Areas denuded of vegetation would be more susceptible to invasion by noxious and invasive plants, but incorporating appropriate BMPs to minimize this risk. Continuation of standard operating procedures (SOP) associated with washing vehicles would also reduce the risk of introducing noxious weeds and plant species from off-site machinery and/or construction materials. Species introductions by recreationists and herbivores would be expected to remain unchanged, but improved vegetation associated with disturbed areas should make the plant communities more resistant to this disturbance. While these impacts would generally affect a greater area than the direct impacts identified above, the majority of the area of analysis is already dominated by these species; therefore, short and long-term adverse indirect impacts would be negligible.

Table 11. Direct Disturbance by Range (Vegetation).

Community Type	Total Area	Affected Area	% of Area Affected
Range 6			
Native Shrubs	11.20	0.00	0
Native Grasslands/Forbs	132.60	0.00	0
Cheatgrass	11.20	0.00	0
Exotic Annual Forbs/Grasses	2.00	0.00	0
Human Disturbance	92.80	2.20	2.4
Range 6 Sub-Total	***249.90***	***2.20***	***0.1***
Range 11b			
Native Shrubs	3.10	0.00	0
Native Grasslands/Forbs	4.10	0.57	14
Cheatgrass	1.00	0.00	0
Exotic Annual Forbs/Grasses	11.20	0.19	2
Human Disturbance	20.40	0.58	3
Range 11b Sub-Total	***39.80***	***1.34***	***3.4***
Range 17			
Native Shrubs	4.10	0.00	0
Native Grasslands/Forbs	12.30	1.23	10
Cheatgrass	0.00	0.00	0
Exotic Annual Forbs/Grasses	125.50	9.22	7
Human Disturbance	3.10	0.35	11
Range 17 Sub-Total	***145.00***	***10.80***	***7.5***

Community Type	Total Area	Affected Area	% of Area Affected
Range 18			
Native Shrubs	52.00	1.11	2
Native Grasslands/Forbs	185.60	7.80	4
Cheatgrass	29.60	0.01	0
Exotic Annual Forbs/Grasses	172.40	8.12	5
Human Disturbance	6.10	0.07	1
Range 18 Sub-Total	***445.70***	***17.11***	***3.8***
Range 22			
Native Shrubs	194.80	0.95	0.5
Native Grasslands/Forbs	1,307.60	3.10	0.2
Cheatgrass	1,859.50	8.43	0.5
Exotic Annual Forbs/Grasses	723.20	6.89	1
Human Disturbance	115.30	1.03	0.9
Range 22 Sub-Total	**4,200.30**	**20.41**	**.05**
Extended Powerline			
Native Shrubs	1.00	0.00	0
Native Grasslands/Forbs	3.10	0.09	2.9
Cheatgrass	0.00	0.00	0
Exotic Annual Forbs/Grasses	10.20	0.57	5.6
Human Disturbance	26.00	3.43	13.2
Extended Powerline Sub-Total	***40.30***	***4.09***	***10.1***
Project Total			
Total	**5,325**	**61.38**	**1.2**

Threatened, Endangered, and Bureau of Land Management Special Status Plants
There are not expected to be any short- or long-term, direct impacts to the identified special status plant species. No populations are known to occur in the area of disturbance and clearances were conducted for all sites during appropriate timeframes. If species are found, proper actions would be taken to protect the species and corresponding habitat.

While there would be no direct impacts, there is the potential that wildfires could affect plant communities adjacent to the area of disturbance. However, based on the limited amount of habitat for these species within the OTA Impact area, coupled with the aggressive fire suppression requirements during training activities and the fire management activities outlined in the 2003 INRMP, the overall potential indirect adverse impacts would be negligible.

It has also been determined by the IDARNG that based on the absence of LEPA or LEPA habitat within the project area, coupled with the construction plan for Range 6 and the overall conservation measures outlined above, there would be No effect on LEPA. A letter of concurrence of these findings was issued by the BLM (Appendix C).

Wildland Fire

While wildfire is a natural function of the ecosystem, the vegetative communities within the area of analysis have been altered considerably. As such, wildfire has become a threat to remnant native plant communities and special status plant species, and training activities associated with the proposed ranges would be potential ignition sources adversely affecting plant communities both directly and indirectly. Direct impacts would diminish natural seed sources and reduce the reproductive capacity of the population, resulting in short and long-term adverse impacts to native populations. The severity of the overall impact would be related to the size and intensity of the burn, but would generally be localized. Indirect long-term impacts associated with increased competition from the establishment and spread of invasive species would also adversely impact native plant communities in the long-term. However, while short-term impacts would be more localized, long-term impacts could be landscape wide without active management.

The SOP's associated with military training activities coupled with daily wildfire monitoring and available resources for suppression and post-fire stabilization of military-caused wildfires provided by the IDARNG considerably reduces the overall potential impacts associated with direct and indirect impacts from wildfires. Based on these resources, the overall impacts from wildfire to native vegetation would be considerably reduced relative to similar areas without the IDARNG resources. Therefore, potential impacts from wildfire associated with the proposed action would be minimal.

3.5 Fish and Wildlife / Special Status Animals

3.5.1 Affected Environment (Fish and Wildlife/ Special Status Animals)

Wildlife species found in the area are those commonly associated with the southern Idaho portion of the Intermountain Sagebrush Province/Sagebrush-Steppe Ecosystem. Species include but are not limited to: badger *(Taxidea taxus),* coyote (*Canis latrans*), pronghorn (*Antilocapra americana*), common raven (*Corvus corax*), long-billed curlew (*Numenius americanus*), western meadowlark (*Sturnella neglecta*), Brewer's sparrow (*Spizella breweri*), sage sparrow (*Amphispiza belli*), western rattlesnake (*Crotalus viridis*), gopher snake (*Ptuophis catenifer*), racer (*Coluber constrictor*), sagebrush lizard (*Sceloporus graciosus*), side-blotched lizard (*Uta stansburiana*), and the western whiptail lizard *(Cnemidophorus tigris).* An expanded list of common species found throughout the OTA is found in Appendix F.

The OTA also supports a wide variety of raptors and associated prey species important to the NCA including but not limited to:

Raptors		
American Kestrel (*Falco sparverius)*	*Burrowing Owl (*Athene cunicularia*)	*Ferruginous Hawk (*Buteo regalis*)
*Prairie Falcon (*Falco mexicanus*)	Red-tailed Hawk (*Buteo jamaicensis*)	Rough-legged Hawk (*Buteo lagopus*)
Northern Harrier (*Circus cyaneus*)	*Swainson's Hawk (*Buteo swainsoni*)	Golden Eagle (*Aquila chrysaetos*)
*Short-eared Owl (*Asio flammeus*)	*Merlin (*Falco columbarius*)	*Peregrine Falcon (*Falco peregrines anatum*)
*Northern Goshawk (Accipiter gentilis)	*Short-eared Owl (*Asio flammeus*)	
** BLM Special Status Species and/or IDFG-listed Species of Conservation Concern.*		
Raptor Prey Species		
Black-tailed Jackrabbit (*Lepus californicus*)	Chisel-toothed Kangaroo Rat (*Dipodomys microps*)	Deer Mouse (*Dipodomys ordii*)
Northern Grasshopper Mouse (*Onychomys leucogaster*)	Nuttal's Cottontail (*Sylvilagus nuttallii*)	Ord's Kangaroo Rat (*Dipodomys ordii*)
Great Basin Pocket Mouse (*Perognathus parvus*)	Least Chipmunk (*Tamias minimus*)	*Piute Ground Squirrel (*Spermophilus mollis*)
Deer Mouse (*Peromyscus maniculatus*)	Ord's Kangaroo Rat (*Dipodomys ordii*)	Western Harvest Mouse (*Reithrodontomys megalotis*)
** BLM Special Status Species and/or IDFG-listed Species of Conservation Concern.*		

The bald eagle (*Haliaeetus albicilla)* winters (November to March) along the Snake River (south of the OTA). It is rarely observed on the OTA and is considered a casual visitor. It does not nest on the OTA. Golden eagles forage year-round throughout the OTA however they nest south of the OTA on cliff faces in the Snake River Canyon.

The BLM and IDFG listed species of special status/conservation concern with a predicted distribution within the OTA including the: pygmy rabbit (*Brachylagus idahoensis*), piute ground squirrel (*Spermophilus mollis artemisea*), California myotis (*Myotis californicus*), Townsend's big-eared bat (*Corynorhinus townsendii*), spotted bat (*Euderma maculatum*), fringed myotis (*myotis thysanodes*), Brewer's sparrow, long-billed curlew, black-throated sparrow (*Amphispiza bilineata*), Brewer's sparrow, sage sparrow, sage thrasher (*Oreoscoptes montanus*), ground snake (*Sonora semiannulata*), long-nosed snake (*Rhinocheilus lecontei*), and nine raptor species (see above).

The USFWS identified four listed wildlife species within Ada County. The Snake River Physa (*Haitia (Physa) natricinia*) is listed as endangered, the Bull trout (*Salvelinus confluentus*) is listed as threatened, and the greater sage-grouse (*Centrocercus urophasianus*) and Yellow-billed

cuckoo (*Coccyzus americanus)* are listed as candidate species (Appendix C). The Snake River Physa, Bull trout, and Yellow-billed cuckoo all require streams, wetlands, or riparian habitat that is not found within or adjacent to any of the proposed project areas or the OTA. In March of 2010, the greater sage grouse was put on the candidate list for future action by USFWS, meaning the species would not receive statutory protection under the ESA and states would continue to be responsible for managing the bird. The species has not been observed within the OTA for more than fifty years and the 2008 NCA-RMP identified that habitat did not occur within the OTA (BLM 2008). The gray wolf (*Canus lupus*) has been reinstated as a USFWS threatened species in Idaho, however, the species has never been observed on the OTA.

The NCA's RMP and Record of Decision (2008) listed ten species found in the project area as "regional and State imperiled". Under this plan, special conservation emphasis is given to the prairie falcon and Piute ground squirrel. Other BLM "regional and state imperiled" species associated with the OTA include the: pygmy rabbit; spotted bat; ferruginous hawk; loggerhead shrike (*Lanius ludovicianus*); sage sparrow; Brewer's sparrow; long-nose snake; and the ground snake (Appendix F).

JEMO staff conduct site specific clearances for all project areas during the months of April and May in 2010. There were no observed occurrences of any special status species within the project areas and overall habitat within these areas would be considered poor based on the existing type and condition of vegetation (Section 3.4), current human uses, and fragmentation associated with historic disturbances.

3.5.2 Environmental Consequences (Fish and Wildlife/Special Status Species)

3.5.2.1 Alternative A: No Action/Continued Current Management

There would be no permanent buildings constructed under the No Action Alternative. However, current impacts on the OTA Impact Area from training would continue under this alternative, as would adjacent sites used to bivouac troops in tents.

3.5.2.2 Alternative B: Proposed Action

The affected areas all fall within the OTA Impact area where historic training of a similar nature has taken place. In addition, the proposed training areas are located in areas with limited native vegetation that has been heavily invaded by undesirable non-native species (Section 3.4) that provide limited habitat (forage or cover) for local wildlife species. Construction of the proposed facilities and infrastructure would directly impact approximately 61 acres (affected area) of potential habitat, resulting in a long-term loss of habitat. However, the Proposed Action has been designed to minimize the impacts to remnant native plant communities, directly affecting approximately 15 acres, 25.0 percent of the affected area or 0.3 percent of the project area or, with the greatest emphasis on sagebrush communities, approximately 2 acres, 3.3 percent of the affected area or 0.04 percent of the project area, being directly affected. These communities provide considerably better habitat for native wildlife species relative to exotic annual grass/forbs and human disturbance that makes up the majority of the affected area (46 acres or 75.0 percent.

As the area is currently used as a training/firing range and direct impacts to remnant native and sagebrush communities would be limited, it is unlikely that associated species, i.e. nesting birds,

rodents, or any other sagebrush obligate species would be affected. In the event that any special status wildlife species is encountered during construction activities, such activities would cease until a full assessment can be made by the attending resource specialist (See BMPs). In addition, the remnant sagebrush stands in the area are not extensive enough to attract any BLM, or other listed special status species that prefer sagebrush for nesting, such as loggerhead shrike, sage sparrow, or sage grouse. The analysis area may be used incidentally by pronghorn and mule deer, but it is not large enough to provide suitable long-term habitat for either of these species. Adverse impacts to foraging wildlife, such as bats and raptors, are likely to be minimal. No known lava tubes or caves (potentially used by bats) occur near the project area.

Impacts to bald and golden eagles would be minimal as both species do not nest in the project area and foraging use by golden eagles varies widely by season. Bald eagles occasionally pass through the OTA (1 or 2 sightings per year) but do not forage on the OTA; therefore negative impacts to this species would be very unlikely. Golden eagles forage mostly in and near shrublands of the OTA and their presence is highly correlated with black-tailed jackrabbits (USDI 1996). No project construction is planned for shrub areas and therefore would result in minimal impacts to golden eagles.

Prairie falcons nest on the cliffs of the Snake River Canyon and forage on the benchlands of the NCA including the OTA. They are most often observed during late winter/early spring months when ground squirrels are active (unpublished raptor survey data) and prairie falcons are feeding their nestlings. Ground squirrel densities are similar on OTA compared to non-OTA sites (USDI 1996). Ground squirrels estivate beginning in June/July which corresponds to a decrease in prairie falcon presence. Impacts to the ground squirrel population (caused by actual ground disturbance, digging) would be minimal and localized. With the decrease in raptor use during summer/fall months, which is when project construction would occur, adverse impacts to prairie falcon foraging activities are likely to be minimal. Similarly, direct impacts to ground squirrel populations would also be minimal based on limited amount of area affected and poor quality of habitat found within the project area.

In addition, IDARNG environmental staff conducts routine surveys for the presence of eagles, prairie falcons and other birds. Range-wide surveys are conducted to record bird use or presence prior to training exercises and construction activities. Training exercises and construction activities with the potential to adversely impact bird species are relocated or modified in following the Migratory Bird Treaty Act of 1918. All bird species found within the OTA generally nest during early and mid spring. By late summer many migratory bird species would have left the OTA and would not return until the following spring. As such, potentially adverse impacts associated with nest abandonment or direct mortality would be minimal as construction activities would occur in early or mid summer, and the area would be cleared by EMO staff prior to any ground disturbing activities.

Migratory bird species most likely to be affected by construction activity would likely be migratory grassland species. Construction and operation activities would result in only temporary displacement of foraging birds as these species show a low sensitivity to disturbance (USDI 1996); therefore, adverse impacts would be minimal. In addition, over the past 20 years there have been no known incidences of bird mortality as a result of a training exercise or construction activity. Prior to each training exercise, soldiers receive a mandatory environmental briefing. This briefing directs soldiers to avoid all wildlife with particular emphasis on birds of prey and migratory birds.

3.6 Cultural Resources

3.6.1 Affected Environment (Cultural Resources)

Based on the potential presence of historic and prehistoric resources associated with the analysis area, the IDARNG Cultural Resources Manager, Jake Fruhlinger and his staff conducted Class III pedestrian archaeological surveys from March 8, 2010 through June 4, 2010. Site surveys were conducted to determine and record the presence and distribution of any historic or prehistoric resources. There are no structures eligible for listing on the National Register of Historic Places (NRHP) or otherwise located within the project APE. Table 12 identifies the results and timeframe of the surveys by area.

Guidelines used to identify historic resources are outlined as follows: Cultural Resources are defined as historic properties outlined by the National Historic Preservation Act (NHPA), cultural items as defined by the Native American Graves and Repatriation Act (NAGPRA), archeological resources as defined by Archaeological Resources Protection Act (ARPA), sacred sites as defined in EO 13007 to which access is afforded under American Indian Religious Freedom Act (AIRFA), and collections and associated records as defined in 36 CFR 79.

Table 12. Cultural Resources Summary

Range/Site	Survey Date	Description
6	3/24/2010	No cultural materials were found, nor were there any previously recorded sites within the proposed area of potential effect (APE).
Powerline Extension	3/24/2010	A single new prehistoric-site was recorded near the proposed project area but well out of the APE.
11b	3/24/2010	No cultural materials were found, nor were there any previously recorded sites within the proposed APE.
17	5/4/2010	No cultural materials were found, nor were there any previously recorded sites within the proposed APE. However, two pre-historic sites were located within one mile of the APE.
18	5/5/2010 5/6/2010	A single new historic site was recorded. Portions of historic Dorsey Road are also present within the survey buffer area but outside of the proposed area of Range 18 construction.
22	5/24/2010 to 6/5/2010	No new cultural properties were noted on this particular survey. There is however, one historic road that runs through the APE known as the historic Boise to Grandview road. This portion of the road, however, has been used for a few decades as a fire break and military transport road and therefore has been suggested as ineligible for the National Register of Historic Places.
28, 29, and 29a	3/8/2010	A single new historic site was recorded. In addition to this, a segment of the Snake River Road lies within the surveyed area but is located approximately .5 miles north of the proposed areas of construction for Range 28, 29, and 29a and would not be affected by the proposed project. This section of road has been deemed potentially eligible from a previous project and report. The IDARNG Cultural Resources Manager concurs with the potential eligibility of this site.

Cultural resource surveys have been conducted for all proposed sites and complete inventory reports have been submitted to the BLM and the Idaho State Historic Preservation Office for reviews. Additionally, it is IDARNG policy to have a qualified archaeologist on site during initial ground disturbing phases of proposed construction projects associated with Idaho military training lands. In the event that any cultural or prehistoric artifacts are encountered during construction activities, such activities shall cease until a full assessment can be made by the attending archaeologist. Furthermore, the IDARNG shall ensure that all military personnel that use the OTA for field training exercises would be informed of IDARNG's SOP's regarding inadvertent discovery of cultural resources, and given information on responding to inadvertent discovery situations would be incorporated into orientation materials and IDARNG regulation 350-12. Non-military units would also be instructed on responding to inadvertent discovery situations.

The IDARNG requires that in the event of the inadvertent discovery of archaeological and/or culturally sensitive resources, measures are taken promptly within 48 hours of discovery to protect them from further disturbance, assess the significance of the discovery, and implement appropriate protection and mitigation measures. In the event of discovery of human remains, funerary objects, sacred objects, or objects of cultural patrimony, the IDARNG shall ensure that all appropriate measures are implemented to protect the remains and/or items, and that all appropriate Tribes and agencies are promptly notified of the discovery, and that all applicable federal, tribal, and state procedures are followed.

3.6.2 Environmental Consequences (Cultural Resources)

3.6.2.1 Alternative A: No Action/Continued Current Management

Continued wind erosion under current management practices could result in the unearthing of culturally significant remains that have not been recorded. Once out of context, such remains would have considerably less informative value. However, the probability of any direct or indirect impact to cultural remains is marginal to none.

3.6.2.2 Alternative B: Proposed Action

Based on preconstruction cultural resource surveys (Appendix B), the limited area affected (61 acres), and SOP's relative to on-site monitoring, the identified construction, maintenance, and operations of the facility and Ranges would unlikely have any adverse, direct impacts on cultural resources. As the area is and would continue to be used for military training, and as such is restricted from public access, unidentified cultural resources within the training area would be protected from public disturbance. Relative to archaeological sites located on public lands administered by the BLM, sites located within the Impact Area of the OTA are posted as off limits to military personnel and access is restricted to the general public. Therefore, known and unknown sites within the Impact Area receive a higher degree of protection from both direct and indirect adverse impacts. All previously recorded sites as well as new sites resulting from the cultural resources surveys are located outside of the proposed areas of ground disturbance. This being the case, known resources would not be directly affected by the proposed project.

Unknown archaeological resources may be impacted by project construction. However, the IDARNG has an informal policy with the Idaho SHPO to have qualified personnel onsite during the initial phase of ground disturbance to monitor for the presence of buried archaeological

resources. As such, potential direct impacts to unknown cultural resources would be considerably reduced or eliminated.

To further address any potential direct or indirect impacts to unknown cultural resources, the IDARNG, pursuant to DoD Instruction 4710.02, sent all local Tribes (Shoshoni-Paiute and the Shoshoni-Bannock) summaries of proposed actions (Appendix C) including a copy of the cultural resource inventory conducted by IDARNG's cultural staff (Appendix B). The purpose of the letters was to inform the tribes of the proposed project and have them identify if there were any unrecorded sites of cultural significance within or near the project area. In addition to scoping letters, the BLM consulted with the Shoshone-Paiute through the Wings and Roots process. The consultation was initiated on June 25, 2010, revisited for further consultation on July 17, 2010, and comment was given to the BLM on August 19, 2010. This consultation process enables us to reduce potential impacts to unrecorded cultural resources and limit the overall adverse impacts.

3.7 Social and Economics

3.7.1 Affected Environment (Social and Economics)

Discussed in this section:
- Demographics
- Regional Employment and Economic Activity
- Regional Income and Expenditures
- Housing
- Schools
- Medical Facilities
- Shops and Services
- Public and Occupational Health and Safety
- Protection of Children

3.7.1.1 Demographics

The over 143,000-acre OTA is located in an unpopulated area in the central portion of the western Snake River Plain and the Mountain Home Plateau. The sites of the Proposed Action are located in southeast Ada County, Idaho, west of the Elmore County line. The area that includes and surrounds the sites of the Proposed Action is within Ada County Census Tract 105.02. This section includes population statistics for the analysis area, which for socioeconomics is considered to include both Ada County and Elmore County. Socioeconomic data were analyzed for Ada County Census Tract 105.02, Ada County, Elmore County, Idaho, and the United States to make relative comparisons of project area conditions and trends.

Ada County Census Tract 105.02

This census tract, which is outside the Boise metropolitan area, is large but sparsely populated. It represents about 20 percent of the land area in Ada County, yet it contains less than 3 percent of the county's total population.

In 1990, Ada County Census Tract 105 had not been split into Tracts 105.01 and 105.02. At that time, there were 5,781 people living in Census Tract 105, and statistics were not gathered related to the urban or rural status of the population (U.S. Census Bureau, 1990). During the most recent census of these tracts in 2000, 13,339 people lived in Census Tracts 105.01 and

105.02, with 45 percent of them (2,352 people) living in rural areas. The population in these combined census tracts increased by 130.8 percent from 1990. Of the 8,728 people living in Census Tract 105.02, 3.2 percent of them (276 people) lived in rural areas (U.S. Census Bureau, 2000a).

In 2000, the median age of people living in Census Tract 105.02 was 29.6 years. Children under 18 years of age comprised 32.7 percent of the population, and those 65 years of age and older comprised 2.8 percent of the population (U.S. Census Bureau, 2000a).

Ada County

Ada County is one of the fastest growing counties in Idaho, as well as the most populous. It has the 31st largest area of Idaho's 44 counties (Idaho Commerce & Labor, 2005a). Boise is located within Ada County. It is the largest city in Idaho, the state capital, and home to some of the largest employers in the state.

Between 1990 and 2000, the population of Ada County increased from 205,775 to 300,904 people. This 46.2 percent growth rate was higher than the growth rate in the rest of the state (28.5 percent) and the nation (13.1 percent) (U.S. Census Bureau, 1990 and 2000b). It has continued to grow at a higher rate than the rest of the state and the nation (U.S. Census Bureau, 2005).

It is forecasted that Ada County would grow to over 385,000 people by 2010 (Community Planning Association of Southwest Idaho [COMPASS], 2004). This would be an increase of over 87 percent since 1990. The economic health, concentration of high-technology industrial employers, and outdoor lifestyle are major reasons for the continued growth in the region.

In 2000, the median age of people living in Ada County was 32.8 years. Children under 18 years of age comprised 27.3 percent of the population, and those 65 years of age and older comprised 9.1 percent of the population (U.S. Census Bureau, 2000b).

Elmore County

Elmore County includes the cities of Mountain Home and Glenns Ferry, along with Mountain Home Air Force Base (AFB). Currently, Elmore County has the 6th largest area and the 12th highest population of the 44 Idaho counties (Idaho Commerce & Labor, 2005b).
Between 1990 and 2000, the population of Elmore County increased from 21,205 to 29,130 people. This 37.4 percent growth rate was higher than the growth rate in the rest of the state (28.5 percent) and the nation (13.1 percent) (U.S. Census Bureau, 1990 and 2000b), but not as high as the growth rate in Ada County (46.2 percent). From 2000 to 2004, the population in Elmore County declined to 28,878 people (U.S. Census Bureau, 2005).

In 2000, the median age of people living in Elmore County was 29.1 years. Children under 18 years of age comprised 28.0 percent of the population, and those 65 years of age and older comprised 7.1 percent of the population (U.S. Census Bureau, 2000c).

3.7.1.2 Regional Employment and Economic Activity

3.7.1.2.1 Ada County Employment

Ada County

The gainfully employed Ada County labor force grew from 137,969 in 1994 to 178,469 in 2004 (Idaho Commerce & Labor, 2005a). During 2004, the industries with the largest average employment in nonfarm payroll jobs in Ada County were Trade, Utilities, and Transportation (19 percent); Professional and Business Services (17 percent); and Government (15 percent). The industries with the lowest average employment included Natural Resources (less than 1 percent) and Information (2 percent) (Idaho Commerce & Labor, 2005a).

There are over 18,000 businesses in the Boise metropolitan area (Canyon and Ada Counties) (Boise Valley Economic Partnership [BVEP], 2005). There are at least 27 businesses in Ada County with at least 500 employees (Idaho Commerce & Labor, 2005c). The IDARNG, with 1,000 employees, is ranked as the 22nd largest employer in the Boise Metropolitan Statistical Area (BVEP, 2005).

Elmore County

The gainfully employed Elmore County labor force grew from 8,165 in 1994 to 10,591 in 2004 (Idaho Commerce & Labor, 2005b). During 2004, the industries with the largest average employment in nonfarm payroll jobs in Elmore County were Government (40 percent); Trade, Utilities, and Transportation (20 percent); and Leisure and Hospitality (11 percent). The industries with the lowest average employment included Natural Resources (less than 1 percent) and Information (1 percent) (Idaho Commerce & Labor, 2005b).

3.7.1.2.2 Unemployment

Ada County

Ada County's average annual unemployment rate has consistently been lower than the unemployment rates of both Idaho and the United States. Ada County's unemployment rate increased from a 10-year low of 3.0 percent in 2000 to 4.6 percent in 2003 then back to 3.9 percent in 2004 (Idaho Commerce & Labor, 2005a).

Elmore County

Until 2004, Elmore County's average annual unemployment rate had been consistently higher than the unemployment rates of both Idaho and the United States. However, in 2004, its unemployment rate of 5.5 percent was the same as that for the U.S., but still higher than the 4.7 percent average annual unemployment rate for Idaho. Elmore County's unemployment rate has decreased from a high of 6.7 percent in 2002 to a 10-year low of 5.5 percent in 2004 (Idaho Commerce & Labor, 2005b).

3.7.1.2.3 Earnings

Ada County

Ada County's highest average annual wages in 2004 from companies in the Covered Employment and Wages (CEW) program (also known as the ES-202 program) were in the Manufacturing ($55,797), Information ($44,492), and Mining ($41,212) industries. In 2004, the

Leisure and Hospitality industry had the lowest average annual wage ($12,169). Overall, the average annual wage in Ada County in 2004 was $35,731 (Idaho Commerce & Labor, 2005a).

Elmore County

Elmore County's highest average annual wages in 2004 from companies in the CEW program were in the Financial Activities ($33,171), Information ($32,752), and Construction ($29,760) industries. In 2004, the Leisure and Hospitality industry had the lowest average annual wage ($9,772). Overall, the average annual wage in Elmore County in 2004 was $22,869 (Idaho Commerce & Labor, 2005b).

3.7.1.2.4 Regional Income and Expenditures

Ada County

The population of Ada County had a combined personal income of approximately $11.5 billion in 2003 (Idaho Commerce & Labor, 2003a). In 1997, retail sales in Ada County were approximately $3.2 billion (FedStats, 2005a). In 2005, approximately $1.5 million were spent on various construction contracts for the IDARNG in Ada County. The number of soldiers trained at the OTA is not expected to exceed 10,000 per training year.

Elmore County

The population of Elmore County had a combined personal income of approximately $670 million in 2003 (Idaho Commerce & Labor, 2003b). In 1997, retail sales in Elmore County were approximately $231 million (FedStats, 2005b).

3.7.1.2.5 Housing

Ada County

In 2002, Ada County had an estimated 127,486 housing units (FedStats, 2005a). In 2003, the homeowner vacancy rate was 1.2 percent and the rental vacancy rate was 8.5 percent (U.S. Census Bureau, 2003). In 2000, approximately 70.7 percent of the housing units were owner-occupied, with a median value of $124,700 (FedStats, 2005a).

Elmore County

In 2002, Elmore County had an estimated 10,927 housing units (FedStats, 2005b). In 2000, approximately 57.4 percent of the housing units were owner-occupied, with a median value of $93,200 (FedStats, 2005b).

3.7.1.2.6 Schools

No Ada or Elmore County schools are located on or proximate to the northeast portion of the OTA (the location of the Proposed Action), and there are no Ada County schools within miles of the Proposed Action.

3.7.1.2.7 Medical Facilities

There are ample medical facilities serving Ada and Elmore Counties. They are concentrated in the Boise Metropolitan Statistical Area and the Mountain Home and Mountain Home AFB. Emergency services are available through military and civilian agencies serving Ada and Elmore Counties.

3.7.1.2.8 Public and Occupational Health and Safety

Public and occupational health and safety consists of several elements, including:
• Police, fire, and rescue services
• Surface Danger Zones
• Unexploded ordnance
• Fire prevention and suppression
• Public safety
• Occupational health and safety
• National security

Police, Fire, and Rescue Services

Police protection is provided by the Ada County Sheriff's Department. Fire and rescue service is provided by the Orchard Rural Fire Department and IDARNG Range Control. Elmore County does not provide police, fire, or rescue services to the OTA.

Surface Danger Zones (SDZ)

An SDZ (Appendix A: Map 11) is that segment of the range that is endangered by a particular type of weapon firing. It extends from the firing point out into the Impact Area. At the OTA, the 53,658-acre Impact Area includes an irregular circular pattern of fourteen active firing ranges (Appendix A: Map 1). These are located along the Range Road that encompasses the Impact Area. Small arms, artillery, tank, mortar, and helicopter firing are targeted at the Impact Area. Within the Impact Area, a smaller, core Artillery Impact Area has been fenced. Personnel in designated positions in the maneuver sectors can fire high explosives (artillery and mortars) into the Artillery Impact Area (Stout and Associates 2004).

There are three general types of gunnery ranges on the OTA (Stout and Associates 2004):

- Tank and Infantry Fighting Vehicle Ranges. From these ranges, stationed tanks and infantry fighting vehicles fire at targets (stationary, moving, and pop-up).

- Specialty Weapons Ranges. In these ranges, soldiers fire pistols, rifles, machine guns, mortars, light anti-armored vehicle weapons, and grenade launchers.

- Maneuver and Firing Range (Multi-Purpose Range Complex-Heavy) at Range 1. Soldiers fire at both moving and stationary targets connected to an electronic scoring system that tracks the hits. Military personnel in a tower on Christmas Mountain control and evaluate the training scenarios. A fenced compound at the base of Christmas Mountain stores equipment and supplies for the ranges.

Military personnel use a tower structure at most ranges to view and evaluate gunnery activity. There are helicopter landing pads adjacent to each range, as well as at the MATES facility and the Snake River Training Facility (Stout and Associates 2004).

Unexploded Ordnance

Various weapons and munitions are used during training activities. These may includes small arms, machine guns, grenades, mortars, C4 demolitions, parachute flares, TOW missiles, and artillery" (IDARNG, undated, as cited in ANL EAD, 2004). Annually, the Impact Area is swept

by IDARNG personnel, in conjunction with an expert explosive ordnance disposal team. To reduce potential adverse impacts to human health and the environment, the UXO they find is detonated in place (McHenry, 2002b, as cited in ANL EAD, 2004). To ensure the public's safety from UXO, the entire Impact Area is off-limits to the public.

3.7.1.2.9 Fire Prevention and Suppression

In 1987, the IDARNG first implemented a wildfire suppression program for military training activities (Stout and Associates 2004). The IDARNG's fire management program, which is designed to monitor, prevent, and respond/suppress wildland fires, includes the following items:

• A minimum of three IDARNG personnel are trained as Class II wildland firefighters so they can participate on the range fire suppression team (INRMP 2003).

• Trained fire crews and equipment must be stationed at ranges during firing exercises to immediately respond to fires that occur from gunnery activity (IDARNG, 1997a, as cited in ANL EAD, 2004).

• IDARNG personnel must immediately tell Range Control if they observe fires anywhere within the OTA (ANL EAD, 2004).

• The Operations and Training Officer must approve and coordinate the use of pyrotechnics (ANL EAD, 2004). For example, restrictions on the use of tracers and pyrotechnics may be placed when there is high danger of fire (INRMP 2003).

• Sagebrush habitats, which are fire sensitive, cannot be used for heavy vehicle training or bivouacking. This minimizes the potential for fires (INRMP 2003).

• The importance of preventing fires is stressed in environmental awareness posters, brochures, and videos (Stout and Associates 2004).

• All range personnel have access to fire safety and prevention educational programs (INRMP 2003). Implementation of the IDARNG's fire management program at the OTA has greatly reduced the number and magnitude of fires compared to previous years (ANL EAD 2004).

3.7.1.2.10 Public Safety

The entire Impact Area is off-limits to the general public. Signs warning of potential danger in the unfenced Impact Area have been posted at 200-meter (656-foot) intervals around the periphery. IDARNG range staff coordinates all activities and access to the Impact Area. To enter the Impact Area, an authorized escort is needed for non-IDARNG personnel (ANL EAD 2004). As an additional safety precaution for livestock and IDARNG personnel and ranchers who might have permission to enter the area, the Artillery Impact Area is fenced (Stout and Associates 2004).

During Annual Training events, signs indicating that increased military activities are taking place are posted at the main entry areas to the OTA (Stout and Associates 2004). In the spring, Range Security staff informs those in popular ground-squirrel hunting areas when military training is occurring in their vicinity (Stout and Associates 2004).

On a continuing basis, to minimize conflicts with military and private planes, IDARNG Annual Training Site personnel coordinate airspace usage over the OTA with the Federal Aviation Agency, the 183rd Aviation Battalion, Gowen Field, and Mountain Home AFB (Stout and Associates 2004). The OTA's INRMP provides for "public access to military installations, subject to safety requirements and military security…. Management options that create significant safety and/or security risks (e.g., allowing uninhibited access to impact areas) would not be considered." (Stout and Associates 2004)

3.7.1.2.11 Occupational Health and Safety

During training activities, troops follow Occupational Safety and Health Administration (OSHA) requirements and other applicable safety regulations. Soldiers and other users must view an environmental and safety video before participating in activities on the OTA (Stout and Associates 2004). For example, "troops are warned about the presence and danger regarding badger holes during training events." (Stout and Associates 2004) Because of safety considerations, the NCA-RMP (BLM 2008b) no longer allows public shooting on large areas to the north and west of the OTA. Since then, there has been more recreational shooting on the OTA, which is a potential safety hazard to troops who train in the area (Stout and Associates 2004).

3.7.1.2.12 Protection of Children

President Clinton issued E.O. 13045, "Protection of Children from Environmental Health Risks and Safety Risks" on April 21, 1997. This E.O. recognized that "a growing body of scientific knowledge demonstrates that children may suffer disproportionately from environmental health and safety risks." These include "risks to health or to safety that are attributable to products or substances that the child is likely to come in contact with or ingest (such as the air we breath[e], the food we eat, the water we drink or use for recreation, the soil we live on, and the products we use or are exposed to)." Therefore, to the extent permitted by law and the agency's mission, it is the responsibility of each federal agency to identify and assess such environmental health and safety risks and to ensure that its policies, programs, activities, and standards address disproportionate risks to children that result from environmental health risks or safety risks. Schools, childcare centers, and family housing areas, with their high concentrations of children, would be sensitive areas for exposure to children. The Proposed Action is not near such sensitive areas.

3.7.2 Environmental Consequences (Social and Economics)

3.7.2.1 Direct and Indirect Economic Effects

3.7.2.1.1 Alternative A: No Action/Continued Current Management

The No Action Alternative would not result in any changes to the existing socioeconomic elements (demographics; regional employment and economic activity; IDARNG salaries and local expenditures; housing; schools; medical facilities; public and occupational health and safety; and protection of children) in the analysis area.

3.7.2.1.2 Alternative B: Proposed Action

As described in the following text, the Proposed Action would have no effects on a number of socioeconomic components and minor direct and indirect effects (some beneficial and others

adverse) on several components. Overall, there would be a negligible beneficial impact on the total labor force, employment, unemployment, and earnings. Training activities that used the proposed facility and ranges would have a beneficial impact on the local economy because troops on temporary training assignments would purchase meals from local merchants, rent rooms in lodging facilities, and purchase gasoline and other commodities during training activities. The resulting improvement in national security would be a long-term, direct beneficial impact of the Proposed Action.

3.7.2.1.2.1 Demographics

Construction of the proposed facility and ranges would not require the relocation of IDARNG personnel. Since the labor force of the local area should be able to provide workers for construction of the Proposed Action, it is not expected that any additional people would need to relocate to the area. In addition, operation of the facility and ranges would not affect the population of the analysis area. Therefore, under the Proposed Action, the location, distribution, density, and growth rate of the populations in Ada County and Elmore County would not be affected.

3.7.2.1.2.2 Regional Employment and Economic Activity

The economic effects of the Proposed Action would be associated with the change in the demand for goods and services in the local economy. Primary (or direct) effects would be caused by initial changes in expenditures, employment, salaries, and population directly related to the Proposed Action. Secondary effects would be induced by the process of spending and re-spending, and the relationship between what is needed to produce goods and services and the commodities that are produced.

The economic effects of the Proposed Action would be limited mostly to temporary effects associated with construction. Total construction costs have been estimated at $ 2.4 million for all seven proposed facilities, ranges, and associated infrastructure (in FY 2010). It is assumed that local contractors would be used for this construction. Expenditures on construction labor, materials, and supplies would result in short-term direct and indirect increases in employment and earnings within the analysis area, a beneficial impact. However, due to the nature of these construction projects, no long-term impacts to the size of the civilian labor force or earnings in Ada County and Elmore County would be anticipated. Since the combined personal income of Ada County was approximately $11.5 billion in 2003 (Idaho Commerce & Labor, 2003a) and that of Elmore County was approximately $670 million in 2003 (Idaho Commerce & Labor, 2003b), the beneficial impacts from short-term construction payrolls and materials purchased would not substantially affect the economy of the analysis area. The addition of construction employees associated with the Proposed Action would represent only a minimal fraction of the total regional workforce.

Businesses in the vicinity of the Proposed Action area, such as gas stations and fast-food restaurants, could benefit from additional sales to construction workers. Overall, the Proposed Action would have a negligible impact on the total labor force, employment, unemployment, or earnings.

The BLM manages the land where the proposed ranges would be developed. Arrangements to use these properties would not affect any social functions or settings near populated areas. In addition, any agreements with the BLM to use the land would not represent a noticeable impact on the region’s economy.

3.7.2.1.2.3 Regional Income and Expenditures

IDARNG Salaries

Under the Proposed Action, no additional IDARNG personnel would be hired. Because no new positions would be created and because the salaries of the existing positions are not expected to change solely as a result of the Proposed Action, the Proposed Action would not have any effect on IDARNG salaries.

Local Expenditures

Local expenditures in the analysis area related to IDARNG training activities are primarily based on the temporary influx of training personnel. These currently require minimal lodging, services, and meals provided by local merchants. The IDARNG would continue a level of training similar to that it currently provides. Therefore, training use of the facility and ranges would not substantially impact the local economy, but would result in negligible short and long-term benefits.

Potential socioeconomic impacts to the analysis area are primarily based on the temporary influx of training personnel, minimally requiring lodging, services, and meals, and would not involve the relocation of individuals or families to the area. Potential impacts to local area businesses and service providers, such as restaurants, entertainment facilities, and hotels, are anticipated to be negligible, but would be beneficial in the short and long-term.

3.7.2.2.2.4 Housing

It is anticipated that all construction workers would come from the local area and there would be no need for temporary housing. Therefore, there would be no impacts to the local housing market. Since the Proposed Action does not involve relocating personnel or hiring additional people to operate the Proposed Action, there would be no impacts on housing.

3.7.2.2.2.5 Schools

Since the Proposed Action does not involve relocating personnel or hiring additional people to operate the Proposed Action, there would be no impacts on schools.

3.7.2.2.2.6 Medical Facilities

Since the Proposed Action does not involve relocating personnel or hiring additional people to operate the Proposed Action, there would be no impacts on medical facilities.

3.7.2.2.2.7 Public and Occupational Health and Safety

Police, Fire, and Rescue Services

There could be temporary short-term, construction-related impacts to local community services and facilities due to implementation of the Proposed Action. Primarily, these impacts would be associated with the potential need for emergency services. However, potential construction activity impacts to community police, fire, and rescue services are expected to be minimal.

Unexploded Ordnance

Training activities have required, and would continue to require, the use of blank as well as live ammunition. To ensure the public's safety, the Impact Area (including the fenced Core Impact Area), which might contain UXO, is off-limits to the public. Warning signs are posted around the Impact Area. Therefore, no impacts due to inadvertent exposure to UXOs are expected.

Fire Prevention and Suppression
The Proposed Action should not increase the risk of fire. The IDARNG would continue to implement its fire management program, which would handle any fires that might occur (See Section 3.5).

Public Safety
The proposed ranges would be military facilities. Safety and security would be consistent with IDARNG security procedures. Appropriate signage and barriers would alert the public of construction activities related to the Proposed Action and any traffic pattern changes.

Occupational Health and Safety
Construction of the Proposed Action would involve heavy machinery and some safety risks to those working and/or monitoring construction activities. While constructing the Proposed Action, OSHA requirements and other applicable worker safety regulations would be followed. Appropriate measures would be taken to limit unauthorized persons from accessing the area during construction. A survey for UXO and appropriate response actions might be required prior to construction.

During training activities, troops would continue to follow OSHA requirements and other applicable safety regulations. Therefore, no substantive impacts to occupational health and safety are expected due to construction and operation of the Proposed Action.

National Security
The proposed facility and ranges would provide IDARNG and other military personnel with a training facility that better simulates anticipated 21st century combat situations. A beneficial impact of the Proposed Action would be the improvement in national security resulting from this training.

3.7.2.2.2.8 Protection of Children

The Proposed Action is not near schools, childcare centers, family housing areas, or other sensitive areas for exposure to children. It would not have an adverse impact on children or pose health or safety risks.

3.8 Hazardous and Toxic Materials/Wastes

3.8.1 Affected Environment (Hazardous and Toxic Materials/ Wastes)

On the basis of a preliminary assessment conducted by the BLM in 1993, the EPA gave the OTA a No Further Action (NFA) designation under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and Superfund Amendments and Reauthorization Act (McHenry 2002b, as cited in ANL EAD 2004). When a site is designated NFA, it implies there is either no evidence of past chemical releases or, if present, the contaminants are below concentrations that could pose unacceptable risks to human health or the environment (ANL EAD, 2004).

Risk of exposure to hazardous and toxic materials and waste (HTMW) on the OTA may result from such things as:

• Releases of shower wastewater at bivouac areas.

• Accidental spills of fuels, lubricants, and related materials during vehicle operations and maintenance.

• Releases of munitions-related compounds and other chemicals during weapons training (ANL EAD 2004).

A publication of the ANL EAD (2004) provides a detailed analysis of the potential HTMW risks across the OTA area.

Generally, the existing training activities that occur near the project area are administrative, light-maneuver, and bivouac-type activities. Small lubricant releases associated with engine leaks may occur from either wheeled or track vehicles using the OTA for maneuver training, troop transport, and support, or from administrative activities. However, since military vehicles undergo regular maintenance, it is expected that such leaks would be very minor and would not pose a risk to ecological resources (ANL EAD 2004). In addition, the IDARNG implements a Spill Prevention Control and Countermeasure Plan (SPCCP) to minimize the potential for, and address accidental spills of, oil, fuel, or other hazardous substances that may occur on the OTA (Bryant Pers. comm. 2006). At the bivouac sites, the use of portable toilets minimizes HTMW exposure risks. The gray water produced from temporary shower facilities during Annual Training, which is applied to the ground, is not expected to pose HTMW risks.

3.8.2 Environmental Consequences (Hazardous and Toxic Materials/ Wastes)

3.8.2.1 Alternative A: No Action/Continued Current Management

The No Action Alternative would not result in any change to the existing potential for hazardous and toxic materials effects in the analysis area.

3.8.2.2 Alternative B: Proposed Action

There are no identified hazardous materials associated with the Proposed Action, but there are identified universal waste products. Potential impacts associated with universal waste and toxic materials from construction and operation of the Proposed Action would be short-term, direct, and minor. Construction activities at the proposed sites would generate some universal waste. It is anticipated that the majority of universal waste generated during construction would be used oil from motorized equipment. Contractor would take care of disposal of universal waste.

The increased presence of heavy construction machinery in the analysis area during construction would increase the potential for an accidental spill of fuel or other contaminants. Construction crews would take safety precautions to decrease the potential for universal spills.

IDARNG personnel implement requirements outlined in IDARNG's Reg. 350-12 and PAM 200-1 to minimize and address accidental spills of oil, fuel, or other universal substances that might occur at the OTA. Low-level spills (less than 5 gallons) have occurred at the OTA, resulting from tank fuel cell expansion and fuel line overflows (McHenry 2002b, as cited in BLM 2004). Under current procedures, all spills, regardless of size, are immediately reported to the Orchard Range Control. The responsible unit works to contain the spill until personnel from Range

Control or the JEMO arrive (ANL EAD, 2004). The protective measures that are implemented on the OTA, and which would be implemented for the Proposed Action, would minimize the potential for impacts from universal and toxic materials, resulting in negligible short-term impacts.

The only potentially universal wastes generated by training exercises would be spent casings, lead bullets, and lead dust. These materials could contaminate soil with heavy metals, particularly lead, through degradation and corrosion processes, although such processes would be very slow due to the low rainfall and the fact that the water table is hundreds of feet below the surface. Established range clearance procedures would be enforced in the training areas. These procedures require that all residues from munitions be collected and disposed of by the unit using the facilities. Units are required to clean up spent casings prior to leaving the site. Berms that would be constructed as part of the Proposed Action could both reduce the number of stray bullets leaving the project area and concentrate such bullets to a limited area. Standard procedures and BMPs associated with training activities would result in minor long-term impacts, similar to the current impacts under the No Action Alternative.

While transporting soldiers to the training areas, there is the potential for a petroleum spill. However, any potential spills would be handled using the protective measures described above. With the implementation of these measures, no adverse impacts would be expected from universal and toxic materials.

In summary, potential impacts associated with universal and toxic materials from construction and operation of the Proposed Action would be minor.

3.9 Livestock Grazing

3.9.1 Affected Environment (Livestock Grazing)

The Sunnyside Spring/Fall Allotment (#00825) and Sunnyside Winter Allotment (#00826) are the only publicly administered livestock grazing lands associated with the project areas (Appendix A: Map 12 and Table 13). These grazing allotments are permitted to multiple operators and administered by the BLM (USDI 2008).

Table 13. Permitted Use Summary for the Sunnyside Allotments.

Allotment Name	Admin. Office	Allotment Number	Authorized AUMs1	Authorized Season of Use	Kind of Livestock
Sunnyside Spring/Fall	ID-111	00825	6,256	04/01 – 06/30 10/15 – 12/16	Cattle, Sheep
Sunnyside Winter	ID-111	00826	11,280	12/16 – 02/28	Cattle, Sheep

[a] Animal unit months (AUMs)

3.9.2 Environmental Consequences (Livestock Grazing)

3.9.2.1 Alternative A: No Action/Continued Current Management

There would be little or no direct or indirect effects (short or long term) on forage availability or overall livestock grazing operations (i.e., reductions in AUMs, exclusions, or changes in season of use).

3.9.2.2 Alternative B: Proposed Action

In general, adverse and beneficial impacts to livestock grazing would be minimal. Construction activity would have short- and long-term, direct, adverse impacts on livestock by reducing forage availability on approximately 61 acres and displacing livestock during construction. However, the impacts would be localized and affect less than one percent of the allotments.

3.10 Cumulative Impacts

Cumulative effects are the impacts on the environment that result from the incremental impact of an action when added to other past, present, or reasonably foreseeable future actions, regardless of what agency or entity (federal or nonfederal) or person undertakes such other actions (40 CFR 1508.7). The effects of past and present actions on the environment are reflected in descriptions of existing resource conditions presented in the Affected Environment sections above. Environmental Consequences, which describe potential effects of the Proposed Action on the existing resources, reflect potential cumulative effects of the Proposed Action, past actions, and present actions on resources. These conditions represent the overall cumulative effects of all past and present relevant actions and activities on area resources.

For the purpose of this analysis, the local geographic area of consideration for cumulative impacts includes approximately 600,000 acres of the NCA north of the Snake River. At approximately 5,300 acres, the project area is approximately 0.8 percent of the geographic area associated with the cumulative impact area. As projects associated with this EA would be implemented within roughly 38 weeks, the period of consideration would be the four year period of 2008 to 2012, which includes two years prior to the start of the project and two years after the project is completed. A short description of the identified projects or activities within the geographic area of consideration for cumulative impacts is found below with general analysis.

Past, current, and reasonably foreseeable future actions near the analysis area and relevant to the Proposed Action include: impacts associated with anticipated future growth and infrastructure development within the NCA, which includes portions of Ada and Elmore County (Boise, Kuna, and Mountain Home); land use planning and management actions associated with the BLM's 2008 NCA-RMP and the IDARNG's 2003 INRMP; the Idaho Joint Land Use Study (JLUS); and the IDARNG projects constructed, under construction, or proposed within the next four years to meet future infrastructure needs and training requirements within the geographic area.

Regional Growth, Military Training, and Resource Management Planning
Although growth and development can be expected to continue throughout the NCA on private lands, roughly 65,000 acres or 11 percent of the NCA, the current and foreseeable economic market has considerably reduced the overall trend related to conversion of agricultural lands to residential or commercial relative to development trends from 2004 to 2007. For example, a

3,000 acre development, roughly five percent of the NCA private lands, was proposed in 2006, but has since withdrawn their application to Ada County. Based on the continued economic trend relative to development within the NCA, it is assumed that other private land owners have also altered development plans or deferred them until land prices increase. As such, the total percentage of private lands associated with the NCA that were proposed to be converted from agricultural lands has likely been reduced considerably more than five percent.

While overall development trends are down within the region, plans for increasing the power infrastructure have continued. The Gateway West project is a large scale power transmission project that was proposed, and is funded by Idaho Power and Ricky Mountain Power. The proposed project would result in over 1,150 miles of new power transmission lines crossing Idaho and Wyoming, of which approximately 33 miles would cross the geographic area. Direct impacts associated with the project, relative to the geographic area, would be attributed to ground disturbance during construction of the towers and associated access roads. Indirect impacts would generally be associated with the potential ignition of wildfires, establishment and spread of invasive species, increased recreational access, and impacts to raptor and other bird species associated with nesting, perching and predation.

Most impacts, both adverse and beneficial, would be short-term and localized with the exception of potential wildfires and increased recreation, but these impacts are also lower in probability of resulting in considerable impacts relative to those that are short-term and localized. The project would also have a considerable socio-economic effect on the region as the project would deliver power to meet increasing customer needs, result in additional local employment, and provide the infrastructure to meet power transmission demands for future endeavors that would result in additional jobs and increased tax revenue for the cities, counties, and state.

A developing infrastructure and historic growth trends in Ada and Elmore County have shown that development pressure could adversely affect existing and future military training activities within the region, including the geographic. Based on the potential impacts associated with regional growth on, and in addition to, current and foreseeable military operations (see below), the JLUS was initiated to identify and address these impacts. The intent of the JLUS is to mitigate both existing and anticipated encroachment issues through improved coordination among stakeholders in the region. Based on the increased communication and associated efforts to coordinate resources between stakeholders, the JLUS is likely to result in reduced use conflicts between existing and future users and increased management efficiency within the geographic area and beyond.

Current and planned military-related projects within the OTA include a rail spur currently under construction at the MATES facility; construction and operation of a Live-Fire Shoot House (Shoot House); an Urban Assault Course (UAC); a Combined Arms Collective Training Facility (CACTF), and an Operational Readiness Training Complex (ORTC). IDARNG projects outside the OTA but within the geographic area include the proposed construct of a new modernized training facility to support the ongoing mission of the units assigned to the Edgemeade Readiness Center in Mountain Home, Idaho. The proposed facility would support a Brigade Special Troops Battalion (BSTB), Engineers (EN), and a Tactical Unmanned Aerial System (TUAS), which would be used in the OTA but housed and maintained from Edgemeade. The total area directly affected by these facilities is approximately 190 acres, which is approximately 0.3 percent of the geographic area.

EAs have been completed for all military-related projects identified above. Based on the findings in each report, direct and indirect adverse impacts associated with each project were generally short-term localized and associated with construction activity in poor wildlife habitat and no adverse impacts to any T&E species. There were also considerable social and economic benefits associated with training capabilities for troop readiness and proximity of training facilities relative to out of state options. For example, the rail spur allows ARNG units from outside the state to use railroad facilities to transport their equipment directly to the MATES facility for training at the OTA reducing the amount of economic resources (fuel, maintenance, wear and tear, etc.) required to transport them from Gowen Field to the OTA. The facility also reduces overall impacts to air, noise, vegetation, public safety, transportation, and other impacts associated with the use of Pleasant Valley Road.

Construction and operation of the proposed training facilities and readiness centers would also have beneficial social and economic effects on the region. The local economy would benefit from increased local employment and expenditures during the construction periods. There would also be a considerable social-economic benefit associated increasing the type and availability of training within the OTA. Increased military training capabilities allows for IDARNG troops to be better prepared and more capable in the field, without having to travel to other facilities, i.e. less time and resources required for travel and a greater resources available on site. The increased amount of time available for training is especially important in preparing for and ensuring troop combat readiness for the IDARNG and other ARNG units.

In addition to the findings in the project-specific EAs, the IDARNG integrates management of the natural and cultural resources with military training activity in the 2003 INRMP. The INRMP identifies a management strategy for the OTA associated with: protection of LEPA and LEPA habitat, wildfire suppression and fuels management, control of invasive and noxious weed species, restoration of native plant communities and wildlife habitat, and others. The primary emphasis of the INRMP is to sustain military training activity in a manner that is not incompatible with the 1993 NCA legislation.

The 2008 NCA-RPM addresses both military training and regional growth as they pertain to natural, cultural, and socio-economic resources and resources uses on BLM lands. Based on the identified management actions, and associated goals and objectives outlined in the 2008 RMP, including but not limited to: 100,000 acres of fuels management; 148 miles of fire breaks; 958 miles of fenceline burns; 130,000 acres of restoration; 4,000 acres/year of weeds treatment; and the DoD withdrawal of the Impact Area, it was identified that, "There would be no regional adverse cumulative impacts" (BLM 2008, pg. 4-144). It further stated that, "there would be slight beneficial cumulative impacts based on recreation, vegetation treatments, wildlife habitat improvements, and general economic growth" (BLM 2008, pg. 4-144). It is assumed that these projects would be funded by BLM or their cooperators.

Based on past, current and foreseeable projects there would be adverse cumulative effects associated with land and infrastructure development and existing/proposed military training activities when combined with the effects of the Proposed Action. However, the overall cumulative impacts are unlikely to have an appreciable adverse effect on the human environment. Furthermore, when these impacts are coupled with potential management framework being developed in the JLUS; the existing and future management actions and identified resources outlined in the BLM's RMP and the IDARNG's INRMP associated with the

protection and enhancement of the human environment within the geographic area (NCA); and the considerable socio-economic benefit associated with military training and increased infrastructure and power availability; the overall cumulative effects would be beneficial.

3.11 Conclusions

Based on the analysis set forth in this EA, the ID ARNG has concluded that the implementation of the Proposed Action would have minor adverse affects to several of the identified resources. The effects would be minimal based on the assumptions and implementation of the BMPs identified in Section 3.0. As such, no mitigation measures beyond the BMPs listed in Table 4 would be necessary or required.

The Proposed Action would not involve unique or unknown risks, and the project is not expected to establish a precedent for future actions. Long-term activities in the affected areas under the Proposed Action would be consistent with current, ongoing activities and IDARNG does not expect an increase in either the number of personnel training in the OTA or in the density of the training population. The Proposed Action would minimally affect public health or safety, and is not anticipated to cause effects that would generate controversy. The Proposed Action would not adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the NRHP, or cause the measurable loss or destruction of scientific, cultural, or historical resources. The Proposed Action would not jeopardize any federal threatened or endangered species, or species proposed for listing as threatened and endangered under authority of the ESA. The Proposed Action would not threaten or violate federal, state, or local laws or requirements imposed for the protection of the environment.

Construction of the Proposed Action would have short-term beneficial effects on the local economy resulting from increases in employment and expenditures during the construction period. In addition, the availability of these types of training activities would reduce the time and resources required to train at other regional facilities. The increased amount of time available for training is especially important in achieving the purpose of the Proposed Action, which is to comply with requirements of the IDARNG in order to meet current DoA standards and to prepare for and ensure troop combat readiness in urban areas.

The No Action Alternative would maintain existing conditions, i.e. not construct or operate the proposed ranges. The environmental consequences of implementing the No Action Alternative would be identical to the consequences of maintaining the status quo (that is, no change in existing conditions). Under the No Action Alternative, facilities for providing the tactical and situational awareness training necessary for surviving and succeeding in urban battlefields would not be provided in Idaho. As a result, there would be a continuation of major training shortfalls for military units at the OTA since these units would not be able to successfully plan and execute specialized urban assault training during combat operations. Without these facilities, soldiers would not be able to perform critical tasks in support of unit operations in urban combat environments. Unlike the Proposed Action, the No Action Alternative would not meet the IDARNG's purpose and need of the Proposed Action.

CHAPTER 4.0 CONSULTATION AND COORDINATION

The land use and management plans identified in section 1.4, as well as management representatives from the IDARNG, USFWS, BLM, IDFG, IDL, and the regional Tribes were used as the primary source for consultation and coordination in producing this document. This document represents an effort to join federal and state cooperators who have the technical expertise and capability to develop and implement a plan that meets the purpose and need of the project.

4.1 List of Preparers and Reviewers

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USFWS Review	
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4.2 List of Agencies, Organizations, and Individuals Consulted

Boise District BLM	Idaho Department of Fish and Game
Idaho Department of Lands	U.S. Fish and Wildlife Services
Shoshone-Paiute Tribe	Shoshone-Bannock Tribe

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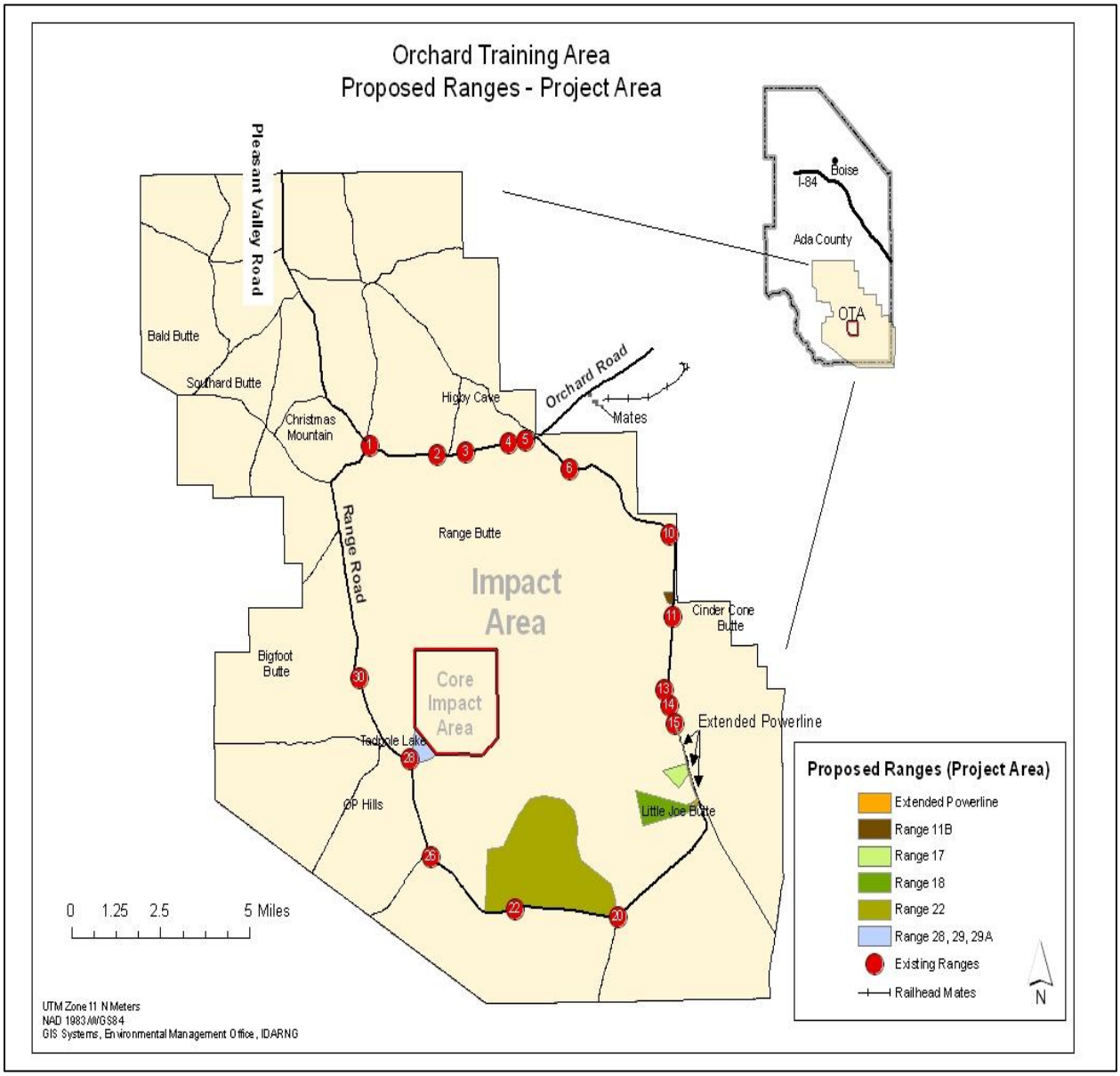
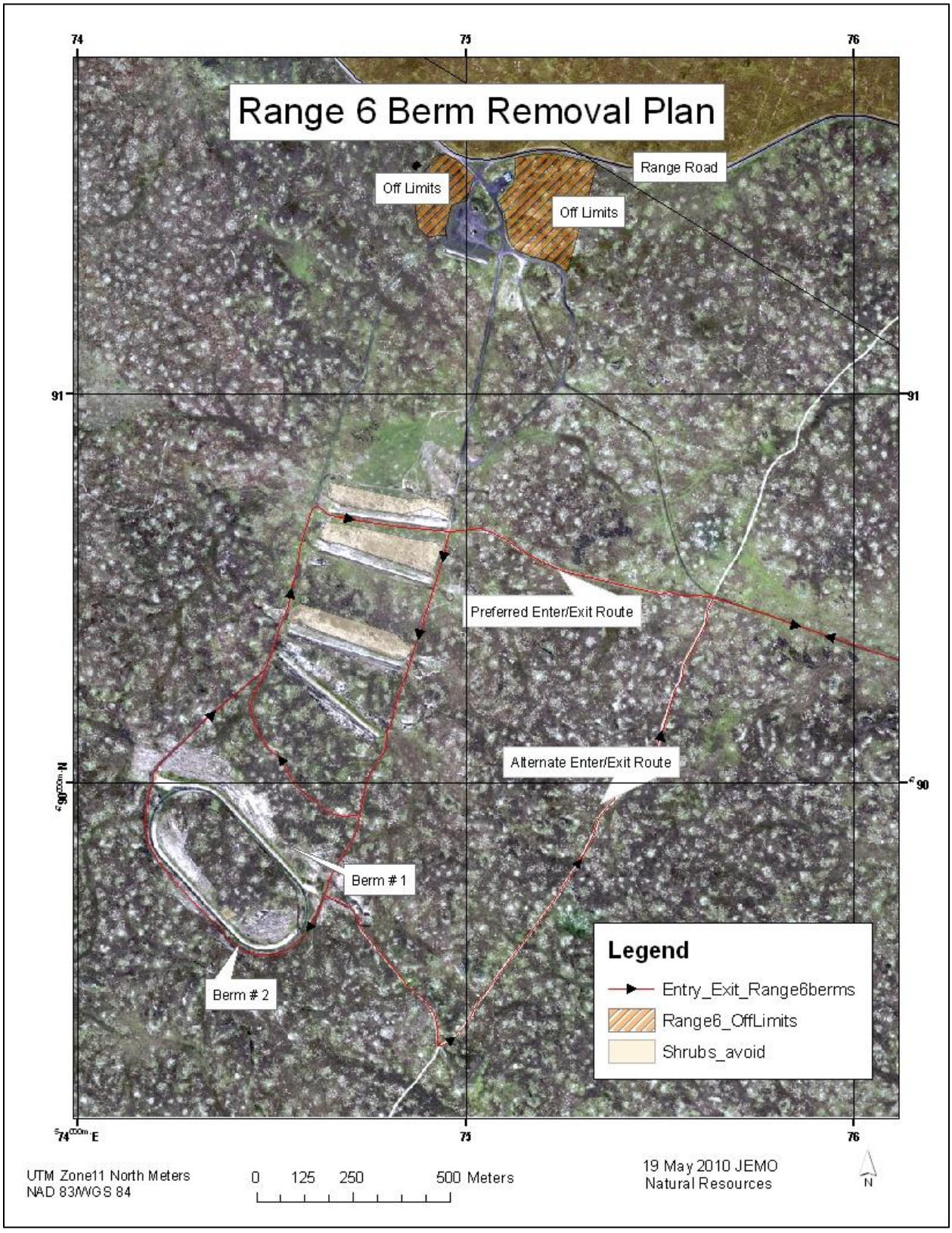
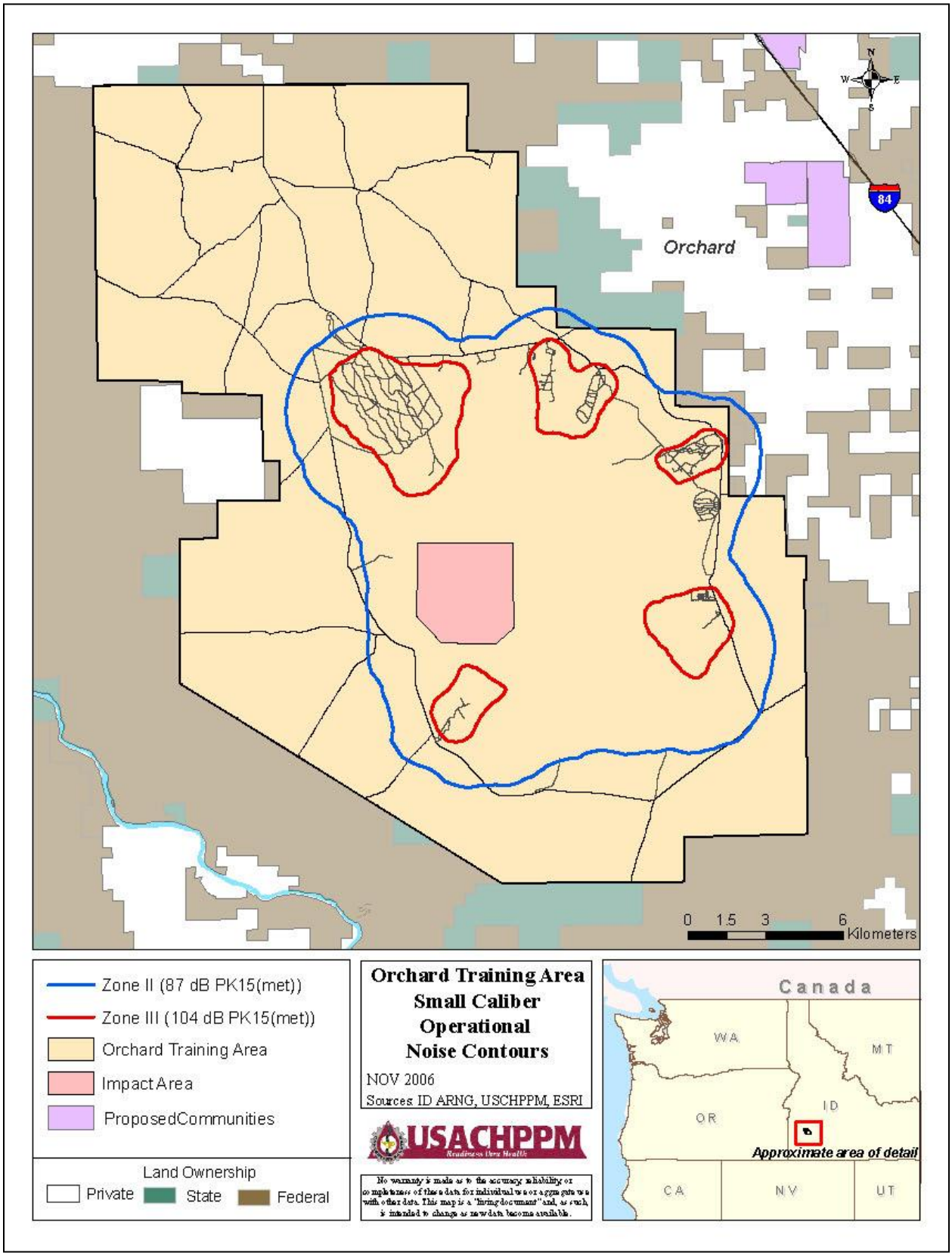


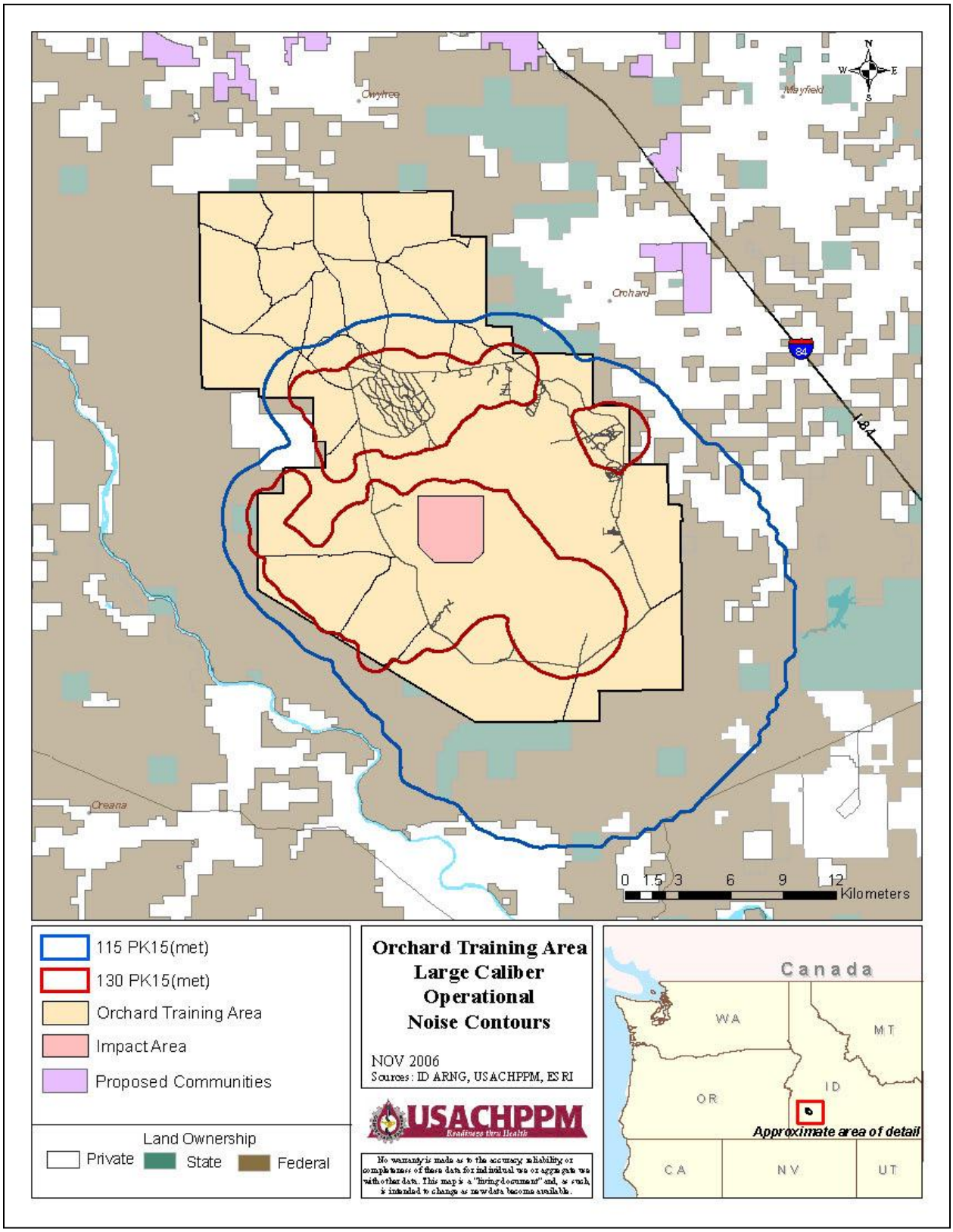
Map 1. Project Area



Map 2. Range 6 Planning and Restriction Map



Map 3. OTA Small Caliber Operational Noise Contours.



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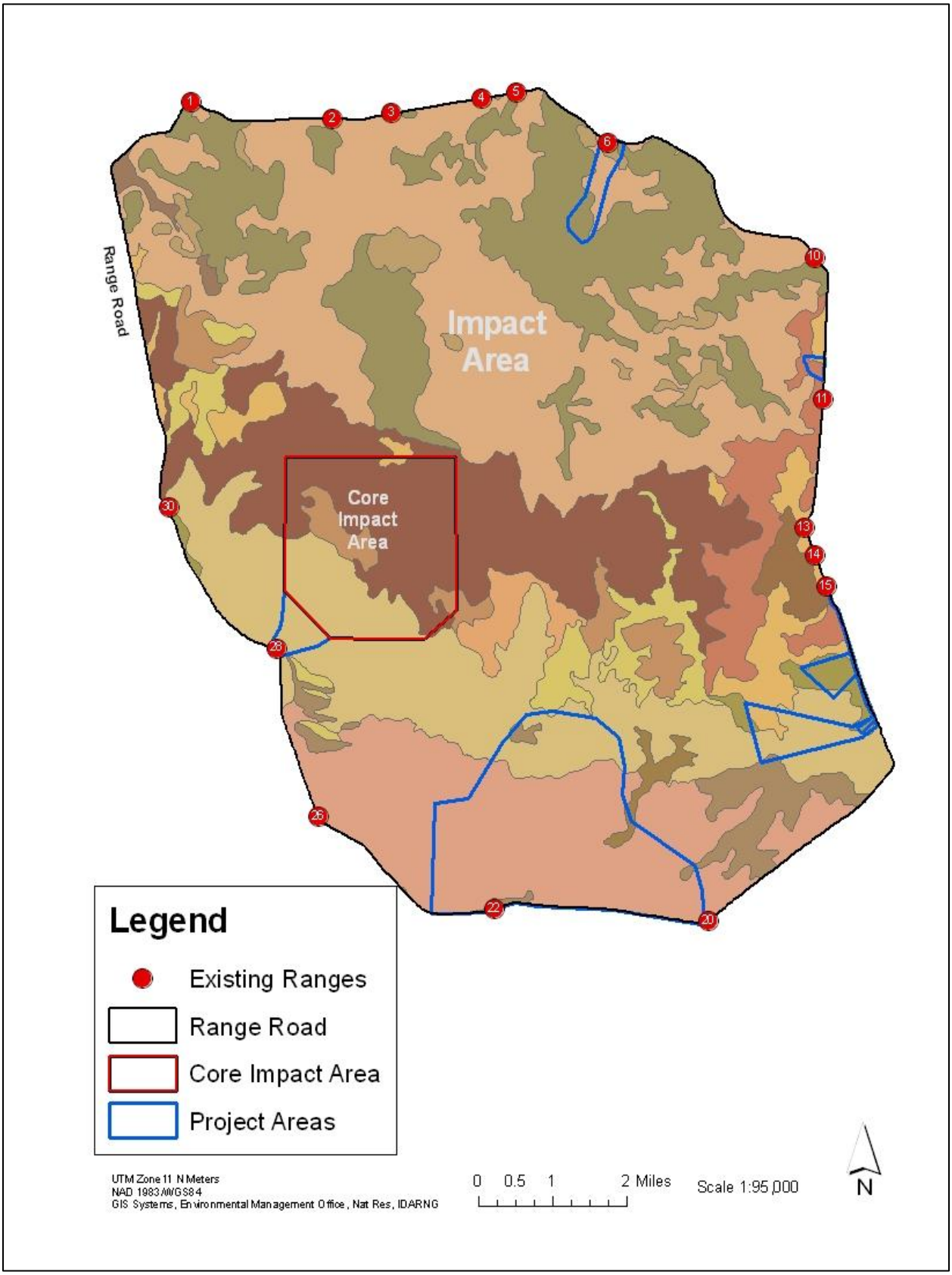
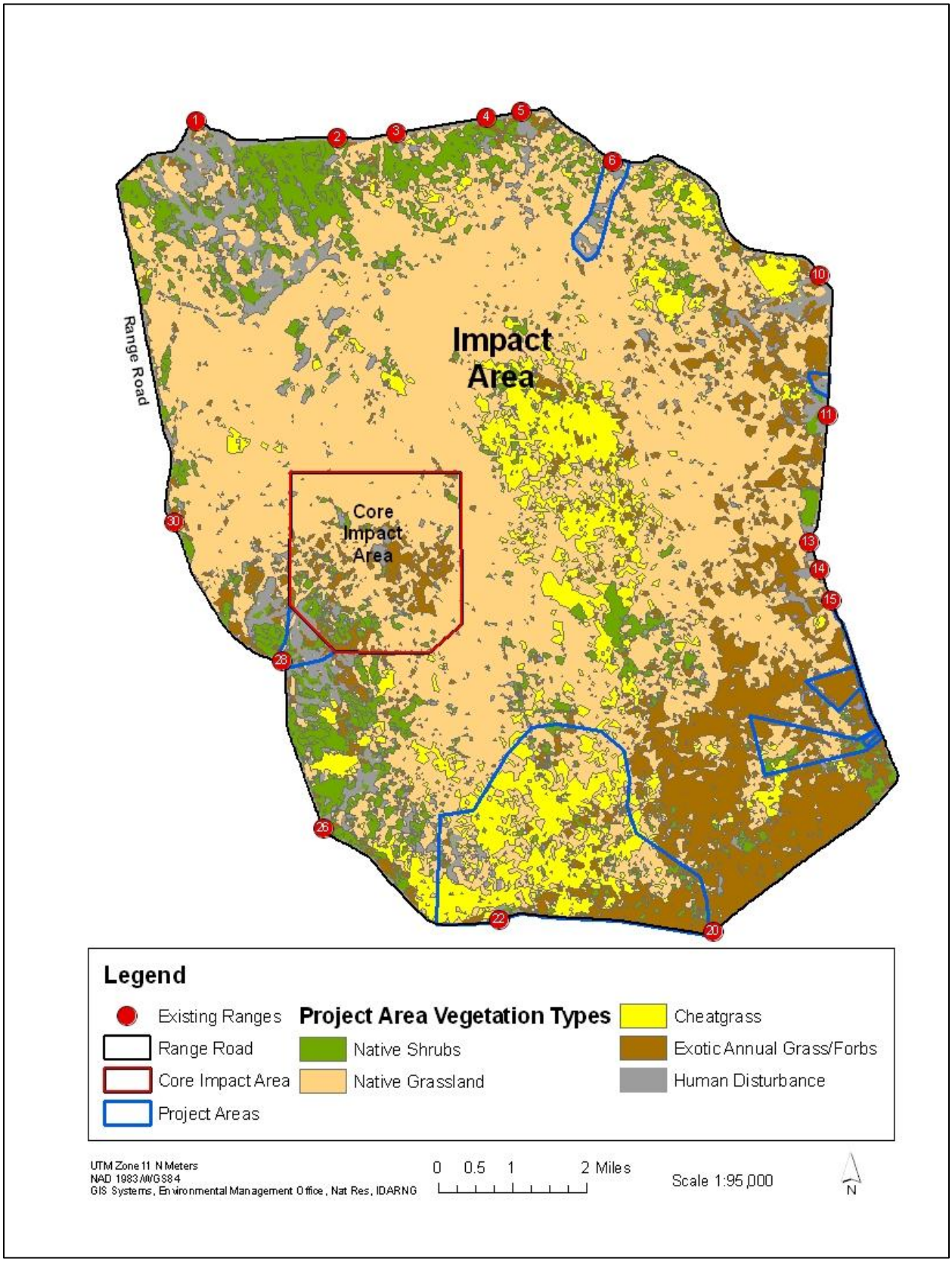
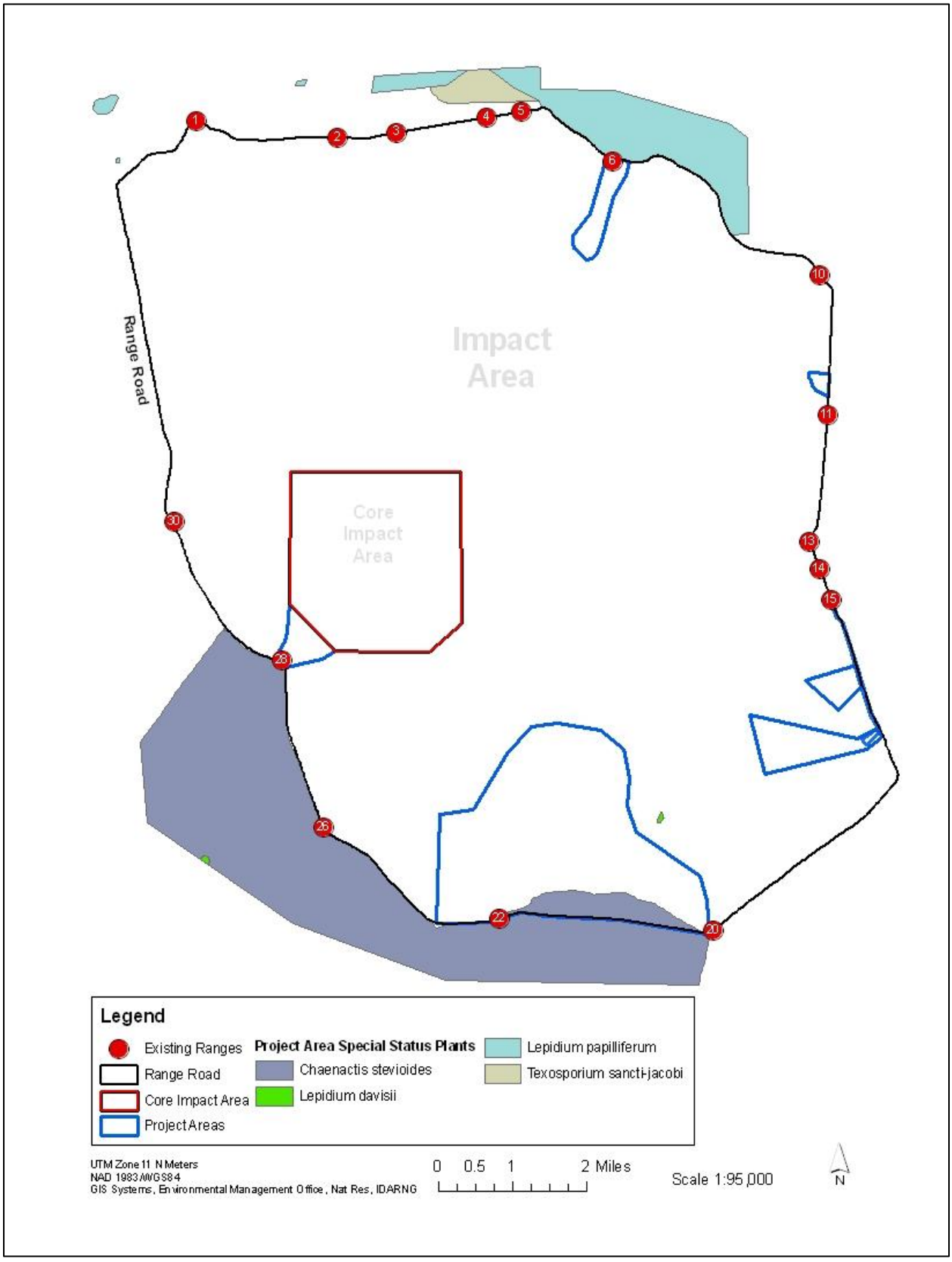


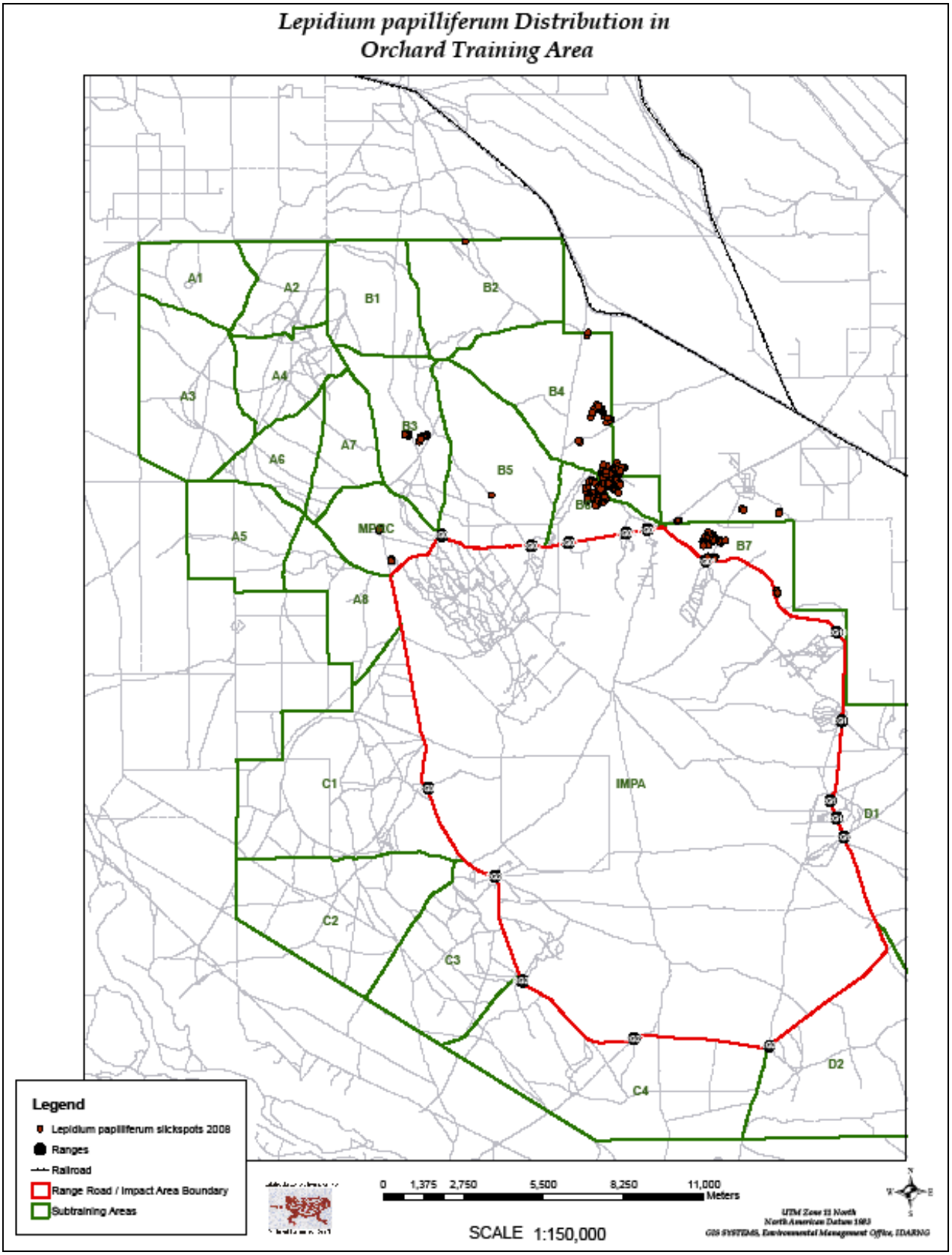
Map 5. OTA Soils Map.



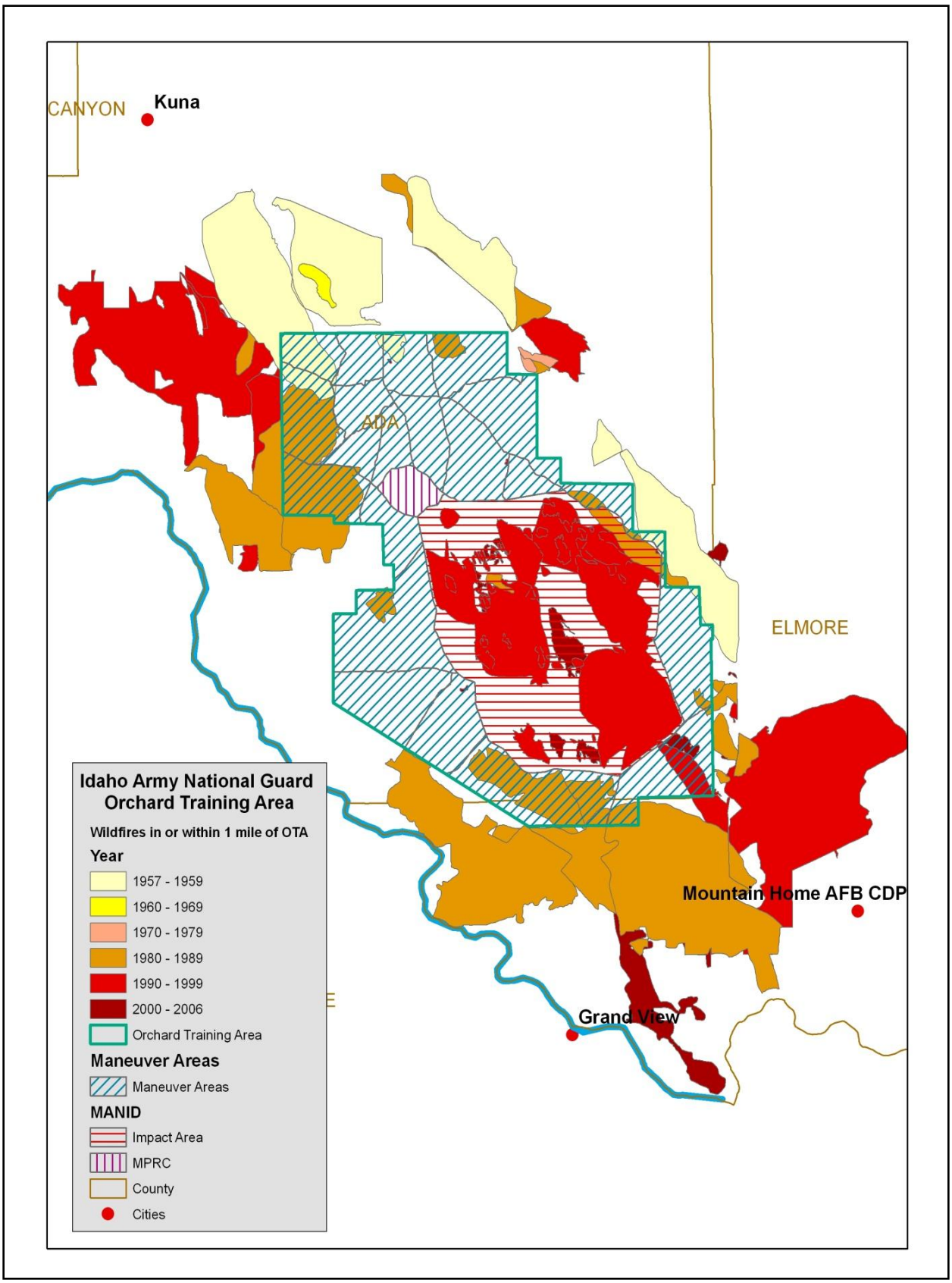
Map 6. OTA Vegetation Map.



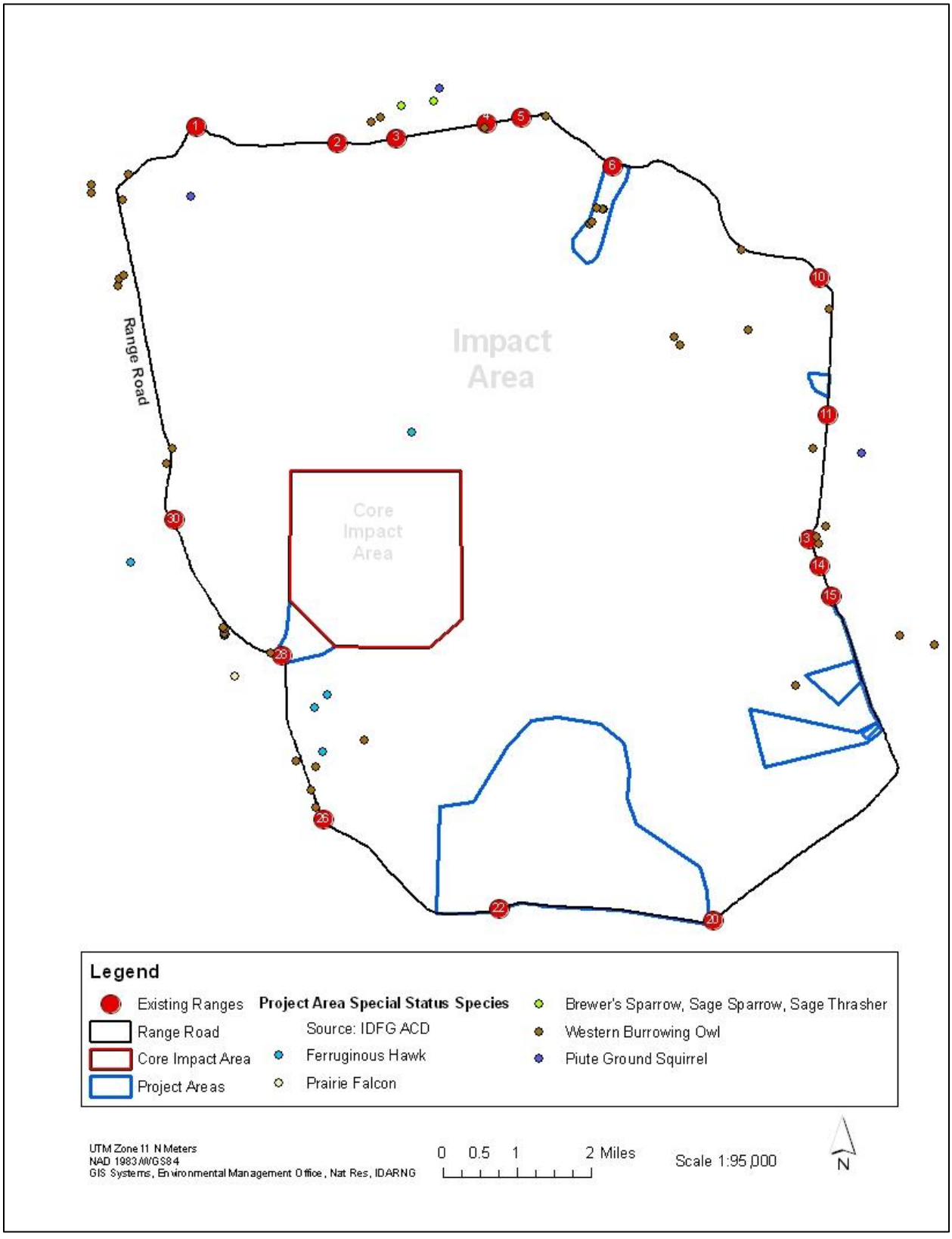
Map 7. OTA Special Status Species (Plants)



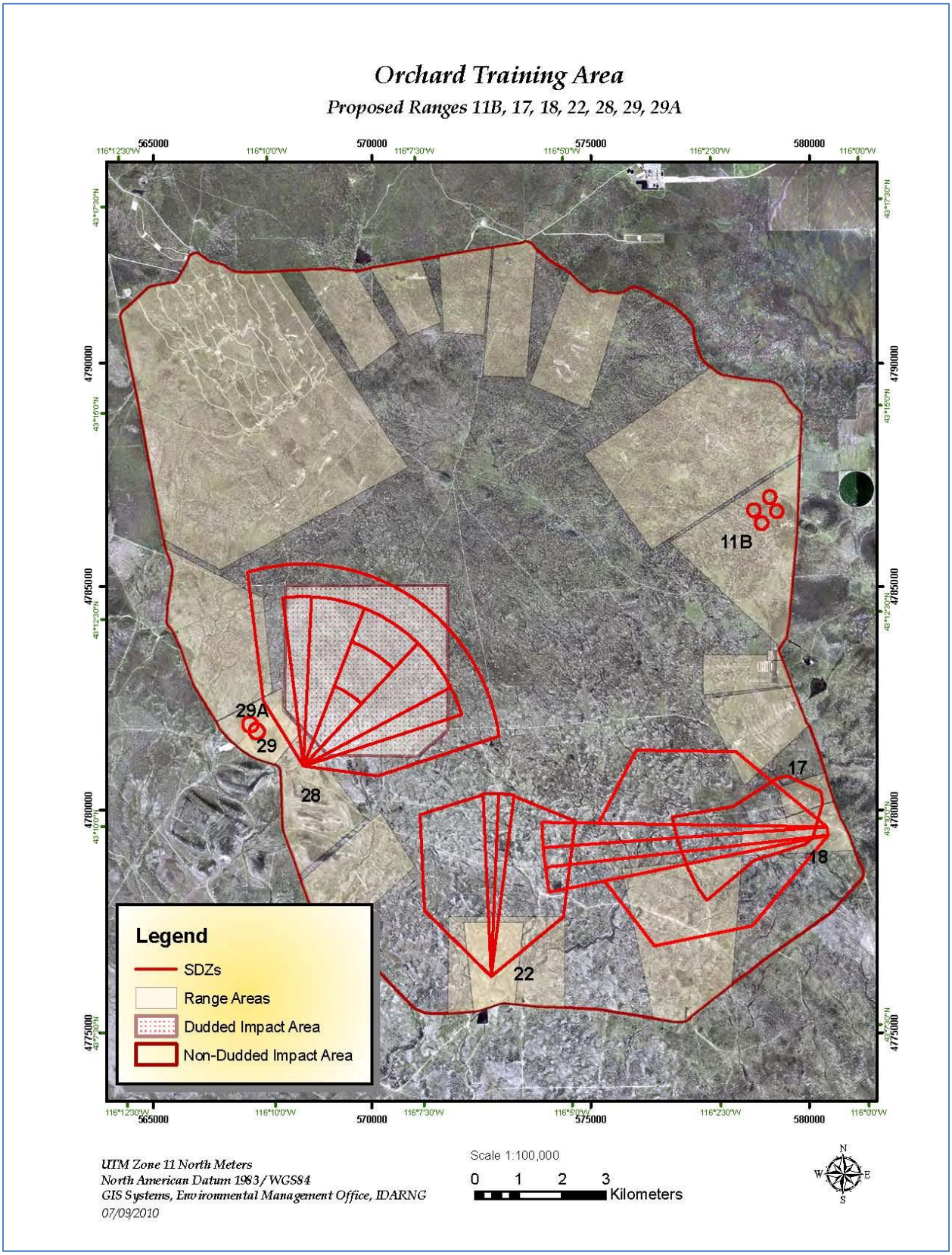
Map 8. Lepidium papilliferum Distribution in the OTA.



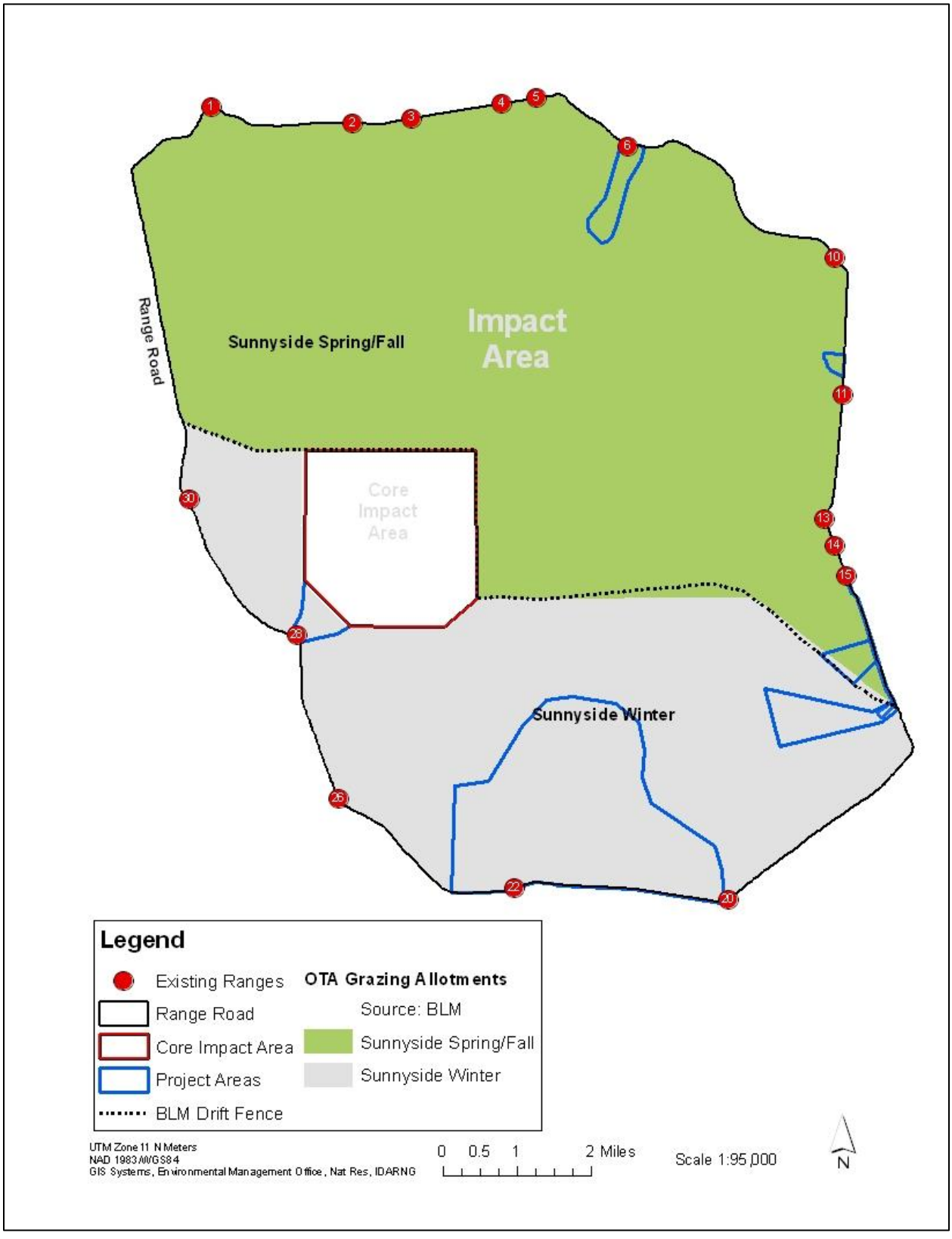
Map 9. OTA Fire Occurrences Since 1957 (BLM District Office 2007)



Map 10. Special Status Species (Wildlife)



Map 11. SDZ Map for Proposed Ranges (11b, 17, 18, 22, 28, 29, and 29a)



Map 12. OTA Livestock Grazing Allotments.

Appendix B: Expanded Project Description

The IDARNG is proposing the modernization of the Orchard Training Area (OTA) facilities and ranges located south of Boise, Idaho (Map 1). The OTA is a designated Brigade training center and mobilization site for the NG. The proposed sites would be located within the OTA Impact Area south of range 15 on the eastern side of the OTA and south of rage 30 on the western side (Map 1). In addition to the training sites, an existing buried power line would be extended from range 15 to the proposed range 18, and soil required for berm construction on range 11b would be moved from existing berms located on range 6 (Map 2).

The total project area associated with the seven proposed facilities and ranges, soil transfer, and power line extension would be approximately 5,325 acres (Table 1). This area included the proposed ranges and a large clearance buffer for planning flexibility. However, the total affected area, approximately 61 acres (one percent of the project area), associated with the proposed ranges or related construction activity would be considerably smaller (Table 2). Construction would take approximately 38 weeks and would begin in September of 2010.

The IDARNG has trained on the OTA since 1953. Between 1943 and 1948 the southern portion was used by the AAF as a practice bombing range referred to as the Swan Falls bombing Range FUDS Property No. F10ID0134. That area was cleared by USACE contractor Shaw Environmental in 2009. All range construction would be conducted in the Non-Dudded impact area. Dud producing ammunition has been restricted to the duded impact area since the early 1960s and as such would not require UXO clean-up or lead remediation actions.

Table 1. Project Area Boundaries*.

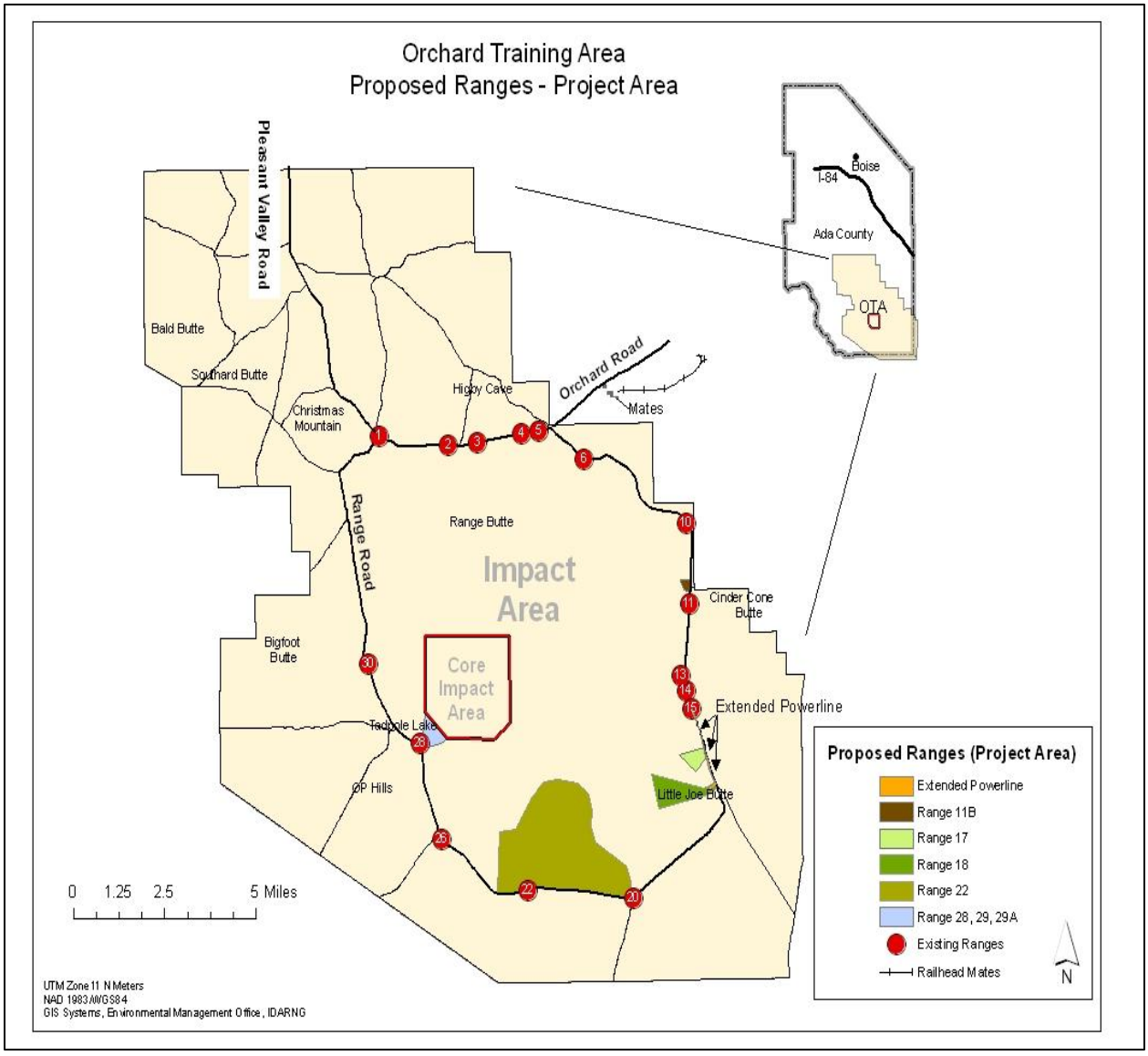
Range	6	11b	17	18	22	28 Complex*	Extended Powerline	Total
Project Area (acres)	250	40	145	440	4,200	210	40	5,325

**Range 28 Complex is Ranges 28, 29, and 29a combined.*
Note: Project areas include construction area, range, and estimated surface danger zone (SDZ).

Table 2. Range Expansion Disturbance Area (acres).

Range	6	11b	17	18	22	28 Complex*	Extended Powerline	Total
Roads	0.00	0.00	4.90	13.10	15.01	0.28	0.00	**33.29**
Pads	0.00	0.01	2.82	0.98	5.40	3.80	0.00	**13.01**
Targets/ Berms	2.20	1.31	2.68	2.63	0.00	0.43	0.00	**9.25**
Power Trenched	0.00	0.02	0.40	0.40	0.00	0.00	4.10	**4.92**
Foot Paths	0.00	0.00	0.00	0.00	0.00	0.91	0.00	**0.91**
Total	**2.20**	**1.34**	**10.80**	**17.11**	**20.41**	**5.42**	**4.10**	**61.38**

**Range 28 Complex is Ranges 28, 29, and 29a combined.*



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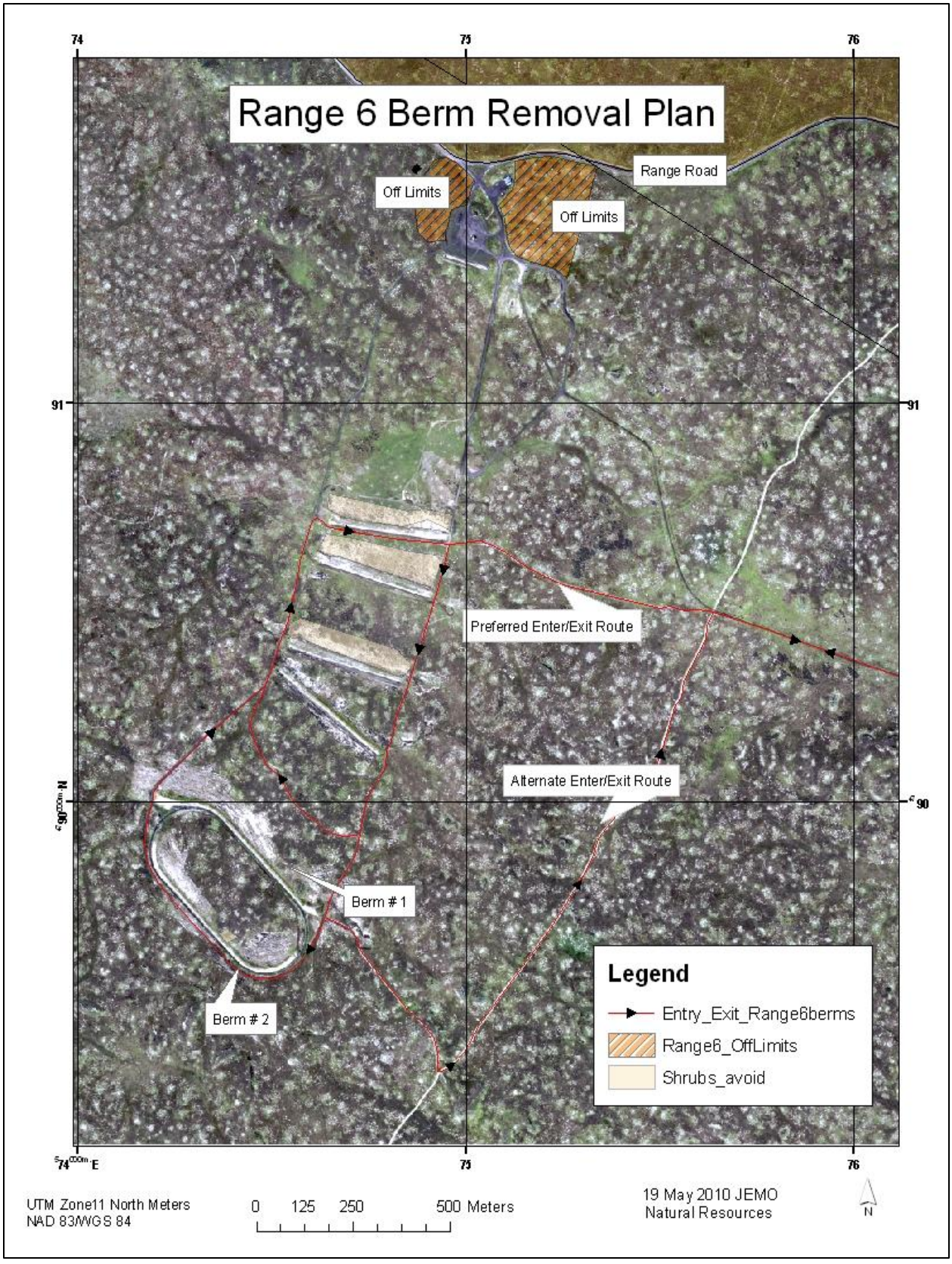


Map 2. Range 6 Planning and Restriction Map

There are a total of seven proposed facilities/ranges: 11b, 17, 18, 22, 28, 29, and 29a (Table 3). These proposed facility/ranges would modernize the existing training capability within existing training areas of the OTA Impact Area, and would serve as the primary readiness and training facilities for the IDARNG. Infrastructure associated construction activities required for the ranges would also be conducted. This includes extending the existing buried Idaho Power line from Range 15 to the proposed Range 18 and berm construction on Range 11b using materials from the southern portion of Range 6 (Map 2).

The expanded power line would be buried adjacent to the existing Range Road in order to limit ground disturbance impacts to soils and vegetation. The total linear distance of the buried line, 3 foot wide trench, is approximately 1.2 miles. The area associated with the excavation is dominated by non-native invasive grass and forbs species.

Existing berms on the southern portion of Range 6 (Map 2) would be used to construct the protective berms on Range 11b in order to limit the use of non-native soils that could result in the establishment and spread of invasive or noxious weed species. The area is generally dominated by invasive grass and forbs species with several isolated shrubs. The northern portion of Range 6 has two existing patches of shrubs with recorded slickspots. While LEPA has not been observed within these slickspots habitat is present. Habitat is also present for Wovenspore Lichen, which is an Idaho-listed species of concern.

Based on the presence of LEPA habitat and potential presence of Wovenspore Lichen, these areas have been restricted, and will be marked off during construction activity. To further protect the area, transportation of materials between Ranges would use an existing two track inside the Impact Area, which is located approximately two kilometers south of the restricted areas. Once construction activities have been completed on Range 6 and 11b the sites would be hydro seeded to stabilize soils and to establish native or desirable species in the disturbed areas.

Similar construction activities and post-construction actions would be done for all seven ranges, and site clearances were conducted for seven ranges and associated infrastructure construction sites (Attachments A-C). Table3 summarizes each range or required infrastructure, with an expanded description of each range below.

Table 3. Summary of Proposed Urban Training Facilities (UTF)/Ranges and Construction Sites.

UTF	Range No.	Description
Existing Training Range	6	Existing berms would be used for berm materials for range 11b. Disturbed areas would be graded and re-seeded with native and desirable non-native vegetation.
Powerline Extension	15-18	Expansion of existing buried Idaho Power line from range 15 to 18 (1.2 miles) in order to supply power for ranges 17 and 18.

UTF	Range No.	Description
FCC 17880-Live Fire Exercise Breach Facility	11b	This breach facility is used to train soldiers on the technical aspects of breaching doors, windows, and different types of walls using various mechanical and light explosive devices.
FCC 17893 Squad Defense Range	17	This range is used to train individuals and squads on employing mutually supporting fires from defensive positions against stationary infantry targets.
FCC 17829 Heavy Sniper	18	This range is used to train and test soldiers on the skills necessary to detect, identify, engage, and defeat stationary and moving targets in a tactical array.
FCC 17889 Engineer Qualification Range	22	This range is used to train and test soldiers on the skills necessary to employ equipment and explosives to breach or create obstacles.
FCC 17855 Field Artillery Direct Fire Range	28*	The range is used to train field artillery crews on the skills necessary to apply fire mission data, engage, and hit stationary targets in the direct fire mode.
FCC 17883 Hand Grenade Familiarization Range	29*	The range is used to train and test individual soldiers in the employment of live fragmentation hand grenades.
FCC 17882 Hand Grenade Qualification Course (Practice grenades not HE*)	29a	The Hand Grenade Qualification Course is used to train and test individual soldiers on the skills necessary to employ hand grenades against stationary target emplacements.

**HE (High-Explosive): These exercises are confined to the core impact area as they could produce duds (un-exploded ordinance). Non-HE equates to non dud-producing capability.*

Note: All facility and range specifications are identified in the TC 25-8 (Training Ranges).

Expanded Facility and Range Descriptions

FCC 17880 Live Fire Exercise Breach Facility (Proposed Range 11B)

Time of Use: The Live Fire Exercise Breach Range number 11B can be used year around, but would likely be limited to use in late spring, summer, and early fall.

Structures and Infrastructure: One vault toilet; three breach stations (see below); four berms; two on each side and one between each station 8' high 3' wide at top 50' long; a 100' x 60' gravel parking area; and a 12' x 100' gravel access road.

Breach Stations include a door breach that is 8' high and 88' wide with four sections of two doors for a total of 8 doors; a window breach that is 10' high and 88' wide in four sections with two windows per section; and a wall breach that is 8' high 28' wide designed for precast panels to fit into each of the four sections.

Weapons: This breach range will use ¼ pound and smaller explosive charges, detonation chord, and thermal devices.

Equipment: Limited to busses, trucks, and sedans in parking area, and a service vehicle (3/4 ton truck) around the three stations to repair and service the targets.

Training description: This range is used to train soldiers to enter buildings through walls, doors, windows, and roofs. The breach facility is designed to train soldiers using tasks and techniques on how to breach locked doors, windows, and create man-sized holes in walls. The facility can be used to train mechanical, ballistic, thermal, and explosive breaching (Figure 1: Map 3).

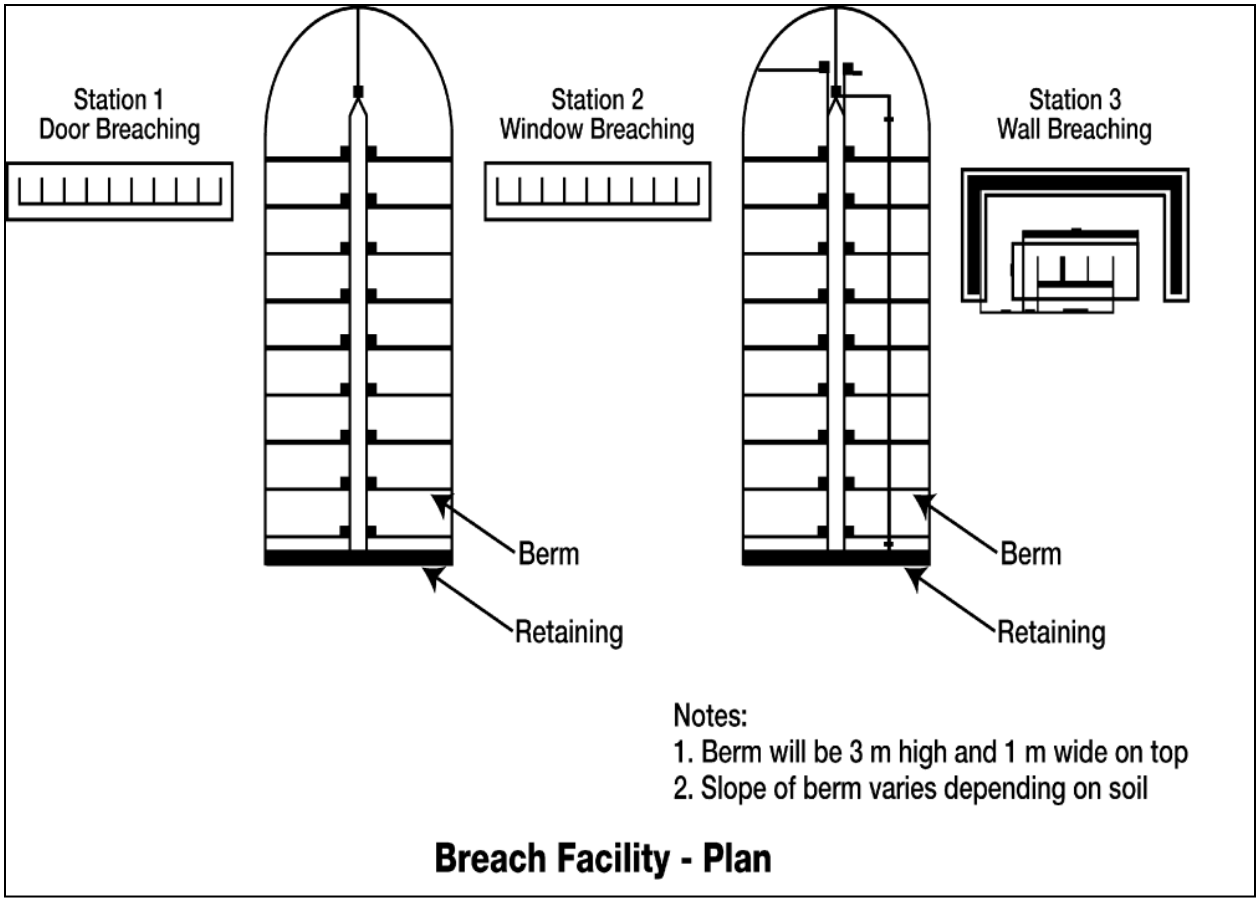
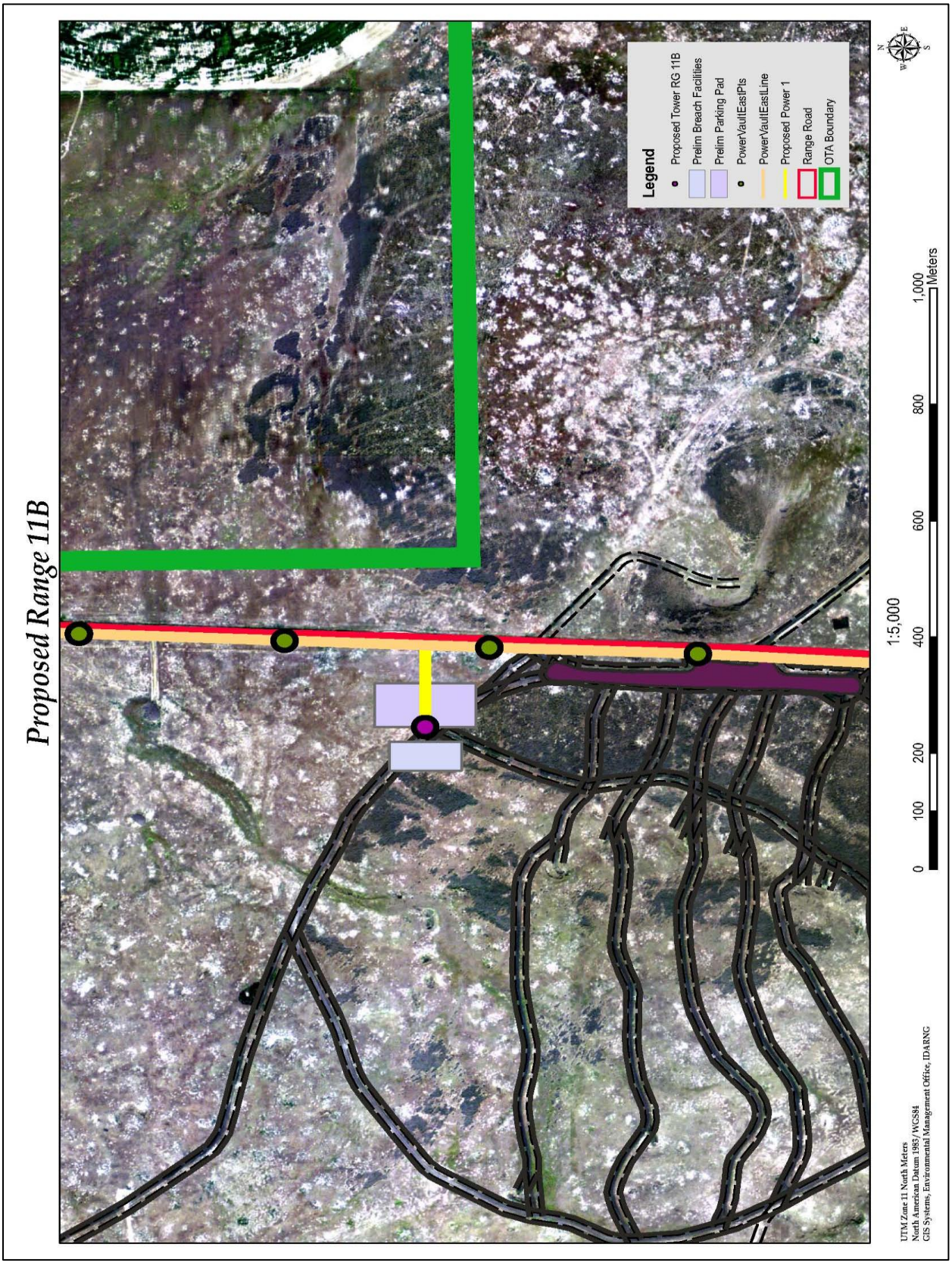


Figure 1. FCC 17880-Live Fire Exercise Breach Facility (Proposed Range 11b)



Map 3. Proposed Site Layout for Range 11b.

FCC 17893 Squad Defense (Proposed Range 17)

Time of Use: The Squad Defense Range number 17 can be used year around day and night, but would likely be limited to daytime training only during late spring, summer, and early fall.

Structures and Infrastructure: one 8' x 8' x 10' tall range tower/operations center on a 10'x10' concrete pad, one vault toilet, five two man above terrain fighting positions/foxholes (concrete 3 sided structures 5'H x 3'W x 3'D with dirt berm to front and sides) 75 ' (ft) apart, 31 stationary pop up infantry targets (plastic silhouette targets on mechanical lifting device in concrete 3 sided structures 3'H x 6'W x 3'D with dirt berm to front and sides) at 27, 150, 300, 600 and 900 ' from the fighting positions, a 100' x 60' gravel parking area, a 12' x 100' gravel access road, 3,000' x 12' gravel perimeter maintenance road and 5000' of underground conduit with power and data cabling in 3' wide trench.

Weapons: Weapons on this range will include 5.56 mm rifles, 7.62 mm light machine gun and 40mm grenade launcher. Ammunition will be full Metal Jacket ball and ball tracer and 40mm practice grenade (non-explosive) with the maximum range of the heaviest weapon (7.62) being 3 miles.

Equipment: Limited to busses, trucks, and sedans in parking area and 3/4T service vehicles beyond the firing line.

Training description: This range is used to train individuals and squads on employing mutually supporting fires from defensive positions against stationary infantry targets. Each defensive position will have a right and a left sector of fire. Within each there will be five targets on either side of the position, which will be staggered at a distance of 75', 150', 300', 600', and 900', measured from the firing position (Figure 2: Map 4).

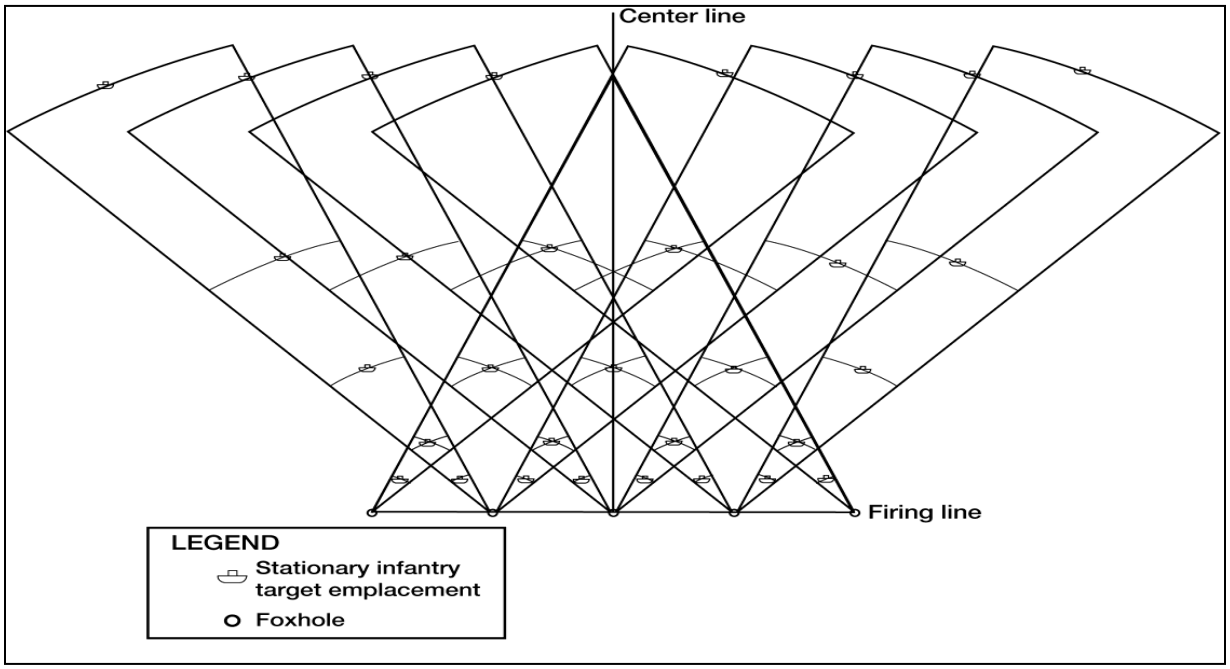


Figure 2. FCC 17893 Squad Defense Range (Proposed Range 17)

FCC 17829 Heavy Sniper (Proposed Range 18)

Time of Use: The Heavy Sniper Range number 18 can be used year around day and night, but would likely be limited to daytime training only during late spring, summer, and early fall.

Structures and Infrastructure: one 8' x 8' x 10' tall range tower/operations center on a 10'x10' concrete pad, one 150' self supporting communication tower, one 8' x 12' x 10' concrete communication structure, one vault toilet, a 100' x 60' gravel parking area, a 12' x 2000' gravel access road, 3,000' x 12' gravel maintenance road and 5000' of underground conduit with power and data cabling in 3' wide trench, 3 stationary infantry targets, 14 stationary armor targets, seventeen 3 sided 6'W x 3H' x 3D'concrete target pits bermed with soil on front and sides, 2 moving armor targets with 600' of track and 6' high berm, 10 stationary steel targets (iron maidens) .

Weapons: Weapons on this range will include 7.62 mm and 50 calibers. Ammunition will be full Metal Jacket ball and ball tracer with the maximum range of the heaviest weapon (.50 cal) being 3 miles.

Equipment: Limited to busses, trucks, and sedans in parking area and 3/4T service vehicles beyond the firing line.

Training description: This range is used to train and test soldiers on the skills necessary to detect, identify, engage, and defeat stationary infantry targets along with stationary and moving vehicular targets in a tactical array out to 3 miles. This range satisfies the training and qualification requirements of the long range sniper rifle. All targets (excluding iron maidens) are fully automated and the event specific target scenario is computer driven and scored. Natural vegetation is required in the target area to provide realistic natural obstacles for the sniper to negotiate (Figure 3: Map 4).

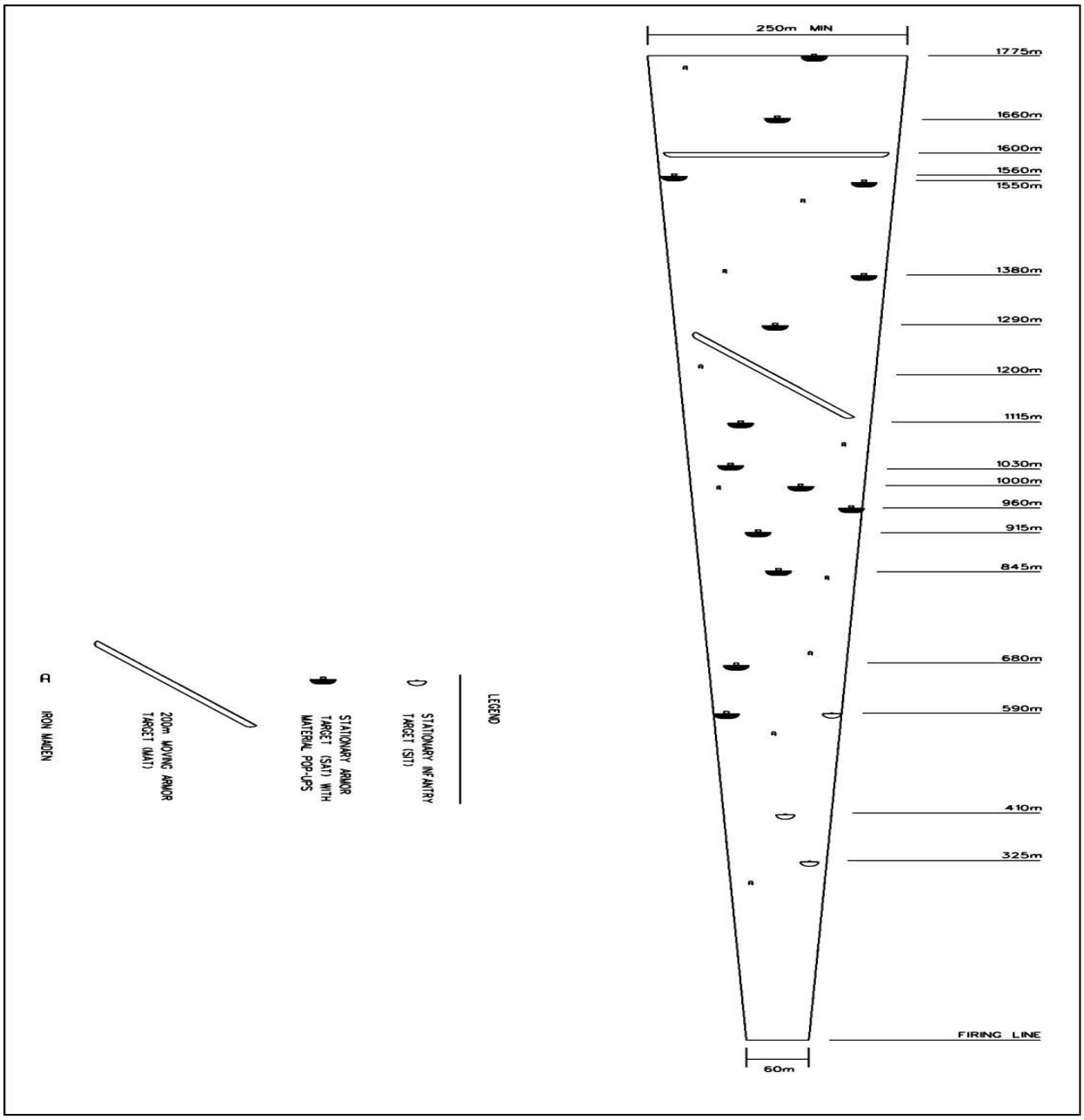
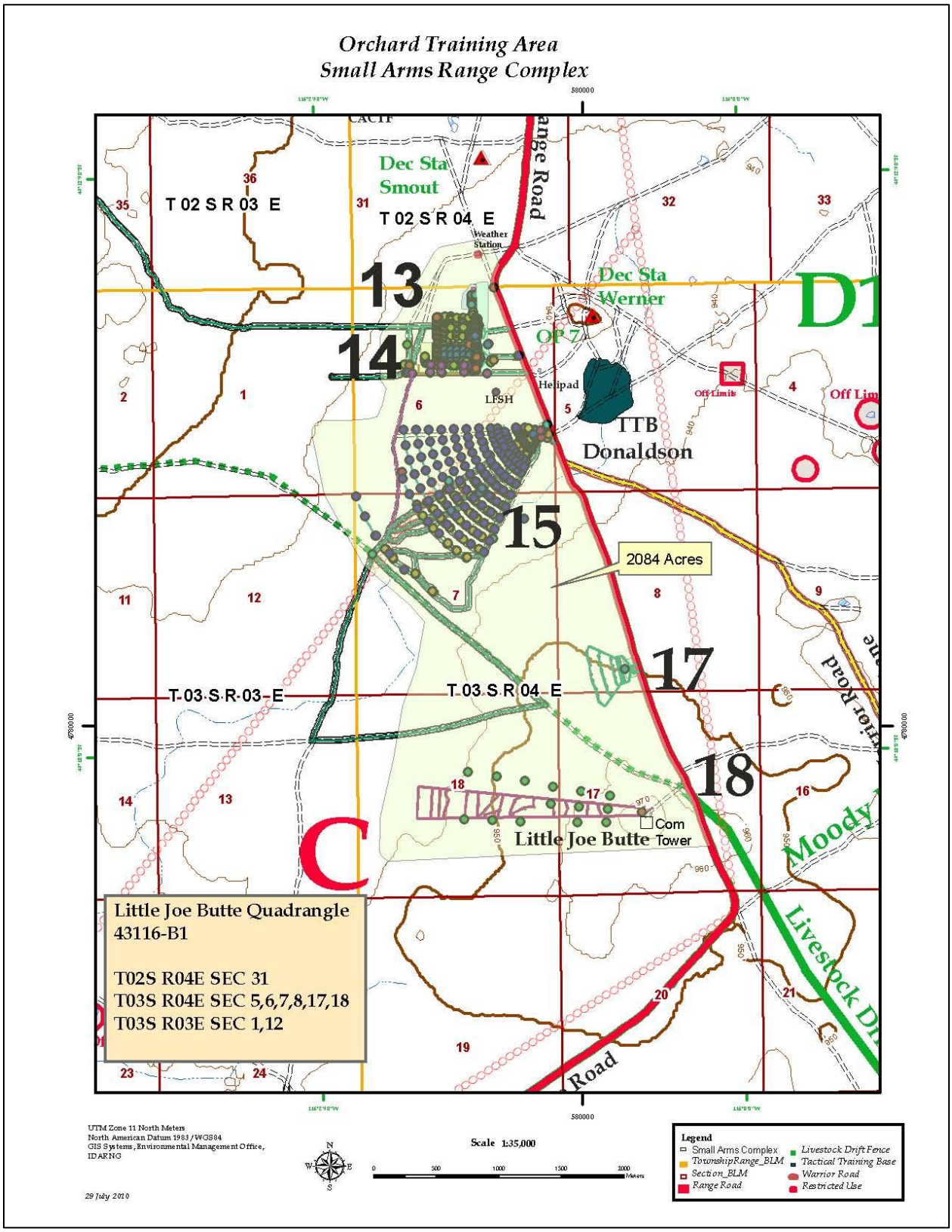


Figure 3. FCC 17829 Heavy Sniper Range (Proposed Range 18)



Map 4. Proposed Site Layout for Ranges 17 and 18.

FCC 17889 Range 22 the Engineer Qualification Range (Proposed Range 22)

Time of Use: The Engineer Qualification Course range 22 can be used year around day or night, but would likely be limited to daytime training only during late spring, summer, and early fall.

Structure and Infrastructure: Improving approximately 1.75 miles of existing two track road and constructing approximately 2 miles of new road to 12' wide all weather gravel standards. Construct an ammunition holding area consisting of a 30' x 30' concrete floor metal prefab building. Construct 4 demolition training sites for timber, steel, concrete, and bridge cutting. Sites are generally 100' in diameter with 8 concrete base supports 18" diameter 2' high at varying distances apart to place cutting materials on. Also contain safety berms on each side of demolition points and may include missile proof observation shelters. One Vault Toilet at pre-existing Tactical Training Base (TTB) Brumpton vicinity of range 22 range flag. One mobility, counter mobility lane approximately 300' wide and 1500' long to conduct tank ditch digging and breaching training, wire emplacement and destruction training with both mechanical and explosive means.

Weapons: Various types of explosives and demolition charges, detonation chord and electric and non electric primers.

Equipment: Busses, trucks, HMMWVs, and 113 series tracked vehicles primarily on the established roads and off trail in vicinity of training sites.

Training description: This range is used to train and test soldiers on the skills necessary to employ explosives and demolition devices in the most efficient manner to breach, cut, displace or destroy various types of material in varied settings (Figure 4: Map 5).

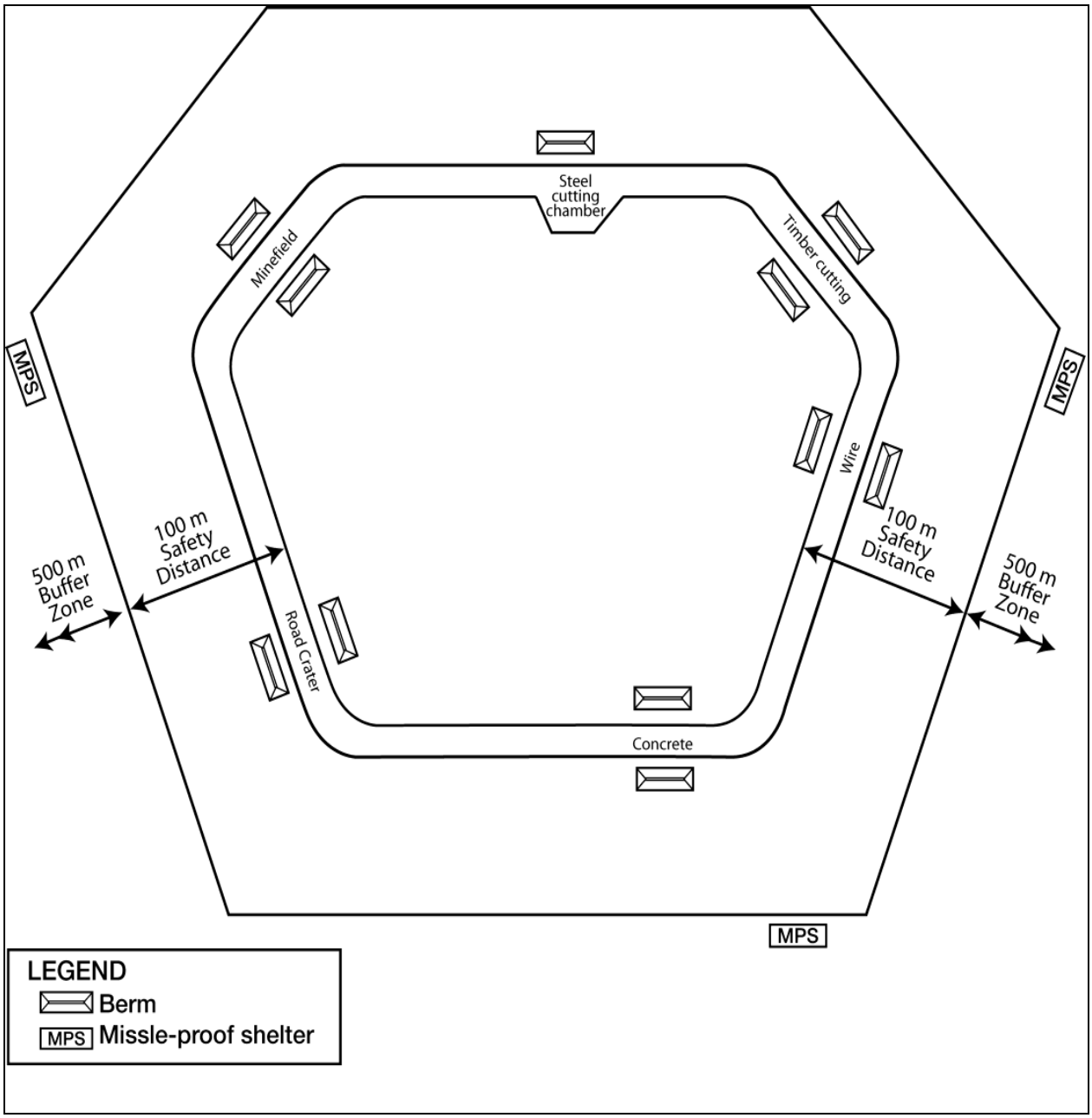
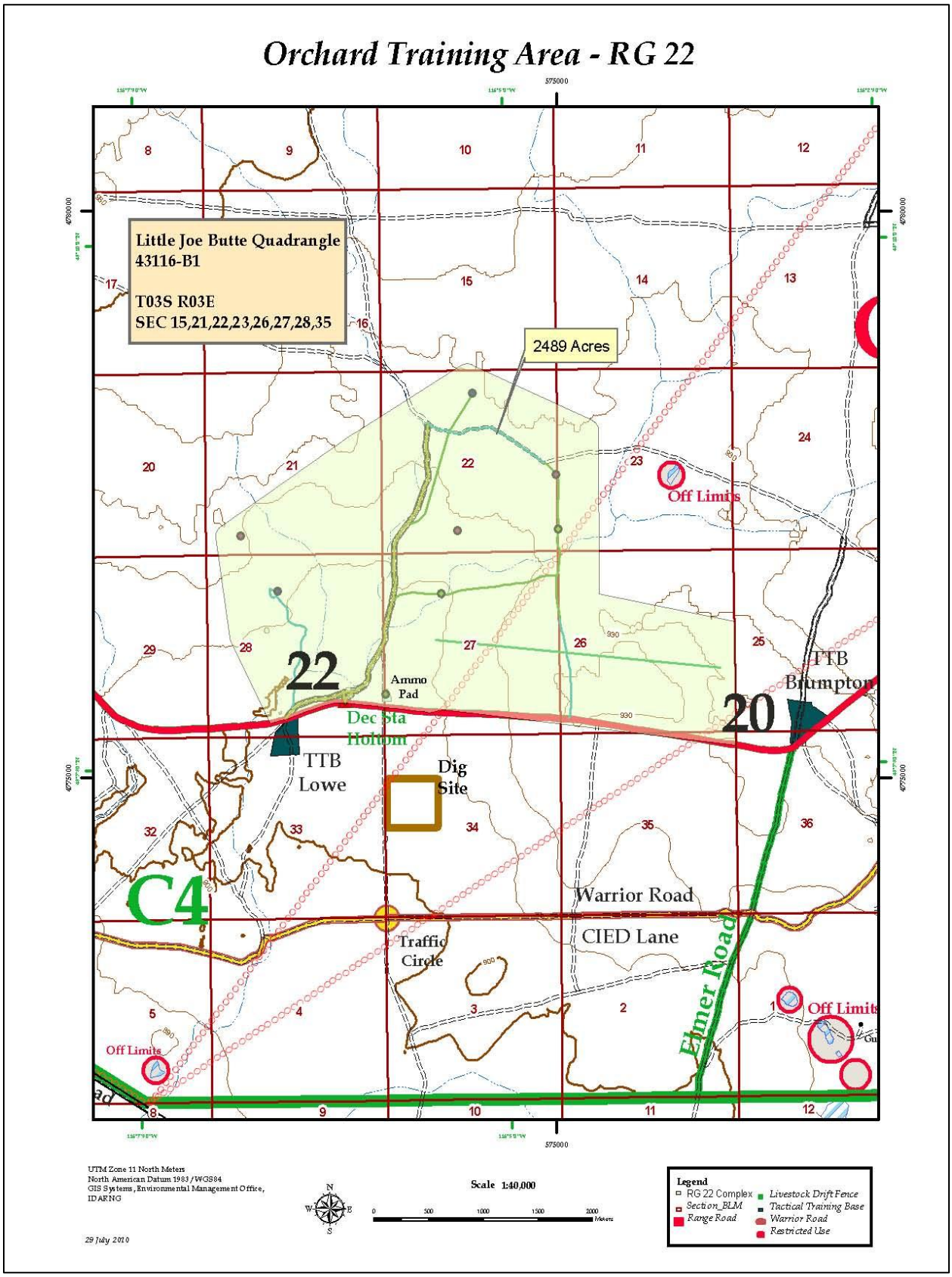


Figure 4. FCC 17889 Engineer Qualification Range (Proposed Range 22)



Map 5. Proposed Site Layout for Range 22.

Range 28 Complex (Proposed Ranges 28, 29, and 29a)

Ranges 28, 29, and 29a are Joint Use Facilities with one 8'D x 8'W x 10'H range tower/operations center on a 10' x 10' concrete pad, one vault toilet, one portable 8'D x 20' W x 10'H Blast Resistant Mobile Viewing Conex , one mile of 13' wide access gravel road, and one gravel parking pad 225' x 450'. Training includes both high-explosive (HE), meaning dud-producing possibility, and non high-explosive (Non-HE) training. All HE training is restricted to the core impact area.

FCC 17855 Field Artillery Direct Fire Range (Proposed Range 28)

Time of Use: The Field Artillery Direct Fire Range can be used year around day and night, but would likely be limited to daytime training only during late spring, summer, and early fall.

Structure and Infrastructure: one 225' X 450' gravel firing pad. One 12' X 30' gravel Blast Resistant Mobile Viewing Conex pad.

Weapons: 155mm self propelled artillery, 5.56 mm rifle, 7.62 mm machine gun, and 50 cal machine gun.

Equipment: Tracked M-106 self propelled howitzers, tracked ammunition transporters, heavy trucks (PLS & HEMMT), medium trucks (FMTV), light trucks (LMTV) and HMMWVs.

Training Description: The Field Artillery Direct Fire range is used to train field artillery crews on the skills necessary to apply fire mission data, engage, and hit stationary targets in the direct fire mode, i.e. lowering the barrels from normal high angle shooting to a flat "direct: shot similar to a tank. Machine gun and individual weapons may be incorporated into live fire training events. The use of explosives artillery rounds in this training dictates the firing positions must be in close proximity to the boundary of the artillery range (Figure 5: Map 6).

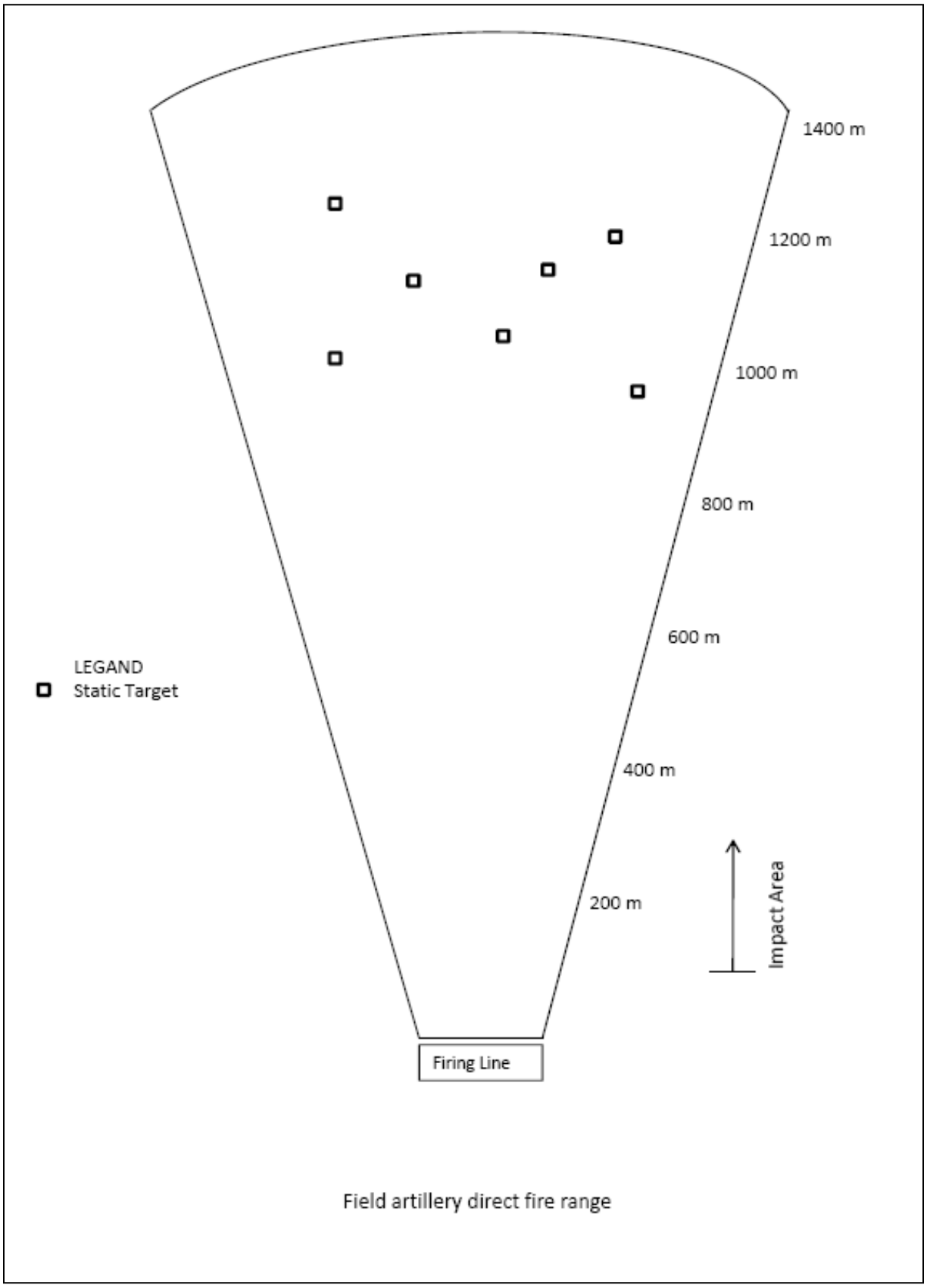


Figure 5. FCC 17855 Field Artillery Direct Fire Range (Proposed Range 28)

FCC 17883 Hand Grenade Familiarization Range (Proposed Range 19)

Time of Use: The Hand Grenade Familiarization Range can be used year around day and night, but would likely be limited to daytime training only during late spring, summer, and early fall.

Structure and infrastructure: One 12' x 30' gravel Blast Resistant Mobile Viewing Conex pad, four (4) three sided above ground concrete throwing pits 6.5'W x 5'D x 5'H separated by three dirt berms 6'H x 100'.

Weapons: Fragmentation Grenades

Equipment: HMMWVs, light trucks and busses to transport participants to site.

Training Description: The Hand Grenade Familiarization range is used to train and test individual soldiers in the employment of live fragmentation hand grenades from a fixed throwing pit, into the high explosive impact area at a fixed target (Figure 6: Map 6).

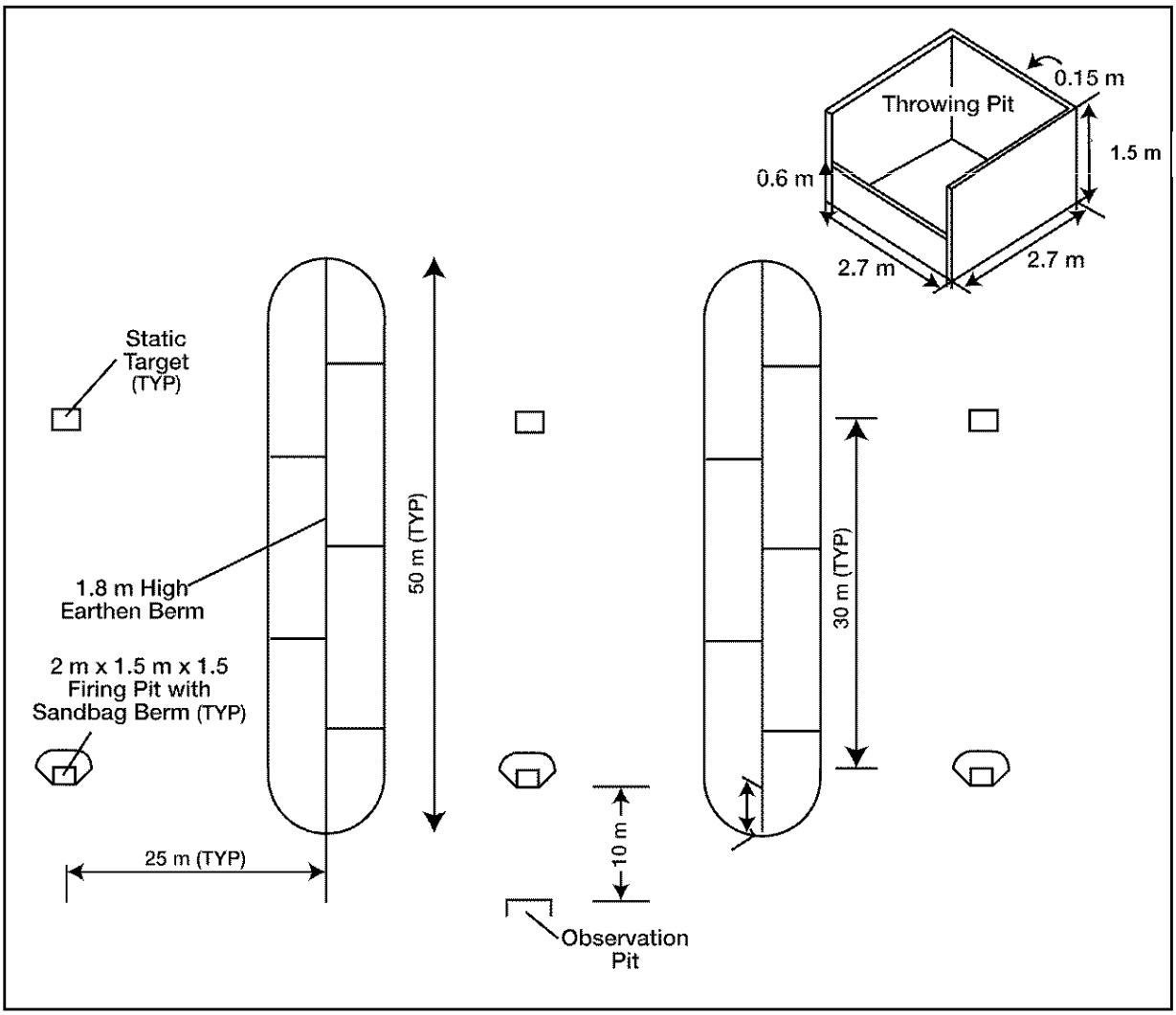


Figure 6. FCC 17883 Hand Grenade Familiarization Range (Proposed Range 29)

FCC 17882 Hand Grenade Qualification Range (Proposed Range 19a)

Time of Use: The Hand Grenade Qualification Range can be used year around day and night, but would likely be limited to daytime training only during late spring, summer, and early fall.

Structure and infrastructure: Silhouette targets, simulated bunker, sandbag fighting position 6' diameter X 3' high, logs to hide behind, shallow trench 2'W x 3'D x 8' L, 2 man foxhole 4' diameter x 4' deep, simulated plywood vehicle.

Weapons: Practice grenades with a charge similar to a small fire cracker.

Equipment: HMMWVs, light trucks and busses to transport participants to site.

Training Description: The Hand Grenade Qualification Course is used to train and test individual soldiers on the skills necessary to employ hand grenades against stationary target emplacements. The qualification course consists of seven stations requiring the soldier to use a practice hand grenade to engage targets in natural terrain in simulated combat conditions (Figure 7: Map 6).

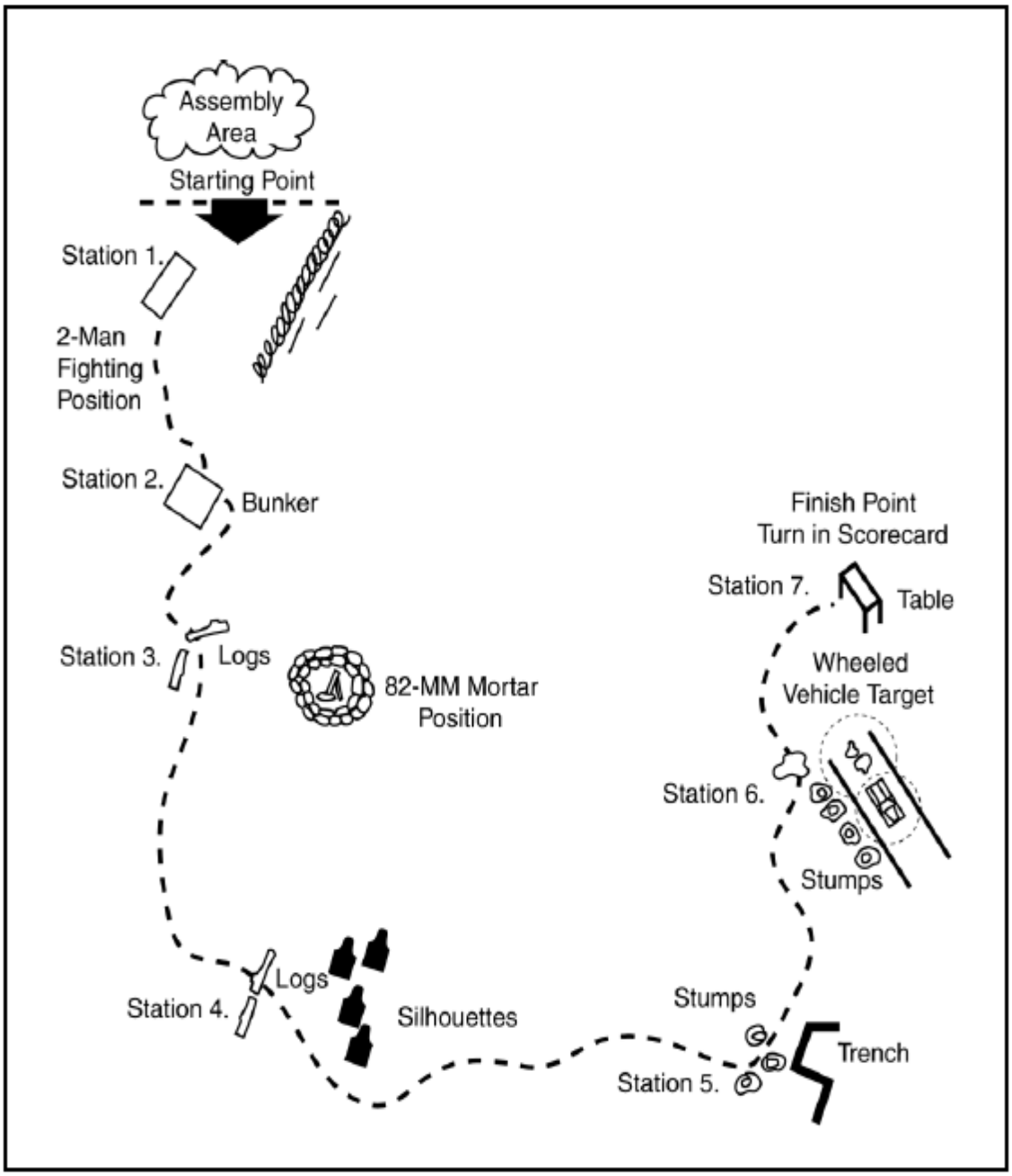
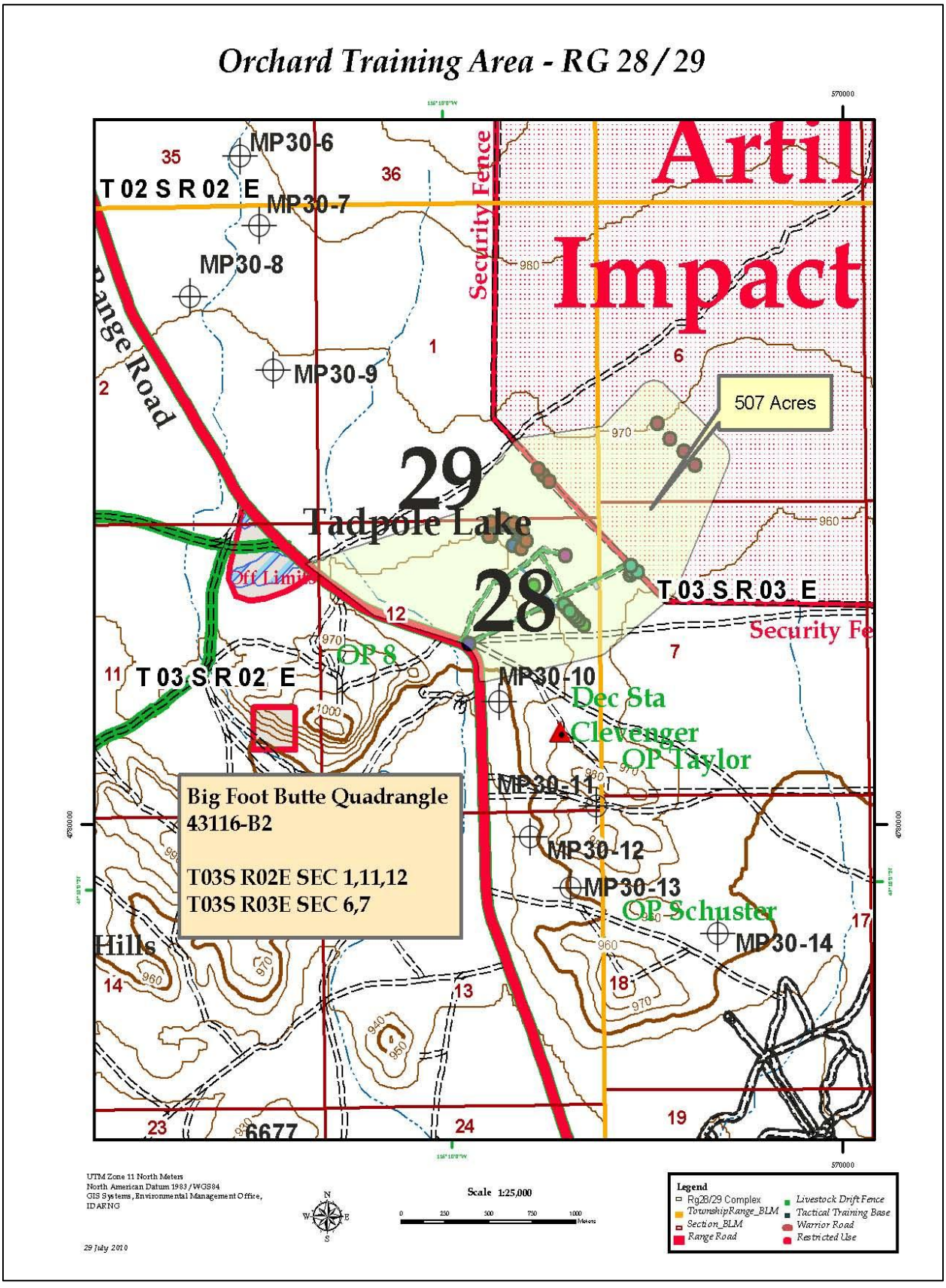


Figure D-27. Hand grenade qualification course

Figure 7. FCC 17882 Hand Grenade Qualification Course (Proposed Range 29a)



Map 7. Proposed Site Layout for Range 28 Complex.

Attachment A-Cultural Clearances

Cultural Summary/Clearance Report by Range

Conducted by: Jake Fruhlinger and Staff

Date(s): 24 March 2010 through 5 June 2010

Methods:
A minimum of two qualified archaeologists conducted reconnaissance-level pedestrian archaeological surveys on each of the project areas. The surveys use 30 meter (m) transects, 30m between observes, to cover the entire project area. All observations were documented, photographed and recorded with a Global Positioning System (GPS).

Results:

Range/Site	Survey Date	Description
6	3/24/2010	No cultural materials were found, nor were there any previously recorded sites within the proposed area of potential effect (APE).
Powerline Extension	3/24/2010	A single new prehistoric-site was recorded near the proposed project area but well out of the APE.
11b	3/24/2010	No cultural materials were found, nor were there any previously recorded sites within the proposed APE.
17	5/4/2010	No cultural materials were found, nor were there any previously recorded sites within the proposed APE. However, two pre-historic sites were located within one mile of the APE.
18	5/5/2010 5/6/2010	A single new historic site was recorded. Portions of historic Dorsey Road are also present within the survey buffer area but outside of the proposed area of Range 18 construction.
22	5/24/2010 to 6/5/2010	No new cultural properties were noted on this particular survey. There is however, one historic road that runs through the APE known as the historic Boise to Grandview road. This portion of the road, however, has been used for a few decades as a fire break and military transport road and therefore has been suggested as ineligible for the National Register of Historic Places.
28, 29, and 29a	3/8/2010	A single new historic site was recorded. In addition to this, a segment of the Snake River Road lies within the surveyed area but is located approximately .5 miles north of the proposed areas of construction for Range 28, 29, and 29a and would not be affected by the proposed project. This section of road has been deemed potentially eligible from a previous project and report. The IDARNG Cultural Resources Manager concurs with the potential eligibility of this site.

Attachment B-Botanical Clearances

Vegetation Summary/Clearance Report by Range

Clearances Conducted by: James Weaver

Date(s):

Methods:

Pre-field Investigation

The IDARNG coordinated with the BLM, IDFG, and USFWS for a list of potential occurrences or habitat of Idaho-listed species of conservation concern and federally listed Threatened, Endangered, and Candidate species for the proposed project area. No recorded populations of special status species exist within the area of impact associated with construction activity.

Field investigation

Surveys were conducted by IDARNG JEMO staff for species listed in the 2008 IDARNG's Integrated Resource Management Plan, the IDFG's 2010 CDC data and the BLM's 2008 NCA RMP and special status species reference (Atwood and DeBolt 2004). IDARNG biologist conducted a comprehensive survey at each identified project area, including a 100 meter buffer around the proposed project area. Staff biologists used an intuitive survey method to look for individuals within the impact area.

This method uses meander transects (a survey line) determined by the surveyor while in the field based on site conditions and their experience and judgment. The location of each transect was also influenced by the terrain and quality of potential habitat for each species identified. Potential habitats were surveyed at a finer scale than surrounding areas that did not have associated habitat characteristics. Any identification of individuals or evidence of presence would be recorded by a Global Positioning System (GPS), photos taken, and recorded in field notes. Surveyors kept a list of dominant plant species encountered and made informal collections of unknown species for identification in the laboratory. Notes were also taken regarding plant associations, noxious weeds, and land use patterns. Vascular Plants of the Pacific Northwest (Hitchcock et al. 1964) and Flora of the Pacific Northwest (Hitchcock and Cronquist 1973) were used as the authorities for vascular plant species identification.

Results:

Range 11B: Vegetation is made up of approximately 3-4% native grasses and forbs and over 90% of the site has been disturbed at one time (wildland fire) and is dominated by exotic annuals. 10-15 ARTR plants NO species of concern on site Texosporium nearby

Range 17: Walked the entire marked area and buffered a couple hundred meters. Native grass and forbs make up less than 3% of the vegetation on the site. Exotic annuals, mainly mustards and RATE, make up the majority of site. Saw no species of concern.

Range 18: Walked around the top of Little Joe Butte, the top dominated by exotic annuals with some

patches of native grass and some forbs mostly Globe mallow. About 30% native 70% exotic. Going down range you have about the same overall mix but do have some patches of good grass mixed in. Also patches of BRTE. Native forbs persist in some rocky outcrops and in draw bottoms. But still dominated by exotic annuals. No shrubs found. Chaenactis steviodes is present in good years did not see any this time.

Range 22: Is a little more diverse with the northern section dominated with Sandbergs Bluegrass with exotic annuals still making a large component. Some areas also have patches of Bud Sage and some small patches of winterfat. Native forbs still persist in the rocky areas of draws and hills. The bottom of most draws is dominated by BRTE. The southern section has much less native grass and is dominated by exotic annuals. The very southern section to Range 20 is made up of small patches of native grass making a small percent and over 70% exotic annuals. The further east the more exotics. Chaenactis is found throughout in good years and there is one LEDA playa.

Rang 28-29: Area dominated with exotic annuals on range 28. Over 80% coverage. Good place. Range 29 is just to the North and is located also in the burned area and is dominated by exotic annuals over 90%. No species of concern.

Special Status Species (Threatened, Endangered, Candidate, Proposed, or Idaho Listed Species of Conservation Concern)

T, E, C Species
Slickspot peppergrass (Lepidium papilliferum), listed Threatened in 2009, was the only T&E species listed within the area. There are no recorded occurrences and no observations of micro-playas within the project areas.

Idaho Listed Species of Conservation Concern (IDFG)

Species	Common Name						
Texosporium sancti-jacobi	Wovenspore Lichen	S2	G2	GP2	1		TYPE 2
Lepidium davisii	Davis' Peppergrass	S3	G3		GP3	5	TYPE 3
Chaenactis stevioides	Desert Pincushion	S2	G5		S		TYPE 4

Source: IDFG's CDC 2010

Idaho listed Noxious Weeds
There were no observed state-listed noxious weeds within or adjacent to the project area.

General species list:

References

Atwood, D., and A. DeBolt. 2004. Field guide to the special status plants of the Bureau of Land Management Lower Snake River District. p. 123.

Hitchcock, C. Leo, Arthur Cronquist. 1973. Flora of the Pacific Northwest. University of Washington Press, Seattle, Washington. 730 pp.

Hitchcock, C. Leo, Arthur Cronquist , M. Ownbey, and J.W. Thompson. 1964. Vascular Plants of the Pacific Northwest (5 volumes). University of Washington Press, Seattle, Washington.

Idaho Department of Fish and Game Conservation Data Center (IDFG CDC). 2010. Plant species of concern data. Idaho Department of Fish and Game, Boise, ID.

Attachment C-Wildlife Clearances

Wildlife Summary/Clearance Report by Range

Conducted by: Kevin Warner and Jay Weaver

Date(s): 28 Feb 2010, 15 March 2010, 12 April 2010, 4-5 May 2010

Methods

Pre-field Investigation

The IDARNG coordinated with the BLM, IDFG, and USFWS for a list of potential occurrences or habitat of Idaho-listed species of conservation concern and federally listed Threatened, Endangered, and Candidate species for the proposed project area.

Field investigation

Surveys were conducted by IDARNG JEMO staff for species listed in the IDARNG's 2008 Integrated Natural Resource Management Plan, the IDFG's 2010 CDC data and the BLM's 2008 NCA RMP. IDARNG biologist conducted a comprehensive survey at each identified project area, including a 100 meter buffer around the proposed project area. Staff biologists used an intuitive survey method to look for individuals within the impact area.

This method uses meander transects (a survey line) determined by the surveyor while in the field based on site conditions and their experience and judgment. The location of each transect was also influenced by the terrain and quality of potential habitat for each species identified. Potential habitats were surveyed at a finer scale than surrounding areas that did not have associated habitat characteristics. Any identification of individuals or evidence of presence would be recorded by a Global Positioning System (GPS), photos taken, and recorded in field notes. Surveyors kept a list of wildlife species observed during the surveys, and notes were taken regarding habitat associations and land use patterns.

Results

Range 11B: Piute ground squirrel (*Spermophilus townsendii*), badger (*Taxidea taxus*), black-tailed jackrabbit (*Lepus californicus*), Coyote (*Canis latrans*), horned lark (*Eremophila alpestris*), common raven (*Corvus corax*), Brewer's sparrow (Spizella breweri), sage sparrow (*Amphizpiza belli*)

Range 17: Piute ground squirrel (*Spermophilus townsendii*), badger (*Taxidea taxus*), Coyote (*Canis latrans*), horned lark (*Eremophila alpestris*), common raven (*Corvus corax*)

Range 18: Piute ground squirrel (*Spermophilus townsendii*), badger (*Taxidea taxus*), Coyote (*Canis latrans*), horned lark (*Eremophila alpestris*), common raven (*Corvus corax*)

Range 22: Pronghorn (*Antilocapra americana*), horned lark (*Eremophila alpestris*), common raven (*Corvus corax*), sagebrush lizard (*Sceloporus graciosus)*

Range 28, 29, and 29a: Piute ground squirrel (*Spermophilus townsendii*), badger (*Taxidea taxus*), Ord's kangaroo rat (*Dipodomys ordii*), horned lark (*Eremphila alpestris*)

Special Status Species (Threatened, Endangered, Candidate, Proposed, or Idaho Listed Species of Conservation Concern)

Threatened, Endangered, Candidate, or Proposed Species
There are no listed wildlife species within or adjacent to the project areas.

Idaho Listed Species of Conservation Concern (IDFG)
Species predicted to occur within or adjacent to the project areas.

Species	Common Name		Species	Common Name
Sonora semiannulata	groundsnake		*Numenius americanus*	long-billed curlew
Buteo regalis	ferruginous Hawk		*Centrocercus urophasianus*	greater sage-grouse
Buteo swainsoni	Swainson's Hawk		*Sonora semiannulata*	ground snake
Athene cunicularia	burrowing Owl		*Rhinocheilus lecontei*	long-nosed snake
Falco columbarius	merlin		*Brachylagus idahoensis*	pygmy rabbit
Asio flammeus	short-eared Owl		*Corynorhinus townsendii*	Townsend's big-eared bat
Spizella breweri	Brewer's sparrow		*myotis thysanodes*	fringed myotis

General OTA species list:

Invertebrates of Orchard Training Area				
Common Name	**Species**	***Breeding***	***Resident***	***Casual***
Raptor Shrimp	Branchinecta raptor	X	X	

Raptors of the Orchard Training Area				
Common Name	***Species***	***Breeding***	***Resident***	***Casual***
American Kestrel	*Falco sparverius*		X	
Bald Eagle	*Haliaeetus albicilla*			X
Barn Owl	*Tyto alba*			X
Black Vulture	*Coragyps atratus*			X
Burrowing Owl	*Athene cunicularia*	X		
Cooper's Hawk	*Accipiter cooperii*			X
Ferruginous Hawk	*Buteo regalis*	X		
Golden Eagle	*Aquila chrysaetos*		X	
Goshawk	*Accipter gentilis*			X
Great Horned Owl	*Bubo virginianus*			X
Long-eared Owl	*Asio otus*			X
Merlin	*Falco columbarius*			X
Northern Harrier	*Circus cyaneus*	X		
Osprey	*Pandion haliaetus*			X
Peregrine Falcon	*Falco peregrinus*			X

Prairie Falcon	*Falco mexicanus*	X		
Red-tailed Hawk	*Buteo jamaicensis*		X	
Rough-legged Hawk	*Buteo lagopus*		X	
Sharp-shinned Hawk	*Accipter striatus*			X
Short-eared Owl	*Asio flammeus*	X		
Swainson's Hawk	*Buteo swainsoni*	X?		
Turkey Vulture	*Cathartes aura*		X	

Birds of the Orchard Training Area				
Common Name	***Species***	***Breeding***	***Resident***	***Casual***
American Avocet	*Recurvirostra americana*			X
American Crow	*Corvus brachyrhynchos*			X
Brewer's Blackbird	*Euphagus cyanocephalus*			X
Mountain Chickadee	*Poecile gambeli*			X
Brown-headed Cowbird	*Molothrus ater*			X
Bufflehead	*Bucephala albeola*			X
California Valley Quail	*Callipepla californica*			X
Sandhill Crane	*Grus canadensis*			X
Gray Partridge	*Perdix perdix*			X
Common Name	***Species***	***Breeding***	***Resident***	***Casual***
Mountain Bluebird	*Sialia currucoides*			X
Long-billed Curlew	*Numenius americanus*	X		
Mourning Dove	*Zenaida macroura*			X
Rock Dove	*Columba livia*			X
Wood Duck	*Aix sponsa*			X
Grey Crowned Rosy Finch	*Leucosticte tephrocotis*			X
Common Flicker	*Colaptes auratus*			X
Western Flycatcher	*Empidonax difficilis*			X
Gadwall	*Anas strepera*			X
Common Goldeneye	*Bucephala clangula*			X
Snow Bunting	*Plectrophenax nivalis*			X
American Goldfinch	*Carduelis tristis*			X
Canada Goose	*Branta canadensis*			X
White Fronted Goose	*Anser albifrons*			X
Snow Goose	*Chen caerulescens*			X
California Gull	*Larus californicus*			X
Ring-billed Gull	*Larus delawarensis*			X
Cinnamon Teal	*Anas cyanoptera*			X
Great Blue Heron	*Ardea herodias*			X
Killdeer	*Charadrius vociferus*	X		X
Western Kingbird	*Tyrannus verticalis*			X
Horned Lark	*Eremophila alpestris*	X		

Black-billed Magpie	*Pica pica*			X
Mallard	*Anas platyrhynchos*			X
Western Meadowlark	*Sturnella neglecta*	X		
Common Nighthawk	*Chordeiles minor*	X		
Northern Pintail	*Anas acuta*			X
Common Raven	*Corvus corax*	X		
American Robin	*Turdus migratorius*			X
Northern Shoveler	*Anas clypeata*			X
Loggerhead Shrike	*Lanius ludouicianus*			X
Northern Shrike	*Lanius excubitor*		X	
Black Throated Sparrow	*Amphispiza bilineata*	X		
Brewer's Sparrow	*Spizella breweri*	X		
Chipping Sparrow	*Spizella passerina*	X		
House Sparrow	*Passer domesticus*	X		
Lark Sparrow	*Chondestes grammacus*	X		
Sage Sparrow	*Amphispiza belli*	X		
European Starling	*Sturnus vulgaris*			X
Black-necked Stilt	*Himantopus mixicanus*			X
Bank Swallow	*Riparia riparia*			X
Bank Swallow	*Riparia riparia*			X
Barn Swallow	*Hirundo rustica*			X
Tundra Swan	*Cygnus columbianus*			X
Blue-winged Teal	*Anas discors*			X
Green-winged Teal	*Anas cyanoptera*			X
Sage Thrasher	*Oreoscoptes montanus*	X		
American Widgeon	*Anas americana*			X
Canyon Wren	*Catherpes mexicanus*	X		
Rock Wren	*Salpinctes obsoletus*	X		
Townsend's Solitaire	*Myadestes townsendi*			X

Mammals of the Orchard Training Area		
Common Name	***Species***	***Status***
Badger	*Taxidea taxus*	common
Bushy-tailed Woodrat	*Neotoma cinerea*	uncommon
Black-tailed Jackrabbit	*Lepus californicus*	common
Chisel-toothed Kangaroo Rat	*Dipodomys microps*	common
Coyote	*Canis latrans*	common
Deer Mouse	*Peromyscus maniculatus*	common
Great Basin Pocket Mouse	*Perognathus parvus*	common
Least Chipmunk	*Tamias minimus*	common
Little Brown Bat	*Myotis lucifugus*	uncommon

Mule Deer	*Odocoileus hemionus*	casual
Northern Grasshopper Mouse	*Onychomys leucogaster*	common
Nuttall's Cottontail	*Sylvilagus nuttallii*	common
Ord's Kangaroo Rat	*Dipodomys ordii*	common
Pronghorn	*Antilocapra americana*	casual
Short-tailed Weasel	*Mustela erminea*	uncommon
Piute Ground Squirrel	*Spermophilus mollis*	common
Northern Pocket Gopher	*Thomomys talpoides*	uncommon
Ring Tailed Raccoon	*Procyon lotor*	casual
Wapiti	*Cervus elephas*	casual
Western Harvest Mouse	*Reithrodontomys megalotis*	common
Yellow-bellied Marmot	*Marmaota flaviventris*	rare

Reptiles and Amphibians of the Orchard Training Area		
Common Name	***Species***	***Status***
Flat-horned Horned Lizard	*Phrynosoma platyrhinos*	uncommon
Gopher Snake	*Pituophis melanoleucus*	common
Common Name	***Species***	***Status***
Great Basin Spadefoot Toad	*Spea intermontana*	rare
Ground Snake	*Sonora semiannulata*	uncommon
Leopard Lizard	*Gambellia wislizenii*	uncommon
Long-nosed Snake	*Rhinocheilus lecontei*	uncommon
Racer	*Colubler constrictor*	uncommon
Sagebrush Lizard	*Sceloporus graciosus*	common
Side-blotched Lizard	*Uta stansburiana*	common
Tiger Salamander	*Ambystoma tigrinum*	rare & ephemeral;
Western Fence Swift	*Sceloporus occidentalis*	uncommon
Western Rattlesnake	*Crotalus viridis*	common
Western Whipsnake	*Masticophus taeniatus*	uncommon
Western Whiptail	*Cnemidophorus tigris*	uncommon

References

Idaho Department of Fish and Game Conservation Data Center (IDFG CDC). 2010. Plant species of concern data. Idaho Department of Fish and Game, Boise, ID.

Banbury Series

Taxonomic class*:* Loamy, mixed, superactive, mesic Lithic Xeric Haplargids
Description: The Banbury series consists of shallow, well drained soils that formed in old alluvium derived from loess and weathered volcanic ash mixed with colluvium derived from basalt. The soils are on hills, terraces, and terrace plains. Permeability is moderate. Slopes are 2 to 25 percent. The average annual precipitation is about 9 inches, and the average annual air temperature is about 50 degrees F.

Bowns Series

Taxonomic class*:* Fine, smectitic, mesic Xeric Paleargids
Description: The Bowns series consists of moderately deep, well drained soils that formed in a thin mantle of loess mixed with colluvium derived from basalt over silty alluvium derived from loess and weathered volcanic ash. The soils are on plains. Permeability is very slow. Slopes are 0 to 15 percent. The average annual precipitation is about 9 inches, and the average annual air temperature is about 52 degrees F.

Catchell Series

Taxonomic class*:* Fine, smectitic, mesic Abruptic Xeric Argidurids
Description: The Catchell series consists of soils that are moderately deep to a duripan, are well drained, and formed in a thin mantle of loess over silty alluvium derived from loess and weathered volcanic ash mixed with colluvium derived from basalt or welded rhyolitic tuff. The soils are on lava plains, structural benches, mesas, buttes, and foothills. Permeability is very slow. Slopes are 0 to 30 percent. The average annual precipitation is about 10 inches, and the average annual air temperature is about 49 degrees F.

Chardoton Series:

Taxonomic class*:* Fine, smectitic, mesic Xeric Paleargids
Description: The Chardoton series consists of very-deep, well drained soils that formed in a thin mantle of loess over silty alluvium derived from loess and weathered volcanic ash over loamy alluvium derived from basalt and volcanic ash. The soils are on plains. Permeability is very slow. Slopes are 0 to 4 percent. The average annual precipitation is about 11 inches, and the average annual air temperature is about 52 degrees F.

Chilcott Series

Taxonomic class*:* Fine, smectitic, mesic Abruptic Xeric Argidurids
Description: The Chilcott series consists of soils that are moderately deep to a duripan and are well drained. These soils formed in a thin mantle of loess and silty alluvium derived from loess and weathered volcanic ash over loamy or sandy and gravelly alluvium derived from igneous material. The soils are on plains and in valleys. Permeability is slow. Slopes are 0 to 30 percent. The average annual precipitation is about 10 inches, and the average annual air temperature is about 51 degrees F.

Corder Series:

Taxonomic class: Loamy, mixed, superactive, mesic, shallow Typic Argidurids
Description: The Corder series consists of soils that are shallow to a duripan and are well drained. These soils are on plains. They formed in loess and weathered volcanic ash mixed with colluvium derived from basalt. Permeability is moderate. Slopes are 0 to 25 percent. The average annual precipitation is about 7 inches, and the average annual air temperature is about 53 degrees F.

Mcpan Series

Taxonomic class: Fine-silty, mixed, superactive, mesic Xeric Argidurids
Description: The McPan series consists of soils that are moderately deep to a duripan and are well drained. These soils formed in loess and silty alluvium derived from weathered volcanic ash mixed with colluviums derived from basalt. The soils are on plains. Slopes are 1 to 20 percent. Permeability is moderately slow. The average annual precipitation is about 10 inches, and the average annual air temperature is about 50 degrees F.

Power Series

Taxonomic class: Fine-silty, mixed, superactive, mesic Xeric Calciargids
Description: The Power series consists of very deep, well drained soils on plains and in valleys. These soils formed in silty alluvium derived from loess and weathered volcanic ash over loamy alluvium derived from igneous material. Permeability is moderately slow. Slopes are 0 to 15 percent. The average annual precipitation is about 9 inches, and the average annual air temperature is about 51 degrees F.

Purdam Series

Taxonomic class: Fine-silty, mixed, superactive, mesic Haploxeralfic Argidurids
Description: The Purdam series consists of soils that are moderately deep to a duripan and are well drained. These soils are in valleys and on plains. They formed in silty alluvium derived from loess and weathered volcanic ash over medium textured or moderately coarse textured alluvium derived from igneous material. Permeability is moderately slow. Slopes are 0 to 30 percent. The average annual precipitation is about 9 inches, and the average annual air temperature is about 48 degrees F.

Tadpole Silt Loam, Saline:

Taxonomic class*: Coarse-silty, mixed, superactive, mesic Durinodic Haplocalcids*
Description: *The Tadpole series consists of very deep, well drained soils that formed in loess and weathered volcanic ash over coarse-loamy alluvium derived from basalt and volcanic ash. These soils are on plains. Permeability is moderate. Slopes are 0 to 20 percent. The average annual precipitation is about 7 inches, and the average annual air temperature is about 53 degrees F.*

Trevino Series

Taxonomic class*: Loamy, mixed, superactive, mesic Lithic Xeric Haplocambids*
Description: *The Trevino series consists of very shallow and shallow, well drained soils on plains. These soils formed in loess, alluvium, and material weathered from basalt. Permeability is moderate. Slopes are 0 to 30 percent. The average annual precipitation is about 9 inches, and the average annual air temperature is about 49 degrees F.*

Plant Species of the Orchard Training Area			
Acronym	***Genus/Species***	***Common Name***	***Plant Family***
ACMI	*Achillea millefolium*	Yarrow	ASTERACEAE
AGDE	*Agropyron desertorum*	crested wheatgrass	POACEAE
ALAC	*Allium acuminatum*	tapertip onion	LILIACEAE (pink)
ALNE	*Allium nevadense*	Nevada onion	LILIACEAE (white)
AMAL	*Amaranthus albus*	prostrate pigweed	AMARANTHACEAE
AMTE	*Amsinckia tessellata*	rough fiddleneck	BORAGINACEAE
AMRE	*Amsinckia retrorsa*	fiddleneck	BORAGINACEAE
ANDI	*Antennaria dimorpha*	low pussytoes	ASTERACEAE
ARCA	*Artemisia cana*	silver sage	ASTERACEAE
ARLU	*Artemisia ludoviciana*	Louisiana sage	ASTERACEAE
ARSP	*Artemisia spinescens*	bud sage	ASTERACEAE
ARTR	*Artemisia tridentata*	big sagebrush	ASTERACEAE
ASSP	*Asclepias speciosa*	showy milkweed	ASCLEPIADACEAE
ARTRI	*Artemisia tripartita*	tripartite sage	ASTERACEAE
ASBE	*Astragalus beckwithii*	Beckwith's milkvetch	FABIACEAE
ATCA	*Atriplex canescens*	four-wing saltbush	CHENOPODIACEAE
ATCO	*Atriplex confertifolia*	shadscale	CHENOPODIACEAE
ATGA	*Atriplex gardneri/falcata*	Nuttall's saltbush	CHENOPODIACEAE
BAHO	*Balsamorhiza hookeri*	Hooker's balsamroot	ASTERACEAE
BRRU	*Bromus rubens*	red brome	POACEAE
BRTE	*Bromus tectorum*	cheatgrass	POACEAE
CAMA	*Calochortus macrocarpus*	greenbanded startulip	LILIACEAE
CABO	*Camissonia boothii*	Booth's evening primrose	ONAGRACEAE
CACO	*Camissonia contorta*	evening primrose	ONAGRACEAE
CAIN	*Caulanthus crassicaulis*	wild cabbage	BRASSICACEAE
CAPI	*Caulanthus pilosus*	hairy wild cabbage	BRASSICACEAE
CADR	*Cardaria draba*	white-top	BRASSICACEAE
CELA	*Ceratoides lanata*	winterfat	CHENOPODIACEAE
CHDO	*Chaenactis douglassii*	Douglas pincushion	ASTERACEAE
CHST	*Chaenactis stevioides*	broad-flower pincushion	ASTERACEAE
CHAL	*Chenopodium album*	lamb's quarters	CHENOPODIACEAE
CHJU	*Chondrilla juncea*	rush skeletonweed	ASTERACEAE
CHNA	*Chrysothamnus nauseosus*	gray rabbitbrush	ASTERACEAE
CHVI	*Chrysothamnus viscidiflorus*	green rabbitbrush	ASTERACEAE
CIAR	*Circium arvense*	Canada thistle	ASTERACEAE
COCA	*Conyza canadensis*	horseweed	ASTERACEAE
COPA	*Collinsia parviflora*	blue-eyed Mary	BORAGINACEAE
CRAC	*Crepis acuminatus*	tapertip hawksbeard	ASTERACEAE
CRCI	*Cryptantha circumscissa*	cushion catseye	BORAGINACEAE
CRRG	*Cryptantha gracilis*	narrow-stem catseye	BORAGINACEAE
CUPE	*Cuscuta pentagona*	bush clover dodder	CUSCUTACEAE
DEBI	*Delphinium bicolor*	larkspur	RANUNCULACEAE
DEPI	*Descurainia pinnata*	pinnate tansymustard	BRASSICACEAE
DESO	*Descurainia sophia*	tansymustard	BRASSICACEAE

Plant Species of the Orchard Training Area			
Acronym	***Genus/Species***	***Common Name***	***Plant Family***
DRVE	*Draba verna*	whitlowgrass	BRASSICACEAE
ELCI	*Elymus cinereus*	Great Basin wild rye	POACEAE
ELJU	*Elymus junceus*	Russian wild rye	POACEAE
EPPA	*Epilobium paniculatum*	willow-herb	ONAGRACEAE
ERSE	*Eremocarpum setigerus*	turkey-mullein	EUPHORBIACEAE
ERWI	*Eriastrum wilcoxii*	Wilcox woolstar	POLEMONIACEAE
ERPU	*Erigeron pumilus*	fleabane daisy	ASTERACEAE
EROV	*Eriogonum ovalifolium*	yellow buckwheat	APIACEAE
ERVI	*Eriogonum vimineum*	leafy buckwheat	APIACEAE
ERRE	*Erysimum repandum*	spreading wallflower	BRASSICACEAE
ERTR	*Eremopyrum triticeum*	annual wheatgrass	POACEAE
ERCI	*Erodium cicutarium*	storksbill	GERANIACEAE
FEID	*Festuca idahoensis*	Idaho fescue	POACEAE
FRAL	*Frasera albicaulis*	white frasera	GENTIANACEAE
GARA	*Gayophytum ramosissima*	pinyon groundsmoke	ONAGRACEAE
GISI	*Gilia sinuata*	shy gilia	POLEMONIACEAE
GNPA	*Gnaphalium palustre*	western marsh cudweed	ASTERACEAE
GRSP	*Grayia spinosa*	spiny hop sage	CHENOPODIACEAE
GUSA	*Gutierrezia sarothrae*	snakeweed	ASTERACEAE
HAGL	*Halogeton glomeratus*	halogeton	CHENOPODIACEAE
HEAN	*Helianthus annuus*	annual sunflower	ASTERACEAE
HOUM	*Holosteum umbellatum*	chickweed	CARYOPHYLLACEAE
HOGL	*Hordeum glaucum*	wild barley	POACEAE
IPMI	*Ipomopsis minutiflora*	small-flowered skyrocket	SCROPHULARIACEAE
KOSC	*Kochia scoparia*	summer cypress	CHENOPODIACEAE
KOPR	*Kochia prostrata*	prostrate kochia	CHENOPODIACEAE
LASE	*Lactuca serriola*	prickly lettuce	ASTERACEAE
LASE2	*Langloisia setosissima*	langloisia	POLEMONIACEAE
LARA	*Lagophylla ramosissima*	hareleaf; rabbitleaf	ASTERACEAE
LAEC	*Lappula echinata*	stickseed	BORAGINACEAE
LEDA	*Lepidium davisii*	Davis' peppergrass	BRASSICACEAE
LEPA	*Lepidium papilliferum*	slick-spot peppergrass	BRASSICACEAE
LEPE	*Lepidium perfoliatum*	peppergrass	BRASSICACEAE
LEPU	*Leptodactylon pungens*	prickly phlox	POLEMONIACEAE
LIGL	*Lithophragma glabrum*	starflower	SAGIFRAGACEAE
LIPA	*Lithophragma dissectum*	prairie star	SAXIFRAGACEAE
LODI	*Lomatium dissectum*	chocolate tips	APIACEAE
LOGR	*Lomatium grayi*	mountain desert parsley	APIACEAE
LOMA	*Lomatium macrocarpum*	bigseed lomatium	APIACEAE
LUHO	*Lupinus holosericeus*	Nuttall's silky lupine	FABACEAE
LUUU	*Lupinus uucialis*	little lupine	FABACEAE
MACA	*Machaeranthera canescens*	hoary aster	ASTERACEAE
MAGL	*Malacothrix glabrata*	smooth desert dandelion	ASTERACEAE
MAPE	*Matricaria perforata*	scentless mayweed	ASTERACEAE

Plant Species of the Orchard Training Area			
Acronym	***Genus/Species***	***Common Name***	***Plant Family***
MESA	*Medicago sativa*	alfalfa	FABACEAE
MEAL	*Mentzelia albicaulis*	blazing star	LOASACEAE
MISU	*Mimulus sucksdorfii*	miniature monkeyflower	SCROPHULARIACEAE
MONU	*Monolepis nuttalliana*	Nuttall's povertyweed	CHENOPODIACEAE
MYAR	*Myosurus aristatus*	mousetail	RANUNCULACEAE
MYMI	*Myosurus minimum*	tiny mousetail	RANUNCULACEAE
NOTR	*Nothocalis troximoides*	false agoseris	ASTERACEAE
ORHY	*Oryzopsis hymenoides*	Indian ricegrass	POACEAE
PEAC	*Penstemon acuminatus*	St. Joseph's wand, blue penstemon	SCROPHULARIACEAE
PECU	*Penstemon cusickii*	Cusick's penstemon	SCROPHULARIACEAE
PEDE	*Penstemon deustus*	hot rock penstemon	SCROPHULARIACEAE
PEBO	*Perideridia bolanderi*	Bolander's yampa	APIACEAE
PHLU	*Phacelia lutea*	yellow phacelia	HYDROPHYLLACEAE
PHAC	*Phlox aculeata*	Snake River Plain phlox	PLOEMONIACEAE
PLHI	*Plagiobothrys hispidus*	shaggy popcorn flower	BORAGINACEAE
PLMA	*Plectritus macrocera*	white sea blush	VALERIANACEAE
POAR	*Polygonum arviculare*	prostrate knotweed, flat driveway plant	POLYGONACEAE
POSE	*Poa secunda*	Sandberg's bluegrass	POACEAE
PSSP	*Pseudoroegneria spicata*	Bluebunch wheatgrass	POACEAE
RAGL	*Ranunculus glabratus*	sagebrush buttercup	RANUNCULACEAE
RATE	*Ranunculus testiculatus*	bur-buttercup	RANUNCULACEAE
RUCR	*Rumex crispus*	curly dock	POLYGONACEAE
SAKI	*Sairocarpus kingii*	least toadsmouth	SCROPHULARIACEAE
SAKA	*Salsola kali=iberica*	Russian thistle	CHENOPODIACEAE
SAVE	*Sarcobatus vermiculatus*	black greasewood	CHENOPODIACEAE
SEHY	*Senecio hydrophyllus*	alkali marsh butterweed	ASTERACEAE
SIAL	*Sisymbrium altissimum*	tumblemustard	BRASSICACEAE
SIHY	*Sitanion hystrix*	squirreltail	POACEAE
SOOL	*Sonchus oleraceus*	sow thistle	ASTERACEAE
SOTR	*Solanum triflorum*	cutleaf nightshade	SOLANACEAE
SPMU	*Sphaeralcea munroana*	white-stemmed globemallow	GERANIACEAE
STTH	*Stipa thurberiana*	Thurber's needlegrass	POACEAE
TAAS	*Taeniatherium asperum*	medusahead rye	POACEAE
TEGL	*Tetradymia glabrata*	horsebrush	ASTERACEAE
TESP	*Tetradymia spinosa*	spiny horsebrush	ASTERACEAE
TOFL	*Townsendia florifer*	Townsend daisy	ASTERACEAE
TRDU	*Tragopogon dubius*	meadow goatsbeard, salsify	ASTERACEAE
VEBL	*Verbascum blattaria*	moth-mullein	SCROPHULARIACEAE
VETH	*Verbascum thapsus*	mullein	SCROPHULARIACEAE
VEBR	*Verbena bracteata*	prostrate vervain	VERBENACEAE
VUBR	*Vulpia bromoides*	brome six weeks' fescue	POACEAE
VUOC	*Vulpia octoflora*	six weeks' fescue	POACEAE

Plant Species of the Orchard Training Area			
Acronym	***Genus/Species***	***Common Name***	***Plant Family***
XAST	*Xanthium strumarium*	cocklebur	ASTERACEAE
ZYPA	*Zygadenus paniculatus*	foothills death camas	LILIACEAE

BLM Special Status Plant Species (Four River Field Office)

Common Name	Species	Status	Present (OTA)	Absent (OTA)	Comments
Aase's onion	*Allium aaseae*	Type 2		X	No habitat within OTA
American wood sage	*Teucrium canadense var. occidentale*	Type 3		X	No habitat within OTA
Bank monkey-flower	*Mimulus clivicola*	Type 5		X	No habitat within OTA
Calcareous buckwheat	*Eriogonum ochrocephalum var. calcareum*	Type 3		X	No habitat within OTA
Chatterbox orchid	*Epipactis gigantea*	Type 3		X	No habitat within OTA
Coral lichen	*Aspicilia fruticulosa (lichen)*	Type 4		X	No habitat within OTA
Cronquist's forget-me-not	*Hackelia cronquistii*	Type 3		X	No habitat within OTA
Cusick's camas	*Camassia cusickii*	Type 5		X	No habitat within OTA
Cusick's primrose	*Primula cusickiana Acomplex*	Type 5		X	No habitat within OTA
Davis peppergrass	*Lepidium davisii*	Type 3	X		See Section 3.4
Desert pincushion	*Chaenactis stevioides*	Type 4	X		See Section 3.4
Douglas clover	*Trifolium douglasii*	Type 2		X	No habitat within OTA
Earth lichen	*Catapyrenium congestum*	Type 4		X	No habitat within OTA
Indian apple	*Peraphyllum ramosissimum*	Type 3		X	No habitat within OTA
Indian Valley sedge	*Carex aboriginum*	Type 2		X	No habitat within OTA
Mahala mat	*Ceanothus prostratus*	Type 3		X	No habitat within OTA
Malheur cryptantha	*Cryptantha propria*	Type 5		X	No habitat within OTA
Malheur princesplume	*Stanleya confertiflora*	Type 2		X	No habitat within OTA
Mourning milkvetch	*Astragalus atratus var. inseptus*	Type 3		X	No habitat within OTA
Mulford=s milkvetch	*Astragalus mulfordiae*	Type 2		X	No habitat within OTA
Packard's buckwheat	*Eriogonum shockleyi var. packardiae*	Type 2		X	No habitat within OTA
Packard's milkvetch	*Astragalus cusickii var. packardiae*	Type 2		X	No habitat within OTA
Plumed clover	*Trifolium plumosum var. amplifolium*	Type 2		X	No habitat within OTA

Common Name	Species	Status	Present (OTA)	Absent (OTA)	Comments
Shining flat sedge	*Cyperus rivularis*	Type 5		X	No habitat within OTA
Silver-skin lichen	*Dermatocarpon lorenzianum*	Type 3		X	No habitat within OTA
Slickspot peppergrass	*Lepidium papilliferum*	T	X		See Section 3.4
Snake River golden weed	*Haplopappus radiates (Pyrrocoma radiata)*	Type 3		X	No habitat within OTA
Snake River milkvetch	*Astragalus purshii var. ophiogenes*	Type 5		X	Located within OTA, but associated soil type not consistent with project area.
Stalk-leaved monkey-flower	*Mimulus patulus*	Type 2		X	No habitat within OTA
Turtleback	*Psathyrotes annua*	Type 3		X	No habitat within OTA
White eatonella	*Eatonella nivea*	Type 4			No habitat within OTA
White-margined wax plant	*Glyptopleura marginata*	Type 4	X		Historic collection has not been relocated
Woven-spore lichen	*Texosporium sancti-jacobi*	Type 2	X		See Section 3.4

E-Endangered; T-Threatened; C-Candidate; P-Proposed

Type 1. Federally Listed, Proposed and Candidate Species: Includes species that are listed under the Endangered Species Act, proposed or candidates for listing.

Type 2. Rangewide / Globally Imperiled Species - High Endangerment: Includes species that are experiencing declines throughout their range with a high likelihood of being listed under the Endangered Species Act in the foreseeable future due to their rarity and significant endangerment factors.

Type 3 - Rangewide / Globally Imperiled Species - Moderate Endangerment: Includes species that are globally rare with moderate endangerment factors. Their global rarity and inherent risks associated with rarity make them imperiled species.

Type 4. Species of Concern: Includes species that are generally rare in Idaho with currently low endangerment threats.

Type 5. Watch List: Includes species that are not considered Idaho BLM sensitive species but current population or habitat information suggests that species may warrant sensitive species status in the future.

Invertebrates of Orchard Training Area				
Common Name	**Species**	***Breeding***	***Resident***	***Casual***
Raptor Shrimp	Branchinecta raptor	X	X	

Raptors of the Orchard Training Area				
Common Name	***Species***	***Breeding***	***Resident***	***Casual***
American Kestrel	*Falco sparverius*		X	
Bald Eagle	*Haliaeetus albicilla*			X
Barn Owl	*Tyto alba*			X
Black Vulture	*Coragyps atratus*			X
Burrowing Owl	*Athene cunicularia*	X		
Cooper's Hawk	*Accipiter cooperii*			X
Ferruginous Hawk	*Buteo regalis*	X		
Golden Eagle	*Aquila chrysaetos*		X	
Goshawk	*Accipter gentilis*			X
Great Horned Owl	*Bubo virginianus*			X
Long-eared Owl	*Asio otus*			X
Merlin	*Falco columbarius*			X
Northern Harrier	*Circus cyaneus*	X		
Osprey	*Pandion haliaetus*			X
Peregrine Falcon	*Falco peregrinus*			X
Prairie Falcon	*Falco mexicanus*	X		
Red-tailed Hawk	*Buteo jamaicensis*		X	
Rough-legged Hawk	*Buteo lagopus*		X	
Sharp-shinned Hawk	*Accipter striatus*			X
Short-eared Owl	*Asio flammeus*	X		
Swainson's Hawk	*Buteo swainsoni*	X?		
Turkey Vulture	*Cathartes aura*		X	

Birds of the Orchard Training Area				
Common Name	***Species***	***Breeding***	***Resident***	***Casual***
American Avocet	*Recurvirostra americana*			X
American Crow	*Corvus brachyrhynchos*			X
Brewer's Blackbird	*Euphagus cyanocephalus*			X
Mountain Chickadee	*Poecile gambeli*			X
Brown-headed Cowbird	*Molothrus ater*			X
Bufflehead	*Bucephala albeola*			X
California Valley Quail	*Callipepla californica*			X
Sandhill Crane	*Grus canadensis*			X
Gray Partridge	*Perdix perdix*			X

Common Name	***Species***	***Breeding***	***Resident***	***Casual***
Mountain Bluebird	*Sialia currucoides*			X
Long-billed Curlew	*Numenius americanus*	X		
Mourning Dove	*Zenaida macroura*			X
Rock Dove	*Columba livia*			X
Wood Duck	*Aix sponsa*			X
Grey Crowned Rosy Finch	*Leucosticte tephrocotis*			X
Common Flicker	*Colaptes auratus*			X
Western Flycatcher	*Empidonax difficilis*			X
Gadwall	*Anas strepera*			X
Common Goldeneye	*Bucephala clangula*			X
Snow Bunting	*Plectrophenax nivalis*			X
American Goldfinch	*Carduelis tristis*			X
Canada Goose	*Branta canadensis*			X
White Fronted Goose	*Anser albifrons*			X
Snow Goose	*Chen caerulescens*			X
California Gull	*Larus californicus*			X
Ring-billed Gull	*Larus delawarensis*			X
Cinnamon Teal	*Anas cyanoptera*			X
Great Blue Heron	*Ardea herodias*			X
Killdeer	*Charadrius vociferus*	X		X
Western Kingbird	*Tyrannus verticalis*			X
Horned Lark	*Eremophila alpestris*	X		
Black-billed Magpie	*Pica pica*			X
Mallard	*Anas platyrhynchos*			X
Western Meadowlark	*Sturnella neglecta*	X		
Common Nighthawk	*Chordeiles minor*	X		
Northern Pintail	*Anas acuta*			X
Common Raven	*Corvus corax*	X		
American Robin	*Turdus migratorius*			X
Northern Shoveler	*Anas clypeata*			X
Loggerhead Shrike	*Lanius ludouicianus*			X
Northern Shrike	*Lanius excubitor*		X	
Black Throated Sparrow	*Amphispiza bilineata*	X		
Brewer's Sparrow	*Spizella breweri*	X		
Chipping Sparrow	*Spizella passerina*	X		
House Sparrow	*Passer domesticus*	X		
Lark Sparrow	*Chondestes grammacus*	X		
Sage Sparrow	*Amphispiza belli*	X		
European Starling	*Sturnus vulgaris*			X
Black-necked Stilt	*Himantopus mixicanus*			X
Bank Swallow	*Riparia riparia*			X

Common Name	Species	Breeding	Resident	Casual
Bank Swallow	*Riparia riparia*			X
Barn Swallow	*Hirundo rustica*			X
Tundra Swan	*Cygnus columbianus*			X
Blue-winged Teal	*Anas discors*			X
Green-winged Teal	*Anas cyanoptera*			X
Sage Thrasher	*Oreoscoptes montanus*	X		
American Widgeon	*Anas americana*			X
Canyon Wren	*Catherpes mexicanus*	X		
Rock Wren	*Salpinctes obsoletus*	X		
Townsend's Solitaire	*Myadestes townsendi*			X

Mammals of the Orchard Training Area		
Common Name	**Species**	**Status**
Badger	*Taxidea taxus*	common
Bushy-tailed Woodrat	*Neotoma cinerea*	uncommon
Black-tailed Jackrabbit	*Lepus californicus*	common
Chisel-toothed Kangaroo Rat	*Dipodomys microps*	common
Coyote	*Canis latrans*	common
Deer Mouse	*Peromyscus maniculatus*	common
Great Basin Pocket Mouse	*Perognathus parvus*	common
Least Chipmunk	*Tamias minimus*	common
Little Brown Bat	*Myotis lucifugus*	uncommon
Mule Deer	*Odocoileus hemionus*	casual
Northern Grasshopper Mouse	*Onychomys leucogaster*	common
Nuttall's Cottontail	*Sylvilagus nuttallii*	common
Ord's Kangaroo Rat	*Dipodomys ordii*	common
Pronghorn	*Antilocapra americana*	casual
Short-tailed Weasel	*Mustela erminea*	uncommon
Piute Ground Squirrel	*Spermophilus mollis*	common
Northern Pocket Gopher	*Thomomys talpoides*	uncommon
Ring Tailed Raccoon	*Procyon lotor*	casual
Wapiti	*Cervus elephas*	casual
Western Harvest Mouse	*Reithrodontomys megalotis*	common
Yellow-bellied Marmot	*Marmaota flaviventris*	rare

Reptiles and Amphibians of the Orchard Training Area		
Common Name	**Species**	**Status**
Flat-horned Horned Lizard	*Phrynosoma platyrhinos*	uncommon
Gopher Snake	*Pituophis melanoleucus*	common

Common Name	***Species***	***Status***
Great Basin Spadefoot Toad	*Spea intermontana*	rare
Ground Snake	*Sonora semiannulata*	uncommon
Leopard Lizard	*Gambellia wislizenii*	uncommon
Long-nosed Snake	*Rhinocheilus lecontei*	uncommon
Racer	*Colubler constrictor*	uncommon
Sagebrush Lizard	*Sceloporus graciosus*	common
Side-blotched Lizard	*Uta stansburiana*	common
Tiger Salamander	*Ambystoma tigrinum*	rare & ephemeral; introduced into cattle watering ponds
Western Fence Swift	*Sceloporus occidentalis*	uncommon
Western Rattlesnake	*Crotalus viridis*	common
Western Whipsnake	*Masticophus taeniatus*	uncommon
Western Whiptail	*Cnemidophorus tigris*	uncommon

Idaho BLM Special Status Animal Species (Four Rivers Field Office)					
Type 1- ESA Listed, Proposed & Candidate Species					
Common Name	**Species**	**Status**	**Present**	**Potentially Present**	**Not Present**
Mammals					
Northern Idaho Ground Squirrel	*Spermophilus brunneus brunneus*	T			X
Southern Idaho Ground Squirrel	*Spermophilus brunneus endemicus*	C			X
Gray Wolf	*Canus lupus*	EXP/T			X
Grizzly Bear	*Ursus arctos*	T			X
Canada Lynx	*Lynx canadensis*	T			X
Birds					
Greater Sage-grouse	*Centrocercus urophasianus*			X	Greater Sage-grouse
Yellow-billed Cuckoo	*Coccyzus americanus*	C			X
Amphibians					
Columbia Spotted Frog	*Rana luteiventris*	C			X
Fish					
White Sturgeon	*Acipenser transmontanus*	E			X
Sockeye Salmon	*Oncorhynchus nerka*	E			X
Chinook Salmon	*Oncorhynchus tshawytscha*	T			X
Steelhead	*Oncorhynchus mykiss*	T			X
Bull Trout	*Salvelinus confluentus*	T			X
Invertebrates					
Utah Valvata Snail	*Valvata utahensis*	E			X
Bliss Rapids Snail	*Taylorconcha serpenticola*	T			X
Idaho Springsnail	*Pyrgulopsis idahoensis*	E			X
Banbury Springs Limpet	*Lanx* sp.	E			X
Snake River Physa Snail	*Physa natricina*	E			X
Bruneau Hot Springsnail	*Pyrgulopsis bruneauensis*	E			X

Type 2 – Rangewide/Globally Imperiled Species				
Common Name	**Species**	**Present**	**Potentially Present**	**Not Present**
Mammals				
Pygmy Rabbit	*Brachylagus idahoensis*			X
Birds				
American White Pelican	*Pelecanus erythrorhynchos*			X
Bald Eagle	*Haliaeetus leucocephalus*	T	X	
Amphibians				
Boreal Toad	*Bufo boreas boreas*			X
Northern Leopard Frog	*Rana pipiens*			X
Fish				
Pacific Lamprey	*Lampetra tridentata*			X
White Sturgeon – above Hells Canyon	*Acipenser transmontanus*			X
Redband Trout	*Oncorhynchus mykiss gibbsi*			X
Westslope Cutthroat	*Oncorhynchus clarki lewisi*			X
Bonneville Cutthroat	*Oncorhynchus clarki utah*			X
Yellowstone Cutthroat	*Oncorhynchus clarki bouveri*			X
Bear Lake Cutthroat	*Oncorhynchus clarki ssp.*			X
Bear Lake Whitefish	*Prosopium abyssicola*			X
Bonneville Whitefish	*Prosopium spilonotus*			X
Bonneville Cisco	*Prosopium gemmiferum*			X
Bear Lake Sculpin	*Cottus extensis*			X
Shoshone Sculpin	*Cottus greenei*			X
Wood River Sculpin	*Cottus leiopomus*			X
Invertebrates				
Shortface Lanx	*Fisherola nuttalli*			X
Marbled Disc	*Discus marmorensis*			X
Mission Creek Oregonian	*Cryptomastix magnidentata*			X
Striate Mountainsnail	*Oreohelix strigosa goniogyra*			X

Type 2 – Rangewide/Globally Imperiled Species				
Common Name	**Species**	**Present**	**Potentially Present**	**Not Present**
Invertebrates (Cont.)				
Idaho Banded Mountainsnail	*Oreohelix idahoensis idahoensis*			X
Lava Rock Mountainsnail	*Oreohelix waltoni*			X
Whorled Mountainsnail	*Oreohelix vortex*			X
Idaho Point-headed Grasshopper	*Acrolophitus pulchellus*			X
St. Anthony Sand Dunes Tiger Beetle	*Cicindela arenicola*			X
Burneau Dunes Tiger Beetle	*Cicindela waynei waynei*			X
Columbia River Tiger Beetle	*Cicindela columbica*			X
Blind Cave Leiodid Beetle	*Glacicavicola bathyscoides*			X

Type 3 – Regional/State Imperiled Species				
Common Name	**Species**	**Present**	**Potentially Present**	**Not Present**
Mammals				
Fringed Myotis	*Myotis thysanodes*		X	
Spotted Bat	*Euderma maculatum*		X	
Townsend's Big-eared Bat	*Plecotus townsendii*		X	
Piute Ground Squirrel	*Spermophilus mollis artemisae*		X	
Fisher	*Martes pennanti*			X
Wolverine	*Gulo gulo luscus*			X
California Bighorn Sheep	*Ovis canadensis californiana*			X
Birds				
Trumpeter Swan	*Cygnus buccinator*			X
Peregrine Falcon	*Falco peregrinus anatum*	X		
Prairie Falcon	*Falco mexicanus*	X		
Northern Goshawk	*Accipiter gentilis*	X		
Ferruginous Hawk	*Buteo regalis*	X		
Columbian Sharp-tailed Grouse	*Tympanuchus phasianellus columbianus*			X
Mountain Quail	*Oreortyx pictus*			X
Black Tern	*Chlidonias niger*			X
Flammulated Owl	*Otus flammeolus*			X
Calliope Hummingbird	*Stellula calliope*			X
Lewis' Woodpecker	*Melanerpes lewis*			X
Williamsons Sapsucker	*Sphyrapicus thyroideus*			X
Willow Flycatcher	*Empidonax trailii*		X	
Hammond's Flycatcher	*Empidonax hammondii*		X	
Olive-sided Flycatcher	*Contopus borealis*		X	
Loggerhead Shrike	*Lanius ludovicianus*	X		
Sage Sparrow	*Amphispiza belli*	X		
Brewer's Sparrow	*Spizella breweri*	X		
Reptiles				
Mojave Black-collared Lizard	*Crotaphytus bicinctores*		X	

Type 3 – Regional/State Imperiled Species				
Common Name	**Species**	**Present**	**Potentially Present**	**Not Present**
Reptiles (Cont.)				
Longnose Snake	*Rhinocheilus lecontei*		X	
Western Ground Snake	*Sonora semiannulata*	X		
Common Garter Snake	*Thamnophis sirtalis*			X
Amphibians				
Coeur d'Alene Salamander	*Plethodon idahoensis*			X
Idaho Giant Salamander	*Dicamptodon aterrimus*			X
Western Toad	*Bufo boreas*			X
Woodhouse Toad	*Bufo woodhousii*			X
Fish				
Leatherside Chub	*Gila copei*			X
Burbot	*Lota lota*			X
Invertebrates				
Boulder Pile Mountainsnail	*Oreohelix jugalis*			X
California Floater	*Anodonta californiensis*			X
Columbia Pebblesnail	*Flumincola fuscus*			X

Type 4 – Peripheral Species: generally rare in Idaho with majority of breeding range outside the state.				
Common Name	**Species**	**Present**	**Potentially Present**	**Not Present**
Mammals				
Coast Mole	*Scapanus orarius*			X
California Myotis	*Myotis californicus*		X	
Cliff Chipmunk	*Tamias dorsalis*			X
Uinta Chipmunk	*Tamias umbrinus*			X
Meriam's Ground Squirrel	*Spermophilus canus vigilis*			X
Wyoming Ground Squirrel	*Spermophilus elegans nevadensis*			X
Little Pocket Mouse	*Perognathus longimembris*			X
Dark Kangaroo Mouse	*Microdipodops megacephalus*			X
Kit Fox	*Vulpes velox*			X
Northern Bog Lemming	*Synaptomys borealis*			X
Birds				
White-faced Ibis	*Plegadis chihi*		X	
Harlequin Duck	*Histrionicus histrionicus*			X
Upland Sandpiper	*Bartramia longicauda*		X	
Black Swift	*Cypseloides niger*			X
White-headed Woodpecker	*Picoides albolarvatus*			X
Virginia's Warbler	*Vermivora virginiae*			X
Black-throated Sparrow	*Amphispiza bilineata*	X		

Type 5 – Watch List Species				
Common Name	**Species**	**Present**	**Potentially Present**	**Not Present**
Mammals				
Yuma Myotis	*Myotis yumanensis*		X	
Long-eared Myotis	*Myotis evotis*		X	
Long-legged Myotis	*Myotis volans*		X	
Western Small-footed Myotis	*Myotis ciliolabrum*		X	
Western Pipistrelle	*Pipistrellus hesperus*		X	
Rock Squirrel	*Spermophilus variegatus*			X
Birds				
Barrow's Goldeneye	*Bucephala islandica*		X	
Swainson's Hawk	*Buteo swainsoni*	X		
Blue Grouse	*Dendragapus obscurus*			X
Long-billed Curlew	*Numenius americanus*	X		
Wilson's Phalarope	*Phalaropus tricolor*		X	
Northern Pygmy-owl	*Glaucidium gnoma*			X
Great Gray Owl	*Strix nebulosa*			X
Short-eared Owl	*Asio flammeus*	X		
Boreal Owl	*Aegolius funereus*			X
Western Burrowing Owl	*Speotyto cunicularia*	X		
Vaux's Swift	*Chaetura vauxi*			X
Red-naped Sapsucker	*Sphyrapicus nuchalis*			X
Black-backed Woodpecker	*Picoides arcticus*			X
Cordilleran Flycatcher	*Empidonax occidentalis*			X
Pinyon Jay	*Gymnorhinus cyanocephalus*			X
Pygmy Nuthatch	*Sitta pygmaea*			X
Sage Thrasher	*Oreoscoptes montanus*	X		
Green-tailed Towhee	*Pipilo chlorurus*			X
Grasshopper Sparrow	*Ammodramus savannarum*		X	
Type 5 – Watch List Species				

Common Name	Species	Present	Potentially Present	Not Present
Mammals (Cont.)				
Brewer's Blackbird	*Euphagus cyanocephalus*	X		
Cassin's Finch	*Carpodacus cassinii*		X	
Reptiles				
Northern Alligator Lizard	*Elgaria coerulea*		X	
Ringneck Snake	*Diadophis punctatus*			X
Night Snake	*Hypsiglena torquata*		X	
Amphibians				
Wood Frog	*Rana sylvatica*			X
Fish				
Shorthead Sculpin	*Cottus confusus*			X
Torrent Sculpin	*Cottus rhotheus*			X