



Final

Environmental Assessment for Utilization Enhancements at Melrose Air Force Range, New Mexico



January
2016

Finding of No Significant Impact (FONSI)

Name of the Proposed Action

Environmental Assessment (EA) for Utilization Enhancements at Melrose Air Force Range (AFR), New Mexico.

Purpose of and Need for the Proposed Action

The purpose of the Proposed Action is to enhance training capabilities at Melrose AFR to support training requirements while creating a safer environment for trainees and the public. The Proposed Action is needed because the current range configuration does not allow for multiple, simultaneous and independent training actions to be performed safely and effectively, resulting in lowered overall training effectiveness.

Description of the Proposed Action and Alternatives

Proposed Action. The Proposed Action is to reconfigure Melrose AFR to reduce range congestion and allow for efficient scheduling of simultaneous training operations. Reconfiguration would include removing the Range Support Complex from the center of the range. New operations support and training capabilities would be constructed on the perimeter of the impact area. Reconfiguration would allow the collocation of multiple surface danger zones (SDZs) and weapons danger zones (WDZs) in a centralized area so munitions training could occur without disrupting other range operations. In accordance with this reconfiguration, the Proposed Action would include the following specific actions:

- Demolition or abandonment of infrastructure that must be moved from the center of the range
- Construction or relocation of new infrastructure including administrative facilities and training features
- Installation of new utilities
- Installation of new fencing and removal of existing fencing
- Non-renewal of the Melrose Range Expansion Area (known as the land gift area) agricultural subleases and commencement of specific training activities where training has not previously occurred
- Reintroduction of explosive munitions training in the western target area
- An increase or decrease of some explosive and non-explosive munitions currently expended on Melrose AFR.
- Non-explosive munitions training in the eastern target area.

Although the Proposed Action includes construction of new training features, the types of activities conducted at those features would not differ greatly or increase from activities that currently take place on Melrose AFR. However, the reintroduction of explosive munitions training in the western target area would be considered a change in current training and is analyzed as part of the Proposed Action.

Alternative 1. Under Alternative 1, the USAF would implement all projects described under the Proposed Action; however, some construction projects would be located in alternative locations or would be configured differently than under the Proposed Action. This alternative would allow flexibility in future years as individual projects are approved, funded, and implemented.

Proposed facility demolition or abandonment, utilities and fencing, training in the land gift area, reintroduction of explosive munitions in the western target area, and changes in munitions expenditures under Alternative 1 would remain the same as described under the Proposed Action. Additionally, proposed increases in the amount of impervious surfaces and land disturbances would remain the same as described under the Proposed Action.

Alternative 2. Under Alternative 2, the USAF would implement all actions described under the Proposed Action, except the USAF would not reintroduce explosive munitions into the western target area. Alternative 2 would include all other projects described under the Proposed Action, including demolition and construction, utilities and fencing, training in the land gift area, and changes in munitions expenditures. Under Alternative 2, the western target area would continue to be used for non-explosive munitions training

No Action Alternative. The No Action Alternative serves as a baseline against which the impacts of the Proposed Action and alternatives can be evaluated. Under the No Action Alternative, Melrose AFR would not be reconfigured to support more efficient training operations. Specifically, the following actions would not occur under the No Action Alternative:

- Demolition or abandonment of infrastructure in the center of the range
- Construction or relocation of new infrastructure including administrative facilities and training features
- Installation of new utilities and fencing
- Non-renewal of the land gift area agricultural subleases and commencement of specific training activities where training has not previously occurred
- Reintroduction of explosive munitions training in the western target area
- An increase or decrease of some explosive and non-explosive munitions currently expended on Melrose AFR.

However, some projects described under the Proposed Action have also been analyzed as part of the Proposed Action in other NEPA documentation. Under the No Action Alternative, these projects could still be implemented under the Proposed Action and analysis of other NEPA documents. The No Action Alternative would not meet the purpose of and need for the action.

Summary of Environmental Effects

The analysis of environmental effects focused on the following environmental resources: air quality, noise, geology and soils, water resources, biological resources, cultural resources, land use, hazardous materials and wastes, health and safety, socioeconomics and environmental justice, and infrastructure and utilities. A cumulative effects assessment was also conducted. Details of the environmental consequences can be found in the *Environmental Assessment (EA) for Utilization Enhancements at Melrose Air Force Range, New Mexico*, which is hereby incorporated by reference. The analysis in the EA for each of the environmental resource areas listed above identified negligible to moderate adverse impacts under the Proposed Action. Potential environmental effects are not expected to be significant.

Conclusion

Based on the description of the Proposed Action as set forth in the EA, all activities were found to comply with the criteria or standards of environmental quality and were coordinated with the appropriate Federal, state, and local agencies. The attached EA and this FONSI were made available to the public for a 30-day review period. Agencies were coordinated with throughout the EA development process, and their comments were incorporated into the analysis of potential environmental impacts performed as part of the EA.

Finding of No Significant Impact

Based on the information and analysis presented in the EA which was prepared in accordance with the requirements of the National Environmental Policy Act, the Council on Environmental Quality regulations, implementing regulations set forth in 32 Code of Federal Regulations 989 (*Environmental Impact Analysis Process*), as amended, and based on review of the public and agency comments submitted during the 30-day public comment period, I conclude that the environmental effects of implementing utilization enhancements at Melrose AFR are not significant, that preparation of an Environmental Impact Statement is unnecessary, and that a FONSI is appropriate.



BENJAMIN R. MAITRE, Colonel, USAF
Commander, 27th Special Operations Wing

26 JAN 2016

Date

Attachment: *Environmental Assessment (EA) for Utilization Enhancements at Melrose Air Force Range, New Mexico*

ABBREVIATIONS AND ACRONYMS

27 SOAOS/ RMO	27th Special Operations Air Operations Squadron/Range Management Office	CFR	Code of Federal Regulations
27 SOW	27th Special Operations Wing	CO	carbon monoxide
ACC	Air Combat Command	CO ₂	carbon dioxide
ADNL	A-Weighted Day Night Sound Level	CZ	Clear Zone
AFB	Air Force Base	dB	decibel
AFCEC	Air Force Civil Engineer Center	dBA	a-weighted decibel
AFI	Air Force Instruction	dBc	c-weighted decibel
AFOSH	Air Force Occupational and Environmental Safety, Fire Protection, and Health	DLQ	Deck Landing Qualification
AFPD	Air Force Policy Directive	DNL	Day Night Sound Level
AFR	Air Force Range	DOD	Department of Defense
AFSOC	Air Force Special Operations Command	DZ	drop zone
AGL	above ground level	EA	Environmental Assessment
AICUZ	Air Installation Compatible Use Zone	ECR	Electronic Combat Range
APZ	Accident Potential Zone	EIAP	Environmental Impact Analysis Process
AST	aboveground storage tank	EIS	Environmental Impact Statement
BCC	Birds of Conservation Concern	EO	Executive Order
BLM	Bureau of Land Management	EOD	Explosive Ordnance Disposal
BMP	best management practice	ESA	Endangered Species Act
BTPD	black-tailed prairie dog	ESQD	Explosive Safety Quantity Distance
CDNL	C-Weighted Day Night Sound Level	FAA	Federal Aviation Administration
CE	Civil Engineering	FONSI	Finding of No Significant Impact
CEQ	Council on Environmental Quality	ft ²	square foot/feet
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	GHG	greenhouse gas
		gpm	gallons per minute
		HLZ	helicopter landing zone
		ICRMP	Integrated Cultural Resources Management Plan
		JA	Staff Judge Advocate

Leq	Equivalent Sound Level	PPE	personal protective equipment
LF	linear feet		
LID	low impact development	ppm	parts per million
LPC	lesser prairie chicken	RCEC	Roosevelt County Electric Cooperative
MBTA	Migratory Bird Treaty Act	RCRA	Resource Conservation and Recovery Act
mg/m ³	milligrams per cubic meter	ROI	Region of Influence
Mini-MUTES	Miniature-Multiple Threat Emitter System	SAAQS	State Ambient Air Quality Standards
mm	millimeter	SDZ	surface danger zone
MOA	military operations area	SEL	Sound Exposure Level
MRAP	mine-resistant ambush protected vehicle	SHPO	State Historic Preservation Office
NAAQS	National Ambient Air Quality Standards	SO ₂	sulfur dioxide
NEPA	National Environmental Policy Act	SOCES	Special Operations Civil Engineer Squadron
NEW	net explosive weight	SOCOM	Special Operations Command
NHPA	National Historic Preservation Act	SOF	Special Operations Forces
NMED	New Mexico Environment Department	SUA	special use airspace
NO ₂	nitrogen dioxide	TCP	traditional cultural property
NO _x	nitrogen oxide	tpy	tons per year
NPDES	National Pollution Discharge Elimination System	µg/m ³	micrograms per cubic meter
NRHP	National Register of Historic Places	USACE	U.S. Army Corps of Engineers
NSA	Noise Sensitive Area	USAF	U.S. Air Force
O ₃	ozone	USCB	U.S. Census Bureau
Pb	Lead	USEPA	U.S. Environmental Protection Agency
PEF	Permanent Exercise Facility	USFWS	U.S. Fish and Wildlife Service
PM _{2.5}	particulate matter with an aerodynamic size less than or equal to 2.5 microns	UST	underground storage tank
PM ₁₀	particulate matter with an aerodynamic size less than or equal to 10 microns	UXO	unexploded ordnance
ppb	parts per billion	VOC	volatile organic compound
		WDZ	weapons danger zone

Cover Sheet
Final Environmental Assessment
for
Utilization Enhancements
at
Melrose Air Force Range, New Mexico

Responsible Agencies: U.S. Air Force; Air Force Civil Engineer Center; Air Force Special Operations Command; 27th Special Operations Wing; and Department of Defense.

Affected Location: Melrose Air Force Range, New Mexico.

Report Designation: Final Environmental Assessment (EA).

Abstract: This Environmental Assessment describes the U.S. Air Force's proposal to reconfigure Melrose Air Force Range to create more efficient and effective training capabilities and to enhance safety for range users and the public. Reconfiguration of the range would reduce congestion in the central portion of the range and allow for efficient scheduling of simultaneous training operations. The Proposed Action includes facility demolition or abandonment, construction, utilities and fencing installation, non-renewal of agricultural subleases, training operations, a reintroduction of explosive munitions to the western target area, and a change in munitions expenditures. Alternative 1 to the Proposed Action includes all elements of the Proposed Action, but proposes a different reconfiguration of the range. Alternative 2 to the Proposed Action includes all elements of the Proposed Action except the reintroduction of explosive munitions in one range.

The analysis in this EA considers the Proposed Action, Alternative 1, Alternative 2, and the No Action Alternative. The EA will aid in determining whether a Finding of No Significant Impact can be prepared or an Environmental Impact Statement is required.

Written inquiries regarding this document should be directed by mail to: Cannon Air Force Base at the attention of *Utilization Enhancements at Melrose Air Force Range*, 27 SOCES/CEIE, 506 N Air Commando Way, Cannon AFB, NM 88103, or by email at UDG_27SOCES_EnvironmentalElement@us.af.mil.

Final

**ENVIRONMENTAL ASSESSMENT
FOR
UTILIZATION ENHANCEMENTS
AT
MELROSE AIR FORCE RANGE, NEW MEXICO**

**AIR FORCE CIVIL ENGINEER CENTER
2261 Hughes Avenue, Suite 155
Joint Base San Antonio-Lackland, Texas 78236**

JANUARY 2016

Table of Contents

Acronyms and Abbreviations	Inside Front and Back Covers
1. Purpose of and Need for the Proposed Action	1-1
1.1 INTRODUCTION.....	1-1
1.2 ORGANIZATION OF THIS DOCUMENT	1-1
1.3 MELROSE AFR AND CANNON AFB HISTORY	1-1
1.4 PROJECT LOCATION DESCRIPTION	1-3
1.4.1 Current Range Operations.....	1-3
1.4.2 Melrose AFR Features.....	1-3
1.4.3 Range Management	1-7
1.5 MELROSE AFR VISION	1-8
1.6 PURPOSE AND NEED	1-8
1.7 NEPA COMPLIANCE REQUIREMENTS	1-8
1.8 INTERGOVERNMENTAL AND STAKEHOLDER COORDINATION.....	1-9
2. Description of the Proposed Action and Alternatives	2-1
2.1 PROPOSED ACTION	2-1
2.1.1 Demolition and Construction.....	2-4
2.1.2 Utilities and Fencing.....	2-9
2.1.3 Land Gift Area.....	2-9
2.1.4 Western Target Area.....	2-14
2.1.5 Munitions Expenditures.....	2-14
2.1.6 Elements of the Proposed Action Dismissed from Further Environmental Analysis.....	2-16
2.2 SELECTION OF ALTERNATIVES TO THE PROPOSED ACTION	2-18
2.3 ALTERNATIVES CARRIED FORWARD FOR ANALYSIS	2-19
2.3.1 Alternative 1 – Alternate Range Configuration	2-19
2.3.2 Alternative 2 – Non-explosive Western Target Area.....	2-20
2.4 NO ACTION ALTERNATIVE	2-20
2.5 ALTERNATIVES CONSIDERED BUT ELIMINATED FROM DETAILED ANALYSIS	2-22
2.5.1 Renovate Existing Facilities	2-22
2.5.2 Extend Sublease of Land Gift Area	2-22
2.6 IDENTIFICATION OF THE PREFERRED ALTERNATIVE	2-22
3. Affected Environment and Environmental Consequences	3-1
3.1 AIR QUALITY	3-1
3.1.1 Definition of the Resource.....	3-1
3.1.2 Affected Environment.....	3-2
3.1.3 Environmental Consequences	3-2

3.2	NOISE	3-7
3.2.1	Definition of the Resource.....	3-7
3.2.2	Affected Environment.....	3-8
3.2.3	Environmental Consequences	3-10
3.3	GEOLOGY AND SOILS	3-15
3.3.1	Definition of the Resource.....	3-15
3.3.2	Affected Environment.....	3-16
3.3.3	Environmental Consequences	3-18
3.4	WATER RESOURCES	3-20
3.4.1	Definition of the Resource.....	3-20
3.4.2	Affected Environment.....	3-21
3.4.3	Environmental Consequences	3-22
3.5	BIOLOGICAL RESOURCES	3-26
3.5.1	Definition of the Resource.....	3-26
3.5.2	Affected Environment.....	3-26
3.5.3	Environmental Consequences	3-35
3.6	CULTURAL RESOURCES.....	3-40
3.6.1	Definition of the Resource.....	3-40
3.6.2	Affected Environment.....	3-41
3.6.3	Environmental Consequences	3-42
3.7	LAND USE.....	3-44
3.7.1	Definition of the Resource.....	3-44
3.7.2	Affected Environment.....	3-44
3.7.3	Environmental Consequences	3-45
3.8	HAZARDOUS MATERIALS AND WASTES	3-48
3.8.1	Definition of the Resource.....	3-48
3.8.2	Affected Environment.....	3-48
3.8.3	Environmental Consequences	3-49
3.9	HEALTH AND SAFETY.....	3-52
3.9.1	Definition of the Resource.....	3-52
3.9.2	Affected Environment.....	3-52
3.9.3	Environmental Consequences	3-53
3.10	SOCIOECONOMICS AND ENVIRONMENTAL JUSTICE	3-55
3.10.1	Definition of the Resource.....	3-55
3.10.2	Affected Environment.....	3-55
3.10.3	Environmental Consequences	3-59
3.11	INFRASTRUCTURE AND UTILITIES.....	3-61
3.11.1	Definition of Resource.....	3-61

3.11.2	Affected Environment.....	3-61
3.11.3	Environmental Consequences	3-64
4.	Cumulative Impacts.....	4-1
4.1	CUMULATIVE IMPACTS	4-1
4.1.1	Projects Considered for Potential Cumulative Effects	4-1
4.1.2	Cumulative Impacts on Resources Areas under the Proposed Action.....	4-3
4.1.3	Cumulative Impacts on Resource Areas under the No Action Alternative	4-3
4.2	UNAVOIDABLE ADVERSE IMPACTS	4-3
4.3	COMPATIBILITY OF PROPOSED ACTION WITH THE OBJECTIVES OF FEDERAL, REGIONAL, STATE, AND LOCAL LAND USE PLANS, POLICIES, AND CONTROLS	4-4
4.4	RELATIONSHIP BETWEEN SHORT-TERM USES OF MAN’S ENVIRONMENT AND MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY	4-4
4.5	IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES.....	4-4
5.	List of Preparers.....	5-1
6.	References.....	6-1

Appendices

- A: Stakeholder and Government Distribution List**
- B: Existing Munitions Expenditures**

Figures

1-1.	Melrose AFR	1-2
1-2.	Current Melrose AFR Configuration.....	1-5
2-1.	Facilities Proposed for Demolition or Abandonment on Melrose AFR.....	2-2
2-2.	Facilities Proposed for Construction on Melrose AFR.....	2-3
2-3.	Utilities and Fencing Proposed within the Range Boundary	2-11
2-4.	Proposed Land Gift Area Training	2-12
2-5.	Western Target Area Location.....	2-15
2-6.	Melrose AFR Proposed Configuration under Alternative 1	2-21
3-1.	Noise Contours for Proposed Landing Areas.....	3-13
3-2.	Water Resources at Melrose AFR and the Land Gift Area.....	3-23
3-3.	Land Cover Types at Melrose AFR and the Land Gift Area	3-27
3-4.	Protected Species Observations and Habitat on Melrose AFR and the Land Gift Area	3-37
3-5.	Unemployment Data among Socioeconomic Spatial Levels	3-58

Tables

1-1.	Current Range Activities	1-4
2-1.	Proposed Demolition and Abandonment Projects.....	2-4
2-2.	Proposed Construction Zones and Projects.....	2-5
2-3.	Proposed Construction and Demolition Summary	2-9
2-4.	Proposed Utilities and Fencing Projects	2-10
2-5.	Proposed HLZ and DLQ Pad Training Summary	2-13
2-6.	Proposed Munitions Expenditures and NEW	2-16
2-7.	Elements of the Proposed Action Dismissed from Further Environmental Analysis ...	2-17
2-8.	Project Location Changes under Alternative 1	2-20
3-1.	National and State Ambient Air Quality Standards.....	3-3
3-2.	Summary of Annual Demolition and Construction Air Emissions and Applicable Significance Criteria.....	3-5
3-3.	Annual Air Emissions from the Use of the Off-road Driving Course	3-6
3-4.	Net Change in Air Emissions from the Proposed Changes in Munitions Expenditures.	3-6
3-5.	Common Sounds and Their Levels.....	3-7
3-6.	Recommended Noise Limits for Land Use Planning	3-8
3-7.	Estimated Background Sound Levels (dBA)	3-10
3-8.	Noise Levels Associated with Outdoor Construction.....	3-10
3-9.	Noise Levels Associated with Individual CV-22 Overflights.....	3-12
3-10.	Sound Levels for Vehicles Using the Off-Road Driving Course.....	3-12
3-11.	Noise Levels Associated with Individual C-130 Overflights	3-14
3-12.	Potentially Occurring Endangered, Threatened, Species of Concern, State Sensitive Taxa, and Candidate Species in Curry and Roosevelt Counties, New Mexico.....	3-30
3-13.	Summary of Vegetation Impacts Associated with the Proposed Construction on Melrose AFR and the Land Gift Area.....	3-35
3-16.	Population Data for Spatial Levels in 2000, 2010, and 2013.....	3-56
3-17.	Vacant Housing Units in the ROI, New Mexico, and the United States (2011–2013) .	3-56
3-18.	Employment Characteristics by Industry for 2010 to 2013	3-57
3-19.	Race, Ethnicity, and Poverty Characteristics in the United States, New Mexico, and Curry and Roosevelt County, New Mexico, for 2011 to 2013.....	3-58
3-20.	Melrose AFR Facility Infrastructure.....	3-61
3-21.	Fuel-Containing ASTs at Melrose AFR	3-63

1. Purpose of and Need for the Proposed Action

1.1 Introduction

This Environmental Assessment (EA) has been prepared for the U.S. Air Force's (USAF) proposed actions for utilization enhancements at Melrose Air Force Range (AFR), New Mexico. This EA is developed in compliance with the National Environmental Policy Act (NEPA); the regulations implementing NEPA (Title 40 Code of Federal Regulations [CFR] Parts 1500–1508); Department of Defense (DOD) Directive 6050.1, *Environmental Considerations in DOD Actions*; and the USAF-implementing regulation for NEPA, the *Environmental Impact Analysis Process* (EIAP), Air Force Instruction (AFI) 32-7061. AFI 32-7061 adopts the regulations implementing the EIAP (32 CFR Part 989, as amended), as the controlling document for the EIAP.

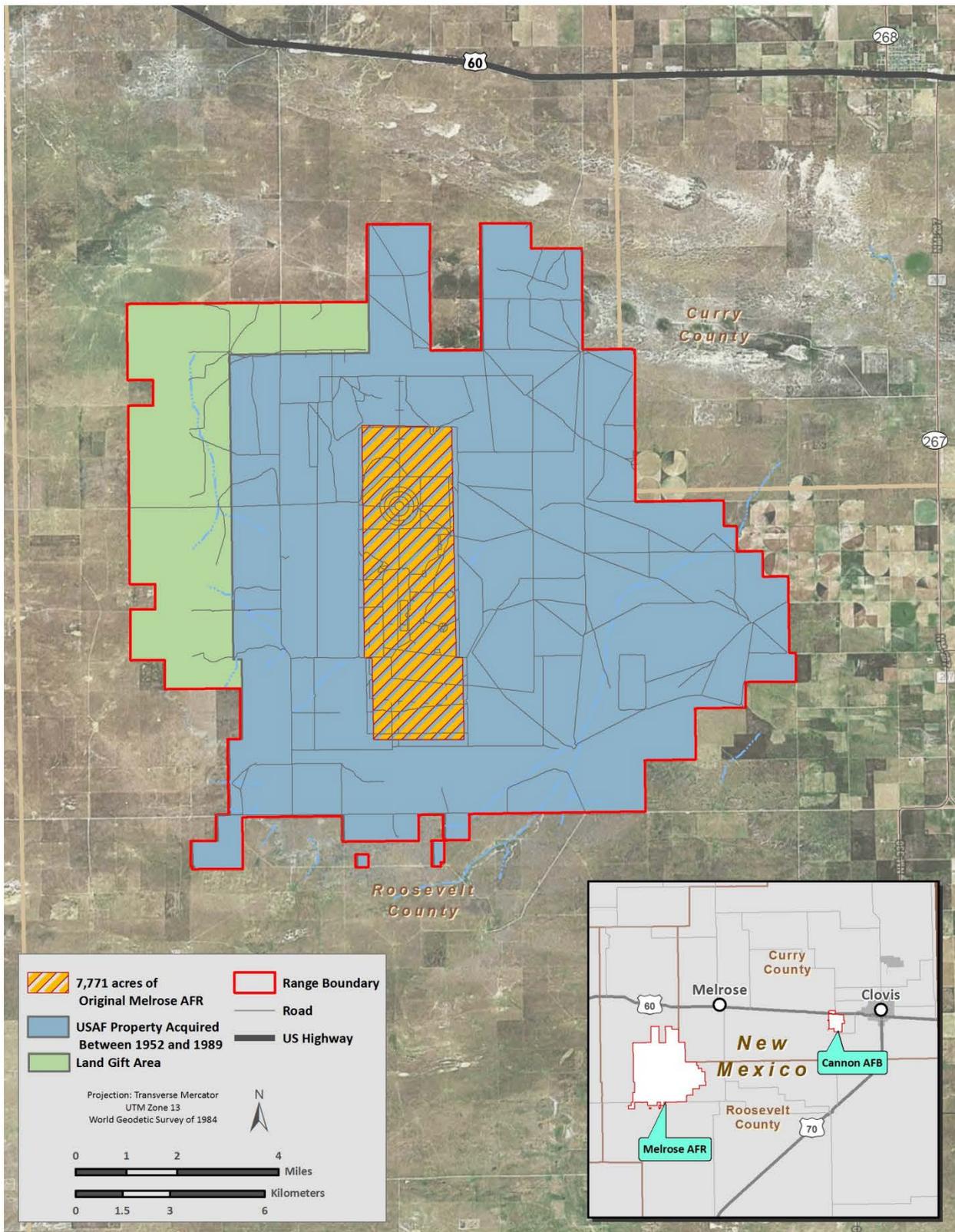
1.2 Organization of this Document

This EA is organized into five sections, plus appendices. **Section 1** of the EA provides historical and background information, the project location, and the purpose of and need for the Proposed Action. **Section 2** contains a description of the Proposed Action and alternatives, including the No Action Alternative. **Section 3** describes the existing conditions of the potentially affected environment and identifies the environmental consequences of implementing all reasonable alternatives. **Section 4** includes an analysis of the potential cumulative and other impacts. **Section 5** provides the names of those who prepared the EA. **Section 6** lists the references used in the preparation of this document. **Appendix A** includes the stakeholder and public involvement distribution list for the EA. **Appendix B** provides a list of existing Melrose AFR munitions expenditures. The EA presents an analysis of the potential environmental consequences of implementing the Proposed Action, alternatives, and the No Action Alternative.

1.3 Melrose AFR and Cannon AFB History

Melrose AFR is currently the primary air-to-ground training range used by the 27th Special Operations Wing (27 SOW), based at nearby Cannon Air Force Base (AFB), New Mexico. In 1952, the USAF acquired the original 7,771 acres of the range which was managed by the Tactical Air Command (see **Figure 1-1**). The original range acreage was used for aerial bombing and gunnery training with explosive munitions, and has been used for non-explosive munitions training in the recent past.

The USAF acquired an additional 52,239 acres of the range between 1968 and 1989 through the Military Construction Authorization Act of 1967 (Public Law 89-568), bringing the total acreage to 60,010 (27 SOW 2011). The range was subsequently managed by the Air Combat Command (ACC) to support tactical aircraft flying primarily daylight missions (Cannon AFB 2009). Cannon AFB and Melrose AFR were transferred from ACC to Air Force Special Operations Command (AFSOC) on October 1, 2007, as directed by the Secretary of Defense in May 2006. Since the transfer of Melrose AFR to AFSOC, the range has operated in support of Special Operations Forces (SOF) training activities while continuing to support the Combat Air Forces (27 SOW 2011).



Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Figure 1-1. Melrose AFR

In 2008, the State of New Mexico proposed the Melrose Range Expansion Area for acquisition by the USAF and administration by Cannon AFB. This acquisition went through an approval process between the state and the USAF known as the “2011 Lease from the New Mexico State Land Office.” The Melrose Range Expansion Area (known as the land gift area) is adjacent to Melrose AFR and covers 10,968 acres of public land previously used primarily for agricultural activities (see **Figure 1-1**). Melrose AFR, including the land gift area, is 70,978 acres.

Currently, the Melrose land gift area is administered by Cannon AFB and is not actively used for training. The land gift area is subleased to ranchers or ranching companies with liability and hold-harmless clauses. The subleases allow access by the USAF for inspection and inventory, and when otherwise deemed necessary for the protection of government interests. For additional information related to the subleases and the Proposed Action, please see **Section 2.1.3**.

1.4 Project Location Description

Melrose AFR is located approximately 25 miles west of Cannon AFB in Roosevelt and Curry counties of east-central New Mexico, as shown in the inset of **Figure 1-1**. The general region surrounding Melrose AFR is rural and primarily used for agriculture and ranching. Melrose AFR consists of 70,978 acres, including the 10,968-acre land gift area described in **Section 1.3**. Melrose AFR is primarily oriented north to south on relatively flat land composed of mixed-grass prairie. The range is bounded on two sides by a mesa reaching an elevation approximately 200 feet above the range.

1.4.1 Current Range Operations

Melrose AFR currently provides air and ground training capabilities and supporting range facilities. Ground and air training-related features include ground training areas, landing zones, helicopter landing zones (HLZs) and drop zones (DZs), a 10,600-acre impact area, an electronic combat range, and special use airspace (SUA). Training on Melrose AFR creates weapons danger zones (WDZs) and surface danger zones (SDZs) over the range surface. Supporting facilities are located in the Range Support Complex. Range features are more thoroughly described in **Section 1.4.2**.

Table 1-1 provides descriptions for some, but not all, specific training activities currently occurring on Melrose AFR.

1.4.2 Melrose AFR Features

1.4.2.1 GROUND TRAINING AREAS

Ground training areas are classified as training areas or maneuver areas. Ground training may occur within the Melrose AFR impact area as specified by the 27th Special Operations Air Operations Squadron/Range Management Office (27 SOAOS/RMO) range planners. The training areas contain features such as military operations in urban terrain sites, vehicle hulks, and weapons ranges. Maneuver areas are larger than training areas and are configured for maneuver or overland navigation. Ground training activities within maneuver and training areas include movements by troops on foot and in vehicles, and small arms firing.

Table 1-1. Current Range Activities

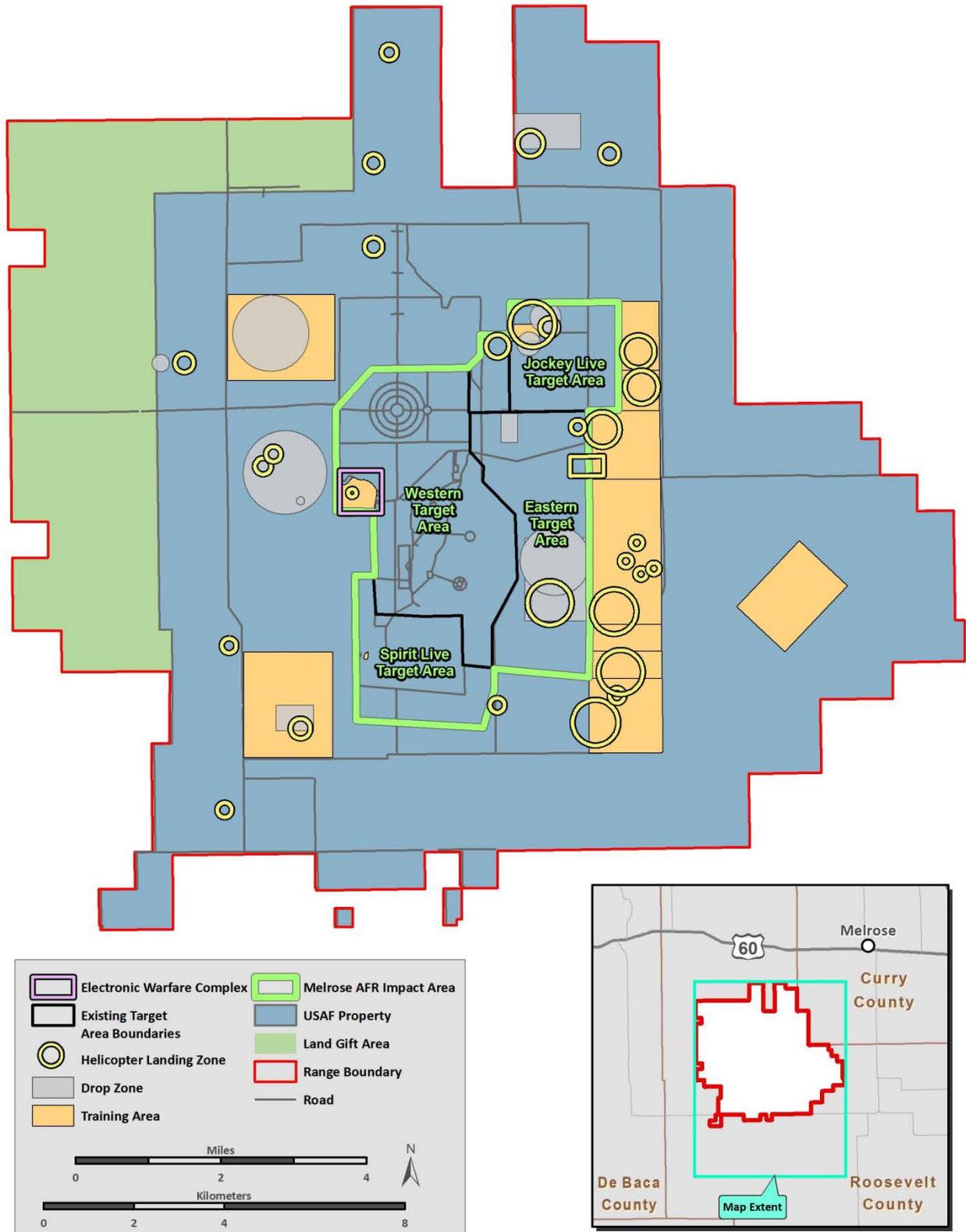
Action	Description
Direct fire explosive munitions training	Firing weapons and ammunition that explode, either from weapons systems on the ground or from aircraft sighted directly on a target. Direct fire explosive munitions training does not include launch of explosive bombs, which are dropped from aircraft and may or may not be sighted to a target. Direct fire of explosive munitions only occurs into designated target areas.
Joint exercises	Training exercises between multiple services and units. Involves coordinated actions between ground (foot and vehicle) and air assets.
Guided and unguided inert aerial bombardment	Launch of non-explosive bombs from aircraft.
Aerial strafing	Attack on ground features by aircraft flying at a low altitude.
Close air support	Actions by aircraft on targets located in close proximity to ground troops. Requires close coordination of fire and movement between aircraft and ground units.
Survival, evasion, rescue, and escape (known as SERE)	Coordinated and individual maneuvers on foot including land navigation and communication.
Intelligence, surveillance, and reconnaissance	Coordinated acquisition and processing of information and movements (ground and air) of hostile troops.
Electronic warfare	Interfering, or preventing interference, with electronic signals emitted from aircraft and munitions.
Small arms and heavy weapons employment	Firing of munitions capable of being carried and those mounted on supporting equipment including vehicles and aircraft. Small arms munitions are non-explosive and do not have to be fired into an impact area. Heavy weapons can be explosive or non-explosive.
Urban warfare	Training within and around facilities representing urban environments.
Counter improvised explosive device	Disarming non-explosive munitions that resemble and are designed as improvised explosive devices.
HLZ, LZ, and DZ operations	Deployment of personnel and cargo from hovering aircraft and aircraft that have landed.

Ground training on Melrose AFR is conducted by the USAF and visiting personnel from the U.S. Army, Navy, and Marine Corps. The 27th Security Forces Squadron uses a small arms range on Melrose AFR for weapons systems that cannot be fired on Cannon AFB. The small arms range is also used when the primary firing range on Cannon AFB is unavailable. Additionally, organizations on Cannon AFB with deployment commitments routinely train on Melrose AFR because realistic ground combat scenarios can be created.

Ground training occurs across Melrose AFR within the maneuver and training areas identified in **Figure 1-2**.

1.4.2.2 HLZS AND DZS

HLZs and DZs are located within ground training areas so air and ground training operations can be integrated, as required. DZs are used by fixed wing (i.e., airplanes), tiltrotor (e.g., CV-22 Osprey), and rotary wing (i.e., helicopters) aircraft. HLZs are only used by tiltrotor and rotary wing aircraft. Both HLZs and DZs support aircraft training including approaches, landings, departures, and aerial delivery of cargo and personnel. HLZs and DZs on Melrose AFR are shown in **Figure 1-2**.



Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Figure 1-2. Current Melrose AFR Configuration

1.4.2.3 IMPACT AREAS

The Melrose AFR impact area is located in the center of the range. The 10,600-acre impact area contains two live target areas for explosive munitions (i.e., Jockey and Spirit), non-explosive practice munitions, manned sites, small arms ranges, and fire breaks.

1.4.2.4 ELECTRONIC COMBAT RANGE

The Melrose Electronic Combat Range (ECR) is primarily located on Melrose AFR and is comprised of a variety of specialized electronic combat systems. The ECR is used to simulate electronic threats to aircraft and munitions so units can train to disarm or avoid these threats. The ECR includes a scoring system to provide feedback. Electronic systems located on Melrose AFR do not emit signals beyond the Melrose AFR boundary or SUA. **Figure 1-2** provides the location of the main control facility for the ECR, known as the Electronic Warfare Complex.

1.4.2.5 SUA

SUA is defined airspace where aircraft activities are confined because of their nature. SUA can include limitations put on aircraft operations not within the defined activities of the SUA. SUA above and surrounding Melrose AFR includes restricted areas (i.e., R-5104A, R-5104B, and R-5105), military operations areas (MOAs) (i.e., Pecos, Taiban, Mount Dora, and Bronco), and military training routes. SUAs associated with Melrose AFR supports aircraft training including approaches, departures, low-level flying activities, and air-to-ground explosive and non-explosive munitions delivery (Cannon AFB 2009).

1.4.2.6 SDZS AND WDZS

SDZs and WDZs are computer-generated boundaries that identify the area within which munitions and associated debris would be contained after firing. SDZs are three-dimensional and include the ground and air associated with ground-based munitions firing. WDZs are three-dimensional and encompass the ground and airspace associated with air-to-ground munitions firing. The size and configuration of SDZs and WDZs depend on the weapons system, training requirements, range configuration, location, and environmental conditions. SDZs and WDZs represent the minimum safety requirements designed for explosive munitions training on DOD ranges.

USAF regulations require access to and use of all lands within the composite WDZs and SDZs be restricted to ensure the safety of personnel, structures, and the public (USAF 2007a). Because only mission-essential personnel are allowed to be present in an SDZ or WDZ during munitions training, land uses contained in these areas are severely limited during weapons operation. SDZs and WDZs are not shown in a figure in this document because the generation of SDZs and WDZs is variable depending on the weapons system and location on Melrose AFR.

1.4.2.7 RANGE SUPPORT COMPLEX

Approximately 11 acres of Melrose AFR are used for the Range Support Complex. Functions contained in the Range Support Complex include training supervision and surveillance, emergency fire services, range communications, equipment and vehicle maintenance, target construction, and other administrative functions. The Range Support Complex is located near

the center of the range in the northern portion of both the western target area and eastern target area shown in **Figure 1-2**. WDZs and SDZs do not overlay the Range Support Complex. For traffic entering and exiting the Range Support Complex, operations are managed to ensure ground traffic is de-conflicted from the employment of munitions or other tactical events.

1.4.3 Range Management

1.4.3.1 SCHEDULING

Use of Melrose AFR, including the ground training areas, HLZs and DZs, target areas, and ECR, is scheduled through an AFI-directed scheduling tool. Range scheduling is managed by the Scheduling Authority, 27 SOAOS/RMO. Users from 27 SOW typically have priority in the scheduling process. A scheduling system is built around a cascading priority scheme that factors in contingency preparation, directed exercises, student training, service affiliation, and other specific requirements. All off-station users (those not stationed at Cannon AFB) are scheduled on a first-come, first-served basis according to the priority level of the event (Cannon AFB 2014). Due to the current design and configuration of Melrose AFR, range management and scheduling requires consideration of training event compatibility and congestion.

1.4.3.2 CONFIGURATION

The use of certain ground training and impact areas on Melrose AFR frequently precludes the simultaneous use of other features due to safety constraints. As shown in **Figure 1-2**, ground training areas on Melrose AFR may occur within the impact area. This configuration does not consistently allow simultaneous training events involving explosive munitions fire and ground movement. Simultaneous events are often constrained due to movement restrictions within SDZs and WDZs, and general congestion considerations. Additionally, the Range Support Complex is located in the center of Melrose AFR in close proximity to the danger area, which is the composite of all weapons safety footprints (e.g., SDZs and WDZs) for the range. This location constrains training capabilities because training events have to be located and scheduled to prevent risk to personnel within the Range Support Complex. Lastly, some HLZ and DZ locations are within the center of the range. Aircraft operations involving HLZs and DZs preclude use of explosive munitions on the ground when aircraft operations would fall within SDZs. Similarly, aircraft participating in explosive munitions training precludes all ground training within the WDZ, except for participating mission-essential personnel. As such, employing explosive munitions into the impact area precludes use of training and operations within the WDZs and SDZs, except by participating mission-essential personnel. Therefore, the current configuration of the range does not allow for efficient range training and operation.

1.4.3.3 RANGE CLEARANCE AND MAINTENANCE

The 27 SOAOS/RMO ensures target areas meet mission requirements. In accordance with AFI 13-212, *Range Planning and Operations*, range management includes clearance of unexploded ordnance (UXO) from the surface of target areas on a regular basis by explosive ordnance disposal (EOD) technicians. The range operating support contractor performs range and target maintenance.

1.5 Melrose AFR Vision

The Melrose AFR vision is “Department of Defense’s premier Special Operations training complex, relevant and sustainable, focusing on AFSOC core missions that support joint, integrated SOF missions, and DOD air and ground training” (Cannon AFB 2014). As described in **Section 1.4.3.2**, the current design of Melrose AFR precludes the use of certain training features due to safety constraints and does not allow for efficient operations of all training features. The current range design is a remnant of the former ACC mission, and there is a need to reconfigure the range so air-to-ground and ground-to-ground training can occur more effectively. As a range heavily used by AFSOC, U.S. Special Operations Command (SOCOM), and other DOD entities, Melrose AFR must be able to provide training capabilities that support current missions and provide flexibility for new missions and units. The vision statement for Melrose AFR embodies the maximum utility of the innate qualities of the range for current and future missions.

1.6 Purpose and Need

The purpose of the Proposed Action is to enhance training capabilities at Melrose AFR to support training requirements while creating a safer environment for trainees and the public. The Proposed Action is needed because the current range configuration does not allow for multiple, simultaneous and independent training actions to be performed safely and effectively, resulting in lowered overall training effectiveness.

The Proposed Action is also needed to support AFSOC training capabilities at Melrose AFR for current missions, to provide flexibility for future missions and units, and to improve efficiency of infrastructure and training venues on the range. In addition to AFSOC training, Melrose AFR provides training support to other users from SOCOM and DOD, as available (27 SOW 2011). The Proposed Action would create more efficient and effective training opportunities for the units that use Melrose AFR.

The purpose and need of the Proposed Action is focused on enhancing training capabilities at Melrose AFR because it is the primary air-to-ground training range used by the 27 SOW, which is based at nearby Cannon AFB. Meeting 27 SOW training requirements at a range other than Melrose AFR would be difficult due to costs and logistics of transporting personnel, equipment, and aircraft to other training locations within the United States. Additionally, because Melrose AFR is managed by Cannon AFB, the 27 SOW has scheduling authority to train at the range. AFSOC and 27 SOW training activities are not the scheduling priority at other DOD ranges.

1.7 NEPA Compliance Requirements

NEPA is a Federal law requiring the analysis of potential environmental impacts associated with proposed Federal actions before the actions are taken. The intent of NEPA is to make decisions informed by potential environmental consequences and take actions to protect, restore, or enhance the environment. NEPA established the Council on Environmental Quality (CEQ), which is responsible for ensuring Federal agency compliance with NEPA. CEQ NEPA regulations specify an EA be prepared to determine whether to prepare a Finding of No Significant Impact (FONSI) or the preparation of an Environmental Impact Statement (EIS) is

necessary. The EA can aid in an agency's compliance with NEPA when an EIS is unnecessary and facilitate preparation of an EIS when one is required. The CEQ NEPA regulations mandate all Federal agencies to use a prescribed approach to environmental impact analysis. The approach includes evaluation of potential environmental consequences associated with a Proposed Action and considers alternative courses of action.

Air Force Policy Directive (AFPD) 32-70, *Environmental Quality*, states the USAF will comply with applicable Federal, state, and local environmental laws and regulations, including NEPA. The USAF's implementing regulation for NEPA is EIAP, AFI 32-7061. This EA was developed in compliance with the EIAP. If significant impacts are predicted, the USAF would decide whether to conduct mitigation to reduce impacts below the level of significance, prepare an EIS, or abandon the Proposed Action.

1.8 Intergovernmental and Stakeholder Coordination

NEPA requirements help ensure environmental information is made available to the public during the decision-making process and prior to actions being taken. A premise of NEPA is that the quality of Federal decisions will be enhanced if the public is involved in the planning process. The Intergovernmental Coordination Act and Executive Order (EO) 12372, *Intergovernmental Review of Federal Programs*, require Federal agencies to cooperate with and consider territorial and local views when implementing a Federal proposal. In compliance with NEPA, Cannon AFB notified relevant agencies, stakeholders, and federally recognized tribes about the Proposed Action and alternatives (see **Appendix A** for stakeholder and public involvement distribution list). The notification process included distribution of the Final Description of the Proposed Action and Alternatives and the Draft EA to parties listed in **Appendix A**. The USAF also provided a Notice of Availability for the Draft EA in the Clovis News Journal and the Portales News Tribune, which initiated a 30-day public review period. These notification processes provided the public, relevant agencies, stakeholders, and federally recognized tribes the opportunity to cooperate with Cannon AFB and provide comments on the Proposed Action and potential environmental impacts.

THIS PAGE INTENTIONALLY LEFT BLANK

2. Description of the Proposed Action and Alternatives

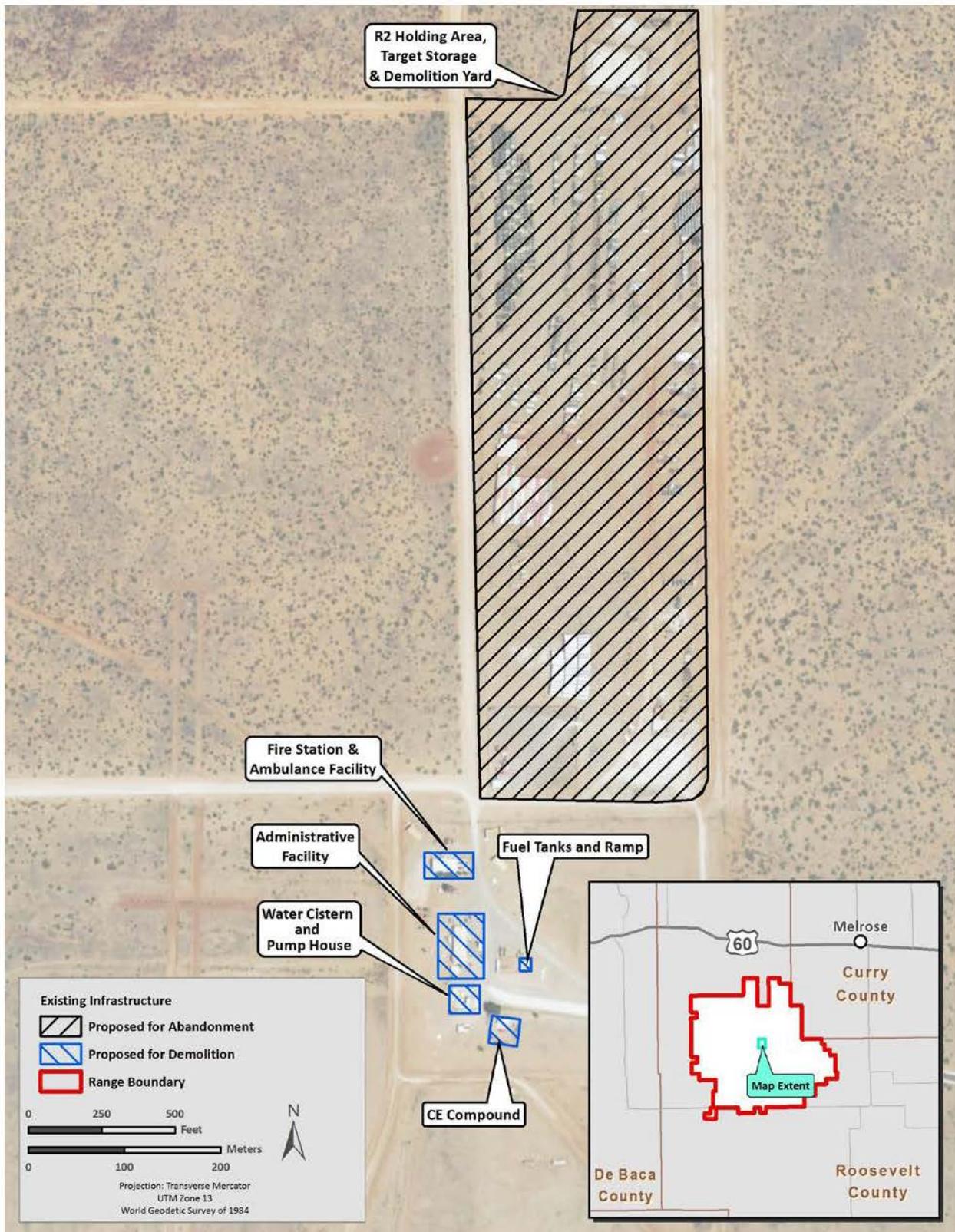
This section provides detailed information about the Proposed Action and alternatives considered, including the No Action Alternative. The NEPA process evaluates potential environmental consequences associated with a Proposed Action and considers alternative courses of action. Reasonable alternatives must satisfy the purpose of and need for the Proposed Action, as defined in **Section 1.6**. In addition, CEQ NEPA regulations specify the inclusion of a No Action Alternative against which potential effects can be compared. While the No Action Alternative would not satisfy the purpose of or need for the Proposed Action, it is analyzed in accordance with the CEQ regulations.

2.1 Proposed Action

The Proposed Action is to reconfigure Melrose AFR as shown in **Figures 2-1** and **2-2**. Reconfiguration would include removing the Range Support Complex from the center of the range. New operations support and training capabilities would be constructed on the perimeter of the impact area. Reconfiguration of the range would reduce range congestion and allow for efficient scheduling of simultaneous training operations. Reconfiguration would allow the collocation of multiple SDZs and WZDs in a centralized area so munitions training could occur without disrupting other range operations. In accordance with this reconfiguration, the Proposed Action would include the following specific actions:

- Demolition or abandonment of infrastructure that must be moved from the center of the range
- Construction or relocation of new infrastructure including administrative facilities and training features
- Installation of new utilities
- Installation of new fencing and removal of existing fencing
- Non-renewal of the land gift area agricultural subleases and commencement of specific training activities where training has not previously occurred
- Reintroduction of explosive munitions training in the western target area
- An increase or decrease of some explosive and non-explosive munitions currently expended on Melrose AFR.
- Non-explosive munitions training in the eastern target area. However, this action is dismissed from environmental analysis in this document as described in **Section 2.1.6.1**.

Although the Proposed Action includes construction of new training features, the types of activities conducted at those features would not differ greatly or increase from activities that currently take place on Melrose AFR described in **Section 1.3**. Continuation of current range activities at new training features would include the activities described in **Table 1-1**. However, the reintroduction of explosive munitions training in the western target area would be considered a change in current training and will be analyzed as part of the Proposed Action. This document



Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Figure 2-1. Facilities Proposed for Demolition or Abandonment on Melrose AFR

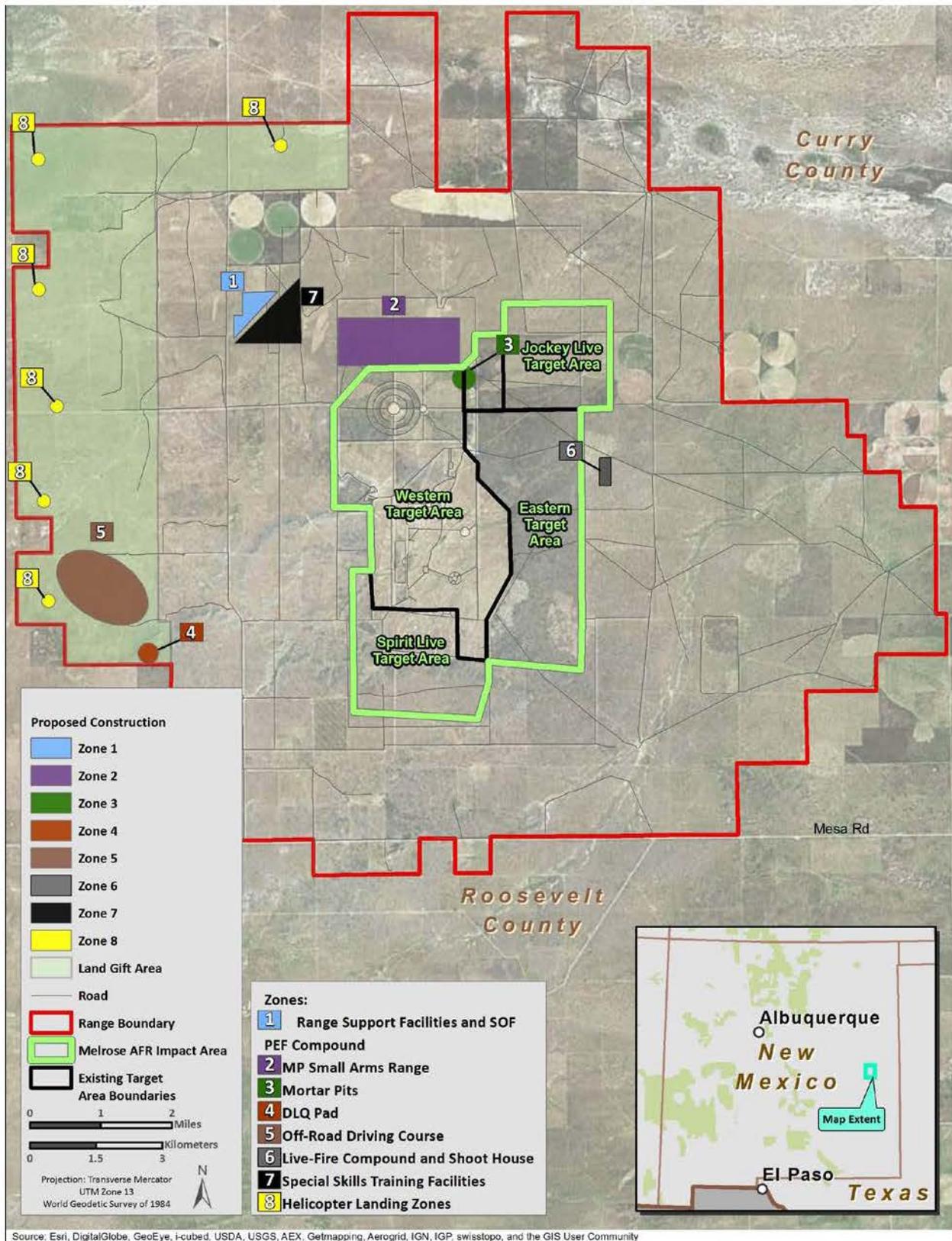


Figure 2-2. Facilities Proposed for Construction on Melrose AFR

accounts for ground maneuvers at new training features by analyzing an area of disturbance for each feature. There would be no explosive munitions expenditures in the land gift area, consistent with current use. Details regarding each element of the Proposed Action are provided in the following paragraphs.

2.1.1 Demolition and Construction

Demolition. To remove facilities from the center of the range, approximately 69,880 square feet (ft²) of facilities would be demolished on Melrose AFR. Additional facilities would be abandoned and reconstructed in other locations on the range as described in the following **Construction** section. **Table 2-1** provides details on each facility proposed for demolition or abandonment and relocation, and **Figure 2-1** provides the current locations of these facilities.

Table 2-1. Proposed Demolition and Abandonment Projects

Action	Timeline	Decrease in Impervious Surfaces	Area of Disturbance
Demolish the administrative facility.	2018–2020	34,285 ft ²	0.79 acre
Demolish the fire station and ambulance facility	2018–2020	14,777 ft ²	0.34 acre
Demolish CE compound.	2018–2020	9,157 ft ²	0.21 acres
Demolish water cistern and pumphouse	2018–2020	9,874 ft ²	0.23
Relocate fuel tanks. Demolish concrete pad will be left in place; therefore, there would be no decrease in impervious surfaces.	2016	1,787 ft ²	0.04 acres
Abandon the holding area, target storage, and demolition yard. The concrete pad will be left in place, and the fence will be moved. Therefore, there would be no decrease in impervious surfaces.	2018–2020	0 ft ²	0 acres
Total decrease in impervious surfaces		69,880 ft²	
Total area of disturbance			1.61 acres

Construction. Individual projects proposed for construction have a stand-alone utility to improve training operations on Melrose AFR but also contribute to the overall purpose of and need for the Proposed Action. While each project would increase the effectiveness of Melrose AFR if implemented alone, full implementation of each proposed project would result in a greater benefit to range operations. The EA addresses all potential impacts individually and collectively to the extent feasible given the independent nature of the various projects of the Proposed Action.

Individual projects proposed for construction on Melrose AFR are grouped into “zones” in accordance with facility similarity and location on the range. It is assumed individual projects could be constructed anywhere within their identified zone, and therefore the entire zone would be an area of disturbance. **Table 2-2** is organized by zone and presents the total area of disturbance for each zone, a description of each construction project, approximate facility footprint (i.e., impervious surfaces), and proposed construction timeline. Zones and projects presented in **Table 2-2** are shown in **Figure 2-2**.