

**DRAFT FINDING OF NO SIGNIFICANT IMPACT**  
**DRAFT PROGRAMMATIC ENVIRONMENTAL ASSESSMENT FOR NEW AND CONTINUED**  
**MILITARY OPERATIONS AND ACTIVITIES AT FORT HUACHUCA, ARIZONA**  
**June 2024**

**Introduction:** This Programmatic Environmental Assessment (PEA) was prepared to analyze the potential for significant environmental impacts associated with new and continued military operations at Fort Huachuca, Arizona. The PEA provides a programmatic evaluation of potential impacts that is broad enough in scope to assist in the evaluation of future unknown actions that are comparable to those projects and activities that are currently identified and evaluated herein.

The PEA was prepared in accordance with the National Environmental Policy Act (NEPA) (Title 42 U.S. Code Section 4321, et seq.), Council on Environmental Quality (CEQ) regulations (Title 40 Code of Federal Regulations [CFR] Parts 1500-1508), and *Environmental Analysis of Army Actions* (32 CFR 651). This Finding of No Significant Impact is a document that briefly states why the Proposed Action will not significantly affect the environment and that an Environmental Impact Statement will not be prepared.

**Description of the Proposed Action:** The Proposed Action includes new and continuing military operations and activities programmed to occur at or near Fort Huachuca. The operations and activities include actions within Fort Huachuca training areas (TAs) and ranges, air operations associated with LAAF, recreational opportunities, resource management, realty actions, and programmed facilities development projects that are master planned to continue to meet mission objectives.

Missions at Fort Huachuca are associated with developing and testing Command, Control, Communications, Computers, Cyber, Intelligence, Surveillance, and Reconnaissance (C5ISR) capabilities; delivering intelligence, unmanned aircraft system (UAS) training, and education; and designing, developing, and integrating intelligence capabilities, concepts, and doctrine. More than 50 organizations exist at Fort Huachuca to support the Fort's ongoing role as a major Army testing and training installation. Fort Huachuca also hosts deployable and non-deployable tenant missions.

Major missions assigned to Fort Huachuca include:

- Training soldiers in the use of C5ISR systems in classrooms and field training exercises,
- Research, develop, test, and evaluate concepts, doctrine, materials, and equipment in the areas of intelligence, electronic warfare, and information systems,
- Develop, conduct, and evaluate training in intelligence, electronic warfare, and information systems,
- Provide trained operation forces in the areas of intelligence and communications,
- Operate, manage, and defend the Army's information operations and infrastructure,
- Perform aviation operations and UAS training, and
- Provide training opportunities for Active Duty, Reserve, and National Guard forces.

**Alternatives Considered:** In addition to the Proposed Action, a No Action Alternative was evaluated. Under the No Action alternative, current military activities would continue in accordance with existing procedures set forth in previously completed NEPA documents and new activities would be subject to ad-hoc NEPA analysis. The No Action Alternative is required under the CEQ regulations implementing the NEPA and serves as a baseline or benchmark to be used to compare the Proposed Action and alternatives.

**Anticipated Environmental Effects:** Based on information gathered and presented in the PEA, it has been determined that implementation of the Proposed Action and the No Action Alternative would have no significant direct, indirect, or cumulative adverse impacts on the environment. Adverse impacts associated with implementing the Proposed Action would be minor in context and intensity. Consequently, the overall environmental effect of implementing the Proposed Action is anticipated to be less than significant.

**30-Day Public and Agency Review Period:** The PEA and a draft copy of this Finding of No Significant Impact will be available to the general public and applicable government agencies for review and comment during a 30-day period that commences on 9 June 2024 with the publication of a Notice of Availability in the *Sierra Vista Herald*. Copies of the PEA along with instructions for submitting comments will be available at the Sierra Vista Public Library, 2600 E. Tacoma Street, Sierra Vista, Arizona 85635 and online at <http://www.army-nepa.info/>.

**Public and Agency Comments:**

**Findings:** Based on the analysis contained in the PEA, I have concluded that implementation of the Proposed Action would not constitute a major federal action significantly affecting the quality of the human environment. Consequently, implementation of the Proposed Action does not require the preparation of an Environmental Impact Statement.

Approved By:

---

JOHN IVES,  
COLONEL,  
Commander, U.S. Army Garrison Fort Huachuca

---

Date

---

**Draft Programmatic Environmental Assessment for  
New and Continued Military Operations and Activities  
at  
Fort Huachuca, Arizona**

**June 2024**

**Environmental and Natural Resources Division  
Directorate of Public Works  
U.S. Army Garrison  
Fort Huachuca, Arizona**



***Prepared by***  
**Westover Federal**

---

**Draft Programmatic Environmental Assessment for  
New and Continued Military Operations and Activities  
at  
Fort Huachuca, Arizona**

Prepared by:

Westover Federal  
10351 S. Riverside St.  
Hereford, AZ 85615

Recommended for Approval by:



---

Jeffrey S. Banner  
Director, Public Works

Approved By:



---

John M. Ives  
Colonel, MI  
Commanding

June 2024

---

## **Executive Summary**

The Army has prepared this Programmatic Environmental Assessment (PEA) in compliance with the National Environmental Policy Act (NEPA) to analyze the potential for significant environmental impacts associated with new and continuing military operations at Fort Huachuca, Arizona. The PEA provides a programmatic evaluation of potential impacts that is broad enough in scope to assist in the evaluation of reasonably foreseeable actions, and the analysis assumes that such activities would be comparable to those projects and activities currently conducted on the installation and are identified and evaluated herein.

Fort Huachuca is a military installation encompassing 80,912 acres of land adjacent to the City of Sierra Vista, Cochise County, Arizona. The Installation is approximately 75 miles southeast of Tucson and 63 miles northeast of Nogales, Arizona. Fort Huachuca is a Joint Department of Defense (DoD) Installation supporting deployable and non-deployable tenant organizations. The overall mission of Fort Huachuca is to provide equitable, effective, and efficient management of the installation to support mission-readiness and execution; enable the well-being of soldiers, civilians, and family members; improve the Army's aging infrastructure; and preserve the environment.

The primary purpose of the Proposed Action is to establish a long-range vision to sustainably support the ever-evolving command goals, mission objectives, and policies of Fort Huachuca. This programmatic document is intended to provide comprehensive, long-term, and overarching resource planning for new and continuing military operations and activities associated with the Installation. The continued authorization for these operations and activities is necessary to advance the Installation's mission. Comprehensive planning, such as that supported by this PEA, helps establish a balance between mission readiness, growth, development, environmental stewardship, and overall sustainability.

The Proposed Action includes new and continuing military activities associated with Fort Huachuca. Missions at Fort Huachuca are associated with developing and testing Command, Control, Communications, Computers, Cyber, Intelligence, Surveillance, and Reconnaissance (C5ISR) capabilities; delivering intelligence, unmanned aircraft system (UAS) training, and education; and designing, developing, and integrating intelligence capabilities, concepts, and doctrine. More than 50 organizations exist at Fort Huachuca to support the Fort's ongoing role as a major Army testing and training installation. Fort Huachuca also hosts deployable and non-deployable tenant missions.

Under the No Action alternative, current military activities would continue in accordance with existing procedures set forth in previously completed NEPA documents and new activities would be subject to ad-hoc NEPA analysis.

At a programmatic level, the potential impacts associated with implementing the Proposed Action at Fort Huachuca would not result in any significant adverse impacts. A summary of potential impacts and measures to minimize adverse impacts of the Proposed Action is provided in Table ES-1.

Based on the analysis contained herein, it is the conclusion of this PEA that neither the Proposed Action nor the No Action Alternative would constitute a major federal action with significant impact on human health or the environment and that a Finding of No Significant Impact (FONSI) for the Proposed Action should be issued to conclude the NEPA documentation process. This is because military activities currently conducted on the installation have already been evaluated under NEPA, and measures to avoid or reduce significant environmental impacts have already been adopted based on previous evaluations. A list of previously conducted Army NEPA analyses is included in Appendix C. As discussed in general below, no impacts other than those evaluated in those previous NEPA analyses have resulted, and the Army has no reason to anticipate any impacts beyond those previously evaluated.

**Table ES-1. Summary of Potential Impacts and Measures to Minimize Impacts for the Proposed Action**

Resource Area	Level of Impact			Summary of Potential Impacts and Measures to Minimize Impacts
	Significant	Less than Significant	No Impact	
Land use			X	No impacts to land use are anticipated. Lands would continue to be used in a manner which supports the Army's mission.
Topography, Geology, and Soils		X		No significant impacts to topography, geography, or soils are anticipated. Erosional impacts resulting from new and continued military activities are mitigated through natural resource management on the Installation consistent with the Integrated Natural Resource Management Plan (INRMP).
Hydrology and Water Resources		X		No significant impacts to floodplains are anticipated. The Army maintains up-to-date floodplain data and considers and factors floodplain data in all planning and development proposals on the Installation early in the decision-making process. When development in floodplains cannot be avoided, mitigation measures are developed and implemented. No significant impact to groundwater is anticipated. Increases in net groundwater pumping beyond current levels is not anticipated to result from the Proposed Action. Further, potential impacts to groundwater from continued pumping would continue to be mitigated as previously approved. No impacts to surface water are anticipated. Impacts to waters of the United States (WOTUS) are regulated through Section 404 of the Clean Water Act; therefore, should any proposed projects or development involve WOTUS, the Army would seek authorization for

Resource Area	Level of Impact			Summary of Potential Impacts and Measures to Minimize Impacts
	Significant	Less than Significant	No Impact	
				such projects or development through the U.S. Army Corps of Engineers (USACE).
Biological Resources and Wetlands		X		<p>No significant impacts to biological resources are anticipated. The Army is preparing an updated Programmatic Biological Assessment (PBA) to evaluate impacts to listed species and critical habitat that may result from new and continued military activities. Potential adverse impacts to Endangered Species Act (ESA) species would be mitigated through the Section 7 consultation initiated with the U.S. Fish and Wildlife Service (USFWS).</p> <p>Continued implementation of Fort Huachuca's INRMP would further reduce potential impacts associated with new and continued military activities to biological resources. The primary goal of vegetation management on the Fort is to manage for and protect native plant communities using integrated ecosystem management principles while accommodating military training needs. Fish and wildlife management on Fort Huachuca is primarily focused on the management of the largest extent of each natural habitat type, thereby permitting the natural system to retain its inherent ability to self-maintain, which ultimately requires fewer external resources to manage species.</p>
Cultural Resources		X		<p>No significant impacts to cultural resources are anticipated. Any new or continuing activities with the potential to impact sites listed on, or eligible for listing on, the National Register of Historic Places, would be required to undergo a review process under Section 106 of the National Historic Preservation Act (NHPA). Fort Huachuca is preparing a Programmatic Agreement (PA) with the Arizona State Historic Preservation Officers (SHPO) and interested tribes to streamline the consultation process pursuant to Section 106 of the NHPA to accommodate routine actions associated with the continued operations, maintenance, and development associated with the Proposed Action. Any new disturbance would be conducted following the stipulations set forth in the PA.</p>
Air Quality		X		<p>No significant impacts to air quality are anticipated. Operations would continue to be conducted in accordance with the voluntary emission limitations and standards described in the Class II permit.</p>
Visual Resources		X		<p>No significant impacts to visual resources are anticipated. Fort Huachuca's commitment to sustaining the environment includes preserving the natural beauty of the Installation and viewscape of the Huachuca Mountains. Development of the Installation is guided by the Installation Planning Standards (IPS) to ensure that buildings and structures are uniform in construction and conform to the overall aesthetics of the area. The IPS also includes standards to avoid impacts to dark skies.</p>
Noise		X		<p>No significant impacts to noise are anticipated. Noise levels are not anticipated to exceed baseline levels. Noise will be managed through the development of a Noise Management Plan for the Installation.</p>

Resource Area	Level of Impact			Summary of Potential Impacts and Measures to Minimize Impacts
	Significant	Less than Significant	No Impact	
Socioeconomics			X	Continued benefits to socioeconomics in the Region Of Influence (ROI) would continue under the Proposed Action. Authorization of continued military activities would provide billions of dollars of economic output to the local economy.
Transportation and Circulation		X		No significant impacts to traffic and circulation are anticipated. The Proposed Action does not propose significant increases in personnel at the Fort, so traffic volume associated with new and continuing activities is not expected to result in any adverse impacts to transportation or traffic flow.
Utilities		X		Indirect benefits to utilities and services are anticipated. Beneficial impacts are expected from the Fort's continued upgrades to utility systems to reduce water and power use and increase the use of renewable energy. The existing electrical, potable water, wastewater, natural gas, and solid waste infrastructures are currently sufficient to support the Proposed Action.
Hazardous and Toxic Substances		X		No significant impacts from hazardous or toxic substances are anticipated. Hazardous materials would continue to be stored, handled, and used in similar quantities to what is currently practiced. Any spills that occur will result in the implementation of procedures established in the Installation Spill Contingency Plan, and contaminated soil and other waste will be properly disposed.
Human Health and Safety			X	No impacts to human health and safety are anticipated. Fire and emergency services are currently adequate to meet the needs of ongoing activities at the Installation. The Proposed Action does not propose any activities that would result in new or additional strains on these resources.
Environmental justice			X	No impacts on environmental justice are anticipated. Fort Huachuca is not in an area that has a disproportionately high concentration of minority or low-income populations. Therefore, no impacts to environmental justice are anticipated to result from the Proposed Action.
Electromagnetic spectrum			X	No impacts to the Electromagnetic (EM) spectrum are anticipated. Spectrum use associated with the Proposed Action is expected be comparable to existing use. Pre-testing coordination will continue between federal and law enforcement agencies regarding testing interference of the respective frequencies which helps to minimize potential impacts.



---

## Table of Contents

<b>EXECUTIVE SUMMARY .....</b>	<b>I</b>
<b>1.0 PURPOSE AND NEED .....</b>	<b>1-1</b>
1.1. Introduction .....	1-1
1.2. Purpose and Need for Action .....	1-2
1.3. Regulatory Framework.....	1-2
1.4. Use of this Programmatic Environmental Assessment .....	1-4
1.5. Public Participation Opportunities .....	1-4
<b>2.0 DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES .....</b>	<b>2-5</b>
2.1. Proposed Action .....	2-5
2.1.1. Garrison, Tenants, and Federal Partners .....	2-6
2.1.2. Garrison .....	2-6
2.1.3. Tenants and Federal Partners .....	2-6
2.1.4. Ground Based Operations .....	2-9
2.1.5. Training Areas and Sites .....	2-9
2.1.6. Intelligence and Electronic Warfare Equipment Training and Testing .....	2-14
2.1.7. Communications Systems Training, Testing, and Experimentation .....	2-14
2.1.8. Intelligence and Unmanned Aviation Warfighter Training .....	2-15
2.1.9. Field Training Exercises .....	2-16
2.1.10. Air Operations .....	2-20
2.1.11. Landing Strips and Runways .....	2-20
2.1.12. Landing Zones .....	2-24
2.1.13. Drop Zones .....	2-25
2.1.14. Other Air Operations .....	2-25
2.1.15. Outdoor Recreational Activities .....	2-27
2.1.16. Cantonment Activities.....	2-27
2.1.17. Programmed Facilities Development .....	2-28
2.1.18. Off-post Activities Authorized or Carried Out by Fort Huachuca. 2- 29	
2.2. No Action Alternative .....	2-31
<b>3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES ....</b>	<b>3-32</b>
3.1. Land Use .....	3-33
3.1.1. Affected Environment.....	3-33
3.1.2. Environmental Consequences .....	3-35
3.2. Topography, Geography, and Soils .....	3-36

---

3.2.1.	Affected Environment.....	3-36
3.2.2.	Environmental Consequences .....	3-41
3.3.	Hydrology and Water Resources .....	3-42
3.3.1.	Affected Environment.....	3-42
3.3.2.	Environmental Consequences .....	3-44
3.4.	Biological Resources .....	3-45
3.4.1.	Affected Environment.....	3-45
3.4.2.	Environmental Consequences .....	3-51
3.5.	Cultural Resources .....	3-52
3.5.1.	Affected Environment.....	3-52
3.5.2.	Environmental Consequences .....	3-54
3.6.	Air Quality .....	3-55
3.6.1.	Affected Environment.....	3-55
3.6.2.	Environmental Consequences .....	3-56
3.7.	Noise.....	3-57
3.7.1.	Affected Environment.....	3-57
3.7.2.	Environmental Consequences .....	3-59
3.8.	Visual Resources.....	3-60
3.8.1.	Affected Environment.....	3-60
3.8.2.	Environmental Consequences .....	3-61
3.9.	Socioeconomics.....	3-62
3.9.1.	Affected Environment.....	3-62
3.9.2.	Environmental Consequences .....	3-63
3.10.	Transportation and Circulation.....	3-63
3.10.1.	Affected Environment.....	3-63
3.10.2.	Environmental Consequences .....	3-65
3.11.	Utilities and Services.....	3-66
3.11.1.	Affected Environment.....	3-66
3.11.2.	Environmental Consequences .....	3-67
3.12.	Hazardous and Toxic Substances .....	3-69
3.12.1.	Affected Environment.....	3-69
3.12.2.	Environmental Consequences .....	3-71
3.13.	Human Health and Safety.....	3-72
3.13.1.	Affected Environment.....	3-72
3.13.2.	Environmental Consequences .....	3-74
3.14.	Environmental Justice.....	3-75
3.14.1.	Affected Environment.....	3-75
3.14.2.	Environmental Consequences .....	3-76
3.15.	Climate Change .....	3-76
3.15.1.	Affected Environment.....	3-76
3.15.2.	Environmental Consequences .....	3-77

---

---

3.16. Electromagnetic Spectrum.....	3-78
3.16.1. Affected Environment.....	3-78
3.16.2. Environmental Consequences .....	3-80
<b>4.0 FINDINGS AND CONCLUSIONS .....</b>	<b>4-81</b>
<b>5.0 REFERENCES .....</b>	<b>5-84</b>
<b>6.0 PREPARERS AND CONTRIBUTORS .....</b>	<b>6-89</b>
<b>7.0 DISTRIBUTION LIST .....</b>	<b>7-90</b>
<b>8.0 LIST OF INDIVIDUALS AND AGENCIES CONSULTED .....</b>	<b>8-92</b>

## **List of Appendices**

Appendix A. Training Areas and Associated Activities

Appendix B. Tenants and Partners

Appendix C. List of Previously Conducted Army NEPA Analyses for Fort Huachuca

---

## LIST OF ACRONYMS

2-13 <sup>th</sup>	2 <sup>nd</sup> Battalion 13 <sup>th</sup>
ACUB	Army Compatible Use Buffer
ADEQ	Arizona Department of Environmental Quality
AEI	Air Emissions Inventory
afa	acre-feet area
AFB	Air Force Base
AGFD	Arizona Game and Fish Department
AMA	Agave Management Area
AMC	Army Materiel Command
amsl	above mean sea level
ANG	Air National Guard
Army	Department of Army
ARPA	Archaeological Resources Protection Act
ASMO	Army Spectrum Management Office
ATC	Air Traffic Control
ATFP	Antiterrorism and force protection
ATKG	Attack squadron
AW	Airlift wing
AWQS	Arizona Aquifer Water Quality Standards
AZ	Arizona
AZ ANG 162 <sup>nd</sup>	Arizona Air National Guard 162 <sup>nd</sup> Wing
AZLWT	Arizona Land and Water Trust
BESS	Battery energy storage system
BGEPA	Bald and Golden Eagle Protection Act
BLM	Bureau of Land Management
BTA	Battalion Training Area
C5ISR	Command, Control, Communications, Computers, Cyber, Intelligence, Surveillance, and Reconnaissance
CAA	Clean Air Act
CBP	Customs and Border Protection
CCRN	Cochise Conservation and Recharge Network
CDNL	C-weighted day-night level
CE	Conservation easement
CEQ	Council of Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CFR	Code of Federal Regulations
CHP	Combined heat and power

---

cm	centimeters
CNF	Coronado National Forest
CO	Carbon monoxide
CO <sub>2</sub> e	Carbon dioxide equivalent
CVMC	Canyon Vista Medical Center
DA	Department of the Army
dB	decibel
dBA	A-weighted decibel
DES	Directorate of Emergency Services
DFMWR	Directorate of Family Morale, Welfare, and Recreation
DMAFB	Davis-Monthan Air Force Base
DNL	day-night decibel
DoD	Department of Defense
DoDPIF	Department of Defense Partners in Flight
DOI	Secretary of the Interior
DPW	Directorate of Public Works
DRMO	Defense Reutilization and Marketing Office
DZ	Drop zone
EIS	Environmental Impact Statement
ENRD	Environmental and Natural Resources Division
EO	Executive Order
EOP	Environmental Operations Park
EPA	Environmental Protection Agency
EPG	Electronic Proving Ground
ESA	Endangered Species Act
EW/SIGINT	Electronic Warfare/Signals Intelligence
FAA	Federal Aviation Administration
FARP	Forward arming and refueling point
FD	Fire Department
FEMA	Federal Emergency Management Agency
FIC	Facility Incident Commander
FOB	Forward operating base
FONPA	Finding of No Practicable Alternative
FONSI	Finding of No Significant Impact
ft	feet
GHG	Greenhouse gas emissions
GPS	Geographic positioning system
ha	hectare
HAP	Hazardous air pollutant
HAZMAT	Hazardous materials

---

HEFT	High elevation fuels treatment
HMMP	Hazardous Materials Management Program
HVAC	Heating, ventilation, and air conditioning
ICUZ	Installation Compatible Use Zone
in	inches
INRMP	Integrated Natural Resources Management Plan
IPCC	Intergovernmental Panel on Climate Change
ISCP	Installation Spill Contingency Plan
ITAM	Integrated Training Area Management
IMCOM	Installation Management Command
IPS	Installation Planning Standards
IRP	Installation Restoration Program
ISSA	Interservice Support Agreement
IWFMP	Integrated Wildland Fire Management Plan
JITC	Joint Interoperability Test Command
JLUS	Joint Land Use Study
km	kilometer
LAAF	Libby Army Airfield
LED	light emitting diodes
LTM	Long-term management
LUPZ	Land Use Planning Zone
LZ	Landing zone
MBTA	Migratory Bird Treaty Act
MDO	Multi-domain operation
mgd	million gallons per day
mi	miles
MER	Military Electromagnetic Range
MPTR	Multi-purpose Training Ranges
MO ANG 139 <sup>th</sup>	Missouri Air National Guard 139 <sup>th</sup> Wing
MOU	Memorandum of Understanding
MOUT	Military operations on urbanized terrain
MRR	Mandatory Reporting Rule
MT	metric tons
MW	megawatt
N/A	Not applicable
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act
NATO	National Atlantic Treaty Organization
NDAA	National Defense Authorization Act
NEPA	National Environmental Policy Act

---

NETCOM	Network Enterprise Technology Command
NHL	National Historic Landmark
NHPA	National Historic Preservation Act
NOA	Notice of Availability
NOI	Notice of Intent
NOTAM	Notice to Air Missions
NO <sub>x</sub>	Nitrogen oxide
NRHP	National Register of Historic Places
ODS	Ozone depleting substances
OEI	Office of Energy Initiatives
OHV	Off-highway vehicle
ORMP	Outdoor Recreation Management Plan
PA	Programmatic Agreement
Pb	Lead
PBA	Programmatic Biological Assessment
PEA	Programmatic Environmental Assessment
PK 15 (met)	Peak sound pressure level
PM <sub>10</sub>	Particulate matter, fine
POL	Petroleum, oil, and lubricants
PPE	Personal protective equipment
PSD	Prevention of significant deterioration
PV	Photovoltaic
QI	Qualified Individual
RCP	Representative Concentration Pathways
RF	Radio frequency
RFMSS	Range and Facilities Management Support System
ROI	Region of influence
ROM	Refuel on the Move
SHPO	State Historic Preservation Office
SO <sub>2</sub>	Sulfur dioxide
SOP	Standard Operating Procedure
SPRNCA	San Pedro Riparian National Conservation Area
SR	State Route
SSVEC	Sulphur Springs Valley Electric Cooperative
SVOC	Semi-volatile organic compound
SVRD-CNF	Sierra Vista Ranger District – Coronado National Forest
SVS	Sierra Vista Subwatershed
TA	Training Area
TAA	Tactical Assembly Area
TCP	Traditional Cultural Property

---

TEP	Tucson Electric Power
TNC	The Nature Conservancy
tpy	tons per year
TRADOC	Training and Doctrine Command
UAS	Unmanned aircraft systems
USAF	U.S. Air Force
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service ‘
USGS	U.S. Geological Survey
USPB	Upper San Pedro River Basin
USPP	Upper San Pedro Partnership
USAICoE	U.S. Army Intelligence Center of Excellence
VOC	Volatile organic compound
WIT	Widened infantry target
WOTUS	Waters of the U.S.
WWA	WW Associates
WWTP	Wastewater Treatment Plant



---

## 1.0 PURPOSE AND NEED

### 1.1. Introduction

The U.S. Army Garrison Fort Huachuca (Fort Huachuca) is committed to providing its Soldiers with the most effective, modern, and highest quality training possible. To enable its Soldier to fight, survive, and prevail in combat, Fort Huachuca must provide an effective training environment that simulates realistic training scenarios and incorporates increasingly sophisticated equipment and range facilities.

Fort Huachuca is a military installation encompassing 80,912 acres of land adjacent to the City of Sierra Vista, Cochise County, Arizona. The Installation is approximately 75 miles southeast of Tucson and 63 miles northeast of Nogales, Arizona. The southernmost boundary of the Installation is approximately 8 miles from the international border with Mexico. Fort Huachuca is divided into an East Reservation (28,597.5 acres) and West Reservation (52,314.5 acres) by State Route (SR) 90. The East Reservation includes the John R. Fox Range (formerly the East Range), which consists almost entirely of open/operational areas. The West Reservation includes the West Range, South Range, Cantonment, and Libby Army Airfield (LAAF).

Camp Huachuca was established in 1877 and served many military purposes. Its status and name changed to Fort Huachuca in 1882. The Fort was deactivated and reactivated multiple times in the 1900s, and was ultimately reactivated in 1954, under the control of the U.S. Army Signal Corps and serving as the U.S. Army Electronic Proving Ground (EPG). In 1967, the installation became the Headquarters for the U.S. Army Strategic Communications Command (STRATCOM), which later was renamed the U.S. Army Communications Command. In 1973, the U.S. Army Communications Management Information Systems Activity was assigned to Fort Huachuca. This and the Communications Command were combined into the U.S. Army Information Systems Command. In 1971 the U.S. Army Intelligence Center and School, now known as U.S. Army Intelligence Center of Excellence (USAICoE), moved to Fort Huachuca from Fort Holabird, Maryland. In 1988, the U.S. Army Intelligence School mission of Fort Devens, Massachusetts, was relocated to Fort Huachuca. Base Closure and Realignment Actions brought several activities to Fort Huachuca along with over 2,000 attendant personnel. In 1996, the U.S. Army Information Systems Command was deactivated, and portions of the staff were re-allocated to other commands at the installation. The remaining U.S. Army Information Systems Command mission was re-designated as the U.S. Army Signal Command and now NETCOM, which remains at Fort Huachuca.

Today, Fort Huachuca is a Joint Department of Defense (DoD) Installation supporting deployable and non-deployable tenant organizations. The overall mission of Fort Huachuca is to provide equitable, effective, and efficient management of the installation to support mission-readiness and execution; enable the well-being of soldiers, civilians,

---

and family members; improve the Army's aging infrastructure; and preserve the environment.

The Programmatic Environmental Assessment (PEA) provides a programmatic evaluation of potential impacts that is broad enough in scope to assist in the evaluation of reasonably foreseeable actions, and the analysis assumes that such activities would be comparable to those projects and activities currently conducted on the installation and are identified and evaluated herein. This PEA was prepared to analyze the potential for significant environmental impacts associated with new and continued military operations and activities associated with the Installation.

## **1.2. Purpose and Need for Action**

The primary purpose of the Proposed Action is to establish a long-range vision to sustainably support the ever-evolving command goals, mission objectives, and policies of Fort Huachuca. This programmatic document is intended to provide comprehensive, long-term, and overarching resource planning for new and continued military operations and activities associated with the Installation. The continued authorization for these operations and activities is necessary to continue to advance the Installation's mission. Comprehensive planning helps establish a balance between mission readiness, growth, development, environmental stewardship, and overall sustainability.

Prior to the preparation of this document, most operations and activities associated with Fort Huachuca were analyzed in standalone National Environmental Policy Act (NEPA) documents (Appendix C). The preparation of this programmatic document allows for the comprehensive planning needed to support the Army's sustainability strategy. The Proposed Action will be visionary, ideal, and general in character and provide long-term guidance in defining the direction and purpose of the Installation's planning and development. There are several time-sensitive projects mentioned within this PEA that will undergo separate and specific NEPA review, including:

- Special Use Permit for the Western Testing Range with the Coronado National Forest (CNF) for electronic testing on CNF-managed lands within the Sierra Vista Ranger District
- Construction of a multi-purpose training and testing range (MPTR) on the John R. Fox Range.

## **1.3. Regulatory Framework**

Congress enacted NEPA in 1969 with accompanying regulations requiring federal agencies to consider potential impacts before taking actions that may impact the environment. The process is designed to provide the decision makers with an overview

---

of the major environmental resources that may be affected, the interrelationship of these resources, and potential impacts to the human environment. The NEPA process is not intended to fulfill the specific requirements of other environmental statutes and regulations. The NEPA process:

- Helps identify potential alternatives to the proposed action,
- Integrates other environmental processes,
- Summarized technical information,
- Documents impact analyses and decisions,
- Interprets technical information for the decision maker and public, and
- Assists the decision maker in selecting a preferred action.

NEPA is intended to be incorporated in the early stages of the decision-making process to ensure that plans and decisions consider environmental values. The NEPA process enables the Army and stakeholders to gain a better appreciation of each other's needs to avoid unexpected confrontations later. In addition, NEPA compliance provides for ongoing evaluation of environmental impacts for actions that will continue over time.

NEPA anticipated the need for evaluation of broad actions by including provisions for the development of programmatic documents. Subsequent environmental analyses for specific activities that fall within the broad area of analysis may "tier" from the programmatic documents and need only summarize the issues that are specific to the proposed action at hand. In these cases, it is only necessary to incorporate by reference any pertinent issues that were already addressed by an approved initial programmatic document or other relevant EAs. In this regard, Fort Huachuca prepared this PEA to evaluate the ongoing and future military operations and activities on a programmatic level. Subsequent NEPA analysis may become necessary as specific projects associated with ongoing military activities are carried out.

In addition to NEPA, this PEA was prepared in compliance with two DA regulations that provide guidance for environmental analyses:

- 32 Code of Federal Regulations (CFR) Part 651, *Environmental Analysis of Army Actions*, dated 29 March 2002, is designed to provide policy, responsibilities, and procedures for integrating environmental considerations into Army planning and decision making. It established criteria for determining which of five review categories pertain to a particular action, and thus the type of environmental document that should be prepared. If the proposed action is not covered adequately in any existing EA, PEA, or Environmental Impact Statement (EIS) and cannot be categorically excluded from NEPA analysis, then a separate NEPA analysis must be completed prior to the commitment of resources (personnel, funding, or equipment) to the proposed action.

- 
- Army Regulation (AR) 200-1, Environmental Protection and Enhancement, dated December 2007, describes DA responsibilities, policies, and procedures to preserve, protect, and restore the quality of the environment. The regulation incorporates a wide range of applicable statutory and regulatory requirements.

#### **1.4. Use of this Programmatic Environmental Assessment**

This PEA analyzes and documents the potential for environmental impacts associated with new and continued military operations and activities at Fort Huachuca relative to a no action alternative. Fort Huachuca will use this PEA to determine whether a Finding of No Significant Impact (FONSI) is appropriate or if a Notice of Intent (NOI) to prepare an EIS should be issued.

#### **1.5. Public Participation Opportunities**

In keeping with established Army policy to provide a transparent and open decision-making process, Fort Huachuca will make this PEA and draft decision document available to applicable federal and local agencies, stakeholders, and the public for review and comment. A Notice of Availability (NOA) will be published in the *Sierra Vista Herald* newspaper and a copy of the PEA will be made available on the internet at <https://home.army.mil/huachuca>. and at the following library:

Sierra Vista Public Library  
2600 E. Tacoma Street  
Sierra Vista, Arizona 85635

Comments must be postmarked within 30 days of the publishing date of the NOA to be considered as part of the NEPA process. Comments should be submitted to:

Environmental Manager  
Westover Federal  
10351 S. Riverside St  
Hereford, AZ85615  
FHPEA@westoverfederal.com

A final decision document in the form of a FONSI or a NOI to complete an EIS will be issued following completion of the 30-day review period and will appropriately address comments received under this NEPA process.

---

## **2.0 DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES**

### **2.1. Proposed Action**

This section describes the Proposed Action for the new and continued military operations and activities occurring or programmed to occur at or near Fort Huachuca. The operations and activities include actions within Fort Huachuca training areas (TAs) and ranges, air operations associated with LAAF, recreational opportunities, resource management, realty actions, and programmed facilities development projects that are master planned to continue to meet mission objectives.

Missions at Fort Huachuca are associated with developing and testing Command, Control, Communications, Computers, Cyber, Intelligence, Surveillance, and Reconnaissance (C5ISR) capabilities; delivering intelligence, unmanned aircraft systems (UAS) training, and education; and designing, developing, and integrating intelligence capabilities, concepts, and doctrine.

Major missions assigned to Fort Huachuca include:

- Training soldiers in the use of C5ISR systems in classrooms and field training exercises,
- Research, develop, test, and evaluate concepts, doctrine, materials, and equipment in the areas of intelligence, electronic warfare, and information systems,
- Develop, conduct, and evaluate training in intelligence, electronic warfare, and information systems,
- Provide trained operation forces in the areas of intelligence and communications,
- Operate, manage, and defend the Army's information operations and infrastructure,
- Perform aviation operations and UAS training, and
- Provide training opportunities for Active Duty, Reserve, and National Guard forces.

The U.S. Army Training and Doctrine Command (TRADOC) recruits, trains, and educates the Army's soldiers, develops leaders, supports unit training, develops doctrine, establishes standards, and builds the future Army. Fort Huachuca is home to two TRADOC training organizations: the USAICoE and the 2<sup>nd</sup> Battalion 13<sup>th</sup> Aviation Regiment (2-13<sup>th</sup>), a tenant unit of the USAICoE for all Army UAS training. The Army's pivot from counter insurgency operations required a focus on expanding Electronic Warfare/Signals Intelligence (EW/SIGINT) individual soldier skills and unit training. The combination of the R-2303 Military Restricted Airspace and the clean electromagnetic environment of the Fort's electronic test ranges make Fort Huachuca an ideal location for

---

this type of individual and unit training. To support this evolving mission and simulate Military Theater battle space, Fort Huachuca requires the ability to conduct combined air and ground operations over the entire installation and to fly over large expanses of land outside the Installation. Training activities require pilots to fly high- and low-altitude missions over large, minimally lit, undeveloped areas on and around Fort Huachuca. The evolving EW/SIGINT training mission will also use these capabilities to conduct ground and aerial EW/SIGINT training operations in preparation for real-world missions.

### **2.1.1. Garrison, Tenants, and Federal Partners**

Installation Management Command (IMCOM) is a subordinate command of Army Materiel Command (AMC) and provides command support to the Fort Huachuca Garrison (Garrison). IMCOM oversees all facets of installation operations and management. The Garrison organization reflects IMCOM's Standard Garrison Organization structure for providing a consistent level of services among installations.

### **2.1.2. Garrison**

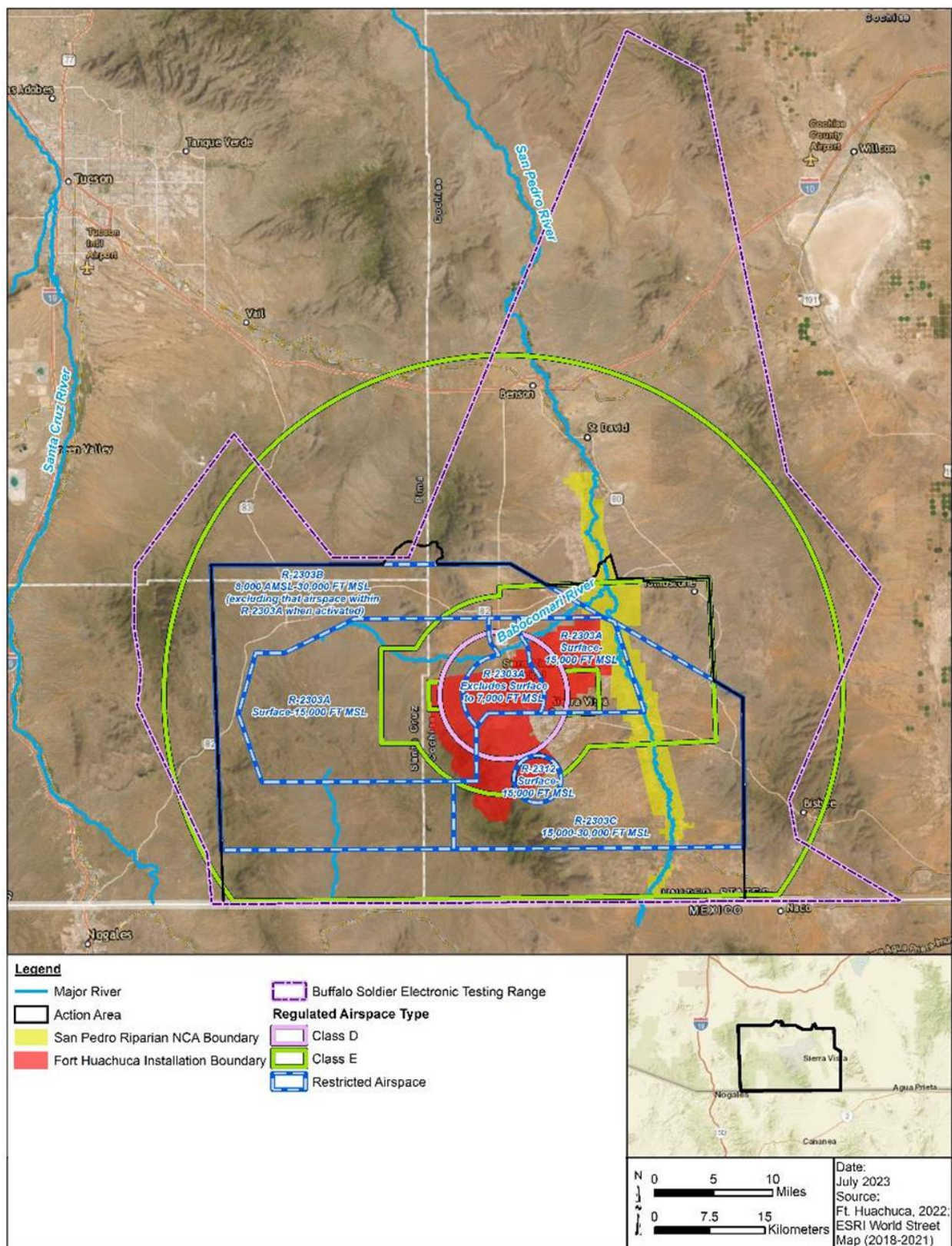
The Garrison carries out administrative and support activities associated with the day-to-day operation of the Fort and the ranges, inclusive of those activities conducted by the tenants and partner organizations. Personnel and activities associated with these operations occur almost exclusively within the Cantonment.

Garrison offices support all commands and agencies that reside, and activities that occur, on Fort Huachuca. Each Garrison organizational element may contain additional divisions, branches, and sections, identified in Appendix A.

### **2.1.3. Tenants and Federal Partners**

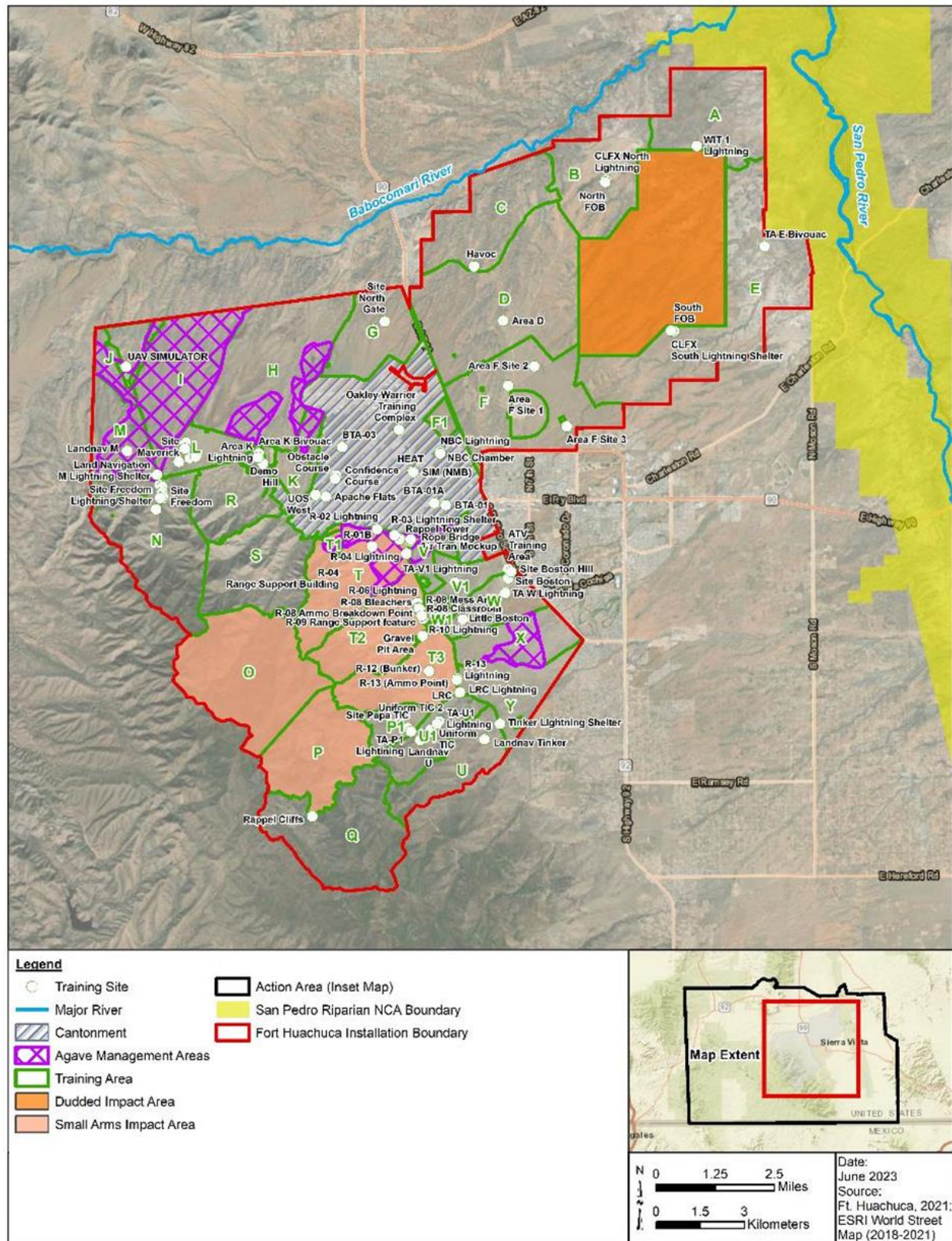
More than 50 partner organizations exist at Fort Huachuca to support the Fort's ongoing role as a major Army testing and training installation. Tenants are the military units and organizations housed at Fort Huachuca who are responsible for conducting testing and training missions. Federal partners are other government agencies using Fort Huachuca as a base of operations for their activities. Fort Huachuca hosts deployable and non-deployable tenant missions. These tenant organizations and Federal partners are listed in Appendix B.





**Figure 2.1-1. Fort Huachuca Airspace and Electronic Testing Range**





**Figure 2.1-2. Fort Huachuca Training Areas and Facilities**



---

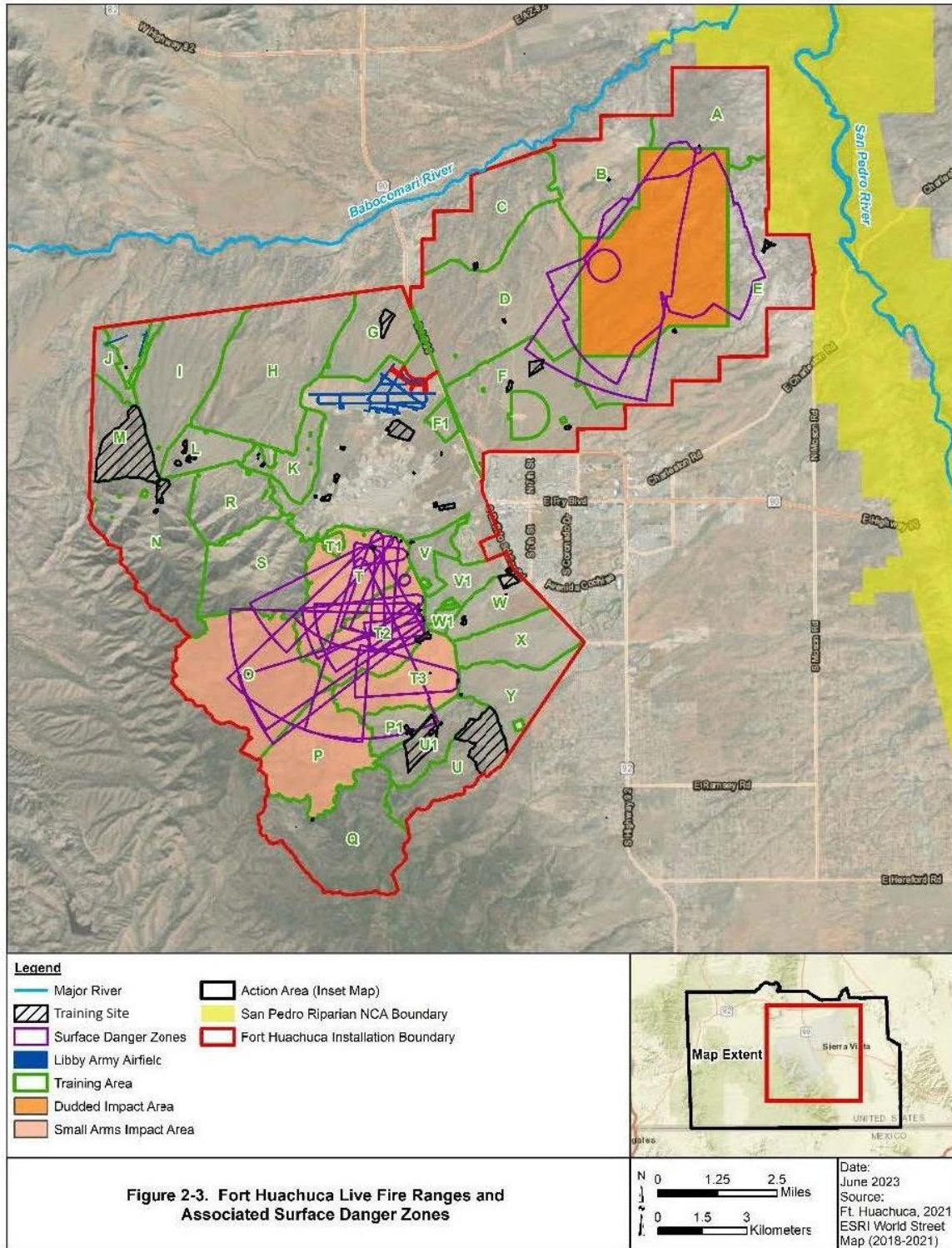
#### **2.1.4. Ground Based Operations**

Ground-based training occurs in designated training areas on Fort Huachuca. Within the training areas, specific, concentrated military training occurs on training sites. Live-fire ranges are areas where specific, concentrated military live-fire training occurs.

#### **2.1.5. Training Areas and Sites**

##### ***2.1.5.1. Training Areas***

Fort Huachuca is divided into 34 training areas surrounding the Installation's living and working space (i.e., Cantonment). Training areas and facilities are illustrated in **Figure 2.1-3**. Training area activities, munitions, facilities, and special use and use restrictions are summarized in Table 2-1. Appendix A (Table A-1) provides a detailed listing of training areas, associated facilities and training sites, and training activities.



**Figure 2.1-3. Fort Huachuca Training Areas, Live Fire Ranges and Associated Surface Danger Zones**

---

### **2.1.5.2. Training Sites**

Training sites are smaller areas inside training areas where specific, concentrated, military training occurs. Fort Huachuca has approximately 47 training sites where the following activities are concentrated:

- Intelligence, communications training, and testing activities,
- Bivouacking,
- Field and situational training exercises,
- Patrol bases/objective rally points/tactical assembly areas (TAAs),
- Air operations, such as personnel ingress and egress, UAS launch and recovery, air-to-ground laser testing and training, and helicopter landing,
- Refuel on the Move (ROM) training, and
- Land navigation.

Training sites include live-fire ranges, bivouac sites, landing zones (LZs) and drop zones (DZs), TAAs, battalion training areas (BTAs), tactical training bases, and forward arming and refueling points (FARPs). Some training may involve hand-digging temporary tactical features such as holes and trenches. Munitions can be used with an approved fire plan in training areas with prior review and approval. These include blanks, simulated munitions, explosives, live munitions, artillery simulators, and pyrotechnics (including smoke grenades).

Training sites are shown in **Figure 2.1-2**. Additional specific features are listed in Appendix A (Table A-2).

### **2.1.5.1. Live-Fire Ranges**

Fort Huachuca has 21 live-fire ranges where specific, concentrated military training occurs. Nineteen are authorized for munitions use, three are not. Live-fire ranges are shown in **Figure 2.1-3** and listed in Appendix A (Table A-3).

**Table 2-1. Summary of Training Areas and Associated Activities, Facilities, and Use Restrictions on Fort Huachuca**

<b><i>Intelligence and Communications Training Activities</i></b>	<b><i>Munitions</i></b>	<b><i>Facilities</i></b>	<b><i>Use Restrictions</i></b>
<ul style="list-style-type: none"> <li>• Intelligence and communications training and testing</li> </ul>	<ul style="list-style-type: none"> <li>• Not Applicable (N/A)</li> </ul>	<ul style="list-style-type: none"> <li>• Weapons Intelligence Training</li> <li>• Demolition Ranges</li> <li>• EPG Test Facilities</li> <li>• MPTRs</li> </ul>	<ul style="list-style-type: none"> <li>• None</li> </ul>
<b><i>Field and Live Fire Training Activities</i></b>	<b><i>Munitions</i></b>	<b><i>Facilities</i></b>	<b><i>Use Restrictions</i></b>
<ul style="list-style-type: none"> <li>• Live-fire ranges</li> <li>• Mounted (on trails and roads) and dismounted maneuver</li> <li>• Bivouacking, including established bivouac sites with field kitchen, latrines, Light bivouacking – tents, no field kitchen</li> <li>• Patrol bases/objective rally points/tactical assembly</li> <li>• Field and situational training exercises, ruck marches, land navigation, mountaineering, and tracking training</li> <li>• Ground-based laser training</li> <li>• EW/SIGNIT training</li> </ul>	<ul style="list-style-type: none"> <li>• Live munitions and explosives in designated training areas</li> <li>• Blanks</li> <li>• Simulated munitions</li> <li>• Artillery simulators</li> <li>• Ground and aerial pyrotechnics, including smoke grenades, with approved fire plan</li> <li>• Paint balls and air soft pellets</li> </ul>	<ul style="list-style-type: none"> <li>• Live Fire Ranges</li> <li>• Bivouac sites</li> <li>• TAAs</li> <li>• Observation Points</li> <li>• Military Operations in Urban Terrain (MOUT)</li> <li>• Tactical Training Bases</li> <li>• Rappel Tower</li> <li>• Land Navigation Course</li> <li>• Rope Bridge</li> </ul>	<ul style="list-style-type: none"> <li>• Vehicles permitted off existing roads and trails within DZs, LZs, FARPs, bivouac areas, and TAAs. Foot traffic only off existing roads and trails</li> <li>• Recreational Restrictions <ul style="list-style-type: none"> <li>○ Rock climbing and rappelling restrictions</li> </ul> </li> <li>• Agave Management Area (AMA) restrictions</li> <li>• Military activities restricted to relatively flat areas in mountainous terrain</li> <li>• Pyrotechnics must have containment and aerial pyrotechnics have weather restrictions</li> <li>• Duded Impact Area restrictions <ul style="list-style-type: none"> <li>○ Military activities require appropriate clearance</li> <li>○ Recreational activities prohibited</li> </ul> </li> </ul>

**Table 2-1. Summary of Training Areas and Associated Activities, Facilities, and Use Restrictions on Fort Huachuca (continued)**

<b><i>Air Operation Training Activities</i></b>	<b><i>Munitions</i></b>	<b><i>Facilities</i></b>	<b><i>Use Restrictions</i></b>
<ul style="list-style-type: none"> <li>• UAS launch and recovery</li> <li>• Rotary- and fixed-wing landing</li> <li>• Field refueling</li> <li>• Personnel and bundle drops</li> <li>• Personnel ingress and egress</li> <li>• Air-to-ground laser</li> <li>• Air-to-ground live fire</li> </ul>	<ul style="list-style-type: none"> <li>•</li> <li>• Live munitions and explosives in designated training areas</li> <li>• Blanks</li> <li>• Simulated munitions</li> </ul>	<ul style="list-style-type: none"> <li>• LAAF</li> <li>• UAS Testing and Laser Range</li> <li>• UAS Training Center</li> <li>• Black Tower Complex</li> <li>• LZs and DZs</li> <li>• Hubbard dirt runway and Kilo dirt strip</li> <li>• Refueling Points</li> <li>• Semi-Permanent Helipads</li> </ul>	<ul style="list-style-type: none"> <li>• Airspace restrictions in areas located within landing and departure zones of the primary runways at LAAF</li> <li>• Military units conduct training on LZs such as insertions and extractions. High elevation LZ use is restricted during the Mexican spotted owl reproductive season (March-August)</li> <li>• Air-to-ground live fire restricted to Area Z.</li> </ul>

---

### **2.1.6. Intelligence and Electronic Warfare Equipment Training and Testing**

Testing intelligence and electronic warfare equipment, and training soldiers on intelligence tactics and procedures requiring realistic, global placement of intelligence systems is a major mission at Fort Huachuca. The Army tests equipment on the Installation and throughout Southeast Arizona. They select specific points for electronic testing based on preferred terrain features, signal strength and availability, and to test the limits of the equipment under a variety of geographic and atmospheric conditions.

The Army conducts training, testing, and experimentation by dispatching intelligence and electronic warfare equipment to a selection of sites that meet training requirements. On the Fort, sites are along existing Fort roads and trails and in previously disturbed areas. Off post sites are all in previously disturbed areas and usually within the right-of-way shoulders along several highways in the region. During training, the military can deploy vehicles and personnel to any combination of training sites, but most remain on Fort Huachuca.

Types of equipment utilized during training include electronic, computer, or radar imaging systems. The vehicular components of the intelligence training systems typically consist of heavy-duty four-wheel drive vehicles, civilian-type 1-ton trucks, and occasionally military 5-ton trucks and Stryker vehicles. Vehicles are equipped with an electronic equipment shelter or are used to carry personnel-transported systems and operators. Personnel drive these vehicles to established parking areas at the training site or to other designated sites authorized for vehicle use. Vehicles must remain on established roads or trails and are permitted to park adjacent to the road or trail in a previously disturbed designated area at each site.

The Army uses several types of transmitting antennae ranging from small vehicle or system-mounted whip antennae to ground-mounted antennae. Personnel can raise ground-mounted antennae to a height of 115 ft with minor ground disturbance associated with trampling and the installation of temporary guide wires. Testing activities typically last from 3 to 30 days and can require students to walk cross-country to other predetermined locations or sites.

### **2.1.7. Communications Systems Training, Testing, and Experimentation**

Another major mission at Fort Huachuca involves communications systems training and testing. Physical components of the systems used during training consist of a variety of satellite, troposcatter, high-frequency, and microwave equipment to provide communications support. The Army moves portable equipment on 2-ton and 5-ton military vehicles and consists of a wide variety of generators, antennas, and trailers.

---

There are no set timelines for testing activities. Organizations conduct tests year-round and may run 24 hours per day, 7 days per week, for as long as a month. These activities occur at similar sites to those mentioned previously for electronics training. During training, units deploy vehicles and personnel to multiple pre-existing sites on Fort. Typical exercises last from 7 to 14 days with 24-hour operations. Each field unit may utilize 40 to 80 vehicles, 50 generators, and 12 communications shelters to support soldiers at the site.

The maximum area covered by a unit during training can be up to 40 acres (16 hectares [ha]) with 13 remote site locations per exercise. Large bivouac exercises occur in predefined areas used repeatedly for such activities and utilize relay sites across the Fort. There are 16 established bivouac training areas on Fort (see Appendix A, Tables A-1 and A-2). The Army uses these sites on a more frequent basis for larger-scale communications testing and training activities. Predefined bivouac areas often include permanent structures and concrete pads for repeated bivouacing. Range Operations approves on Fort training sites prior to use, may restrict the use of certain areas during high wildfire seasons, and enforces special stipulations for areas within protected AMAs.

The Army also conducts larger battalion and brigade exercises. Units conduct battalion-level exercises 8 to 12 times annually that involve approximately 20 vehicles. They conduct brigade-level exercises one to two times annually with approximately 150 to 200 vehicles.

### **2.1.8. Intelligence and Unmanned Aviation Warfighter Training**

Intelligence and Unmanned Aviation Warfighter training is associated with developing and testing C5ISR capabilities; delivering intelligence, UAS training, and education; and designing, developing, and integrating intelligence capabilities, concepts, and doctrine.

The stable strategic environment in the “sky islands” in southern Arizona is critically important to Fort Huachuca mission success. Due to the low levels of electronic interference and lines of sight in the immediate vicinity, it is essential to preserve the C5ISR range at Fort Huachuca. The C5ISR range completes a military ‘virtual test range’ that extends from the White Sands Missile Range/Fort Bliss complex in Southwestern New Mexico to the east to Edwards Air Force Base (AFB) in Southern California to the west. Having the ability to test systems and equipment over long distances in real-world conditions is critical to fielding the best equipment for the U.S. military (ENRD 2021).

Fort Huachuca’s training infrastructure includes the 946-mi<sup>2</sup> (2,450 km<sup>2</sup>) R-2303 Military Air Complex, the Army’s only UAS-centric airspace for training and operations (see Figure 2.1-1). Organizations that use the complex are the U.S. Army UAS School, the USAICoE, and multiple other DoD, international, and federal agencies for their manned and UAS operations. The airspace is unique in that it is also available for use for manned military

---

aircraft and general aviation. The U.S. Air Force (USAF), Army, and Air National Guard (ANG) all maintain a daily presence in R-2303 (ENRD 2021).

### **2.1.9. Field Training Exercises**

Fort Huachuca units, Army Reserve, Army National Guard (ARNG), ANG, Customs and Border Protection (CBP), and partner organizations conduct field training exercises on Fort Huachuca. They must schedule, coordinate, and control all training activities requiring use of range facilities through Range Operations. Field training exercises consist of individual soldier tasks, unit collective training, land navigation, patrolling and tactics training, individual development training, and vehicle maneuver training. Integrated Training Area Management (ITAM) maintains over 250 mi (402 km) of maneuver trails for field training exercises (ENRD 2021).

On occasion, training units utilize on Fort locations such as TAAs for setting up bivouacs containing sleeping, mess, and other related facilities for field training exercises. Troops and vehicles stage in TAAs (formerly called Forward Operating Bases [FOBs]) before performing an exercise or training. Specific bivouac areas vary from exercise to exercise and do not always coincide with existing sites or pre-defined bivouac sites (see Figure 2.1-2). Units must request use of any site from Range Operations a minimum of 21 days in advance and include a concept of operations.

Units are only authorized to remove vegetation in preparation of field training exercises by clearing it with ITAM, who coordinates work with the Directorate of Public Works (DPW) and Environmental and Natural Resources Division (ENRD). Units can request vegetation removal to provide line of sight for movement and maneuverability and to accommodate unit tactical assembly and training areas. Units can only excavate fighting and firing positions with prior coordination with Range Operations, ITAM, and ENRD, resulting in an approved dig permit being issued by DPW

There are 16 established bivouac areas on the Fort, in Training Areas C, D, E, F, G, K, L, N, T1, T2, and W (see Figure 2.1-2; Appendix A, Table A-1 and A-2) (ENRD 2021). Units use concrete pads in permanent bivouac areas for field kitchens to prevent wastewater (gray water) from seeping into the ground in case of spills (ENRD 2021). Range Operations maintains established bivouac areas and facilities as permanent areas for repeated use.

#### **2.1.9.1. Multi-Purpose Training, Testing, and Experimentation**

Multi Domain training and testing and experimentation uses strategically placed and operated electronic emitters and jammers to train U.S. Military forces to intercept, identify, and disrupt enemy electronic signals, as well as testing emerging technologies.

Company- to brigade-sized air and ground operations with tactical vehicles and actively and remotely piloted fixed- and rotary-winged aircraft (payload tests only) test and train



---

in a field environment while units larger than brigade-size can test and train in a synthetic environment. Testing and training will occur for approximately 3 to 10 days per month, every month. The spectrum office on Fort Huachuca manages electronic signal frequencies.

Fort Huachuca has a Department of the Army (DA)-validated and approved project to build a multi-domain operational (MDO) capable non-kinetic training and testing range (MPTR) for the purposes of emerging MDO requirements on the John R. Fox Range. Fort Huachuca will cover this action by a separate Environmental Assessment.

#### ***2.1.9.2. Land Navigation Training***

Land navigation involves the training of personnel to accurately navigate terrain on foot to locate pre-established sites and locations. Land navigation exercises typically involve 15 to 20 personnel and four to five vehicles to transport personnel to and from the field site (ENRD 2021). Land navigation training exercises:

- Are typically completed within 1 day,
- Are conducted year-round,
- Are conducted during day and night,
- Restrict vehicles to existing roads, trails, or parking areas always,
- Prohibit live fire, firing of blanks, and use of pyrotechnics, and
- Limit night activities within AMAs due to human safety concerns and for protection of sensitive and ecologically important agave resources.

Units use existing land navigation courses on the Installation (see Figure 2.1-2 and Appendix A, Table A-2) approximately two times per month for approximately 3 days and include:

- Training Area U, Tinker Land Navigation Course: 44 surveyed concrete points,
- Training Area U1, U Land Navigation Course: 26 surveyed points; and
- Training Area M, M Land Navigation Course: 58 surveyed concrete points.

Although nearly all land navigation training occurs at the established courses where surveyed markers are located, units can also conduct additional land navigation training at the Installation's other training areas.

#### ***2.1.9.3. Patrolling and Tactics Training***

Patrolling and tactics training occurs across the South and West Ranges (see Figure 2.1-2). These exercises simulate patrol, search and rescue, and intelligence gathering missions. Units conduct patrolling and tactics training exercises monthly with

---

approximately 50 personnel, generally for 3 days. Ammunition used during these operations includes pyrotechnics, flares, smoke, and small arms blanks up to .50 caliber (ENRD 2021). Firing blanks or pyrotechnics is prohibited within 0.25-mi of protected AMAs in accordance with Range and Training Regulations. Firing blanks is prohibited if it is determined by Range Operations, the Fort Huachuca Fire Department, and ENRD that a fire hazard exists. Units conduct activities day and night, except within protected AMAs, where night operations are limited from 1 July through 31 October.

During these training exercises, soldiers maneuver on trails and travel cross-country on foot and may utilize existing TAAs. Vehicles are kept on existing roads and trails. With prior authorization from Range Operations, soldiers occasionally dig shallow holes, approximately 5 inches [in] (2 centimeter [cm]) deep to bury sensors and training aids near the trails and major roads.

Occasionally, a Special Forces unit requests permission to conduct patrol training in the Huachuca Mountains on Fort Huachuca. Usually fewer than 12 personnel participate in these exercises. Range Operations provide training to these personnel on environmental awareness, and they must comply with all environmental requirements, including prohibitions on making campfires or harming wildlife.

#### ***2.1.9.4. Individual Development Training***

Several individual development training facilities are on the South and West Ranges and within the Cantonment. These permanent facilities are used to train personnel from a variety of host and partner organizations. Individual Development Training facilities include (ENRD 2021):

- Rappelling tower (Training Area T1) – A four-level tower platform used for rappelling practice,
- Rappelling Cliffs (Training Area Q) – Cliffs in Garden Canyon, varying in height from approximately 70 to 100 ft,
- Rope Bridge Training Site (Training Area V) – An open area with four upright telephone pole tops, approximately 4 ft high,
- Leadership Reaction Course (Training Area Y) – Eight stations depicting a situation which requires negotiation of obstacles by expedient means,
- Demonstration Hill (Training Area K) – Used as a test point and training (observation point and equipment setup); has a helipad,
- Warrior Task Complex (Cantonment) – Six stations, each requiring soldiers to negotiate obstacles using the Military Decision-Making Process,
- Obstacle Course (Cantonment) – Clover-shaped with 17 obstacles. The course is a test of a Soldier's basic motor skills and physical conditioning,

- 
- Confidence Course (Cantonment) – Clover-shaped with four groups of higher and more challenging obstacles than the obstacle course. Designed to give soldiers confidence in their mental and physical abilities, and
  - Challenge Course (Cantonment) – Ropes course designed to provide a combination of mental and physical challenges requiring groups to work as a team.

#### **2.1.9.5. Vehicle Maneuver Training**

Vehicle maneuver and driver training activities occur across the Fort on various existing roads and trails. The ITAM program assesses and manages over 250 mi (402 km) of maneuver and tactical movement trails for condition (e.g., drivability) and status (e.g., in service or abandoned). ITAM defines these trails as unpaved trails within a maneuver area used for mounted or dismounted maneuvering. Wheeled-vehicle maneuvers include attaching and detaching trailers, loading and unloading equipment, and driver training.

Maneuvering activities are confined to existing roads and designated maneuver trails. Fort Huachuca policy authorizes light vehicle use on roads and trails and restrict oversized vehicles to roads. No cross-country maneuvering is currently authorized, except for limited off-road driving on established DZs, LZs, FARPs, bivouac areas, and TAAs or during emergency situations (e.g., safety and fire). However, this may change upon needs of the Army and its mission. Existing and planned operations will adhere to the following requirements:

- Fort Huachuca Regulation 385-8, *Safety – Range and Training Area Operations* (3 October 2006; revision in process),
- Fort Huachuca Policy 20-42, *Off-Highway Vehicle Operation* (13 October 2020),
- Fort Huachuca Installation Spill Contingency Plan (Baker and Vernadero 2011), and
- Reservation request via the web-based Range and Facilities Management Support System (RFMSS) program for approval prior to commencement of training.

#### **2.1.9.6. Live Fire Qualification and Ground-based Laser Training**

Most live fire activities take place on weapons qualifications ranges in Training Areas T1, T2, and T3. When conditions permit, Range Operations can authorize tracer rounds on all live firing ranges, except for Ranges 2, 3, and 4 (ENRD 2021). Small arms qualification and live fire at Fort Huachuca occur on 13 live fire ranges in Training Area T1, T2 and T3; on Hill 4 in Training Area A; at the widened infantry target (WIT) 1 and 2 facilities in Training Area Z (duded impact area); and on the Convoy Live Fire range in Training Area Z. Units use firing ranges for personnel qualification and training throughout the year. Range Operations prohibits live fire at night on Ranges 1, 1B, 2, 3, and 4 from 1 July through 31 October, when practicable, as they are in protected AMAs. The John R.

---

Fox Range contains several surveyed firing points usable for mortar and artillery firing into Impact Area Z. Mortar and artillery firing points are activated as required for any indirect live-fire exercises (ENRD 2021). Fort Huachuca may prohibit live fire if Range Operations, the Fort Huachuca Fire Department and ENRD determine a wildfire hazard exists.

Maximum permitted ammunition and associated noise levels used on these ranges are listed in Appendix A (Table A-3). The location of these firing ranges, firing positions, and safety fans are shown in Figure 2.1-3.

Ground-based laser testing and training is conducted via ground operations within established sites at Ranges 6, 8, 9, and 10 on the South Range. Laser operations may be conducted during the day or night, depending on the type of laser used. Laser testing and training includes the use of lasers on towers, ground vehicles, soldier weaponry, and other ground-based platforms (i.e. remote or unmanned ground vehicles). Laser testing and training activities includes stationary and mobile targets at ground-level.

#### **2.1.10. Air Operations**

Air operations include fixed-wing piloted aircraft training, UAS testing and training, unmanned drug and border surveillance balloon operations, and rotary wing aircraft. Air Operations generally occur at LAAF, Black Tower Complex, and Hubbard LZ. Units may also use the following locations on occasion:

- Landing strips and runways, including Kilo 1 LZ,
- 30 LZs, including 5 helipads, and
- 6 DZs.

Air Operation training areas and flight corridors are illustrated in Figure 2.1-4 and summarized in Appendix A, Table A-4.

#### **2.1.11. Landing Strips and Runways**

##### ***2.1.11.1. Libby Army Airfield***

LAAF is a full-service DoD airfield north of the Cantonment. It is a military-civilian joint-use facility supporting military aircraft involved in test and training programs; troop movements; and standard military, commercial, and General Aviation operations. Assigned units, other active and reserve units, and the USAF use LAAF to transport Service members, personnel, and equipment. The Army conducts manned and unmanned aviation training and C5ISR training and testing. LAAF is capable of operating 24 hours per day, 7 days per week, 365 days per year but currently operates on a 24-hour schedule 5 days per week to support mission operations (ENRD 2021). Other regional agencies using LAAF include the CBP and U.S. Forest Service (USFS).

---

LAAF has one of the Army's largest runways and can accommodate any aircraft in the DoD inventory. LAAF consists of two runways: a 12,000-foot Class B main runway on an east-west axis and a 5,366-foot secondary (i.e., crosswind) runway on a southeast-northwest axis. Additionally, there are several taxiways, aprons, and parking areas for fixed and rotary-wing aircraft. Numerous support facilities sustain air operations, including the Air Traffic Control (ATC) tower, Ground Control Approach, a navigational aid building, an operations building, Fire Station 3, hangars, utilities support structures, and storage buildings.

Approximately 130,000 aviation evolutions<sup>1</sup> occur at LAAF annually. Military operations include 110,500 evolutions or approximately 85 percent (%) of all activity. General aviation evolutions account for the remaining activities (ENRD 2021).

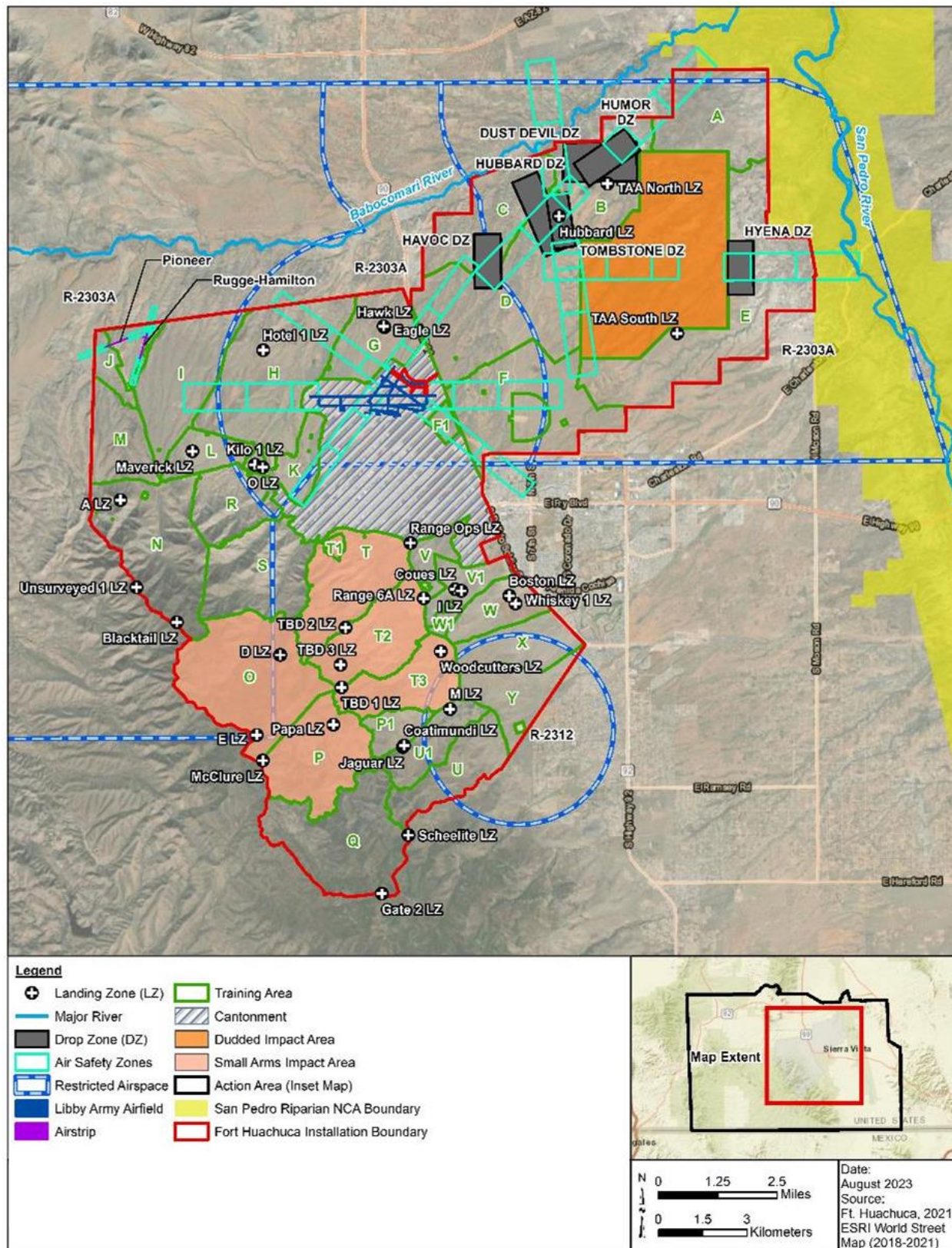
Flight operations originating at LAAF (i.e., fixed-wing, helicopter, and UAS operations) use only a small portion of the LAAF airspace. The USAF from Davis Monthan Air Force Base (DMAFB) and the ANG conduct at least 49% of the activities in this airspace.

Both U.S. and international entities conduct training activities at LAAF, which includes:

- General training for ANG and active duty MQ-9 units who fly Fort Huachuca aircraft via remote split operations from their bases across the country in the Fort's local airspace. Most units do not have their own aircraft, so they rely on other units to conduct live flight training. These units conduct training from the Ground Control Station at LAAF.
- Exercises in the local airspace to produce training for the MQ-9 and other aircraft. Examples include Red Flag-Rescue, 355<sup>th</sup> Wing Combat Search and Rescue Task Force exercises, Marine Urban Assault training, and Sage Eagle.
- Practice launch and recovery operations to maintain currency and proficiency for local aircrew qualified in those procedures.
- Training to assist Department of Emergency and Military Affairs with wildfire suppression and other emergency response operations.

---

<sup>1</sup> Each landing or departure counts as one evolution.



**Figure 2.1-4. Fort Huachuca Aviation Training Areas**



---

### ***Fixed-Wing Piloted Aircraft Training***

Fort Huachuca manages airspace and facilities used by other DoD agencies for proficiency testing and training during exercises originating at other installations.

The USAF and USAF Reserve conduct individual pilot proficiency training in Fort Huachuca airspace and at LAAF. The most utilized aircraft is the ground attack A-10 flown out of DMAFB. These A-10 flights averaged 30,000 flight evolutions at LAAF for calendar years 2022 - 2023, for an average of 27% of the annual military activity at the airfield. The LAAF air safety zone used during this activity is shown in Figure 2.1-4.

The AZ ANG 162<sup>nd</sup> and MO ANG 139<sup>th</sup> Airlift Wing (AW) use Fort Huachuca airspace and LAAF facilities on a continuous basis for pilot proficiency training. On average, AZ ANG and MO ANG aircraft use LAAF for 40,000 flight evolutions per year or approximately 36% of the annual military activity (USAIC and FH 2006, ENRD 2021).

The MO ANG 139<sup>th</sup> AW maintains the Advanced Airlift Tactics Training Center (AATTC). They have four to six C-130s and/or one to two C-17s on LAAF at any given time and hold 10 to 12 training classes per year.

Other fixed-wing activities at LAAF include non-DoD tenants at Fort Huachuca, such as the USFS Air Tanker Base and the CBP border surveillance activities (see Appendix B). Occasionally, other agencies use LAAF on a temporary basis, including North Atlantic Treaty Organization (NATO) partner aircraft, and transient USAF operational aircraft.

### ***Unmanned Aircraft Systems***

The Army flies and trains the MQ-1C Gray Eagle and the RQ-7B Shadow.

The MQ-1C Gray Eagle UAS operations require the use of a 5,000-foot runway and therefore operates from LAAF. UAS operations may operate 24 hours per day. The MQ-1C Gray Eagle UAS system uses restricted area R-2303 A/B/C and the Class-D airspace for pattern work.

Other non-DoD organizations conduct UAS operations from LAAF, including CBP Predator-B flights.

#### ***2.1.11.2. Black Tower Complex***

The Black Tower Complex, managed under LAAF operations, contains unmanned facilities, such as runways and support and training facilities associate with the operation and training of UAS, at Rugge-Hamilton and Pioneer Airstrips in the northwest corner of the West Range. The Army trains Shadow operators to sustain the Army's manpower requirements for the life of the system. Currently, the lifespan of the Shadow System is not known.

---

Units conduct the UAS training at the airstrips approximately 6 mi (10 km) west of the Cantonment on the West Range (see Figure 2.1-4). The Army uses equipment such as UAS ground control stations, 2.5-ton trucks, 5-ton trucks, mobile power units, and communication antennas.

#### **2.1.11.3. Hubbard Landing Zone**

Hubbard LZ is an unpaved Forward Landing dirt strip in the north-central portion of the John R. Fox Range. Hubbard supports joint landing training operations and is capable of handling C-130 and C-17 aircraft. The landing zone provides fixed-wing aircraft with the ability to perform assault landings and the USAF primarily uses it regularly during the AATTC classes, offered one week per month (ENRD 2021). They use it for full stop landings, mostly with C-130 aircraft. Additional UAS testing and training occurs on and alongside the Hubbard LZ, at the North TAA (TA B), and Humor/Dust Devil DZ (TA B). The ANG uses Hubbard LZ as a training flight destination and objective where airdrops or landings can be practiced (see Figure 2.1-4).

#### **2.1.11.4. Kilo 1**

The Kilo 1 LZ is an unpaved Forward Landing dirt strip west of the Cantonment on the West Range. It is within LAAF-controlled non-restricted Class D airspace. Kilo 1 supports landing training operations and is capable of handling rotary-wing aircraft and small UASs on a non-interference basis. Kilo's landing zone orientation and very close proximity to LAAF in its current configuration is most suitable for rotary aircraft operations, if properly cleared.

### **2.1.12. Landing Zones**

LZs, including helipads, can host fixed-wing aircraft (where size allows), rotary-winged aircraft, and UAS. The following activities occur in LZs: emergency, first responder; training and testing; and airborne operations such as insertions, infiltration and exfiltration, fast rope; along with other training site activities that apply for any given training or testing event. Remote helipads are situated throughout the mountainous portion of the Installation but are used primarily for firefighting and CBP interdiction operations against smugglers of both contraband and undocumented immigrants (ENRD 2021).

Seasonal restrictions are in place for high elevation LZs in mountainous TAs (i.e., N, O, P, and Q), where training may occur only from September through February. Mid and low elevation LZs do not have seasonal training restrictions. Seasonal restrictions do not apply to emergency actions, such as firefighting or CBP interdiction operations.

There are thirty LZs and helipads totaling approximately 43 ac (17 ha). LZs and helipad locations are shown in Figure 2.1-4 (see Appendix A, Table A-4).



---

### **2.1.13. Drop Zones**

Six DZs total approximately 3,052 ac (1,235 ha). DZs can host fixed-wing aircraft (where size allows), rotary-winged aircraft, and UAS. Activities occurring in DZs are: emergency, first responder; intelligence and communications training and testing activities; bivouacking; field and situational training exercises; patrol bases/objective rally points/tactical assembly areas; airborne operations such as UAS launch and recovery, helicopter landings, and bundle and personnel drops (e.g., insertions, infiltration, and exfiltration, fast rope); ROM training and FARP; along with other training site activities that apply for any given training or testing event. Units can use the following munitions in DZs with prior review and approval: blanks, simulated munitions, artillery simulators, and pyrotechnics (including smoke grenades) with an approved fire plan. Some of this training may involve hand-digging temporary tactical features such as holes and trenches. Units use Humor DZ in support of training, consisting of dropping palletized loads from aircraft. Short off-road recovery trips are required for operational use of the DZ.

DZs are shown in Figure 2.1-4 (see Appendix A, Table A-4).

### **2.1.14. Other Air Operations**

#### ***2.1.14.1. Unmanned Balloon Operation***

The CBP assumed operation of an aerostat drug surveillance balloon in the southern portion of the South Range in 2012, which the USAF operated since 1987 (23 ac [9 ha] Aerostat Site). This and other blimp-type balloons are ground-tethered and serve as an aerial platform for radar equipment used to detect aircraft illegally entering the U.S. and other training purposes. Aerostat drug surveillance balloons provide radar data for CBP, DoD, and the Federal Aviation Administration (FAA) and operate year-round, 24 hours per day. The Aerostat drug surveillance balloon operates within restricted airspace R-2312 exclusively. Airspace for restricted airspace R-2312 is shown in Figure 2.1-1.

Occasionally other tethered aerostat testing and training by U.S. and international organizations occurs in Training Areas A, B, C, D, E, U1 and Y within the R-2303 airspace.

#### ***2.1.14.2. Rotary-Wing***

Military units occasionally conduct training on LZs and DZs such as insertions and extractions. The USFS typically operates rotary-wing operations from May to August, which are primarily associated with wildland fire suppression. CBP flies' missions at unscheduled times associated with border surveillance activities. High elevation LZs have training restrictions from March through August to avoid noise impacts to listed species. There are no seasonal restrictions for LZs at mid or low elevations (see Appendix A, Table A-4).

---

### **2.1.14.3. Laser Testing and Training**

Fort Huachuca conducts laser testing and training at the Blacktail Test Facility and on TAs I, J, M on the West Range; on the South and John R. Fox Ranges; and on Sunnyside and the Willcox Playa. Laser operations include both day and night operations, depending on the type of laser being used. Solid state laser testing and training are conducted via ground and air operations from Gray Eagle and Shadow UASs within established on-post and off-post sites. The flight altitude for UAS laser training is typically at or above 13,000 ft above mean sea level (amsl). No laser testing or training activities include lasing from the ground to an aerial target. Laser testing and training includes the use of lasers on towers, ground vehicles, soldier weaponry, other ground-based platforms (i.e. remote or unmanned ground vehicles), aerostats (John R. Fox Range only), air vehicles (manned or unmanned), and lighter-than-air vehicles. Laser testing and training activities include stationary and mobile targets at ground-level. All lasers, including solid state lasers, are categorized into classes: 1, 1M, 2, 2M, 3R, 3B, and 4. The class of a laser is determined by its potential for causing biological damage and is based on calculations of the laser beam energy, the wavelength of the emitted radiation, and the exposure time. The following is a representative list of the lasers/laser systems utilized by the Fort include:

- Laser designators, which are near infrared, invisible lasers used to guide “smart munitions” to their targets. These lasers are typically Class 4 (hazardous to view under any condition and have the potential for skin and fire hazard).
- Invisible tactical laser pointers or illuminators may be used to point out a target or other item of interest. They are invisible to the human eye, but visible when using night vision goggles. These lasers are typically Class 3B (potentially hazardous to view, but small probability of injury) but can also be Class 3R (potentially hazardous to view under some direct and specular reflection) or 4.
- Visible tactical lasers may be used to point out a target or other item of interest. They may be mounted on weapons and used as aiming devices. They are typically Class 3B but may also be Class 3R or Class 4.
- Laser range finders, which are almost always invisible lasers, are typically Class 1 lasers (incapable of producing damaging radiation levels during operation). Older laser range finders may be Class 3R or 3B.
- Communications lasers are almost always invisible Class 1 lasers but may be Class 3R. These lasers are point to point and are each other’s target.

Class 1 lasers are used at all sites; Classes 2, 3A, and 3B are used on the John R. Fox Range, Blacktail Test Facility, and Willcox Playa. Class 4 lasers are used on the John R. Fox Range, Blacktail Test Facility, and in a limited capacity at Willcox Playa.

---

UAS-mounted laser systems, such as the extended range multipurpose (ER/MP) system, multi-mission optronic stabilized payload (MOSP) 3000 system, and the Israel Aerospace Industries (IAI) pod are Class 4 and are designed to be mounted to specific UAS including the MQ-1C Gray Eagle and RQ-7B Shadow. Lasers are classified based on an Accessible Emission Limit factor. More detailed descriptions and thresholds for each class of laser are in the Biological Assessment for Reorientation of Runway and Laser Testing and Training at the Black Tower Complex.

### **2.1.15. Outdoor Recreational Activities**

Areas outside the firing ranges and impact areas are open to the public for recreational opportunities such as hunting, hiking, mountain biking, camping, picnicking, horseback riding, golfing, and off-highway vehicle (OHV) use on established roads. The Army does not permit recreational caving on Fort Huachuca.

Fort Huachuca controls the types, locations, and magnitude of outdoor recreational activities to ensure that such uses do not interfere with the military mission and reduce the potential for negative impacts on natural and cultural resources. All users are required to coordinate recreational activities with the Directorate of Family, Morale, Welfare, and Recreation (DFMWR) and ENRD. The Army prioritizes the military mission over all recreational activities. The Army may close the installation, or portions thereof, to recreation activities without notice for mission and security reasons. Recreational activities are only allowed when they are compatible with the military mission and security (ENRD 2021).

The 2019 Outdoor Recreation Management Plan (ORMP) includes a planning approach to provide and maintain outdoor recreation opportunities that support community interests while sustaining natural and cultural resources (WW Associates [WWA] 2019). The ORMP identified existing recreational opportunities within and outside of the Cantonment, challenges, prohibited activities, and recommended proposed future recreational facilities and uses. Existing recreation activities include hunting, hiking, bird watching, mountain biking, picnicking, camping, horseback riding, OHV use, and other outdoor recreation activities within the Cantonment.

### **2.1.16. Cantonment Activities**

The Cantonment and other developed lands cover approximately 7,380 ac (2,987 ha), or approximately 8% of the Fort. Most of the buildings and structures are within the Cantonment. Army command headquarters are located throughout the Cantonment along with facilities for operation and testing; maintenance and production; research, development, test and evaluation; supply; medical; administrative; housing and community support; utility and grounds improvements; and training. Land management activities and maintenance for all facilities fall under the direction of the DPW, and

---

coordination is required for all Garrison and tenant activities on any infrastructure anywhere on the Fort.

Fort Huachuca organizations conduct activities associated with operating a military installation, including but not limited to:

- Operation and maintenance of a 2 million gallons per day (mgd) capacity wastewater treatment plant (WWTP),
- Collection of solid waste and disposal at the Huachuca City landfill (primary) and Cochise County landfill,
- Maintenance of a network of roads, most of which are primary or collector streets in the Cantonment and many unpaved routes on the training ranges,
- Operation of three access gates to the Fort: Buffalo Soldier, Van Deman, and West gates,
- Distribution by Sulphur Springs Valley Electric Cooperative (SSVEC) and electricity supplied by Tucson Electric Power (TEP),
- Distribution and use of stationary fuels, such as natural gas and propane, as provided by Southwest Gas Corporation,
- Distribution, storage, and use of vehicle and aircraft fuels, and
- Operation of a Hazardous Material Management Center in compliance with Occupational Safety and Health Administration hazardous communications standards and National Fire Prevention Association standard codes, the Installation Spill Contingency Plan, and the Installation Hazardous Waste Management Plan.

The following outdoor training facilities are within the Cantonment:

- Obstacle Course – Clover-shaped course with 17 obstacles designed to test a Soldier's basic motor skills and physical conditioning,
- Confidence Course – Clover-shaped course with four groups of higher and more difficult obstacles than the obstacle course, designed to give soldiers confidence in their mental and physical abilities, and
- Three BTAs (BTA 1, BTA 1A, and BTA 3) collectively just over 24 ac (10 ha), used for military field training exercises.

### **2.1.17. Programmed Facilities Development**

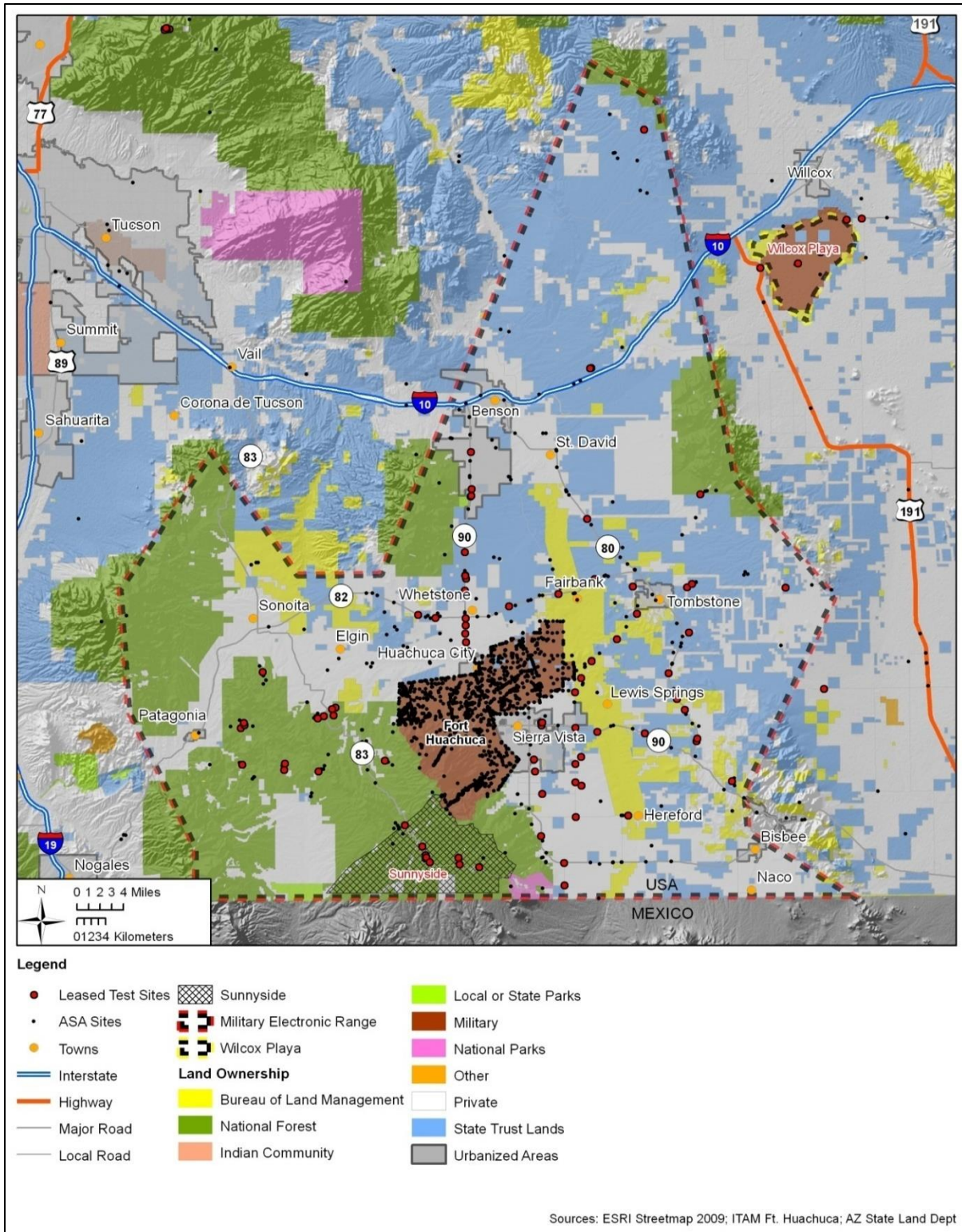
Programmed renovation and construction of facilities and infrastructure support mission-related activities. The Real Property Master Plan consists of six separate component documents which identify the following goals relevant to programmed facilities development:

- 
- Maintaining Soldier, family, and civilian readiness through repurposing and utilizing existing facilities to adapt to evolving environment and mission requirements and concentrating uses and activities to promote efficiency and readiness,
  - Maintaining Soldier, family, and civilian well-being through encouraging the development of pedestrian and bicycle trails, improving traffic circulation, improving existing community facilities, providing quality outdoor recreation amenities, preserving open spaces, redeveloping streetscapes, and protecting historic architectural and archaeological resources,
  - Maintaining installation readiness through ensuring the adequacy of facilities to support current and future mission population levels, promoting reuse and modernization of existing facilities, maintaining current facilities, employing current and emerging technologies, designing new facilities that are adaptable for future reuses, maximizing space utilization, controlling encroachment on training areas, airspace, and electromagnetic spectrum, replacing temporary buildings with permanent structures, encouraging compact, mixed-use development to promote efficiency and productivity, and controlling growth on the Installation by using effective space management practices, and
  - Maintaining a safe and secure environment through incorporating antiterrorism and force protection (ATFP) standards at existing facilities where economically and physically feasible, designing new facilities to meet current ATFP requirements, enhancing perimeter security, and working to ensure land use compatibility between the Installation and adjoining parcels of land.

Military construction projects typically occur within the Cantonment, LAAF, and Black Tower Complex. Additional growth may occur near or within existing mission areas. The Army prioritizes Military Construction Army project funds to upgrade or improvement existing buildings, such as short-term growth opportunities focused on providing facilities for UAS training. The Fort will complete the NEPA process on future development projects that are currently in the planning stages.

#### **2.1.18. Off-post Activities Authorized or Carried Out by Fort Huachuca**

Fort Huachuca controls areas that are leased, withdrawn, or permitted from federal, state, county, municipal agencies, and private individuals (ENRD 2021). Most leased/withdrawn land is in Cochise County and parcels range in size from less than 1 ac to 29,046 ac (11,754 ha) on Willcox Playa. The Army uses off-post leased lands to conduct equipment testing and field training exercises by a variety of Fort Huachuca training units and tenants that require placement of equipment over a large geographic area. The EPG uses some off post lease properties to conduct C5ISR system testing and for communications sites (e.g., antennas, microwave towers), while others are pull-off sites along roadways where equipment is temporarily operated (ASA points; Figure 2.1-5). Operation of equipment at off post locations is usually temporary.



**Figure 2.1-5. Military Electronic Range with ASA Sites**

---

## **2.2. No Action Alternative**

The No Action Alternative is required under the Council of Environmental Quality (CEQ) regulations implementing NEPA and serves as a baseline or benchmark to compare with the Proposed Action. Under the No Action alternative, the Army would elect not to implement the programmatic approach described in this PEA. Management of Fort Huachuca military activities would continue under the status quo. Consequently, current military activities would continue in accordance with existing procedures and new activities would be subject to ad-hoc analysis. The No Action Alternative would result in the preparation of repetitive environmental impact analyses for each operation and training group, which would cause significant schedule delays, inefficiencies, and high costs to the Army - limiting the Installation's ability to meet its missions and soldier readiness.



---

### **3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES**

Section 3 describes conditions of, and possible impacts to, environmental resources potentially affected by the Proposed Action and alternatives. The description of existing conditions provides a baseline understanding of the resources from which any changes that may be brought about by the implementation of an alternative can be identified and evaluated. The description of the potential impacts of the Proposed Action incorporates conservation measures that will be included in the project if the project is implemented.

Following the description of environmental resources potentially affected, the potential changes or impacts to the resources are then described as environmental consequences. As stated in CEQ guidelines in 40 CFR 1508.14, the “human environment potentially affected” is interpreted comprehensively to include the natural and physical resources and the relationship of people with those resources. The term “environment” as used in this report encompasses all aspects of the physical, biological, social, and cultural surroundings of the Installation. In compliance with guidelines contained in NEPA and CEQ regulations, the description of the affected environment focuses only on those aspects potentially subject to impacts.

Cumulative impacts for each resource area are then addressed. Cumulative impacts are defined in the CEQ regulations (40 CFR 1500-1508) as those impacts attributable to the Proposed Action combined with other past, present, or reasonably foreseeable future impacts regardless of the source. Cumulative impacts can result from individually minor but collectively significant actions taking place over time. However, to be considered a cumulative impact, the impacts must:

- Occur in a common locale or region,
- Not be localized (i.e., they would contribute to impacts of other actions),
- Impact a particular resource in a similar manner, and
- Be long term (short-term impacts would be temporary and would not typically contribute to significant cumulative impacts).

Analysis of cumulative impacts requires the evaluation of a broad range of information that may have a relationship to the Proposed Action and alternatives. A good understanding of the politics, sociology, economics, and environment of the region is vital to this analysis, as is an accurate evaluation of factors that contribute to cumulative impacts.



---

## 3.1. Land Use

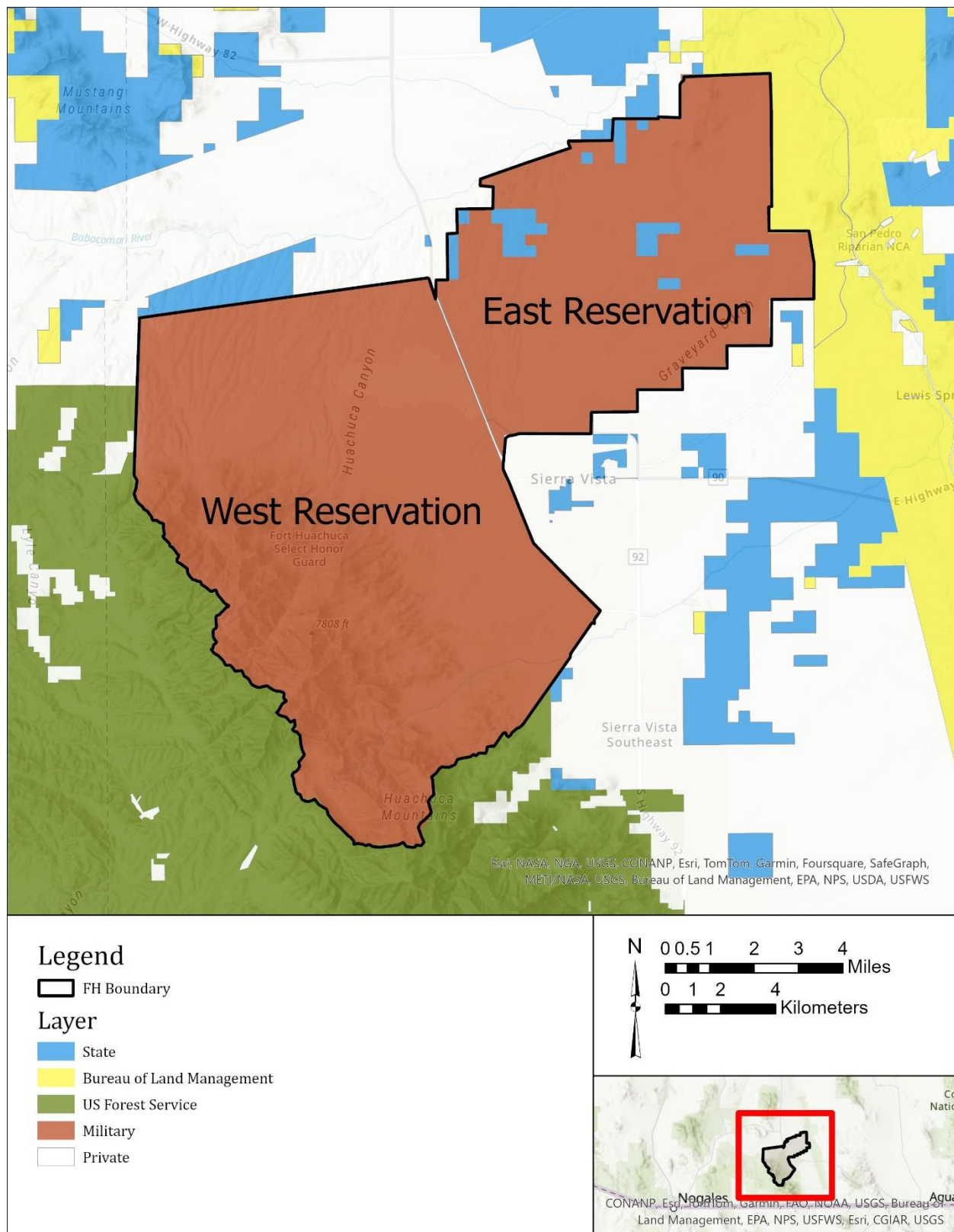
### 3.1.1. Affected Environment

Fort Huachuca is a military installation located in the San Pedro River Valley. Adjacent to the Fort are the San Pedro River National Conservation Area (SPRNCA) and City of Sierra Vista to the east, Huachuca City to the north, and the Coronado National Forest (CNF) to the west and south. The Huachuca Mountains form the southern and western boundaries of Fort Huachuca (ENRD 2021). Fort Huachuca encompasses 80,912 acres, which is divided into the East Reservation (28,597.5 acres) and the West Reservation (52,314.5 acres) by SR 90 (Figure 3.1-1). Land use is generally classified as open/operational or developed within the two reservations. Within the Installation, the open/operational areas on the West and East Reservations are used as training and test ranges and comprise of approximately 90% of the Installation. Developed areas comprise the remaining 10% of the Installation, including the Cantonment.

The East Reservation includes the John R. Fox Range and is divided into training areas A, B, C, D, E, F, and Z. Multiple test facilities including the open-air antenna testing range, Hubbard LZ, the Convoy Live Fire Range (CLFR), a demolition range, an impact area, and six DZs are located within the training areas on the John R. Fox Range.

The West Reservation includes the West Range, South Range, and Cantonment (including LAAF). Most buildings and facilities on Fort Huachuca are within the Cantonment. These facilities and associated personnel provide the functions required to operate and maintain the Installation. LAAF is in the northernmost corner of the Cantonment and consists of joint civilian-military runways and separate support facilities. The LAAF complex and Sierra Vista Municipal Airport are used for aviation-related training and both military and civilian aviation operations. The West Range is divided into training areas F1, G, H, I, J, K, L, M, N, R, and S. The Black Tower UAS Complex is in the in the northwestern corner of the West Range. It is home to the Army's UAS Training Center and flight lines for medium tactical UAS flights. The South Range is divided into training areas O, P, P1, Q, T1, T1A, T2, T3, U, U1, V, V1, W, W1, X, and Y. The south range includes the firing ranges and several impact areas.

To help ensure compatible land uses between on-post military activity and surrounding development, a Joint Land Use Study (JLUS) was developed through a collaborative effort between Fort Huachuca and other stakeholders. The study was finalized in 2007 and updated in 2022. Compatible land use agreements between all stakeholders are managed using a cooperative program of affected jurisdictions in Cochise and Santa Cruz counties that have the authority to implement land use regulations, along with Fort Huachuca and other interested parties (Arizona Department of Commerce 2007). The JLUS identified operations occurring at the Installation that extend beyond the boundaries of the Fort and into the surrounding communities, including uses of the electromagnetic environment.



**Figure 3.1-1. Land Ownership near Fort Huachuca, Arizona**

---

Further, authorized by 10 U.S.C. § 2684a, the Army Compatible Use Buffer (ACUB) program is a tool that can provide conservation benefits and address land use issues to protect mission critical resources to prevent encroachment on installations (ENRD 2021). ACUB allows the Fort to enter into cooperative agreements to acquire or encumber land to protect habitat and training without acquiring new land under Army ownership. Cooperating partners include The Nature Conservancy (TNC), Arizona Land and Water Trust (AZLWT), and Cochise County.

The limited amount of developed land surrounding the Installation provides an EM environment that is an unparalleled asset for testing and training operations carried out on the Installation. It is the only U.S. location where aggressive, offensive electronic warfare testing can be conducted and that has a frequency coordination zone protected by federal mandate. The restricted airspace surrounding Fort Huachuca is a vital resource for military missions at the Fort and other military installations in Arizona and for the aviation needs of other organizations and agencies. The restricted airspace extends well beyond installation boundaries and supports Fort Huachuca's aviation missions.

Willcox Playa is a 27,387-acre parcel within the playa, a 50 square mile dry lakebed, located 40 miles northeast of Fort Huachuca, near the town of Willcox, Arizona. The parcel is Bureau of Land Management (BLM) land and was permanently withdrawn for military purposes in 1934. The entire lakebed was designated and used as a bombing range from 1943 until its transfer to Fort Huachuca in 1958. Although BLM retains ownership of the land, the U.S. Army has exclusive use and control over the parcel.

### **3.1.2. Environmental Consequences**

#### ***3.1.2.1. Proposed Action***

The implementation of the Proposed Action is not anticipated to result in any impacts to land use on Fort Huachuca.

The Army is not proposing new land uses other than that associated with the WTR and MPTR, for which Fort Huachuca will analyze specific impacts in standalone EAs; and new operations will be comparable to those projects and activities currently conducted on the Installation. Utilization of training lands located within training areas is scheduled through the Fort Huachuca Training Division of DPTMS using a Range Facility Management Support System (RFMSS). The RFMSS deconflicts training activities on training ranges and minimizes training related land use conflicts.

Land management practices on Fort Huachuca would continue to focus on the improvement, use and maintenance of land resources for the appropriate long-term net public benefit while supporting the mission. To manage land use impacts and provide sustainable use guidelines, Fort Huachuca would implement planning and policy initiatives and several management plans including, but not limited to, the Integrated

---

Natural Resources Management Plan (INRMP), Sustainable Range Program (SRP), Range and Training Land Program (RTLTP), the ITAM plan, and ACUB.

### **3.1.2.2. No Action Alternative**

Under the No Action Alternative, Fort Huachuca would not implement the Proposed Action. Current military activities would continue in accordance with existing procedures and new activities would undergo project-by-project evaluation under NEPA. Consequently, no impacts are anticipated from the No Action Alternative.

### **3.1.2.3. Cumulative Impacts**

No cumulative impacts related to incompatible land use are anticipated to occur. Development outside the Installation's boundaries and within the JLUS study area is guided by the Fort Huachuca JLUS and local governance. The JLUS facilitates the implementation of compatible land uses critical to the Fort's mission and operations. The Fort carefully considers all projects early in the planning process to avoid significant impacts to existing and future land use. Siting would continue to be coordinated with all appropriate directorates and tenants, and local governance if appropriate, to ensure that projects do not conflict with existing land uses, or ongoing or reasonably foreseeable future projects. Pursuant to Arizona statute, counties and municipalities consult with military installations for planned land use (see ARS 9-461.05, ARS 11-804, and ARS 28-8481).

## **3.2. Topography, Geography, and Soils**

### **3.2.1. Affected Environment**

#### Topography

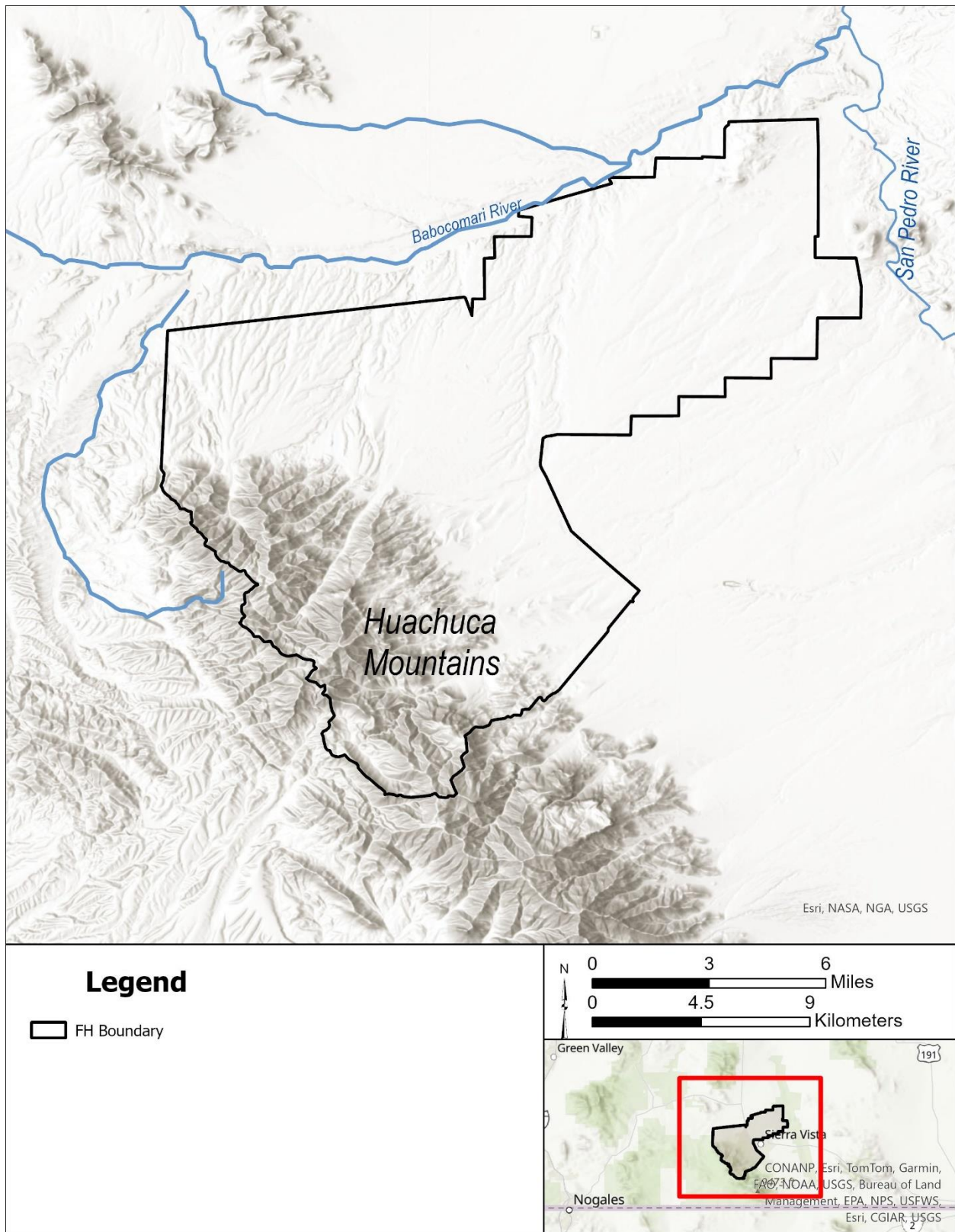
The Installation is in the Mexican highland section of the Basin and Range physiographic province. The landscape consists of isolated mountain ranges and broad, flat valleys or basins (Figure 3.2-1). The Huachuca Mountains, which trend northwest to southeast, encompass a portion of the southwestern boundary of the Fort, while the remainder extends southwest of the Installation. The Mustang and Whetstone Mountains are north of Fort Huachuca and north of the Babocamari River, which closely parallels the Fort's northern boundary. Elevations on Fort Huachuca range from approximately 3,925 feet (ft) amsl in the northeast corner of the East Reservation near the San Pedro River to about 8,625 amsl at the crest of the Sheelite Canyon in the Huachuca Mountains. Steep slopes in the West Reservation transition to gradual slopes toward the San Pedro River east of the Installation (Vernadero 2014).

The Cantonment is relatively flat, with an approximate elevation of 5,050 ft amsl and a slope of roughly 2 percent. It is surrounded by foothills to the west with slopes of 70 percent. Deeply incised ephemeral streambeds flow out of the mountains and across the

---

Cantonment toward the San Pedro and Babocomari rivers (Vernadero 2014). The terrain within the Black Tower UAS Complex is highly dissected, with ridges and valleys draining north toward the Babocomari River. Facilities primarily occupy ridges.

The western portion of the South Range and the southern portion of the West Range consist of steep slopes and high elevations of the Huachuca Mountains. Eastern portions of the South Range and the northern and eastern portions of the West Range are generally level, with a slight gradual decrease in elevation moving toward the San Pedro and Babocomari rivers.



**Figure 3.2-1. Fort Huachuca Topography**

---

## Geology

The unconsolidated and semi-consolidated sediments of the Upper San Pedro River Basin (USPB) consist of three layers. The lowest unit is a thick, cemented conglomerate (Pantano Formation) overlain by the lower basin fill unit, composed of weakly to strongly cemented layers of interbedded sandy clay, silty sand, and sandy gravel. The upper basin fill unit in the vicinity of the Fort consists of very permeable, flat-lying layers of weakly compacted clay, gravel, sand, and silt of middle to late Pleistocene age. When combined, the upper and lower basin fill units form the USPB's principal groundwater reservoir. The floodplain alluvium overlying the upper basin fill in the San Pedro River Valley is composed of highly permeable unconsolidated gravel, sand, and silt.

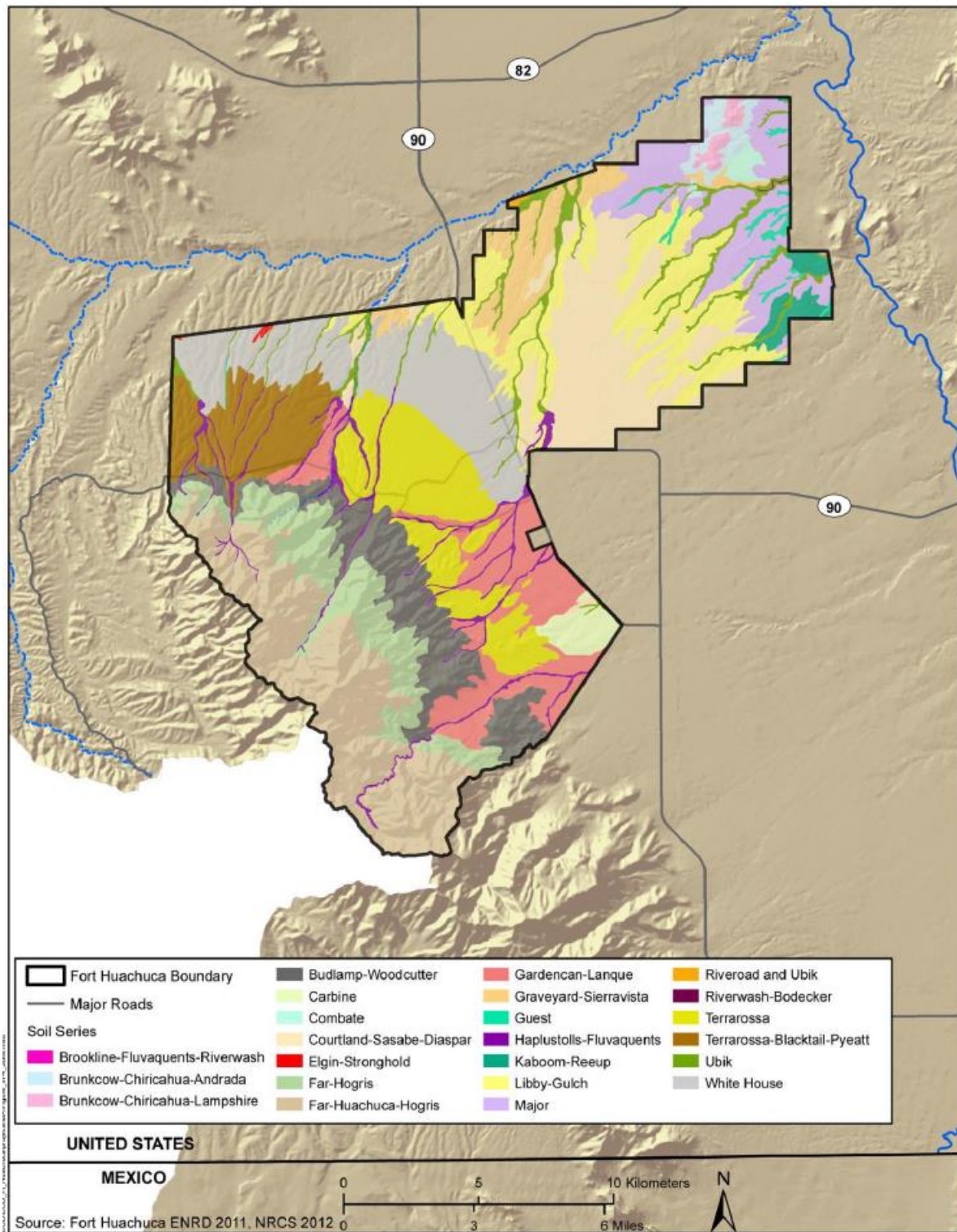
The Huachuca Mountains along the southwestern edge of the Installation are comprised primarily of granitoid and sedimentary rocks. In some areas, such as the southwestern flank of the Huachuca Mountains, volcanic rocks are interbedded with classic sediments (U.S. Geological Survey [USGS] 2006).

## Soils

Fort Huachuca has a diverse assortment of soil types. This diversity is directly related to very localized differences in climate, parent material and topography at the Installation. The soils exhibit wide variations in depth, texture, and chemical properties. The Soil Survey of Fort Huachuca characterizes the types of soils that occur at the Installation, locations of the soil types, and potential uses (ENRD 2021; Figure 3.2-2). The most abundant soil types include White House complex on the West Reservation; Courtland-Sasabe-Diaspar and Libby-Gulch complexes on the East Reservation; Far-Huachuca-Hogris association in the highest elevations of the Huachuca Mountains; and Terrerosa complex spanning the Cantonment and LAAF (NRCS 2024).

Many soils in the hilly and mountainous areas, particularly on the South and West Ranges, are shallow with steep slopes; these soils tend to have low available water capacity and are susceptible to erosion. The high sodium and gypsum contents of many soils on the John R. Fox Range make these soils subject to gully erosion and piping; in addition, they are very corrosive to concrete and steel. The soil in the Cantonment consists of alluvial fan soils. Almost one quarter of the post land area has deep red clay soils that have slow permeability and tend to poorly drain. They become very slippery when wet and are susceptible to compaction. Other properties of soils on the Installation influencing land use and management are gravelly or rocky soils, soils with hard pans and deep, droughty, sandy soils (USAGFH 2004).





**Figure 3.2-2. Soil Types on Fort Huachuca**



---

### **3.2.2. Environmental Consequences**

#### **3.2.2.1. *Proposed Action***

The implementation of the Proposed Action is not anticipated to result in any significant impacts to topography, geography, or soils.

The Army is not proposing new disturbance other than that associated with the WTR and MPTR, for which Fort Huachuca will analyze specific impacts in standalone EAs; and activities will be comparable to those projects and activities currently conducted on the Installation. Erosional impacts resulting from ongoing military activities are mitigated through natural resource management on the Installation. A goal of Fort Huachuca's INRMP, finalized in 2021, is to restore or rehabilitate and enhance native habitats across Fort Huachuca lands where soil disturbing activities have occurred. One of the objectives used to meet this goal is to conduct annual restoration projects in coordination with ITAM to reduce the amount of bare ground, thereby decreasing the loss of soil through erosion. Another goal of the INRMP is to implement Best Management Practices (BMPs) for ground disturbing projects. BMPs for ground disturbing projects may include limiting disturbance to the minimum practicable footprint, revegetating disturbed areas with a native seed mix, and water spraying disturbed areas to manage dust.

#### **3.2.2.2. *No Action Alternative***

Under the No Action Alternative, Fort Huachuca would not implement the Proposed Action. Current military activities would continue in accordance with existing procedures and new activities would undergo project-by-project evaluation under NEPA. Consequently, no significant impacts to topography, geography, or soils are anticipated from the No Action Alternative. Existing Best Management Practices (BMP) would still be utilized to stabilize soils and repairs under the ITAM Program would continue.

#### **3.2.2.3. *Cumulative Impacts***

Fort Huachuca actively takes measures to reduce the impacts of erosion on the Installation. These practices include promoting grass establishment through mesquite mastication and extraction, removal of invasive woody vegetation via chemical treatment, revegetating upland areas, installing gabions and erosion control structures, limiting off-road vehicle use, limiting operations during periods of heavy rains and wet soils, and closing unnecessary roads and fire breaks.

Based on the Installation's continued efforts to reduce erosion, no significant cumulative impacts to topography, geology, or soils are anticipated.

---

### **3.3. Hydrology and Water Resources**

#### **3.3.1. Affected Environment**

##### Floodplains

To date, no floodplains are mapped within Fort Huachuca on Federal Emergency Management Agency (FEMA) flood area maps. However, low risk floodplains occur in the Cantonment and in open space, training, and recreation areas (ENRD 2021).

##### Groundwater

Fort Huachuca is within the USPB. The Arizona Department of Water Resources (ADWR) divided the USPB into sub-watersheds to better define and manage available water resources. Fort Huachuca, Sierra Vista, and most of the SPRNCA occur within the Sierra Vista sub-watershed (SVS; USAGFH 2004).

Groundwater within the USPB is potable. Wells within the basin are used to meet all the water needs of the communities within the basin. There are eight municipal drinking water wells on Fort Huachuca. Two of the wells are on the John R. Fox Range and six wells are in the Cantonment. Another five wells support military testing and research activities and have minimal production (ENRD 2021).

The total quantity of groundwater pumped by the Installation in 2023 was 1,709 acre-feet area (afa; ENRD 2023). Fort Huachuca accomplished on-post water conservation by implementing a water conservation policy for all water use on the Installation, including residents. Measures that the Fort implemented to accomplish water efficiency and savings include fixtures upgrades, facility infrastructure removal/consolidation, aggressive leak detection and repair, water conservation education, and xeriscape landscaping.

Section 321 of the 2004 National Defense Authorization Act (2004) (NDAA), Public Law 108-136 limited the federal responsibility for water consumption attributable to the Fort's present and future operations. Consistent with Section 321, groundwater withdrawals attributable to Fort Huachuca are derived from the estimated number of people who live in the SVS due to the presence of Fort Huachuca. Groundwater pumping attributable to Fort Huachuca includes pumping from the Fort's on post wells and pumping associated with its off post "direct," "indirect," and "induced" populations within the SVS.

The Fort-attributable population makes up about 33% of the entire SVS population (AECOM 2022) and consists of the direct civilian, military, and contractor personnel employed by the Fort, the indirect population associated with those personnel (i.e., household members), and the induced population of persons whose employment arises from the expenditures of the direct and indirect population.

---

The impact of pumping on groundwater aquifers and related ecosystems is moderated by the amount and location of passive and deliberate managed aquifer recharge in the SVS. Passive, or “incidental,” recharge includes seepage from septic systems and excess irrigation, while deliberate recharge includes the application of treated effluent and stormwater to constructed groundwater recharge basins. Several groundwater-related mitigation measures are in place, which include:

- Replacing grass in parks and fields with artificial turf,
- Using treated effluent to irrigate the Mountain View Golf Course,
- Directing treated effluent to recharge basins,
- Capturing and recharging stormwater runoff in dry wells and recharge basins,
- Supporting Cochise Conservation & Recharge Network (CCRN) recharge efforts at the City of Sierra Vista’s Environmental Operations Park (EOP) and at the Palominas Recharge Project, and
- Acquiring and holding Conservation Easement (CE) parcels to preclude any new groundwater pumping for future development or agricultural purposes.

The Fort entered into agreements and partnerships with other groups and agencies for the purpose of reducing water use in the USBP. Agricultural pumping has decreased due to the retirement of agriculture associated with creation of the SPRNCA and through the purchase of conservation easements by Fort Huachuca in partnership with The Nature Conservancy (TNC), Arizona Land and Water Trust (ALWT) and Cochise County. In addition, Fort Huachuca is an active member of the Upper San Pedro Partnership (USPP), a consortium of 21 agencies that collaborate to meet water needs in the region while protecting the San Pedro River (USPP n.d.). All these water conservation measures and projects result in savings of approximately 7,879 acre-feet per year (Vernadero 2014).

### Surface Water

Fort Huachuca is bordered by the San Pedro River to the east and the Babocomari River to the north. The headwaters of the San Pedro River are in Mexico. The river flows north through Arizona for approximately 100 miles before converging with the Gila River. The Babocomari River drains the Mustang Mountains, Canelo Hills, and the north end of the Huachuca Mountains and carries this water to its confluence with the San Pedro River.

Most of the surface water features on Fort Huachuca are ephemeral streams that consist of dry washes, arroyos, or continuous and discontinuous gullies. Ephemeral streams are usually dry and only flow in response to precipitation that is significant enough to achieve runoff conditions. Ephemeral streams on Fort Huachuca are typically narrow channels with a sand and gravel layer at the bottom. Some of these channels are deeply entrenched. The channels carry runoff to larger drainage systems (ENRD 2021).

---

Fort Huachuca has approximately 4.5 miles of perennial streams, with 3.5 miles occurring in Garden Canyon and another 0.75 mile in Huachuca Canyon. Minor lengths of perennial reaches also occur in McClure and Blacktail Canyons. In addition, 15 ponds cover approximately 32 acres on Fort Huachuca. The perennial streams are typically fed by one or more of the Installation's 39 springs (ENRD 2021). Most of the ponds are dry and only retain water during heavy rains. No surface water is used to meet Fort Huachuca's water needs.

The alluvial fans south of the Babocomari River Valley within the West Range are dissected by three major drainages: Blacktail Canyon, Slaughterhouse Canyon, and Huachuca Canyon. Within the John R. Fox Range, the primary drainage is Soldier Creek. These drainages are intermittent and flow in response to rainfall. Huachuca Creek serves as a major stormwater interceptor for Huachuca Canyon and the Cantonment (ENRD 2021).

### **3.3.2. Environmental Consequences**

#### **3.3.2.1. *Proposed Action***

No significant impacts to water resources are anticipated from the implementation of the Proposed Action.

Fort Huachuca's post population is variable from year to year in support of new and continued military operations which are consistent those projects and activities currently conducted on or near the installation. Despite this variability in personnel population, no significant impacts to water resources are anticipated from the implementation of the Proposed Action due to the Fort's ongoing strategy of water mitigation projects and initiatives.

Pursuant to Executive Orders (EOs) 11988, Flood Plain Management and 13690, Establishing a Federal Flood Risk Management floodplain considerations are factored into all Fort Huachuca planning and development decisions early in the planning process and up-to-date floodplain data is maintained. When development in floodplains cannot be avoided, mitigation measures are developed and implemented and a Finding of No Practicable Alternative (FONPA) is published. The INRMP sets goals for avoiding to the extent possible long- and short-term adverse impacts to floodplains. Consequently, no significant impacts to floodplains are anticipated.

The Proposed Action will continue to require a variable amount of water and personnel stationed at Fort Huachuca or living in the region in support of new and continued military operations. Due to ongoing mitigation strategies and initiatives, no increase in net groundwater pumping beyond current levels is anticipated. Consequently, no significant impacts to ground water are anticipated.

---

Impacts to waters of the United States (WOTUS) are regulated through Section 404 of the Clean Water Act, and any impacts would be permitted through the U.S. Army Corps of Engineers (USACE). Further, WOTUS considerations are factored into all Fort Huachuca planning and development decisions early in the planning process. Consequently, no significant impacts to surface waters are anticipated.

### **3.3.2.2. No Action Alternative**

Under the No Action Alternative, Fort Huachuca would not implement the Proposed Action. Current military activities would continue in accordance with existing procedures and new activities would undergo project-by-project evaluation under NEPA. The Fort will continue to foster partnerships with other groups and agencies for the purpose of reducing water use in the USBP. Consequently, no impacts are anticipated from the No Action Alternative.

### **3.3.2.3. Cumulative Impacts**

No cumulative impacts to water resources are anticipated to occur due to any of the alternatives. Fort Huachuca has entered into multiple agreements and partnerships with surrounding groups and agencies to conserve water in the region.

## **3.4. Biological Resources**

### **3.4.1. Affected Environment**

#### Vegetation/Flora

There are thirteen plant communities documented on Fort Huachuca, which vary along with the diverse topography according to gradient, moisture regime, and elevation (Figure 3.4-1). These communities consist of shrubland, open grassland, shrub-grassland, mesquite-grass savanna, oak-grass savanna, pine woodlands, mesquite woodlands, oak woodlands, mixed woodlands, deciduous woodlands, Mahogany woodlands, pinyon-juniper, and urban and built land. Development across southeastern Arizona increased grassland fragmentation and conversion, while fire suppression allowed shrub encroachment onto the landscape. Grasslands in the region have steadily converted to shrublands and woodlands. As a result, much of what were semidesert grasslands now appear and function as shrublands. The Cantonment has a long history of disturbance. Portions of the Cantonment and Black Tower UAS Complex that are not considered urban or built-up land consist of grassland and shrubland.

#### Fauna

A variety of fauna including mammals, reptiles, birds, fish, amphibians, and invertebrates are present at Fort Huachuca. Of the almost 500 species of birds found in southeast Arizona, approximately 313 species occur on Fort Huachuca (Taylor 1995, Ireland 1981).

---

Approximately 18 species of reptiles, 18 species of small terrestrial mammals, 5 species of large mammals, 18 species of bats, 6 species of amphibians, and more than 180 species of invertebrates have been documented on Fort Huachuca (Sam Houston State University 1996, Bailowitz and Upson 1997, ENRD 2021). Non-native fish are the only fish species that have been documented on Fort Huachuca since 1893.

### Special Status Species

The Endangered Species Act (ESA) protects federally listed animal and plant species and their critical habitats. The U.S. Fish and Wildlife Service (USFWS) maintains a list of species considered threatened, endangered, and proposed or candidates for listing under the ESA. An endangered species is defined as any species in danger of extinction throughout all or a significant portion of its range. A threatened species is defined as any species likely to become an endangered species in the foreseeable future. Candidate species are those that the USFWS has enough information on file to propose listing as threatened or endangered, but listing has been precluded by other agency priorities. Although Fort Huachuca is not required by the ESA to consider candidate species, AR 200-1 requires the Army to consider candidate species in all actions that may affect them.

Thirteen federally protected species have been documented on Fort Huachuca (Table 3-1). Potential habitat is present on Fort Huachuca for four federally protected species, including beardless chinchweed (*Pectis imberbis*), Bartram's stonecrop (*Graptopetalum bartramii*), Arizona eryngo (*Eryngium sparganophyllum*), and Northern Mexican gartersnake (*Thamnopsis eques megalops*), however these species are not currently known to occur on the Installation (ENRD 2021).

**Table 3-1. ESA Protected Species Documented on Fort Huachuca**

Species	Federal Status
<b>Plants</b>	
Huachuca water umbel ( <i>Lilaeopsis schaffneriana</i> ssp. <i>recurva</i> )	Endangered
<b>Birds</b>	
Mexican spotted owl ( <i>Strix occidentalis lucida</i> )	Threatened
Southwestern willow flycatcher ( <i>Empidonax traillii extimus</i> ) <sup>1</sup>	Endangered
Yellow-billed cuckoo ( <i>Coccyzus americanus</i> )	Threatened
<b>Mammals</b>	
Jaguar ( <i>Panthera onca</i> )	Endangered
Ocelot ( <i>Felis pardalis</i> )	Endangered
<b>Amphibians</b>	
Sonora tiger salamander ( <i>Ambystoma mavortium stebbinsi</i> )	Endangered
Chiricahua leopard frog ( <i>Lithobates chiricahuensis</i> )	Threatened
<b>Fish</b>	
Gila chub ( <i>Gila intermedia</i> ) <sup>1</sup>	Endangered
Spikedace ( <i>Meda fulgida</i> ) <sup>1</sup>	Endangered
Gila topminnow ( <i>Peociliopsis occidentalis occidentalis</i> ) <sup>1</sup>	Endangered
Desert pupfish ( <i>Cyprinodon macularius</i> ) <sup>1</sup>	Endangered
Loach minnow ( <i>Tiaroga cobitis</i> ) <sup>1</sup>	Endangered

<sup>1</sup> Species historically present but not currently known to occur on Fort Huachuca.

Critical habitat is a specific geographic area deemed essential for the conservation of a threatened or endangered species and may require specific management and protection. Critical habitat may include areas that are not currently occupied by the species but are needed for its recovery (USFWS 2002e). There is 3.8 miles along the Garden Canyon Watershed that has designated critical habitat for Huachuca water umbel (USFWS 1999). Fort Huachuca is exempt from designated critical habitat for Mexican spotted owl and jaguar due to ongoing management actions associated with the INRMP (USFWS 2004 and 2014). Designated critical habitat for the western distinct population of yellow-billed cuckoos occurs adjacent to the Installation in the SPRNCA; however, no military lands or training areas are included in USFWS' final designation (USFWS 2021).

Eleven Protected Activity Centers (PACs) and one Inventory Area (IA) for Mexican spotted owl occur on the Installation. Ongoing Mexican spotted owl monitoring performed on the Installation since 1990 has supported research efforts for this species. AMAs have been designated on the Installation to protect stands of Palmer's agave (*Agave palmeri*), a primary nectar source for the delisted lesser long-nosed bat (*Leptonycteris yerbabuenae*) in support of the Draft Post-Delisting Monitoring Plan (USFWS 2019).

---

The Bald and Golden Eagle Act (BGEPA) provides federal protection to bald eagles (*Haliaeetus leucocephalus*) and golden eagles (*Aquila chrysaetos*) and their parts, nests, and eggs. Bald eagles are rare in southern Arizona, although a few transient bald eagles have been recorded along the San Pedro River since 1993. The only record of this species on the Installation was a bald eagle flying over the West Range in February 1998. Bald eagle use of the Fort is expected to be very sporadic because suitable nesting or winter concentration habitat is not present (ENRD 2021). Golden eagles are slightly more common on the Installation, with consistent observation records associated with Blacktail Canyon and the surrounding area (ENRD 2021).

All native birds in Arizona are protected under the Migratory Bird Treaty Act (MBTA). The MBTA prohibits the taking, killing, or possessing of migratory birds unless permitted by the Secretary of the Interior (DOI). Section 315 of the 2003 National Defense Authorization Act provided that the Secretary of DOI prescribe regulations to exempt the Armed Forces for the incidental taking of migratory birds during military readiness activities. In accordance with 50 CFR 21, (Migratory Bird Rule) the regulation does not allow an installation to take migratory birds indiscriminately during readiness activities but requires that installations consider the protection of migratory birds when planning and executing military readiness activities.

### Wetlands

There are approximately 64 acres of wetlands on Fort Huachuca (ENRD 2021). Palustrine unconsolidated bottom wetlands are the predominant type of wetland, representing about 65% of the Installation's wetlands. The next most common wetland type is palustrine emergent wetlands. Most of the Fort's wetlands are located in Garden and Huachuca Canyons in the South and West Ranges, respectively.

### Natural Resource Management

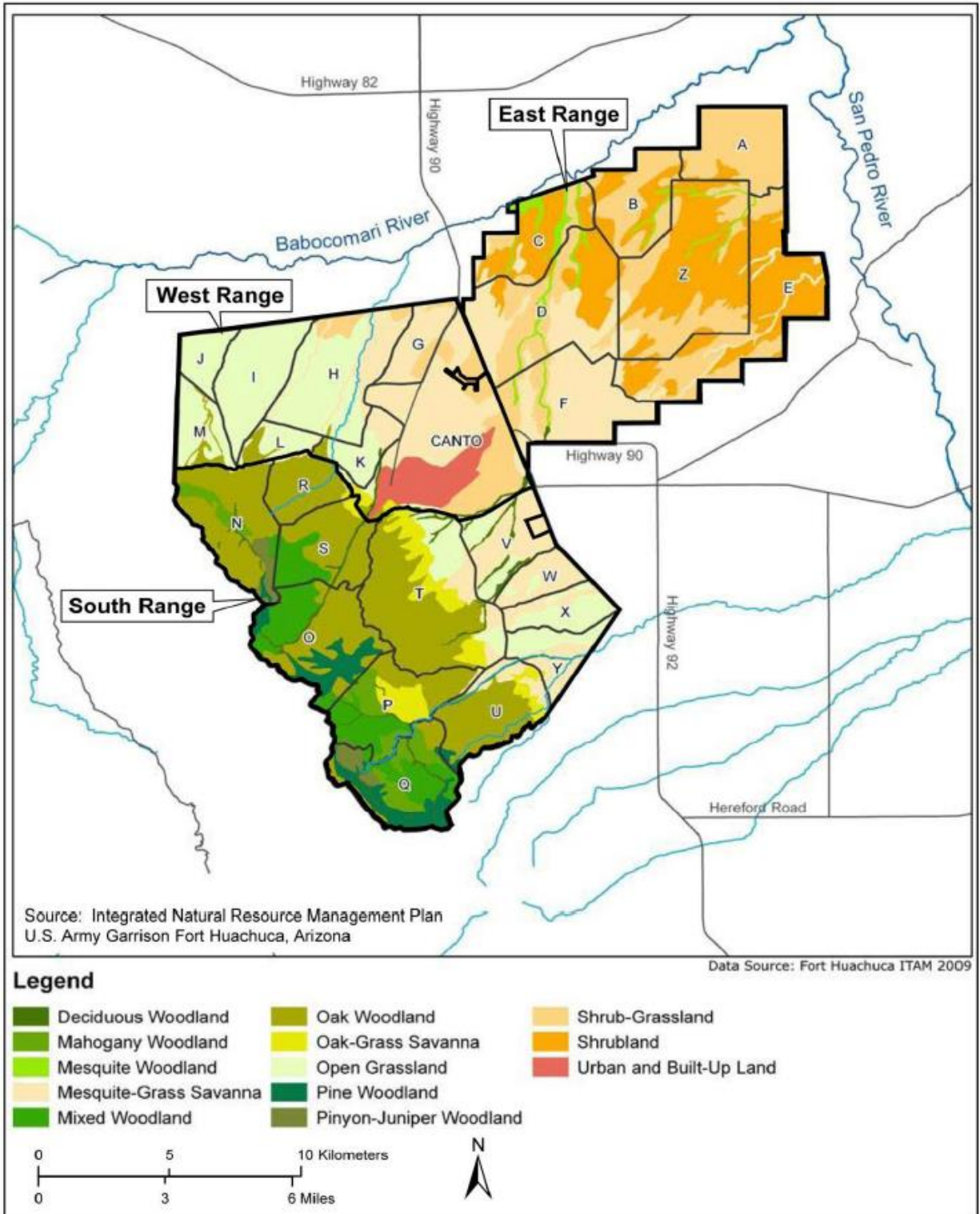
Biological resources are managed through Fort Huachuca's Natural Resource Management Program, whose purpose, as defined in AR 200-1, is to carry out mission requirements in harmony with the requirements of the ESA and the Sikes Act. The Sikes Act requires coordination with the USFWS and the Arizona Game and Fish Department (AGFD), the States game and fish and wildlife agency, to carry out a program for the conservation and rehabilitation of natural resources while allowing for the sustainable, multipurpose use of natural resources. A primary goal of Fort Huachuca's Natural Resource Management Program is to balance mission requirements with sensitive species and sensitive habitat protection. Species are managed at the landscape-level rather than as individuals when practicable through the conservation of biological diversity. The INRMP describes how the Fort manages their natural resources.

ENRD updated Fort Huachuca's INRMP in May 2021 (ENRD 2021). It is the overarching management plan which guides the implementation and integration of natural resources



---

management including sensitive and special-status species and their habitat, migratory birds, wildlife and bird-aircraft strike hazard, groundwater resources, floodplain and wetlands, vegetation, land and forest, wildland fire, invasive species, pests, outdoor recreation, and protection of biodiversity. The INRMP integrates important management actions and plans to include the Integrated Wildland Fire Management Plan (IWFMP; ENRD 2023) and the USFWS's draft Lesser long-nosed Bat Post Delisting Plan. Effective implementation of the INRMP preserves high-quality training lands that are critical to the military mission while protecting natural resources, consistent with federal regulations (ENRD 2021). Provisions of the INRMP apply to each directorate, command, tenant unit, lands occupied by tenants or lessees at Fort Huachuca, contractors (government and private), private groups, dependents, and individuals who either directly or indirectly use the Installation's natural resources.



**Figure 3.4-1. Vegetation Communities on Fort Huachuca**

---

### **3.4.2. Environmental Consequences**

#### **3.4.2.1. Proposed Action**

No significant impacts to biological resources are anticipated from the implementation of the Proposed Action, as activities will be comparable to those projects and activities currently conducted on the Installation. Further, Fort Huachuca is preparing a Programmatic Biological Assessment (PBA) to evaluate impacts to listed species and critical habitat that may result from new and continued military activities. Potential adverse impacts to ESA species would be mitigated through the Section 7 consultation initiated with the USFWS as part of this NEPA review.

Continued implementation of Fort Huachuca's INRMP would further reduce potential impacts associated with ongoing activities to biological resources. AR 200-1 requires that vegetation management be conducted in a manner that conserves and enhances existing flora and fauna with the goal of managing, protecting, and sustaining biological diversity while supporting the accomplishment of the military mission. AR 200-1 requires that the highest consideration be given to the management of federally listed and proposed species, followed by state listed species of conservation concern, and to other environmentally sensitive areas and areas of special concern. Fort Huachuca's vegetation management program focuses on identifying and reducing non-native invasive plants and native weedy species that have transformed historic floral and faunal communities and reduced the extent of bare ground and soil movement using native plant restoration (ENRD 2021).

The primary goal of vegetation management on the Fort is to manage for and protect native plant communities using integrated ecosystem management principles while accommodating military training needs. Efforts such as the mesquite mastication program, the high elevations fuel treatment (HEFT) program, native re-seeding, and invasive species management are effecting positive changes to landscape dynamics across many parts of the Fort (ENRD 2021).

Fish and wildlife management on Fort Huachuca is primarily focused on the management of the largest extent of each natural habitat type, thereby permitting the natural system to retain its inherent ability to self-maintain, which ultimately requires fewer external resources to manage species. ENRD resource specialists emphasize the maintenance, restoration, and enhancement of habitat favorable to the production of indigenous terrestrial and aquatic species and their habitats, and ultimately to ecosystem sustainability and biological diversity. Fort Huachuca is committed to the management of terrestrial and aquatic wildlife populations and their habitats consistent with accepted scientific principles and in compliance with the ESA and other applicable laws and regulations (ENRD 2021).

---

Due to the bald eagle's rarity on the Installation, activities associated with the Proposed Action are not anticipated to have any impact on this species. Activities associated with the Installation's INRMP, including the HEFT program, invasive flora treatment, and protection and enhancement of large areas of grassland, are anticipated to benefit golden eagles (ENRD 2021).

Migratory bird management on the Installation is based on maintaining compliance with MBTA regulations, DA policy, and fulfilling objectives identified in the Department of Defense Partners in Flight (DoDPIF) Strategic Plan. Fort Huachuca works to protect, restore, and manage habitats of migratory birds and prevent or minimize the loss or degradation of nesting or feeding habitats.

Wetlands on the Installation are managed in accordance with Executive Order (EO) 11990 and AR 200-1. Fort Huachuca works to inventory, delineate, classify, and protect all wetlands on the Installation. Wetland considerations are factored into all planning and development decisions. Development within wetlands is avoided whenever possible. When development in floodplains cannot be avoided, mitigation measures are developed and implemented.

#### **3.4.2.2. No Action Alternative**

Under the No Action Alternative, Fort Huachuca would not implement the Proposed Action. Current military activities would continue in accordance with existing procedures and new activities would undergo project-by-project evaluation under NEPA. Biological resources would continue to be managed in accordance with the INRMP. Consequently, no impacts are anticipated from the No Action Alternative.

#### **3.4.2.3. Cumulative Impacts**

Threats to regional biological resources resulting from the conversion of rangelands to residential and commercial uses are expected to continue in and around Fort Huachuca. Several federal and state agencies and numerous nongovernmental organizations are active in the protection and conservation of special status and wildlife species in the area. Fort Huachuca's INRMP provides benefits to biological resources from habitat restoration and enhancement, removal of nonnative species, buffers, and cooperative agreements with conservation agencies and organizations. Therefore, no significant cumulative impacts are expected to result from the Proposed Action.

### **3.5. Cultural Resources**

#### **3.5.1. Affected Environment**

Cultural resources is a broad term that includes all aspects of human activities, including material remains of the past and the beliefs, traditions, rituals, and cultures of the present.

---

As mandated by law, all federal installations and personnel must participate in the preservation and stewardship of cultural resources and must consider potential impacts to these resources prior to any installation undertaking. Resources include historic properties as defined by the National Historic Preservation Act (NHPA), cultural items as defined by the Native American Graves Protection and Repatriation Act (NAGPRA), archaeological resources as defined by the Archaeological Resources Protection Act (ARPA), sacred sites as defined by Executive Order 13007 to which access is provided under the American Indian Religious Freedom Act, significant paleontological items as described by 16 USC 431-433 (Antiquities Act of 1906) and collections as defined in 36 CFR 79, *Curation of Federally Owned and Administered Archaeological Collections* (DA 2007).

The NHPA and AR 200-1 constrain land use and development where significant cultural resources are affected. Section 106 of the NHPA requires Fort Huachuca to consult with, at a minimum, the State Historic Preservation Office (SHPO) and any interested federally recognized Indian tribes when a Project may affect historic properties. Eleven tribes claim traditional, religious, and/or cultural affiliation to Fort Huachuca lands, including the Ak-Chin Indian Community, Fort Sill Apache Tribe, Gila River Indian Community, Hopi Tribe, Mescalero Apache Tribe, Pascua Yaqui Tribe, Pueblo of Zuni, Salt River Pima-Maricopa Indian Community, San Carlos Apache Tribe, Tohono O'odham Nation, and White Mountain Apache Tribe.

Approximately 55,967 acres of the Fort has been surveyed for archaeological sites. These surveys account for approximately 69% of the Installation; 27% is not surveyable (duded impact area or mountain slopes) and 4% requires survey. Surveys have identified 531 archaeological sites, including 2 paleontological sites, 213 prehistoric sites, 177 historic sites, 73 unknown aboriginal sites, 51 multicomponent sites, and 51 temporally unaffiliated sites. Of these sites, 3 are listed in the National Register of Historic Places (NRHP), 313 are eligible, 97 are not eligible, and 117 remain unevaluated. The Fort Huachuca Historic District ("Old Post") is listed in the NRHP and as a National Historic Landmark (NHL) District. The historic district is 69 acres and contains 212 contributing elements (80 buildings, 23 structures, 1 site, 2 site features, and 106 infrastructure features) and 27 noncontributing elements (2 buildings, 8 structures, and 17 infrastructure features). There is also a 2,661-acre historic viewshed surrounding the district that encompasses the "Old Post" area, starting at the north end of the district and extending southwest up Huachuca Canyon. There are 138 buildings outside the NHL that are considered historic. Federally recognized Tribes identified 4 sacred sites and 1 traditional cultural property (TCP) including the Garden Canyon Village, the Garden Canyon Pictographs, the Rappel Cliffs Rockshelter, and the Apache Scout Camp as sacred sites, and the Apache Flats Adobe Huts site as a TCP.

---

## **3.5.2. Environmental Consequences**

### ***3.5.2.1. Proposed Action***

The implementation of the Proposed Action is not anticipated to have significant impacts to cultural resources.

Any new or continuing activities with the potential to impact cultural resources listed on, or eligible for listing on, the NRHP, is required to undergo a review process under Section 106 of the NHPA. Pursuant to this regulation, any project with potential to impact cultural resources described above would need to be evaluated for impacts and seek ways to avoid, minimize, or mitigate any adverse impacts on historic properties.

Fort Huachuca will utilize site boundaries identified in previous cultural survey efforts to avoid known protected cultural resources when conducting military activities. In areas that may not have been surveyed for cultural resources, new surveys may be required and the need for these surveys would be identified during pre-coordinate meetings. Should undiscovered archaeological materials being encountered during any testing or training, activities would cease, ENRD would be contacted, and the site would be protected until evaluation by ENRD had been completed.

Fort Huachuca is currently drafting an Operations and Maintenance Programmatic Agreement (PA) with the Arizona SHPO and interested tribes to streamline the consultation process pursuant to Section 106 of the NHPA to accommodate routine actions associated with the ongoing operations, maintenance, and development associated with the Proposed Action. The PA will reduce paperwork and focus resources on the integration of project planning with historic properties management. Any new disturbance would be conducted following the stipulations set forth in the PA.

### ***3.5.2.2. No Action Alternative***

Under the No Action Alternative, Fort Huachuca would not implement the Proposed Action. Current military activities would continue in accordance with existing procedures and new activities would undergo project-by-project evaluation. Consequently, no significant impacts to cultural resources are anticipated from the No Action Alternative. New or continuing activities with the potential to impact cultural resources listed on, or eligible for listing on, the NRHP, would still undergo a review process under Section 106 of the NHPA.

### ***3.5.2.3. Cumulative Impacts***

The Sierra Vista and San Pedro River basins have a rich and diverse cultural history. Numerous archaeological sites have been identified, many of which are on and protected by Fort Huachuca. Within Fort Huachuca, the PA, as well as the SHPO, will dictate the

---

treatment and preservation of all cultural resources. There are currently no known proposed undertakings that would likely contribute to an increased potential for cumulative impacts to cultural resources. Therefore, cumulative impacts to cultural resources are not anticipated to be significant.

### **3.6. Air Quality**

#### **3.6.1. Affected Environment**

Fort Huachuca is in the Southeast Arizona Air Quality Control Region, which includes Cochise, Graham, Greenlee, and Santa Cruz Counties. A region is either in “attainment” or “nonattainment” of the National Ambient Air Quality Standards (NAAQS) established under the Clean Air Act (CAA). Depending on the pollutant and averaging time, nonattainment status is classified as Extreme, Severe, Serious, Moderate, Marginal, and Submarginal (listed most significant to least significant).

Fort Huachuca and the immediate vicinity lie within an attainment area for all NAAQS and is not subject to a General Conformity Analysis, which only applies to Federal actions on property that lies within a nonattainment area. One area in Cochise County, the Paul Spur/Douglas area, is a nonattainment area for particulate matter, fine (PM<sub>10</sub>). However, this nonattainment area is over 25 miles distant from the Installation (ADEQ 2024).

The Fort’s current annual emissions fall below the 100 tons per year (tpy) threshold that would classify it as a Title V Major Source, which is the most highly regulated permit. Staying under the Major Source threshold qualifies Fort Huachuca for a Class II synthetic minor air permit, which was issued in 2012 and renewed in 2021. A synthetic minor permit, as defined by Arizona Administrative Code Title 18, Chapter 2, Section 306.01 (R18-2-306.01), includes voluntarily accepted emissions limitations, controls, or other requirements (for example, a cap on production rates or hours of operation, or limits on the type of fuel) meant to reduce the potential to emit to a level below the major source threshold.

As part of Fort Huachuca’s regulatory reporting requirements, a comprehensive air pollution emissions statement, known as an Air Emissions Inventory (AEI), must be prepared annually. The AEI evaluates sources which emit any single regulated air pollutant in a quantity greater than 1 tpy or the amount listed in R18-2-101, whichever is less, as well as sources that emit any combination of regulated air pollutants in a quantity greater than 2.5 tpy (R18-2-327). The AEI quantifies emissions from seven criteria pollutants, including total suspended particulate, nitrogen oxide (NO<sub>x</sub>), PM<sub>10</sub>, volatile organic compounds (VOCs), sulfur dioxide (SO<sub>2</sub>), lead (Pb), and carbon monoxide (CO). Additionally, the AEI includes annual emissions of hazardous air pollutants (HAPs) and ozone depleting substances (ODS).

Sources that emit criteria pollutants, HAPs, or ODS at Fort Huachuca include:

- Gas fired boilers, heaters, and hot water heaters

- 
- Generators
  - Fuel storage and dispensing operations
  - Paint spray booth operations
  - Firing range operations
  - Chillers, air conditioners, and refrigeration units
  - Welding operations
  - Wastewater treatment operations
  - Pesticide, herbicide, rodenticide, and insecticide usage
  - Degreasing operations
  - Miscellaneous chemical usage

### **3.6.2. Environmental Consequences**

#### **3.6.2.1. Proposed Action**

The implementation of the Proposed Action is not anticipated to result in any significant impacts to air quality on Fort Huachuca.

Potential long-term impacts to air quality resulting from the Proposed Action are associated with burning of fossil fuels in vehicles, equipment, and generators, and the generation of dust through use of dirt roads. The Proposed Action would not result in a significant increase in the number of vehicles or equipment being used and new equipment is expected to be comparable to existing equipment with respect to quantity and air emissions potential. Portable generators used in conjunction with military operations are considered minor sources under the State of Arizona regulations, and the emissions generated are considered trivial in nature. New and continued operations as described in the Proposed Action are not anticipated to exceed the Major Source threshold of 100 tpy. Operations would continue to be conducted in accordance with the voluntary emission limitations and standards described in the Class II permit.

Consequently, the limited use of fossil fuel vehicles and equipment is not anticipated to impact regional or local air quality conditions. Air emissions are not expected to exceed de minimis threshold levels or contribute emissions in violation of any federal, state, or local air quality regulations.

#### **3.6.2.2. No Action Alternative**

Under the No Action Alternative, Fort Huachuca would not implement the Proposed Action. Current military activities would continue in accordance with existing procedures and new activities would undergo project-by-project evaluation under NEPA. The AEI



---

would continue to be completed annually and the Fort operations would continue to be conducted in accordance with the voluntary emissions limitations and standards as described in the Class II synthetic minor air permit. Consequently, no impacts are anticipated from the No Action Alternative.

### **3.6.2.3. Cumulative Impacts**

Fort Huachuca and the immediate vicinity lie within an attainment area for all NAAQS. In the past, Arizona Department of Environmental Quality's (ADEQ's) annual evaluations at Fort Huachuca have shown emissions to be relatively low. The Fort has chosen to be a Title V Class II Synthetic Minor by placing caps on emissions by limiting operational loads and run times for permitted equipment.

Future air quality will likely be influenced by the development of areas surrounding Sierra Vista and Fort Huachuca. Urban development has tended to expand in areas surrounding Sierra Vista, which inherently brings about various types of air pollution sources.

Continued air quality monitoring, voluntary reduction of emissions, annual preparation of an AEI, and continued Greenhouse Gas monitoring aim to keep air quality at the Fort within attainment of the NAAQS. Given these air quality monitoring mechanisms, and the short duration of vehicle and generator usage at testing and training sites, it is unlikely that the implementation of any of the Alternatives would result in cumulative impacts to air quality.

## **3.7. Noise**

### **3.7.1. Affected Environment**

Noise, by definition, is sound that is loud or unpleasant or that causes a disturbance. When sound interrupts daily activities, such as sleeping or conversation, it becomes noise. The degree to which noise becomes disruptive is dependent on the way it is perceived by the receptors (people) living or working in the affected area. AR 200-1 lists housing, schools, and medical facilities as examples of noise-sensitive land use.

One goal of the Department of the Army is to plan, initiate, and carry out actions and programs designed to minimize adverse impacts upon the quality of the human environment without impairing the Army's mission. The Installation Compatible Use Zone (ICUZ) Program implements Army policy for such planning. The ICUZ program promotes land use that is compatible with the military noise environment. An ICUZ study was conducted in 2018 with the purpose to quantify the noise environment from military training and testing sources and recommend the most appropriate uses of noise-impacted areas (APHC 2018).

Noise is measured in decibels (dB) with zero being the least perceptible sound to more than 130 dB, at which noise becomes a health hazard. Because the human ear is more

---

sensitive to certain ranges of the sound spectrum, a weighted scale was developed to reflect more accurately what the human ear perceives. These measurements are adjusted into units known as A-weighted decibels (dBA).

According to AR 200-1 (DA 2007), sensitivity to noise varies by the time of day, with receptors being more sensitive at night. To reflect this sensitivity, ambient noise measurements are normally adjusted by adding 10 dB to actual measurements between the hours of 2200 and 0700. Decibel levels adjusted in this way are known as day-night decibel measurements (DNL). Averaging noise levels over a protracted period does not generally adequately assess the probability of noise complaints coming from receptors in the nearby community. Therefore, the risk of noise complaints from large caliber impulsive noise resulting from testing and training activities (e.g., machine gun, mortars, and demolition events), in terms of either peak sound pressure level (PK 15 (met)) or C-weighted day night level (CDNL) must also be assessed (DA 2007).

Table 3.7-1 summarizes decibel levels associated with four different noise zones (Land Use Planning Zone (LUPZ), Zone I, Zone II, and Zone III). Each zone is defined according to allowable noise limits, which increase in intensity from LUPZ to Zone III. Regulation guidelines state for land use planning purposes, noise-sensitive land uses are acceptable within the Noise Zone I, generally not compatible in Noise Zone II, and incompatible in Zone III.

**Table 3-2. Noise Limits for Noise Zones**

Noise Limits (dB)			
Noise Zone	Aviation ADNL	Impulsive CDNL	Small Arms PK 15 (met)
LUPZ	60 – 65	57 – 62	N/A
Zone I	< 65	< 62	< 87
Zone II	65 – 75	62 – 70	87 – 104
Zone III	> 75	> 70	> 104

**dB**- decibel; **LUPZ**- land use planning zone; **ADNL**- A-weighted day-night levels; **CDNL**- C-weighted day-night levels; **PK 15(met)**- Single event peak level exceeded by 15 percent of events; **N/A**- Not Applicable

Chapter 14 of AR 200-1 (DA 2007) outlines the major goals of the Army's noise program, which include:

- Control operational noise to protect the health and welfare of people, on- and off-post, impacted by all Army produced noise, including on- and off-post noise sources;
- Reduce community annoyance from operational noise to the extent feasible, consistent with Army training and materiel testing mission requirements; and

- 
- Actively engage local communities in land use planning in areas subject to high levels of operational noise and a high potential for noise complaints

Activities that have the potential to produce noise at Fort Huachuca include military vehicle use, aircraft operations, weapons discharge, and dismounted training.

Military vehicles use public roads, on-post roads, and military maneuver trails. Vehicle type and speed influence noise levels produced. Vehicle speeds are relatively low on unpaved roads during vehicle maneuvers. Noise levels generated by High Mobility Multipurpose Wheeled Vehicle (HMMWVs) and two-axle military trucks are comparable to noise from medium trucks (about 65 to 70 dBA at 50 feet). Multi-axle heavy trucks would generate noise levels comparable to other heavy-duty trucks (about 78 to 80 dBA at 50 feet). On average, peak noise levels drop by 15 dBA at 500 ft from the travel path (USACE 2008).

The Noise Zones for aircraft flights from LAAF show the greatest annual impact outside the installation boundary is concentrated geographically east of the installation in the City of Sierra Vista (APHC 2018). The ADNL noise zones II and III for LAAF aircraft operations remain entirely on the Installation. The LUPZ extends 1,600 meters beyond the Fort Huachuca boundary into the City of Sierra Vista to the east. Outside of the Installation, the LUPZ consists of industrial, commercial, and residential land use. On Fort Huachuca, the LUPZ encompasses on-post housing, troop barracks, and a chapel (APHC 2018).

Noise related to small caliber weapons and airfield operations are addressed by the ICUZ program. The small arms ranges at Fort Huachuca are in the South Range and are operational year-round depending on training mission requirements. The noise zones from small arms firing are contained within the Fort Huachuca boundary except for one small (15 acres) rural area to the north, which contains no residential land use. On post, Zone II resulting from small arms weapon firing extends 190 meters into the Cantonment in one small area; and Zone II extends 1,000 meters into the Cantonment. Zone III does not encompass any noise-sensitive land uses. Noise-sensitive land uses within Zone II consist of on-post housing, four elementary and middle schools, and a child development center (APHC 2018).

### **3.7.2. Environmental Consequences**

#### ***3.7.2.1. Proposed Action***

The implementation of the Proposed Action is not anticipated to result in any significant impacts to noise on Fort Huachuca. Noise levels are not anticipated to exceed baseline levels. Implementation of the Proposed Action would not result in Zone III noise zones encompassing noise-sensitive land uses. Noise will continue to be managed through the development of a Noise Management Plan for the Installation.

---

Indirect impacts various military vehicles and equipment used for new and continued military operations, such as trucks, portable generators, and military aircraft. The greatest noise impact would likely come from military aircraft training. However, the Proposed Action is not expected to generate a significant increase in the amount of air traffic operations and the air operations are expected to be comparable to existing operations with respect to type of aircraft, quantity of aviation evolutions, and noise emissions potential. To help minimize noise impacts, populated areas sensitive to aircraft noise are avoided and manned aircraft typically flies at altitudes higher than 15,000 ft and will have little impact to noise conditions on the ground.

### **3.7.2.2. No Action Alternative**

Under the No Action Alternative, Fort Huachuca would not implement the Proposed Action. Current military activities would continue in accordance with existing procedures and new activities would undergo project-by-project evaluation under NEPA. Noise will continue to be managed through the development of a Noise Management Plan for the Installation. Consequently, no impacts are anticipated from the No Action Alternative.

### **3.7.2.3. Cumulative Impacts**

Noise in and around Sierra Vista has steadily increased as the community has grown into a small city supported by an active military installation. Noises associated with Fort Huachuca could grow as mission requirements change. Most of the noise created by military vehicles is comparable to typical existing civilian traffic noises off-post. Operations that require equipment with increased noise levels, such as generators, are typically in more remote areas that are further way from adjacent populations. Due to the temporary and mobile nature of the indirect noise associated with proposed action, none of the alternatives are anticipated to result in cumulative noise impacts.

## **3.8. Visual Resources**

### **3.8.1. Affected Environment**

Much of Fort Huachuca consists of open space and areas of natural habitat the provide an aesthetically pleasing landscape from both within and outside the Installation boundaries.

The Cantonment is the primary urban core of the Installation and includes housing, commercial districts, recreation areas, open space, community facilities and support services, and utility infrastructure (Vernadero 2014). The Fort Huachuca Historic District, an NHL district, consists of 69 acres within the Cantonment and contains 212 contributing elements (buildings, structures, sites, site features, and infrastructure). A 2,661-acre historic viewshed surrounds the district and encompasses the entire “Old Post,” beginning at the north end at Smith Avenue and running southwest into Huachuca Canyon.

---

The South and West Ranges are mostly open grasslands used for range and training exercises. The ranges are in and below the foothills of the Huachuca Mountains. Some areas within the South Range are restricted land use areas to maintain wildlife habitat and provide outdoor recreational space. There is minimal military development within the South and West Ranges, providing the City of Sierra Vista and the Cantonment with a natural view of the Huachuca Mountains. The Black Tower UAS Complex is in a remote area of the West Range and has far less visibility than the Cantonment, as it is surrounded by undeveloped land. There is little urban development to the north, west, or south of the West Reservation.

The John R. Fox Range is primarily an open space used for range and training exercises. Portions of the Range are visible from the City of Sierra Vista to the south and from Huachuca City to the northwest.

### **3.8.2. Environmental Consequences**

#### ***3.8.2.1. Proposed Action***

The implementation of the Proposed Action is not anticipated to result in any significant impacts to visual resources on Fort Huachuca. Fort Huachuca's commitment to sustaining the environment includes preserving the natural beauty of the Installation and viewscape of the Huachuca Mountains.

Proponents must consider the historic district viewshed when proposing any work within that viewshed. Development of the Installation is guided by the Installation Planning Standards (IPS) to ensure that buildings and structures are uniform in construction and conform to the overall aesthetics of the area (Michael Baker Jr., Inc. & AECOM 2017b).

Fort Huachuca's IPS provide a clear set of guidelines to ensure the Installation's vision and planning objectives for development are achieved. These standards were developed to promote visual order, enhance the natural and manmade environments through consistent architectural themes and standards, and improve the functional aspects of the Installation. One of these standards requires all lighting to meet "dark sky" compliance standards. Dark sky requirements are intended to reduce light pollution, or the projection of light to the sky and surroundings, in excess of what is needed to illuminate the intended object.

Standards have been developed for buildings, streets, and landscapes and apply to all Installation tenants (Michael Baker Jr., Inc. & AECOM 2017b).

#### ***3.8.2.2. No Action Alternative***

Under the No Action Alternative, Fort Huachuca would not implement the Proposed Action. Current military activities would continue in accordance with existing procedures and new activities would undergo project-by-project evaluation under NEPA. Fort

---

Huachuca would still be required to consider the historic district viewshed and follow IPS guidelines when planning projects or activities. Consequently, no impacts are anticipated from the No Action Alternative.

### **3.8.2.3. Cumulative Impacts**

No cumulative impacts to visual resources are anticipated to occur because of the Proposed Action. Future development on the Installation would conform with the IPS to ensure that structures are uniform and conform to the overall aesthetics of the area.

## **3.9. Socioeconomics**

### **3.9.1. Affected Environment**

Socioeconomic resources are defined as basic attributes associated with the human environment, primarily population and economic activity. Population encompasses the magnitude, characteristics, and distribution of people, and economic activity refers to employment distribution, business growth, and individual income. The region of influence (ROI) subject to this analysis includes Cochise County.

Fort Huachuca is adjacent to the City of Sierra Vista, Cochise County, Arizona. Sierra Vista is the largest city in the county with an estimated population in 2022 of 45,439 (U.S. Census Bureau 2024). The total population for Cochise County in 2022 was 125,663 (U.S. Census Bureau 2024). Both the City and the County's economies rely heavily on Fort Huachuca. The Installation has historically been and is currently the single largest employer in Cochise County. Other major industries in the County include services, retail trade, and construction (WWA 2018).

In 2022, AECOM conducted an economic impact analysis for ongoing activities on the Installation (AECOM 2022). This analysis studied the direct, indirect, and induced economic impacts. Direct impacts were defined as the military, civilian, and contractor employees and the associated economic activities for each industrial sector in which they operate. Indirect impacts were those that result from the provision of goods and services to the direct impacts, calculated as multiplier impacts that ripple through the economy based on trade linkages and spending patterns within the regional economy. Induced impacts were those that result from household consumption from the employment and wages of the direct and indirect impacts of the Fort within the various regions where employees work and live. Induced impacts also included spending from Fort students and retirees associated with the Fort.

Within Cochise County, the total aggregate impacts of the combined operations of Fort Huachuca produce an estimated \$2.8 billion, with \$1.1 billion in labor income for approximately 17,800 full-time jobs. The direct and indirect population attributable to the Fort, which encompasses personnel associated with the Installation as well as their

---

household members including dependents, is estimated to be approximately 18,498 (AECOM 2022).

### **3.9.2. Environmental Consequences**

#### **3.9.2.1. *Proposed Action***

Implementation of the Proposed Action is anticipated to result in continued significant benefits to socioeconomic resources in the ROI. The Proposed Action would authorize the continuation of military activities which provide billions of dollars of economic output to the local economy.

Fort Huachuca's post population is variable from year to year in support of new and continued military operations which are consistent with those projects and activities currently conducted on or near the installation. Despite this variability in personnel population, no significant impacts to the Fort's population or in the surrounding ROI are anticipated.

#### **3.9.2.2. *No Action Alternative***

Under the No Action Alternative, Fort Huachuca would not implement the Proposed Action. Current military activities would continue in accordance with existing procedures and new activities would undergo project-by-project evaluation under NEPA. Implementation of the No Action Alternative is anticipated to continue to provide benefits to socioeconomic resources in the ROI.

#### **3.9.2.3. *Cumulative Impacts***

The total estimated economic impacts of the Fort's operations are significant and diverse, creating "ripple effects" across the local, regional, statewide, and national economy. Operations at the Fort, combined with spending by personnel and employees and their households within the local, regional, and state economies, as well as the broader U.S., create jobs and demand for goods and services well beyond the area immediately surrounding the Fort. The Fort has proven to be a major employer and economic engine for the SVS, Cochise County, and the surrounding area (AECOM 2022). Consequently, continued cumulative benefits are expected from the implementation of the Proposed Action.

## **3.10. Transportation and Circulation**

### **3.10.1. Affected Environment**

The main highway access to Fort Huachuca is SR 90, which divides the Installation into the East and West Reservations. The Van Deman Gate control point is on Hatfield Road, west of its intersection with SR 90. The Buffalo Soldier Gate is west of the intersection of

---

Buffalo Soldier Trail and Fry Boulevard in the City of Sierra Vista. The West Gate is in the Installation's West Range. The West Gate provides access through the Installation to individuals living in remote rural areas west of the Installation, reducing their drive to the nearest emergency services in Sierra Vista by approximately 30 minutes. A North Gate also exists on the Installation but is not used regularly, occasionally being opened for oversized loads or during closures of other gates.

The existing road network on Fort Huachuca provides access to all operational and residential areas on the Installation. There are approximately 200 miles of paved roadways, 130 miles of gravel roads, and 150 miles of firebreak roads and trails on the Installation. Overall, the road network is adequate to support the traffic on the Installation.

Traffic studies have shown that traffic volumes are greatest during two, one-hour-long periods in the morning and evening as people drive to and from work, with peak hours occurring between 0645-0745 and 1600-1700. A third peak travel time occurs around 1200 due to lunch hour traffic. Overall, the Installation has little to no congestion and minimal delays (Vernadero 2014).

Primary roads are the main routes that connect the Cantonment with the off-post transportation network and provide access between different land uses on the Installation. The primary roads carry the highest traffic volumes and often allow for higher travel speeds. Primary roads within the Installation include Allison Road, Hatfield Street, Lawton Road, Smith Avenue, Squire Avenue, and Winrow Avenue. Winrow Avenue provides the main access to and from the Buffalo Soldier Gate. Installation traffic is controlled at intersections using a variety of means, including traffic circles, stop signs, and traffic signals (Vernadero 2014).

Roads serving the training areas within the three ranges are mostly unpaved. Due to the erosive character of the soils on the Fort, the condition of the unpaved roads varies, and in some cases, the roads are severely eroded. In addition, several roads within the ranges have been closed but not rehabilitated. These roads channel surface runoff in some cases, with gullying and headcutting occurring.

Military vehicles use a combination of public roads, Installation roads, and maneuver trails. Vehicle convoys using public roads typically are limited to no more than 24 vehicles in a group. Vehicles within a convoy ground (also called convoy serials) usually are spaced about 165 to 330 ft apart. Convoy serials are spaced at least 15 to 30 minutes apart. These convoy procedures reduce noise levels and prevent the convoy vehicles from dominating local traffic flow for long periods of time (Vernadero 2014).

Airfield activities primarily occur at LAAF/Sierra Vista Municipal Airport which has two intersecting runways. LAAF is one of the busiest airfields in the Army, with approximately 130,000 flight operations each year. Runway 08/26 is the primary runway, accounting for about 90 percent of total operations. Occasional general aviation arrivals and departures



---

use Runway 12. Additionally, the airfield has four helipads along Taxiway P. LAAF/Sierra Vista Municipal Airport operates Monday through Friday 0700-2300 and other times via Notice to Air Missions (NOTAM)..Except for Runway 2312, the restricted airspace is controlled only during these hours. During monsoon season, the operating hours change to avoid late afternoon thunderstorms and high winds.

Other airfield activities occur on the range and training lands outside the Cantonment and include operations at Hubbard LZ on the John R. Fox Range; Rugge-Hamilton and Pioneer landing strips within the Black Tower UAS Complex; and field helipads (Vernadero 2014). The airstrips at the Black Tower UAS Complex operate during the same hours as LAAF/Sierra Vista Municipal Airport and flights are also managed by LAAF air traffic control.

No rail service is available to Fort Huachuca. The closest rail service is in Benson, Arizona, approximately 30 miles north of the Installation. Fort Huachuca does not operate a public transit system. The City of Sierra Vista's public transit system, Vista Transit, provides daily bus transportation to the public, with stops throughout the City of Sierra Vista, but no stops on the Installation.

### **3.10.2. Environmental Consequences**

#### ***3.10.2.1. Proposed Action***

The implementation of the Proposed Action is not anticipated to result in any significant impacts to traffic and circulation on Fort Huachuca. Highway 90 and roads in the vicinity of and within the Installation are currently serving the area adequately.

While there may be fluctuations in the post population from year to year, the Proposed Action does not propose significant increases in personnel at the Fort, so traffic volume associated with new and continued military activities is expected to be comparable to existing traffic conditions. On-post roads are designed to handle the traffic created by military operations. Air traffic is not expected to significantly increase beyond current flight levels and is expected to remain in accordance with normal flight patterns and elevations. All aircraft testing and training activities must use approved flight paths and comply with all applicable laws, regulations, and policies governing airspace on and around Fort Huachuca. Consequently, no significant impacts to transportation or traffic flow are anticipated.

#### ***3.10.2.2. No Action Alternative***

Under the No Action Alternative, Fort Huachuca would not implement the Proposed Action. Current military activities would continue in accordance with existing procedures and new activities would undergo project-by-project evaluation under NEPA.

---

Consequently, no impacts to transportation and circulation are anticipated from the No Action Alternative.

### **3.10.2.3. Cumulative Impacts**

The implementation of the Proposed Action is not anticipated to result in any significant impacts to transportation and circulation on Fort Huachuca. Interstate 10 and SR 90 will continue to serve as the main vehicular access to the community. A network of smaller roads connects other parts of Cochise County to Sierra Vista and Fort Huachuca. The existing immediate roadways adequately serve the needs of the surrounding civilian communities and the mission of Fort Huachuca. While there could be fluctuation in the post population from year to year, the Proposed Action does not propose significant increases in personnel on the Installation, therefore, no cumulative impacts are anticipated.

## **3.11. Utilities and Services**

### **3.11.1. Affected Environment**

TEP provides electric power to Fort Huachuca. SSVEC manages the distribution infrastructure and system under a privatization agreement. The existing distribution system adequately supports the current and futures needs of the Installation (Vernadero 2014).

Fort Huachuca implemented projects to reduce energy use including the replacement of traditional lighting with light emitting diodes (LEDs), replacing heating and cooling pumps, and upgrading cooling systems with all new renovations, and installing occupancy sensors to reduce energy use in unoccupied spaces. Fort Huachuca initiated a project in 2019 to construct a 44-megawatt (MW) combined heat and power (CHP) plant driven by natural gas (Smart Energy Decisions 2018). CHP plants capture heat that would otherwise be wasted from electrical energy generation and use it to provide heat for buildings. The project provides energy resiliency, diversifies the energy supply, and supports Army and federal energy policies.

Further, Fort Huachuca partnered with TEP and Arizona Electric Power Cooperative to install a power line to provide electricity to the Installation from a micro power grid, ensuring resiliency. Fort Huachuca is also working with the Office of Energy Initiatives (OEI) to create an Energy Resilience Conservation Investment Program to install microgrids and a 4-MW backup generator.

In addition, the Fort increased the use of renewable energy through the utilization of solar power. The Fort initiated a project in collaboration with TEP, the Army Energy Initiatives Task Force, General Services Administration, and a private company to construct a photovoltaic (PV) solar array (Army 2015). The PV solar array has the capacity to

---

generate 22 MWs or approximately 25% of the Fort's electricity energy demand. The Fort also partnered with TEP to install a Battery Energy Storage System (BESS) to alleviate the strain during peak demand hours and to increase resiliency on the Installation.

Southwest Gas provides natural gas. Natural gas is delivered via two 400 pounds-per-square-inch supply lines and distributed throughout the Installation. The system capacity is adequate to support current and future demands.

Natural gas, potable water, and wastewater distribution systems are owned and managed by Fort Huachuca.

Solid waste accumulated at the Installation is transported off-post and primarily disposed of at the Huachuca City landfill. A small amount of solid waste is directed to the Elfrida landfill, which is also in Cochise County.

The only water supply at Fort Huachuca is groundwater from the Sierra Vista subwatershed regional aquifer. Fort Huachuca's water system is operated and maintained by an Installation service contractor. There are eight municipal groundwater production wells on the Installation. Water is treated prior to entering the supply lines and the water quality is generally suitable for all uses. The greatest demand on the water supply comes from the Installation housing areas. A water conservation program was developed to educate the Installation residents and personnel on methods to conserve the water supply. Other conservation methods are also implemented at Fort Huachuca, including the use of treated wastewater effluent rather than potable water for irrigation and recharge. Water supply and storage at Fort Huachuca is adequate to meet current and future demands; but additional storage for the Old Post/Black Tower area is planned.

The Fort Huachuca wastewater collection and treatment system is operated and maintained by an Installation service contractor. Installation wastewater is directed to a single WWTP. Most wastewater flows to the WWTP via gravity; however, some areas, such as a small portion of the housing in the southeastern Cantonment, requires wastewater be pumped through a lift station. After treatment, wastewater is directed to seven effluent recharge basins on the John R. Fox Range or reused as irrigation water for the golf course. The current wastewater system at Fort Huachuca is adequate for current flows, and the WWTP is currently running at approximately 30% of its permitted allowance. Additionally, the WWTP is currently undergoing modernization and upgrades.

### **3.11.2. Environmental Consequences**

#### ***3.11.2.1. Proposed Action***

The implementation of the Proposed Action is not anticipated to result in any significant impacts to utilities and services on Fort Huachuca. The existing electrical, potable water, wastewater, natural gas, and solid waste infrastructures are currently sufficient to support the Proposed Action. Indirect benefits to utilities and services are expected from the Fort's

---

continued upgrades to utility systems to reduce water and power use and increase renewable energy usage.

Advanced energy technology (solar, wind, biomass, hydrogen, etc.) development is an essential endeavor on DoD facilities, and the DoD has set a goal that 25% of its energy should come from renewable sources by 2025 (ENRD 2021). Fort Huachuca's Energy Efficiency, Water Conservation Design/Construction Guidelines and Operation Standards require all design and construction on the Installation shall consider the best renewable energy or energy efficient equipment available; that photovoltaic power using a DC micro-grid shall be incorporated whenever feasible; and that all water/condensate from all equipment shall be captured for reuse (FH 2014).

### ***3.11.2.2. No Action Alternative***

Under the No Action Alternative, Fort Huachuca would not implement the Proposed Action. Current military activities would continue in accordance with existing procedures and new activities would undergo project-by-project evaluation under NEPA. Consequently, no impacts are anticipated from the No Action Alternative.

### ***3.11.2.3. Cumulative Impacts***

The growth and development around the Installation continues to increase the demand for utilities such as those providing electricity, telecommunications, water, and wastewater. While all utility systems are currently sufficient to support the Proposed Action, the Installation is continuously working to modernize and upgrade these systems to increase efficiency and reduce its demand for nonrenewable resources.

The Fort already completed numerous projects that collectively provide long-term, beneficial impacts to the utilities infrastructure and natural environment, including capping leaking water lines, installing artificial turf on athletic fields and utilizing xeriscaping, installing solar arrays and a BESS, and converting the Mountain View Golf Course to a desert course and upgrading the irrigation system to reuse treated effluent more efficiently.

The City of Sierra Vista has implemented several projects to conserve energy. These projects include installing solar streetlights; retrofitting fire station hot water heaters with solar power; and replacing inefficient heating, ventilation, and air conditioning (HVAC) units in City facilities (City of Sierra Vista 2014).

The Installation entered into agreements and partnerships with other groups and agencies to reduce water use in the USBP. The Fort's and surrounding communities' reduction in water use and increased use of renewable energy sources is not only beneficial to the environment, but also decreases the demand on existing utilities and necessity for new utilities. Consequently, no significant cumulative impacts to utilities are expected to occur from the Proposed Action.

---

## 3.12. Hazardous and Toxic Substances

### 3.12.1. Affected Environment

Hazardous materials (HAZMAT) refers to any item or agent (biological, chemical, and physical) that has potential to cause harm to humans, animals, or the environment, either by itself or through interaction with other factors. Across the Army, the Hazardous Material Management Program (HMMP) is used to integrate the accountability for HAZMAT into day-to-day decision-making, planning, operations, and compliance across all Army missions, activities, and functions. The HMMP policies, including its objectives and goals, are set forth in AR 200-1 (DA 2007). A complete list of federally recognized hazardous substances and their reportable quantities is in 40 CFR Part 302.4. Many other substances are not on this list that may be hazardous according to their ignitability, corrosivity, reactivity, or toxicity as defined by 40 CFR 261.20-24.

Fort Huachuca is an Environmental Protection Agency (EPA)-registered large quantity generator, defined as generating 1,000 kilograms per month or more of hazardous waste, more than 1 kilogram per month of acutely hazardous waste, or more than 100 kilograms per month of acute spill residue or soil. Vehicle and aircraft maintenance produce most hazardous wastes generated by the Installation, and facility maintenance may also contribute. Hazardous substances typically associated with these operations such as fuels, antifreeze, paints, cleaners and petroleum, oil, and lubricants (POL) are stored, transported, and disposed of in accordance with applicable laws and regulations. The Hazardous Waste Management Program at Fort Huachuca complies with OSHA hazardous communications standards and EM 385-1-1 materials handling, storage, and disposal standards; the Installation Spill Contingency Plan; the Installation Hazardous Waste Management Plan; Department of Transportation regulations; and ENRD (Vernadero 2014).

The Fort operates one 90-day Hazardous Waste Warehouse, approximately 120 satellite accumulation points and a Hazardous Material Control Center, which allows for collection and withdrawal of usable hazardous materials on the Installation. Frequent inspections of hazardous waste storage and disposal sites are conducted by the ENRD and state and federal regulatory agencies. The Defense Reutilization and Marketing Office (DRMO) provides contract service to transport and dispose of hazardous waste off-post.

Facilities that store, transport, dispose of, or utilize POLs at the Fort are strictly regulated by Federal and DoD regulations. The fundamental purpose of Federal and DoD regulations is to prevent or limit the accidental release of POL materials to surface water, groundwater, or soils at Fort Huachuca. Specific areas of regulatory focus are spill prevention plans, POL transfer operations, POL storage in containers, and used oil. AR 200-1 requires Fort Huachuca to “manage tank systems used to store oil and hazardous substances in an environmentally safe manner, prevent spills of these substances, and rapidly respond to spills.” Among other things, AR 200-1 requires development of an

---

Installation Spill Contingency Plan (ISCP) and a Spill Prevention Control and Countermeasures Plan for storage tank systems that hold POLs or hazardous substances. Response resources for Fort Huachuca are mobilized at the direction of the Qualified Individual (QI) or Facility Incident Commander (FIC). However, location and personal protective equipment (PPE) requirements will dictate which unit initially responds and completes the response.

Incident response priorities are established using prudent spill response procedures. Fort Huachuca's priorities are protecting against loss of life, fire/explosion, and release transport, respectively. All unit hazardous material coordinators are responsible for making all necessary emergency equipment available for the response action.

Spills may occur from mobile units such as fuel tanker trucks, trucks with fuel pods, trucks carrying hazardous material/waste, and aircraft that are parked, landing, or taking off. If any spills occur personnel must call 911 immediately. Response strategies involving these types of mobile units are handled in the following manner:

- Truck incidents – Incident most likely to be a roadside accident involving an overturned vehicle. Response by the Fire Department (FD) and the FD HAZMAT unit for initial containment and fire suppression. Additional containment and clean-up by the DPW contractor.
- Unmanned Aircraft Systems – all incident responses, clean-up and investigations are conducted by the Garrison Response Team. Additional containment and clean-up by the DPW contractor.

The Army's Installation Restoration Program (IRP) is a comprehensive program to identify, investigate, and clean up contamination at Army Installations to eliminate risks to human health and the environment. The IRP includes, but is not limited to, the cleanup of Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) hazardous substances, POLs, hazardous wastes and hazardous waste constituents, and low-level radioactive materials or wastes. Historically, there were 77 cleaned up IRP sites at Fort Huachuca. The Fort Huachuca Installation Action Plan, dated 2021, identifies five remaining IRP sites, with two of these being in long-term management (LTM); two in remedial investigation/feasibility study phase; and one in the remedial action construction phase.

The South Range Landfill (FTHU-10), one of the sites in the LTM phase, is an approximately 100-acre closed landfill site located two miles southeast of the main cantonment facilities. The landfill was used from 1970 to 1975 as a dump site for household garbage, pesticides, herbicides and sodium arsenite. In groundwater samples collected since 1999 no pesticides, VOCs, or semi-volatile organic compounds (SVOCs) have been detected above Arizona Aquifer Water Quality Standards (AWQS). There were three instances in which metals (lead and cadmium) exceeded their respective AWQS.

---

In 2020, ADEQ agreed on site closure and no further groundwater monitoring will be required. Land use controls restrict further development at the site.

The East Range Mine Shaft (FTHU-65), also in the LTM phase, is located in the remote East Range. The mine shaft had been used since the 1940s for disposal of a variety of wastes including refuse, petroleum products, small aircraft/drone bodies and unexploded ordinance. Groundwater has been sampled periodically for the presence of VOCs, hydrocarbons, metals, and explosives since 1992. Groundwater sampling results have all been below the AWQS. In 2020, ADEQ agreed on site closure and no further groundwater monitoring will be required. Land use controls restrict further development at the site.

FTHU-91 is a site created in 2018 to account for all PFAS costs at the Installation. A preliminary assessment was performed in Spring 2019 to identify all releases of PFAS to the environment and 20 areas of potential interest were identified. The site is currently in the remedial investigation/feasibility study phase.

FTHU-013 is a transferred range, with private ownership, comprising of 310 acres north and adjacent to the East Artillery Range. Acquisition documents indicated that the land was used as part of the artillery range. The range is currently used primarily as farmland. Munitions in the transferred range were found and removed, but no remediation activities are known to have taken place. The site is currently in the remedial investigation/feasibility study phase to determine whether further investigation and analysis to inform further action is needed. The 2021 Installation Action Plan indicates that no further action is anticipated for this site.

FTHU-017 is a 700-acre former landmine training site discovered during a cultural survey being conducted at the site to prepare for construction of a motor pool facility, at which time land mines were uncovered. After further investigation it was determined that the area contains land mine ordinances. Due to the need for clearing the area for the motor pool facility, a Time Critical Remedial Action was performed in 2020 on a 100-acre area within the site. The site is currently in the remedial investigation/feasibility study phase. It is anticipated that a remedial action will be required and land use controls will be recommended at the site.

### **3.12.2. Environmental Consequences**

#### ***3.12.2.1. Proposed Action***

Implementation of the Proposed Action is not anticipated to result in any significant impacts from hazardous or toxic substances at the Fort. Hazardous materials associated with the new and continuing military operations at Fort Huachuca are expected be comparable to existing materials currently in use, and would continue to be stored, handled, and used in similar quantities to what is currently practiced.

---

Fort Huachuca's current policies and procedures will minimize impacts from the use of hazardous or toxic substances during the implementation of the Proposed Action. In accordance with training requirements set forth in AR 200-1 and the procedures defined in Fort Huachuca's ISCP, vehicle and equipment operators are expected to be well-versed in the proper measures and notification processes necessary to handle accidental spills of hazardous or toxic substances including POLs. Equipment, such as portable generators, utilizes the latest safety technology. Volumes of hazardous or toxic materials at any given testing location are minimal and would not pose a major threat to human health or safety. Vehicles are outfitted with drip pans, plastic sheeting, and spill kits, which are used to prevent and clean up accidental spills (Vernadero 2011).

#### **3.12.2.2. No Action Alternative**

Under the No Action Alternative, Fort Huachuca would not implement the Proposed Action. Current military activities would continue in accordance with existing procedures and new activities would undergo project-by-project evaluation under NEPA. Fort Huachuca would continue to manage hazardous materials in accordance with applicable laws and would continue following the ISCP for spill response procedures. Consequently, there would be no impacts due to hazardous or toxic substances.

#### **3.12.2.3. Cumulative Impacts**

Fort Huachuca has a Hazardous Waste Management Program and several other hazardous-materials-handling programs and manuals to direct the use of these materials. Fort Huachuca additionally has a Hazardous Materials Control Center to keep track of materials and remove them safely from the Installation.

Fort Huachuca's Installation Spill Contingency Plan describes the procedures to implement in the event of a spill of hazardous materials or petroleum, oil, and lubricants. Due to the extensive policies and procedures in place for potential spills and mishandling of hazardous and toxic substances, it is anticipated that the Proposed Action will not result in a cumulative local or regional impact from the use of hazardous and toxic substances.

### **3.13. Human Health and Safety**

#### **3.13.1. Affected Environment**

Health and safety services can be obtained both on Fort Huachuca and within the surrounding communities. Law enforcement is provided by community police forces and Arizona Department of Public Safety services off-post. On Fort Huachuca, the law enforcement division of the Directorate of Emergency Services (DES) has primary responsibility for the enforcement of rules and regulations and the security of the Installation.



---

Medical services on Fort Huachuca can be received at the Raymond W. Bliss Army Health Center. This center provides services to active and retired military personnel and their families. Services include primary care, internal medicine, general surgery referral and follow-up, orthopedics, physical therapy, optometry (active duty only), and preventive medicine. Off the Installation, emergency medical services can be obtained at the Canyon Vista Medical Center (CVMC). CVMC is a level III trauma center and offers emergency services; women and newborn services; orthopedics, intensive, progressive, and acute care services; cardiac catheterization lab; surgical services and an outpatient surgery center; adult psychiatric unit; advance diagnostic imaging; laboratory services; rehabilitation services; two helicopter pads; wound care; and hospice home care (CVMC n.d.).

Fort Huachuca also has three stations. Personnel from these stations respond to emergencies on the Installation, at LAAF, and in the surrounding area. The Sierra Vista Fire Department has four fire stations (City of Sierra Vista n.d.). The Cochise County Fire District responds to calls occurring in the county and can provide additional assistance to other agencies when needed. The Fry Fire District has one station located within Sierra Vista and two additional stations in outlying areas within the county (Fry Fire District n.d.).

Multiple fire agreements are in place for the Installation. A Memorandum of Understanding (MOU) is maintained between Fort Huachuca and eight local fire districts to cover mutual assistance for both structural and wildland fires in the region. These districts include Fry Fire District, the Huachuca City Fire Department, the Palominas Fire District, the City of Sierra Vista Fire Department, the City of Douglas Fire Department, the Sonoita-Elgin Fire Department, the Whetstone Fire Department, and the USFS. All Cochise County fire departments and districts have standing mutual-aid agreements to enhance initial and sustained wildland response (ENRD 2023).

ENRD entered an Interservice Support Agreement (ISSA) with the Sierra Vista Ranger District of the CNF (SVRD-CNF) to provide prescribed fire support, planning, and implementation within the boundary of Fort Huachuca. DES also entered into an agreement with the SVRD-CNF to provide wildland fire suppression, planning, and implementation within Installation boundaries (ENRD 2023).

Fort Huachuca and the surrounding area have an active fire regime and wildland fires occur regularly. Fire management on the Installation is directed to meet the goals and objectives identified in the Fort Huachuca Integrated Wildland Fire Management Plan (ENRD 2023). These goals include protecting life as the highest priority, providing for the safety of Army personnel, dependents, employees, visitors, fire staff, and safeguarding the Fort Huachuca Garrison, protecting the Installation and personal property, managing fire to support military training, managing fire to benefit and protect natural and cultural resources and coordinating fire operations with neighboring landowners. The plan addresses the management of both wildfires and prescribed burns and treatment of areas supporting sensitive resources (natural and cultural). In 2009, the USFS authorized the

---

Huachuca FireScape Project. This project coordinates fire and fuel reduction flexibility, efficiency, and consistency across about 400,000 acres of adjoining federal land (U.S. Department of Agriculture/Forest Service 2009).

Range Operations is responsible for coordinating and regulating activities on the ranges, supported by the DES Law Enforcement and Fire Department. Ranges are secured and patrolled by Law Enforcement, the Fire Department is responsible for fighting and extinguishing range fires, and ENRD manages and schedules prescribed burns and maintains fire breaks in conjunction with the Fire Department and USFS. Range Operations regulations and standard operating procedures identify allowable range practices and precautions that must be taken (ENRD 2023).

### **3.13.2. Environmental Consequences**

#### ***3.13.2.1. Proposed Action***

Implementation of the Proposed Action is not anticipated to cause any impacts to human health and safety. Projects and activities will be comparable to those currently conducted on the Installation and not result in any new human health and safety exposures.

Fire and emergency services are currently adequate to meet the needs of new and continued activities at the Installation. The Proposed Action does not propose any activities that would result in new or additional strains on these resources. The Fort has developed several Standard Operating Procedures (SOPs), to include the Range SOP, Laser SOP, TSC SOP, and Range Synch Center SOP, which establishes policies, defines responsibilities, and prescribes practices that will ensure personnel safety during testing and training operations within designated ranges at Fort Huachuca.

#### ***3.13.2.2. No Action Alternative***

Under the No Action Alternative, Fort Huachuca would not implement the Proposed Action. Current military activities would continue in accordance with existing procedures and new activities would undergo project-by-project evaluation under NEPA. Consequently, no impacts are anticipated from the No Action Alternative.

#### ***3.13.2.3. Cumulative Impacts***

Human health and safety services have increased over the years as Sierra Vista and surrounding communities have agreed to provide mutual support with fire and other emergency services.

With the requirements and guidelines of the standard operating procedures that are dictated both verbally and in written form prior to any testing or training activities in place, it is anticipated that no significant cumulative impacts would be expected to occur regarding human health and safety.

---

### 3.14. Environmental Justice

#### 3.14.1. Affected Environment

EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, was issued to ensure federal agencies identify and address disproportionately high and adverse human health or environmental impacts on low-income and minority populations. The first step in analyzing this issue is to identify minority and low-income populations that might be affected by implementation of the Proposed Action or its considered alternatives. Demographics information on ethnicity, race, and economic status is provided in this section as the baseline against which potential Environmental Justice impacts can be identified and analyzed.

A minority population includes persons who identify as African American, Asian or Pacific Islander, Native American or Alaskan Native, or Hispanic. Minorities consist of all non-white persons, in addition to Hispanic white persons. A minority population exists when minorities exceed 50% of the total population or that has a meaningfully greater minority population than the adjacent geographic areas. Table 3-3 summarizes the local and regional demographics surrounding the proposed boundary. Sierra Vista (53%) has a comparable overall percent minority population compared to the State of Arizona and Cochise County.

**Table 3-3. Local and Regional Demographics**

Category	White Non-Hispanic or Latino (%)	American Indian and Alaskan Native Alone (%)	Hispanic or Latino (%)	Black or African American Alone (%)	Asian Alone (%)	Native Hawaiian and Other Pacific Islander Alone (%)	Two or More Races (%)	Persons Living in Poverty (%)
State of Arizona	52.9	5.2	32.5	5.5	3.9	0.3	3.2	12.5
Cochise County	54.6	1.9	35.9	4.4	2.2	0.4	3.6	17.7
City of Sierra Vista	56.1	0.6	24.6	8.3	3.9	0.8	15.2	10.8
Source: USCB 2024								

According to the USCB, a “poverty area” is a census tract where 20% or more of the residents have incomes below the poverty threshold, and an “extreme poverty area” is one with 40% or more below the poverty level. The poverty rate for the City of Sierra Vista’s was 10.8% in 2023 which is lower than the county (17.7%), state (12.5%), and national (11.5%) averages (USCB 2024), and below the 20% threshold, consequently

---

Fort Huachuca is not in a “poverty area” (Table 3-3). The median household income for 2018-2022 was \$70,899 per year (USCB 2024). Fort Huachuca is not in an area that has a disproportionately high concentration of minority or low-income populations (EPA 2024).

### **3.14.2. Environmental Consequences**

#### ***3.14.2.1. Proposed Action***

The implementation of the Proposed Action is not anticipated to result in any impacts to environmental justice. Fort Huachuca is not in an area that has a disproportionately high concentration of minority or low-income populations. Therefore, no impacts to environmental justice are anticipated to result from the Proposed Action.

#### ***3.14.2.2. No Action Alternative***

No impacts to environmental justice are anticipated from implementation of the No Action Alternative.

#### ***3.14.2.3. Cumulative Impacts***

No impacts are anticipated from the Proposed Action or No Action Alternative, and Fort Huachuca is not within an area with a disproportionately high concentration of minority or low-income populations. No cumulative impacts to environmental justice are expected.

### **3.15. Climate Change**

#### **3.15.1. Affected Environment**

The global average temperature has increased since 1880 due to greenhouse gases emitted from human activities that resulted in detectable warming in the Southwest U.S. (Gonzalez et al. 2018 and Knutson et al. 2017). Between 1901 and 2016, average temperatures have increased across nearly the entire Southwest U.S. (Vose et al. 2017). The Intergovernmental Panel on Climate Change (IPCC) established Representative Concentration Pathways (RCPs) to model future climate scenarios that may occur depending on the volume of greenhouse gases (GHG) emitted in the years to come. Under the highest scenario (RCP8.5), climate models project an 8.6°F (4.8 degrees Celsius [°C]) increase in Southwest regional annual average temperature by 2100 (Vose et al. 2017). In some regions in the Southwest, such as the Upper Colorado River Basin, long-term increases in temperatures since 1900 resulted in intensified drought conditions since 2000 (Gonzalez et al. 2018). Total precipitation projections for the Southwest remain uncertain due to natural variations in interannual climate (Easterling et al. 2017). However, both moderate (RCP4.5) and high (RCP8.5) climate scenarios project significant drying conditions when compared to the calibration interval (1931-1900) in the entire Southwest (Cook et al. 2015).

---

In 2009, the EPA made an endangerment finding stating that “current and projected concentrations of the six key well-mixed greenhouse gases (CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride) in the atmosphere threaten the public health and welfare of current and future generations” (74 CFR 66,496). This finding opened the door for the regulation of GHG emissions published in 75 CFR 31514, which led to what is known as the prevention of significant deterioration (PSD) & Title V GHG Tailoring rule. For the purposes of PSD and Title V, this rule set a major source threshold of 100,000 tpy carbon dioxide equivalent (CO<sub>2</sub>e) and a 75,000 tpy CO<sub>2</sub>e significance level.

In addition, on September 22, 2009, the Administrator of the EPA signed the Final Mandatory Reporting of GHG Rule, known as the Mandatory Reporting Rule (MRR), which was published in the Federal Register (40 FR Part 98) on 30 October 2009. The final rule requires reporting of GHG emissions from large sources, which are those sources that emit 25,000 metric tons (MT) CO<sub>2</sub>e or more per year. Except for electric generating and cogeneration plants, all stationary facilities that emit more than 25,000 MT of CO<sub>2</sub>e per year are considered covered and must be reported on.

Fort Huachuca’s annual emissions are less than the reporting threshold of 25,000 metric tons CO<sub>2</sub>e annually and is therefore not required to report under the Mandatory GHG Reporting Rule. In the event the installation ever exceeded those thresholds, Fort Huachuca must perform a comprehensive GHG emissions inventory to facilitate reporting.

The DOD made significant efforts to identify the potential impacts of climate change and identify and explore natural resource asset management issues through the Strategic Environmental Research and Development Program/Environmental Security Technology Certification Program, the Legacy Resource Management Program, and by developing a guide to incorporate climate considerations and necessary adaptations for DoD Natural Resource Managers (ENRD 2021).

### **3.15.2. Environmental Consequences**

#### ***3.15.2.1. Proposed Action***

No significant impacts to climate change or GHG emissions are anticipated from implementation of the Proposed Action. Potential long-term impacts resulting from the Proposed Action are associated with the burning of fossil fuels in vehicles and equipment, however, the Proposed Action would not result in a significant increase in the number of vehicles and equipment being used by the Installation. It is anticipated that the Proposed Action would not cause an exceedance of the 25,000 MT of CO<sub>2</sub>e threshold under the Mandatory GHG Reporting Rule.

---

Long-term benefits associated with the development of advanced renewable energy technology (solar, wind, biomass, hydrogen, etc.) could be expected from the Proposed Action. The DOD has set a goal that 25% of its energy should come from renewable sources by 2025, reducing reliance on fossil fuels for energy (ENRD 2021). Fort Huachuca has further committed to striving to a net zero energy goal by 2025 (FH 2014).

### **3.15.2.2. No Action Alternative**

Under the No Action Alternative, Fort Huachuca would not implement the Proposed Action. Current military activities would continue in accordance with existing procedures and new activities would undergo project-by-project evaluation under NEPA. Consequently, no impacts are anticipated from the No Action Alternative.

### **3.15.2.3. Cumulative Impacts**

Initiatives are underway on Fort Huachuca and in the surrounding area to combat climate change through the reduction in GHG emissions. The DoD's goal of having 25% of its energy sourced from renewables by 2025 will reduce reliance on fossil fuels for energy. Likewise, a major goal of the City of Sierra Vista's General Plan is to consider and adopt strategies to mitigate the impacts of climate change (City of Sierra Vista 2014). One such recent project is the installation of electric vehicle charging stations throughout Sierra Vista. Therefore, no significant cumulative impacts to climate change are expected to occur from the Proposed Action.

## **3.16. Electromagnetic Spectrum**

### **3.16.1. Affected Environment**

The EM spectrum is the entire range of electromagnetic radiation, characterized by frequency and wavelength. The EM spectrum extends from radio waves which have the longest wavelengths and lowest frequencies, to gamma rays which have the shortest wavelength and highest frequencies. Lasers occur in the infrared and visible portions of the EM.

One of Fort Huachuca's unique operational roles for the DoD includes EM testing and training. The metal-bearing mountain ranges surrounding Fort Huachuca create a unique topographic "bowl" that blocks external EM interference within the basin. This creates an ideal location for electronics testing and training. The natural topography provides the flexibility of using both military and commercial spectrum for operational and developmental testing.

The limited amount of undeveloped land that surrounds the Installation provides an EM environment that is an unparalleled asset for testing. Due to the operational setting, the communications and electronic equipment testing function of the EPG moved to Fort

---

Huachuca in 1954. The capabilities of both testing and training use made Fort Huachuca a unique spectrum asset for the Army. The Army established the area surrounding Fort Huachuca as the Buffalo Soldier Military Electromagnetic Range (MER), one of the only U.S. locations where regional electronic equipment testing can be effectively conducted. The MER is a frequency coordination zone protected by federal mandate (Arizona Department of Commerce 2007). The EM environment is also a critical resource for many other tenants and organizations operating on the Installation and plays a vital role in the success of testing missions conducted by the EPG.

Spectrum-related activities associated with Fort Huachuca are subject to the policies and procedures of several federal agencies. At the highest level, the spectrum management authority for all federal agencies is the National Telecommunications and Information Administration, part of the Department of Commerce. The policies and procedures for spectrum use by federal agencies are contained in the Manual of Regulations and Procedures for Federal Radio Frequency Management, commonly referred to as the National Telecommunications and Information Administration (NTIA) Manual. In addition to the NTIA, the DoD has well established and detailed policies and procedures for the use of the EM spectrum by DoD agencies. Finally, the U.S. Army has its own policies and procedures guiding the spectrum-dependent activities of Army entities. Regulations and procedures relevant to Army spectrum management issues are addressed in AR 5-12.

Principal responsibility for spectrum management within the U.S. Army rests with the Director of the Army Spectrum Management Office (ASMO) who is also the Army Spectrum Manager. The Director of ASMO reports to the Army Chief Information Officer (CIO)/G6. Several federal agencies have frequency assignments for radio frequency (RF) systems within the EM spectrum surrounding the Fort. All federal agencies that use the EM spectrum have an office designated to perform the spectrum management function; typically, this office reports to the agency's Chief Information Officer. Like DoD agencies, these agencies obtain authorized frequency assignments through the NTIA, and the frequency assignment process contained in Chapter 8 of the NTIA manual. Non-federal government systems also contribute to the EM environment at Fort Huachuca. Commercial, state, and local authorities are licensed to use the EM spectrum by the Federal Communications Commission.

The wavelength of lasers used at Fort Huachuca falls between infrared and ultraviolet, including visible wavelengths, on the EM spectrum. Fort Huachuca's other sources of EM testing include radar and radio communications systems, which operate on separate frequencies. Electronic signals used at Fort Huachuca are no stronger than commercial Global Positioning System (GPS) or cell phone emissions. All signals and emissions receive prior approvals through the Installation Spectrum Management Office prior to emitting.

---

## **3.16.2. Environmental Consequences**

### ***3.16.2.1. Proposed Action***

Implementation of the Proposed Action is not anticipated to result in any significant impacts to the EM Spectrum. Spectrum use associated with the new and continuing military operations at Fort Huachuca is expected be comparable to existing use.

Pre-testing coordination will continue between federal and law enforcement agencies regarding testing interference of the respective frequencies which helps to minimize potential impacts. Therefore, no impacts to the EM spectrum are anticipated because of the Proposed Action.

### ***3.16.2.2. No Action Alternative***

Under the No Action Alternative, Fort Huachuca would not implement the Proposed Action. Current military activities would continue in accordance with existing procedures and new activities would undergo project-by-project evaluation under NEPA. Fort Huachuca would still be required to conduct pre-testing coordination between federal and law enforcement agencies to deconflict potential interference.

### ***3.16.2.3. Cumulative Impacts***

Multiple agencies utilize the EM spectrum in and around Fort Huachuca. EM testing is coordinated between agencies regarding testing interference. Therefore, no cumulative impacts to the EM spectrum are anticipated from either alternative.



## 4.0 FINDINGS AND CONCLUSIONS

A summary of the potential impacts and measures to minimize adverse impacts is provided in Table 4-1. Based on the analysis contained herein, this PEA concludes that the implementation of the Proposed Action would not constitute a major federal action with significant impacts to human health or the environment. It is recommended that a Finding of No Significant Impact be issued to complete the NEPA documentation process.

**Table 4-1. Summary of Potential Impacts and Measures to Minimize Impacts for the Proposed Action**

Resource Area	Level of Impact			Summary of Potential Impacts and Measures to Minimize Impacts
	Significant	Less than Significant	No Impact	
Land use			X	No impacts to land use are anticipated. Lands would continue to be used in a manner which supports the Army's mission.
Topography, Geology, and Soils		X		No significant impacts to topography, geography, or soils are anticipated. Erosional impacts resulting from new and continued military activities are mitigated through natural resource management on the Installation consistent with the Integrated Natural Resource Management Plan.
Hydrology and Water Resources		X		<p>No significant impacts to floodplains are anticipated. The Army maintains up-to-date floodplain data and considers and factors floodplain data in all planning and development proposals on the Installation early in the decision-making process. When development in floodplains cannot be avoided, mitigation measures are developed and implemented.</p> <p>No significant impact to groundwater is anticipated. Increases in net groundwater pumping beyond current levels is not anticipated to result from the Proposed Action. Further, potential impacts to groundwater from continued pumping would continue to be mitigated as previously approved.</p> <p>No impacts to surface water are anticipated. Impacts to WOTUS are regulated through Section 404 of the Clean Water Act; therefore, should any proposed projects or development involve WOTUS, the Army would seek authorization for such projects or development through the USACE.</p>
Biological Resources and Wetlands		X		<p>No significant impacts to biological resources are anticipated. The Army is preparing an updated PBA to evaluate impacts to listed species and critical habitat that may result from new and continued military activities. Potential adverse impacts to ESA species would be mitigated through the Section 7 consultation initiated with the USFWS.</p> <p>Continued implementation of Fort Huachuca's INRMP would further reduce potential impacts associated with new and continued military activities to biological resources. The primary goal of vegetation management on the Fort is to manage for and protect native plant communities using integrated ecosystem management principles while</p>

Resource Area	Level of Impact			Summary of Potential Impacts and Measures to Minimize Impacts
	Significant	Less than Significant	No Impact	
				accommodating military training needs. Fish and wildlife management on Fort Huachuca is primarily focused on the management of the largest extent of each natural habitat type, thereby permitting the natural system to retain its inherent ability to self-maintain, which ultimately requires fewer external resources to manage species.
Cultural Resources		X		No significant impacts to cultural resources are anticipated. Any new or continuing activities with the potential to impact sites listed on, or eligible for listing on, the National Register of Historic Places, would be required to undergo a review process under Section 106 of the NHPA. Fort Huachuca is preparing a PA with the Arizona SHPO and interested tribes to streamline the consultation process pursuant to Section 106 of the NHPA to accommodate routine actions associated with the continued operations, maintenance, and development associated with the Proposed Action. Any new disturbance would be conducted following the stipulations set forth in the PA.
Air Quality		X		No significant impacts to air quality are anticipated. Operations would continue to be conducted in accordance with the voluntary emission limitations and standards described in the Class II permit.
Visual Resources		X		No significant impacts to visual resources are anticipated. Fort Huachuca's commitment to sustaining the environment includes preserving the natural beauty of the Installation and viewscape of the Huachuca Mountains. Development of the Installation is guided by the IPS to ensure that buildings and structures are uniform in construction and conform to the overall aesthetics of the area. The IPS also includes standards to avoid impacts to dark skies.
Noise		X		No significant impacts to noise are anticipated. Noise levels are not anticipated to exceed baseline levels. Noise will be managed through the development of a Noise Management Plan for the Installation.
Socioeconomics		X	X	Continued benefits to socioeconomics in the ROI would continue under the Proposed Action. Authorization of continued military activities would provide billions of dollars of economic output to the local economy.
Transportation and Circulation		X		No significant impacts to traffic and circulation are anticipated. The Proposed Action does not propose significant increases in personnel at the Fort, so traffic volume associated with new and continuing activities is not expected to result in any adverse impacts to transportation or traffic flow.
Utilities		X		Indirect benefits to utilities and services are anticipated. Beneficial impacts are expected from the Fort's continued upgrades to utility systems to reduce water and power use and increase the use of renewable energy. The existing electrical, potable water, wastewater, natural gas, and solid waste infrastructures are currently sufficient to support the Proposed Action.

Resource Area	Level of Impact			Summary of Potential Impacts and Measures to Minimize Impacts
	Significant	Less than Significant	No Impact	
Hazardous and Toxic Substances		X		No significant impacts from hazardous or toxic substances are anticipated. Hazardous materials would continue to be stored, handled, and used in similar quantities to what is currently practiced. Any spills that occur will result in the implementation of procedures established in the Installation Spill Contingency Plan, and contaminated soil and other waste will be properly disposed.
Human Health and Safety			X	No impacts to human health and safety are anticipated. Fire and emergency services are currently adequate to meet the needs of ongoing activities at the Installation. The Proposed Action does not propose any activities that would result in new or additional strains on these resources.
Environmental justice			X	No impacts on environmental justice are anticipated. Fort Huachuca is not in an area that has a disproportionately high concentration of minority or low-income populations. Therefore, no impacts to environmental justice are anticipated to result from the Proposed Action.
Electromagnetic spectrum			X	No impacts to the EM spectrum are anticipated. Spectrum use associated with the Proposed Action is expected be comparable to existing use. Pre-testing coordination will continue between federal and law enforcement agencies regarding testing interference of the respective frequencies which helps to minimize potential impacts.

---

## 5.0 REFERENCES

- AECOM. 2022. Demographic Analysis Report, Estimated Fort Huachuca-Attributable Population. Prepared for USAG Fort Huachuca.
- Arizona Department of Commerce. 2007. Fort Huachuca Joint Land Use Study. Arizona Military Regional Compatibility Project. Arizona Department of Commerce. June 2007.
- Arizona Revised Statutes Title 9. Cities and Towns § 9-461.05. General plans; authority; scope - last updated March 08, 2022.
- Arizona Revised Statutes Title 11. Counties § 11-804. Comprehensive plan; contents - last updated March 08, 2022.
- Arizona Revised Statutes Title 28. Transportation § 28-8481. Planning and zoning; military airport and ancillary military facility's operation compatibility; compliance review; penalty; definitions - last updated March 08, 2022
- ADEQ. 2024. Air Quality | Nonattainment Areas. Available at: [https://www.azdeq.gov/nonattainment\\_areas](https://www.azdeq.gov/nonattainment_areas). Accessed 15 January 2024.
- Army Public Health Center (APHC). 2018. Fort Huachuca Installation Compatible Use Zone Study. Environmental Noise Branch, Environmental Health Sciences Division, U.S. Army Public Health Center. May 2018.
- Bailowitz and Upson. 1997. Fort Huchuca, Arizona Butterfly List [Online] [Accessed 22 December 2009.] <http://www.naba.org/chapters/nabasa/Fort%20Huachuca%20Butterfly%20List%20-%20page%201.html>.
- Baker, Michael, Jr, Inc. and Vernadero. 2011. *Installation Spill Contingency Plan*. Prepared for U.S. Army Garrison Fort Huachuca, Arizona.
- City of Sierra Vista. 2014. Vista 2030 General Plan. November 2014.
- \_\_\_\_\_. N.d. Fire & Medical Services. Available at: <https://www.sierravistaaz.gov/our-city/departments/fire-medical-services>. Accessed 5 February 2024.
- Cochise Conservation and Recharge Network (CCRN). Available at: <https://www.cochise.az.gov/356/Cochise-Conservation-Recharge-Network#:~:text=CCRN%20is%20an%20innovative%20series%20of%20projects%20capable,can%20most%20benefit%20the%20flows%20of%20the%20river>. Accessed 16 June 2023.

---

Cook, B.I., T.R. Ault, and J.E. Smerdon, 2015. Unprecedented 21st century drought risk in the American Southwest and Central Plains. *Science Advances*, 1 (1), e1400082.

CVMC. N.d. About Us. Available at: <https://www.canyonvistamedicalcenter.com/about>. Accessed 5 February 2024.

DA. 2007. AR 200-1: Environmental Protection and Enhancement. 13 December 2007.

Department of Army (Army). 2015. Fort Huachuca Renewable Energy Factsheet. Available at: [https://www.asaie.army.mil/Public/ES/oei/docs/Fort%20Huachuca\\_%20Fact%20Sheet\\_16Jan2015.pdf](https://www.asaie.army.mil/Public/ES/oei/docs/Fort%20Huachuca_%20Fact%20Sheet_16Jan2015.pdf). Accessed 31 July 2023.

Easterling, D.R., K.E. Kunkel, J.R. Arnold, T. Knutson, A.N. LeGrande, L.R. Leung, R.S. Vose, D.E. Waliser, and M.F. Wehner, 2017: Precipitation change in the United States. Climate Science Special Report: Fourth National Climate Assessment, Volume I. Wuebbles, D.J., D.W. Fahey, K.A. Hibbard, D.J. Dokken, B.C. Stewart, and T.K. Maycock, Eds. U.S. Global Change Research Program, Washington, DC, USA, 207-230.

ENRD. 2021. Integrated Natural Resource Management Plan, Fort Huachuca, Cochise County, Arizona. Directorate of Public Works, Environmental and Natural Resources Division, Fort Huachuca, Arizona.

\_\_\_\_\_. 2023. 2023 Fort Huachuca Wildland Fire Management Plan. Prepared by Environmental and Natural Resources Division, Directorate of Public Works, U.S. Army Garrison, Fort Huachuca, Arizona.

EPA. 2024. EJScreen Community Report. 11 February 2024.

Fort Huachuca. 2014. Energy Efficiency, Water Conservation Design/Construction Guidelines and Operation Standards. 1 August 2014.

Fry Fire District. N.d. Fry Fire District Station Locations. Available at: <https://www.fryfiredistrictaz.gov/about-us/station-locations/>. Accessed 5 February 2024.

Gonzalez, P., G.M. Garfin, D.D. Breshears, K.M. Brooks, H.E. Brown, E.H. Elias, A. Gunasekara, N. Huntly, J.K. Maldonado, N.J. Mantua, H.G. Margolis, S. McAfee, B.R. Middleton, and B.H. Udall, 2018: Southwest. In Impacts, Risks, and Adaptation in the United States: Fourth National Climate Assessment, Volume II [Reidmiller, D.R., C.W. Avery, D.R. Easterling, K.E. Kunkel, K.L.M. Lewis, T.K. Maycock, and B.C. Stewart (eds.)]. U.S. Global Change Research Program, Washington, DC, USA, pp. 1101–1184.

---

Ireland, W. 1981. Birds of Fort Huachuca (an informational checklist) compiled by William R. Ireland, Wildlife Biologist. Published by Game and Fish Management Section, Fort Huachuca; 1981, 48 pp.

Knutson, T., J.P. Kossin, C. Mears, J. Perlwitz, and M.F. Wehner, 2017: Detection and attribution of climate change. Climate Science Special Report: Fourth National Climate Assessment, Volume I. Wuebbles, D.J., D.W. Fahey, K.A. Hibbard, D.J. Dokken, B.C. Stewart, and T.K. Maycock, Eds. U.S. Global Change Research Program, Washington, DC, USA, 114-132.

Michael Baker Jr., Inc. and AECOM. 2017. Fort Huachuca Real Property Vision Plan. Funded and Managed by Headquarters, Installation Management Command, under contract to U.S. Army Corps of Engineers, St. Louis District, Contract no. W91238-11-D-0016.

\_\_\_\_\_. 2017b. Fort Huachuca Installation Planning Standards. Funded and Managed by Headquarters, Installation Management Command, under contract to U.S. Army Corps of Engineers, St. Louis District, Contract no. W91238-11-D-0016.

National Park Service. National Register of Historic Places. Available at: <https://www.nps.gov/nr/travel/amsw/sw3.htm>. Accessed 1 February 2024.

NRCS. 2024. Web Soil Survey. Available at: <https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>. Accessed 10 February 2024.

Sam Houston State University. 1996. Fish and Wildlife section for the integrated natural resources management plan. Draft. Sam Houston State University, Department of Biological Sciences, Huntsville, Texas.

Smart Energy Decisions. 2018. Fort Huachuca to Upgrade Energy Efficiency. Available at: <https://www.smartenergydecisions.com/energy-management/2018/06/11/fort-huachuca-to-upgrade-energy-efficiency>. Accessed 23 March 2022.

Taylor, R.C. 1995. A birder's guide to Southeastern Arizona. American Birding Association. Colorado Springs, Colorado.

U.S. Census Bureau. 2024. QuickFacts. Available at: <https://www.census.gov/quickfacts/>. Accessed 15 January 2024.

U.S. Department of Agriculture/Forest Service. 2009. Environmental Assessment – Huachuca FireScape Project. February 2009.

USACE. 2008. Fort Huachuca Real Property Master Plan Update. October 2008.

- 
- USAGFH. 2004. *Programmatic Environmental Assessment Future Development Plan, U.S. Army Intelligence Center, Fort Huachuca*. Environmental and Natural Resources Division, Directorate of Installation Support, U.S. Army Garrison, Fort Huachuca, Arizona. November 2004.
- USFWS. 1999. Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the Huachuca Water Umbel, a Plant. Federal Register 64(132): 1991.
- \_\_\_\_\_. 2004. Endangered and Threatened Wildlife and Plants; Final Designation of Critical Habitat for the Mexican Spotted Owl; Final Rule. Federal Register 69(168):53182.
- \_\_\_\_\_. 2014. Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for Jaguar. Federal Register 79(43):12572
- \_\_\_\_\_. 2019. Draft post-delisting monitoring plan for the lesser long-nosed bat (*Leptonycteris yerbabuenae*). U.S. Fish and Wildlife Service Region 2, Arizona Ecological Services Field Office, Phoenix.
- \_\_\_\_\_. 2021. Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the Western Distinct Population Segment of the Yellow-billed Cuckoo. Federal Register 86(75):20798.
- USGS. 2006. Ground-Water Flow Model of the Sierra Vista Subwatershed and Sonoran Portions of the Upper San Pedro Basin, Southeastern Arizona, United States, and Northern Sonora, Mexico. 2006.
- USPP. N.d. Upper San Pedro Partnership: About the Partnership Fact Sheet.
- Vernadero. 2014. Programmatic Environmental Assessment – Implementation of the Real Property Master Plan at United State Army Garrison Fort Huachuca, Arizona. September 2014.
- \_\_\_\_\_. 2011. Final Programmatic Environmental Assessment – United States Army Electronic Proving Ground Testing Activities on Fort Huachuca and Throughout Arizona. August 2011.
- Vose, R.S., D.R. Easterling, K.E. Kunkel, A.N. LeGrande, and M.F. Wehner, 2017: Temperature changes in the United States. Climate Science Special Report: Fourth National Climate Assessment, Volume I. Wuebbles, D.J., D.W. Fahey, K.A. Hibbard, D.J. Dokken, B.C. Stewart, and T.K. Maycock, Eds. U.S. Global Change Research Program, Washington, DC, USA, 185-206.
- WWA. 2018. Final Programmatic Environmental Assessment – Construction of Gray Eagle Runway at Black Tower and Testing and Use of Lasers on the West Range, Fort Huachuca, Arizona. April 2018.

---

\_\_\_\_\_. 2019. Outdoor Recreation Management Plan. Prepared for U.S. Army Garrison Fort Huachuca, Arizona.



---

## **6.0 PREPARERS AND CONTRIBUTORS**

Catherine Esquer, Westover Federal

Daniel Castellanos, Westover Federal

Betty Phillips, USAG Fort Huachuca

---

## 7.0 DISTRIBUTION LIST

### Federal Agencies

Bureau of Land Management  
San Pedro National Riparian  
Conservation Area  
4070 S Avenida Saracino  
Hereford, AZ 85615

Bureau of Reclamation  
6150 W. Thunderbird Rd.  
Glendale AZ 85306

Coronado National Forest  
Sierra Vista Ranger District  
4070 S Avenida Saracino  
Hereford, AZ 85615

Environmental Protection Agency,  
Region 9  
Office of Federal Activities  
75 Hawthorne St  
San Francisco, CA 94105

National Park Service  
Coronado National Memorial  
4101 E Montezuma Canyon Rd  
Hereford, AZ 85615

U.S. Fish and Wildlife Service  
201 North Bonita Avenue Suite 141  
Tucson, AZ 85745

U.S. Geological Survey  
520 N Park Avenue, Suite 221  
Tucson, AZ 85719

### Tribal Governments

Ak-Chin Indian Community  
42507 W Peters & Nall Rd  
Maricopa, AZ 85138

Fort Sill Apache Tribe  
Route 2, Box 121  
Apache, OK 73006

Gila River Indian Community  
PO Box 97  
Sacaton, AZ 85147

Hopi Tribe  
PO Box 123  
Kykotsmovi, AZ 86039

Mescalero Apache Tribe  
PO Box 227  
Mescalero, NM 88340

Pascua Yaqui Tribe  
7474 S Camino de Oeste  
Tucson, AZ 85746

Salt River Pima-Maricopa Indian  
Community  
10005 E Osborn  
Scottsdale, AZ 85256

San Carlos Apache Tribe  
PO Box 0  
San Carlos, AZ 85550

Tohono O'odham Nation  
PO Box 837  
Sells, AZ 85634

White Mountain Apache Tribe  
PO Box 1150  
Whiteriver, AZ 85941

Pueblo of Zuni  
PO Box 339  
Zuni, NM 87327

---

### State Agencies

Arizona Department of Environmental  
Quality  
1110 W Washington St  
Phoenix, AZ 85007

Arizona Department of Water  
Resources  
1802 W Jackson St  
Box #79  
Phoenix, Arizona 85007

Arizona Game and Fish Department  
5000 W Carefree Hwy  
Phoenix, AZ 85086

Arizona Game and Fish Department  
Tucson Regional Office  
555 N Greasewood Rd  
Tucson, AZ 85745

Arizona State Land Department  
1110 W Washington St  
Phoenix, AZ 85007

Arizona State Parks  
State Historical Preservation Officer  
1100 W Washington St  
Phoenix, AZ 85007

### Local Governments

City of Bisbee  
76 Erie St  
Bisbee, AZ 85603

City of Sierra Vista  
1011 N. Coronado Dr  
Sierra Vista, AZ 85635

Cochise County Board of Supervisors  
1415 Melody Lane, Building G  
Bisbee, AZ 85603

City of Tombstone  
613 E Allen St  
Tombstone, AZ 85638

Town of Huachuca City  
500 N Gonzales Blvd  
Huachuca City, AZ 85616

Hereford Natural Resources  
Conservation District  
PO Box 3361  
Sierra Vista, AZ 85636

### Organizations

Center for Biological Diversity  
PO Box 1178  
Flagstaff, AZ 86002-1178

Huachuca Audubon Society  
3327 Eagle Ridge Dr  
Sierra Vista, AZ 85650

Sierra Vista Chamber of Commerce  
21 E Wilcox Dr  
Sierra Vista, AZ 85635

Sierra Vista Public Library  
2600 E Tacoma St  
Sierra Vista, AZ 85635

The Nature Conservancy  
1510 E Fort Lowell  
Tucson, AZ 85719

---

## **8.0 LIST OF INDIVIDUALS CONSULTED**

Davey Dobbs, Air Quality Program Manager, IMCOM, DPW, USAG Fort Huachuca, Arizona

Betty Phillips, NEPA Coordinator, ENRD, DPW, USAG Fort Huachuca, Arizona

Christopher Higgins, DERP/IRP/Water Programs Manager, ENRD, DPW, USAG Fort Huachuca, Arizona

Dawn Rohr, Division Chief, ENRD, DPW, USAG Fort Huachuca, Arizona

Martyn Tagg, Conservation Branch Chief, ENRD, DPW, USAG Fort Huachuca, Arizona

## **APPENDIX A. TRAINING AREAS AND ASSOCIATED ACTIVITIES**

**Table A-1. Training Areas and Associated Activities on Fort Huachuca**

<i>Training Area</i>	<i>Area (Acres)</i>	<i>Training Area (TA) Activities</i>	<i>Munitions</i>	<i>Facilities</i>	<i>Special Use and Use Restrictions (ENRD 2021)</i>
<b>Fox Range</b>					
A	2,579	<ul style="list-style-type: none"> <li>• Intelligence and communications training and testing</li> <li>• Mounted (on trails and roads) and dismounted maneuver</li> <li>• Light bivouacking – tents, no field dining facility</li> <li>• Patrol bases/objective rally points/tactical assembly</li> <li>• Field and situational training exercises, ruck marches, and land navigation</li> <li>• Air operations – UAS launch and recovery personnel ingress and egress, air-to-ground laser training</li> </ul>	<ul style="list-style-type: none"> <li>• Live munitions</li> <li>• Explosives</li> <li>• Blanks,</li> <li>• Simulated munitions</li> <li>• Artillery simulators</li> <li>• Aerial and ground pyrotechnics</li> </ul>	<ul style="list-style-type: none"> <li>• Weapons Intelligence Training site 1, small demolition range</li> <li>• Range 18, sniper range</li> <li>• UAS laser range</li> </ul>	<ul style="list-style-type: none"> <li>• Foot traffic only off existing roads and trails</li> <li>• Contains surveyed firing points</li> <li>• Ground pyrotechnics must be used in containment</li> <li>• Fire and weather restrictions for aerial pyrotechnics</li> </ul>
B	2,460	<ul style="list-style-type: none"> <li>• Intelligence and communications training and testing</li> <li>• Mounted (on trails and roads) and dismounted maneuvers</li> <li>• Light bivouacking – tents, no field dining facility</li> <li>• Patrol bases/objective rally points/tactical assembly</li> <li>• Field and situational training exercises, ruck marches, and land navigation</li> <li>• Air operations – personnel and bundle drops, UAS launch and recovery, helicopter landing, field refueling, and air to ground laser training</li> </ul>	<ul style="list-style-type: none"> <li>• Live munitions</li> <li>• Explosives</li> <li>• Blanks,</li> <li>• Simulated munitions</li> <li>• Artillery simulators</li> <li>• Aerial and ground pyrotechnics</li> </ul>	<ul style="list-style-type: none"> <li>• Tombstone, Humor, and Dust Devil DZ,</li> <li>• North Tactical Assembly Area (N TAA) and associated helipad, and</li> <li>• Humor Forward Arming and Refueling Point (FARP)</li> <li>• Surveyed firing points</li> </ul>	<ul style="list-style-type: none"> <li>• Wheeled vehicles permitted off existing roads and trails within LZs, DZs, FARPs, and TAAs</li> <li>• Helicopter landing in established LZs and DZs only</li> <li>• Ground pyrotechnics must be used in containment</li> <li>• Fire and weather restrictions for aerial pyrotechnics</li> </ul>
C	2,495	<ul style="list-style-type: none"> <li>• Intelligence and communications training and testing</li> <li>• Mounted (on trails and roads) and dismounted maneuver</li> <li>• Light bivouacking – tents, no field dining facility</li> <li>• Patrol bases/objective rally points/tactical assembly</li> <li>• Field and situational training exercises, ruck marches, and land navigation</li> <li>• Air operations – personnel and bundle drops, UAS launch and recovery; helicopter, rotary-wing, and fixed-wing landing, field refueling, and air to ground laser training.</li> </ul>	<ul style="list-style-type: none"> <li>• Live munitions</li> <li>• Explosives</li> <li>• Blanks,</li> <li>• Simulated munitions</li> <li>• Artillery simulators</li> <li>• Aerial and ground pyrotechnics</li> </ul>	<ul style="list-style-type: none"> <li>• Tombstone, Hubbard, and Havoc DZ</li> <li>• Hubbard Landing Strip</li> <li>• Air Assault Strip</li> <li>• Havoc bivouac area</li> <li>• Observation points</li> <li>• Surveyed firing points</li> </ul>	<ul style="list-style-type: none"> <li>• Tracked and wheeled vehicles permitted off existing roads and trails within DZs, LZs, landing strips, and bivouac areas</li> <li>• Helicopter landing in established LZs and DZs only</li> <li>• Rotary- and fixed-wing landing at established air strips</li> <li>• Ground pyrotechnics must be used in containment</li> <li>• Fire and weather restrictions for aerial pyrotechnics</li> </ul>
D	5,236	<ul style="list-style-type: none"> <li>• Intelligence and communications training and testing</li> <li>• Mounted (on trails and roads) and dismounted maneuver</li> <li>• Light bivouacking – tents, no field dining facility</li> <li>• Patrol bases/objective rally points/tactical assembly</li> <li>• Field and situational training exercises, ruck marches, and land navigation</li> <li>• Air operations – personnel and bundle drops, UAS launch and recovery, helicopter, rotary-wing, and fixed-wing landing, field refueling, and air to ground laser training.</li> </ul>	<ul style="list-style-type: none"> <li>• Live munitions</li> <li>• Explosives</li> <li>• Blanks,</li> <li>• Simulated munitions</li> <li>• Artillery simulators</li> <li>• Aerial and ground pyrotechnics</li> </ul>	<ul style="list-style-type: none"> <li>• Tombstone, Hubbard, and Havoc DZ</li> <li>• Hubbard Landing Strip / Air Assault Strip</li> <li>• Hubbard TAA</li> <li>• Hubbard and TA D bivouac area</li> <li>• Surveyed firing points</li> </ul>	<ul style="list-style-type: none"> <li>• Tracked and wheeled vehicles permitted off existing roads and trails within DZs, LZs, landing strips, TAAs, and bivouac areas</li> <li>• Helicopter landing in established LZs and DZs only</li> <li>• Rotary- and fixed-wing landing at established air strips</li> <li>• Ground pyrotechnics must be used in containment</li> <li>• Fire and weather restrictions for aerial pyrotechnics</li> </ul>

<b>Training Area</b>	<b>Area (Acres)</b>	<b>Training Area (TA) Activities</b>	<b>Munitions</b>	<b>Facilities</b>	<b>Special Use and Use Restrictions (ENRD 2021)</b>
E	5,230	<ul style="list-style-type: none"> <li>Intelligence and communications training and testing</li> <li>Mounted (on trails and roads) and dismounted maneuver</li> <li>Light bivouacking – tents, no field dining facility</li> <li>Patrol bases/objective rally points/tactical assembly</li> <li>Field and situational training exercises, ruck marches, and land navigation</li> <li>Air operations – personnel and bundle drops, UAS launch and recovery, helicopter landing, personnel ingress and egress, stationary balloons, and air to ground laser training.</li> </ul>	<ul style="list-style-type: none"> <li>Live munitions</li> <li>Explosives</li> <li>Blanks,</li> <li>Simulated munitions</li> <li>Artillery simulators</li> <li>Aerial and ground pyrotechnics</li> </ul>	<ul style="list-style-type: none"> <li>Hyena DZ</li> <li>TA E bivouac area</li> <li>South Forward Operating Base (S TAA) and associated LZ.</li> <li>Non-kinetic Multi-purpose Training Range (MPTR) (Proposed)</li> <li>Surveyed firing points .</li> </ul>	<ul style="list-style-type: none"> <li>Tracked and wheeled vehicles permitted off existing roads and trails within DZs, TAAs, and bivouac areas</li> <li>Foot traffic only off existing roads and trails</li> <li>Helicopter landing in established LZs and DZs only</li> <li>Ground pyrotechnics must be used in containment</li> <li>Fire and weather restrictions for aerial pyrotechnics</li> </ul>
F	3327	<ul style="list-style-type: none"> <li>Intelligence and communications training and testing</li> <li>Mounted (on trails and roads) and dismounted maneuver</li> <li>Light bivouacking – tents, no field dining facility</li> <li>Patrol bases/objective rally points/tactical assembly</li> <li>Field and situational training exercises, ruck marches, and land navigation</li> <li>Air operations –UAS launch and recovery, personnel ingress and egress.</li> </ul>	<ul style="list-style-type: none"> <li>Live munitions</li> <li>Explosives</li> <li>Blanks,</li> <li>Simulated munitions</li> <li>Artillery simulators</li> <li>Aerial and ground pyrotechnics</li> </ul>	<ul style="list-style-type: none"> <li>TA F bivouac areas 1, 2, and 3</li> <li>Non-kinetic MPTR (Range Operations and Control Area)</li> <li>TA F TAA</li> <li>Three EPG test facilities</li> <li>observation points</li> </ul>	<ul style="list-style-type: none"> <li>Tracked and wheeled vehicles permitted off existing roads and trails within bivouac areas and TAAs</li> <li>Foot traffic only off existing roads and trails</li> <li>Contains surveyed firing points</li> <li>Located to the east of LAAF, airspace over portions of this area is within landing and departure zones of primary runways at LAAF</li> <li>Ground pyrotechnics must be used in containment</li> <li>Fire and weather restrictions for aerial pyrotechnics</li> </ul>
F1	212	<ul style="list-style-type: none"> <li>Intelligence and communications training and testing</li> <li>Mounted (on trails and roads) and dismounted maneuver</li> <li>Light bivouacking – tents, no field dining facility</li> <li>Patrol bases/objective rally points/tactical assembly</li> <li>Field and situational training exercises, ruck marches, and land navigation</li> <li>Air operations –UAS launch and recovery, personnel ingress and egress.</li> </ul>	<ul style="list-style-type: none"> <li>Blanks,</li> <li>Simulated munitions</li> <li>Artillery simulators</li> <li>Pyrotechnics</li> </ul>	<ul style="list-style-type: none"> <li>None</li> </ul>	<ul style="list-style-type: none"> <li>Foot traffic only off existing roads and trails</li> <li>Ground pyrotechnics must be used in containment</li> <li>Fire and weather restrictions for aerial pyrotechnics</li> </ul>
Z (aka Dudded Impact Zone)	6,646	<ul style="list-style-type: none"> <li>Contains various types of targets for artillery and mortars. High explosive ammunition may be fired in this area, and some areas may contain unexploded ordnance (UXO)</li> <li>Communications testing, and training</li> <li>May have non-recoverable or explosive payloads dropped from UAS or other aircraft in the future</li> <li>Combat and Convoy live-fire training</li> </ul>	<ul style="list-style-type: none"> <li>Live munitions</li> <li>Explosives</li> <li>Blanks,</li> <li>Simulated munitions</li> <li>Artillery simulators</li> <li>Aerial and ground pyrotechnics</li> </ul>	<ul style="list-style-type: none"> <li>Two (Weapons Intelligence Training (WIT) light demolition ranges</li> <li>Combat Live Fire Range</li> <li>Convoy Live Fire Exercise (CLFX) range</li> <li>Two semi-permanent helipads, used for emergency situations only</li> </ul>	<ul style="list-style-type: none"> <li>Off limits to military activities without appropriate clearance</li> <li>Off-road areas in this zone permanently "off-limits" to recreational activities.</li> <li>Foot and wheeled or tracked vehicle use not permitted</li> <li>Ground pyrotechnics must be used in containment</li> <li>Fire and weather restrictions for aerial pyrotechnics</li> </ul>

<i>Training Area</i>	<i>Area (Acres)</i>	<i>Training Area (TA) Activities</i>	<i>Munitions</i>	<i>Facilities</i>	<i>Special Use and Use Restrictions (ENRD 2021)</i>
<b>West Range</b>					
G	1,670	<ul style="list-style-type: none"> <li>• Intelligence and communications training and testing</li> <li>• Mounted (on trails and roads) and dismounted maneuver</li> <li>• Bivouacking</li> <li>• Patrol bases/objective rally points/tactical assembly</li> <li>• Field and situational training exercises, ruck marches, and land navigation</li> <li>• Air operations –UAS launch and recovery, helicopter landing, personnel ingress and egress</li> </ul>	<ul style="list-style-type: none"> <li>• Blanks,</li> <li>• Simulated munitions</li> <li>• Artillery simulators</li> <li>• Ground pyrotechnics</li> </ul>	<ul style="list-style-type: none"> <li>• Hawk and Eagle LZ</li> <li>• North Gate bivouac area</li> <li>• EPG test facility</li> </ul>	<ul style="list-style-type: none"> <li>• Tracked and wheeled vehicles permitted off existing roads and trails within LZs and bivouac areas</li> <li>• Foot traffic only off existing roads and trails</li> <li>• Helicopter landing in established LZs only</li> <li>• Pyrotechnics must be used in containment</li> </ul>
H	4,140	<ul style="list-style-type: none"> <li>• Intelligence and communications training and testing</li> <li>• Mounted (on trails and roads) and dismounted maneuver</li> <li>• Light bivouacking – tents, no field dining facility</li> <li>• Patrol bases/objective rally points/tactical assembly</li> <li>• Field and situational training exercises, ruck marches, and land navigation</li> <li>• Air operations –UAS launch and recovery, helicopter landing, personnel ingress and egress</li> </ul>	<ul style="list-style-type: none"> <li>• Blanks,</li> <li>• Simulated munitions</li> <li>• Artillery simulators</li> <li>• Ground pyrotechnics</li> </ul>	<ul style="list-style-type: none"> <li>• Hotel 1 LZ</li> </ul>	<ul style="list-style-type: none"> <li>• Tracked and wheeled vehicles permitted off existing roads and trails within LZs</li> <li>• Testing and training sites located in protected Agave Management Areas (AMA)<sup>2</sup> within this training area adhere to special use restrictions:</li> <li>• Foot traffic only off existing roads and trails</li> <li>• Helicopter landing in established LZs only</li> <li>• Pyrotechnics must be used in containment</li> </ul>
I	2,618	<ul style="list-style-type: none"> <li>• Intelligence and communications training and testing</li> <li>• Mounted (on trails and roads) and dismounted maneuver</li> <li>• Light bivouacking – tents, no field dining facility</li> <li>• Patrol bases/objective rally points/tactical assembly</li> <li>• Field and situational training exercises, ruck marches, and land navigation</li> <li>• Air operations –UAS launch and recovery, personnel ingress and egress.</li> </ul>	<ul style="list-style-type: none"> <li>• Blanks,</li> <li>• Simulated munitions</li> <li>• Artillery simulators</li> <li>• Ground pyrotechnics</li> </ul>	<ul style="list-style-type: none"> <li>• EPG test facility</li> </ul>	<ul style="list-style-type: none"> <li>• Testing and training sites located in protected AMA within this training area adhere to special use restrictions:</li> <li>• Foot traffic only off existing roads and trails</li> <li>• Pyrotechnics must be used in containment</li> </ul>
J	978	<ul style="list-style-type: none"> <li>• Intelligence and communications training and testing</li> <li>• Mounted (on trails and roads) and dismounted maneuver</li> <li>• Light bivouacking – tents, no field dining facility</li> <li>• Patrol bases/objective rally points/tactical assembly</li> <li>• Field and situational training exercises, ruck marches, and land navigation</li> <li>• Air operations –UAS launch and recovery, helicopter landing</li> </ul>	<ul style="list-style-type: none"> <li>• Blanks,</li> <li>• Simulated munitions</li> <li>• Artillery simulators</li> <li>• Ground pyrotechnics</li> </ul>	<ul style="list-style-type: none"> <li>• Black Tower</li> <li>• 2<sup>nd</sup>-13<sup>th</sup> UAS Training Center and associated facilities.</li> </ul>	<ul style="list-style-type: none"> <li>• Testing and training sites located in protected AMA within this training area adhere to special use restrictions:</li> <li>• Foot traffic only off existing roads and trails</li> <li>• Helicopter landing at established air strips</li> <li>• Pyrotechnics must be used in containment</li> </ul>
K	879	<ul style="list-style-type: none"> <li>• Intelligence and communications training and testing</li> <li>• Mounted (on trails and roads) and dismounted maneuver</li> <li>• Bivouacking</li> <li>• Patrol bases/objective rally points/tactical assembly</li> <li>• Field and situational training exercises, ruck marches, and land navigation</li> <li>• Air operations –UAS launch and recovery, helicopter landing, personnel ingress and egress</li> </ul>	<ul style="list-style-type: none"> <li>• Blanks,</li> <li>• Simulated munitions</li> <li>• Artillery simulators</li> <li>• Ground pyrotechnics</li> </ul>	<ul style="list-style-type: none"> <li>• Helipad O and Kilo 1 LZ</li> <li>• Kilo landing strip</li> <li>• TA K Bivouac area</li> <li>• Demonstration Hill Observation Point</li> <li>• Three EPG test facilities</li> </ul>	<ul style="list-style-type: none"> <li>• Tracked and wheeled vehicles permitted off existing roads and trails within LZs, air strips, and bivouac areas</li> <li>• Testing and training sites located in protected AMA within this training area adhere to special use restrictions:</li> <li>• Foot traffic only off existing roads and trails</li> <li>• Helicopter landing in established LZs and air strips only</li> <li>• Fixed-wing landing on established air strips only</li> <li>• Pyrotechnics must be used in containment</li> </ul>



<b>Training Area</b>	<b>Area (Acres)</b>	<b>Training Area (TA) Activities</b>	<b>Munitions</b>	<b>Facilities</b>	<b>Special Use and Use Restrictions (ENRD 2021)</b>
L	829	<ul style="list-style-type: none"> <li>Intelligence and communications training and testing</li> <li>Mounted (on trails and roads) and dismounted maneuver</li> <li>Bivouacking</li> <li>Patrol bases/objective rally points/tactical assembly</li> <li>Field and situational training exercises, ruck marches, and land navigation</li> <li>Air operations –UAS launch and recovery, helicopter landing, personnel ingress and egress</li> </ul>	<ul style="list-style-type: none"> <li>Blanks,</li> <li>Simulated munitions</li> <li>Artillery simulators</li> <li>Ground pyrotechnics</li> </ul>	<ul style="list-style-type: none"> <li>Site Maverick Tactical Training Base (TTB)</li> <li>Maverick LZ</li> <li>Maverick East and Site Maverick North bivouac areas</li> <li>Site Maverick Military Operations in Urban Terrain (MOUT)</li> <li>EPG test facility</li> </ul>	<ul style="list-style-type: none"> <li>Tracked and wheeled vehicles permitted off existing roads and trails within TTBs, LZs, bivouac areas, and the MOUT</li> <li>A large percentage of its land is in a protected Agave Management Area (AMA). Special use restrictions</li> <li>Foot traffic only off existing roads and trails</li> <li>Helicopter landing in established LZs only</li> <li>Pyrotechnics must be used in containment</li> </ul>
M	1,398	<ul style="list-style-type: none"> <li>Intelligence and communications training and testing</li> <li>Mounted (on trails and roads) and dismounted maneuver</li> <li>Light bivouacking – tents, no field dining facility</li> <li>Patrol bases/objective rally points/tactical assembly</li> <li>Field and situational training exercises, ruck marches, and land navigation</li> <li>Air operations –UAS launch and recovery, personnel ingress and egress, air-to-ground laser</li> </ul>	<ul style="list-style-type: none"> <li>Blanks,</li> <li>Simulated munitions</li> <li>Artillery simulators</li> <li>Ground pyrotechnics</li> </ul>	<ul style="list-style-type: none"> <li>Land Navigation M Course</li> <li>UAS Laser Testing and Training Range.</li> </ul>	<ul style="list-style-type: none"> <li>Testing and training sites located in protected AMA within this training area adhere to special use restrictions:</li> <li>Foot traffic only off existing roads and trails</li> <li>Laser Testing and Training Range targets are placed along roadways and previously disturbed areas, avoiding areas with water, powerlines or dense vegetation</li> <li>Pyrotechnics must be used in containment .</li> </ul>
N	3,467	<ul style="list-style-type: none"> <li>Intelligence and communications training and testing</li> <li>Mounted (on trails and roads) and dismounted maneuver</li> <li>Bivouacking</li> <li>Patrol bases/objective rally points/tactical assembly</li> <li>Field and situational training exercises, ruck marches, land navigation, and tracking training</li> <li>Air operations –helicopter landing, personnel ingress and egress</li> </ul>	<ul style="list-style-type: none"> <li>Blanks,</li> <li>Simulated munitions</li> <li>Artillery simulators</li> <li>Ground pyrotechnics</li> </ul>	<ul style="list-style-type: none"> <li>Blacktail, Helipad A, and Unsurveyed LZs .</li> <li>Site Freedom</li> <li>Site Freedom East and West Bivouac areas</li> <li>Two EPG test facilities</li> </ul>	<ul style="list-style-type: none"> <li>Tracked and wheeled vehicles permitted off existing roads and trails within LZs (including helipads) and bivouac areas</li> <li>Terrain is mountainous; therefore military activities are restricted to the relatively flat areas</li> <li>Helicopter landing in established LZs only</li> <li>Seasonal restrictions for air operations</li> <li>Pyrotechnics must be used in containment</li> <li>Seasonal noise restrictions</li> </ul>
R	1,474	<ul style="list-style-type: none"> <li>Intelligence and communications training and testing</li> <li>Mounted (on trails and roads) and dismounted maneuver</li> <li>Light bivouacking – tents, no field dining facility</li> <li>Patrol bases/objective rally points/tactical assembly</li> <li>Field and situational training exercises, ruck marches, land navigation, tracking training, mountaineering.</li> </ul>	<ul style="list-style-type: none"> <li>Blanks,</li> <li>Simulated munitions</li> <li>Artillery simulators</li> <li>Ground pyrotechnics</li> </ul>	<ul style="list-style-type: none"> <li>None</li> </ul>	<ul style="list-style-type: none"> <li>Foot traffic only off existing roads and trails</li> <li>Pyrotechnics must be used in containment</li> </ul>
<b>South Range</b>					
O	3,973	<ul style="list-style-type: none"> <li>Intelligence and communications training and testing</li> <li>Mounted (on trails and roads) and dismounted maneuver</li> <li>Light bivouacking – tents, no field dining facility</li> <li>Patrol bases/objective rally points/tactical assembly</li> <li>Field and situational training exercises, ruck marches, land navigation, tracking training, mountaineering</li> <li>Air operations –helicopter landing, personnel ingress and egress.</li> </ul>	<ul style="list-style-type: none"> <li>Blanks,</li> <li>Simulated munitions</li> <li>Artillery simulators</li> <li>Ground pyrotechnics</li> </ul>	<ul style="list-style-type: none"> <li>Helipad D and E LZs</li> </ul>	<ul style="list-style-type: none"> <li>Tracked and wheeled vehicles permitted off existing roads and trails within LZs (including helipads)</li> <li>Terrain is mountainous; therefore military activities are restricted to the relatively flat areas</li> <li>Foot traffic only off existing roads and trails</li> <li>Helicopter landing in established LZs only</li> <li>Seasonal restrictions for air operations</li> <li>Pyrotechnics must be used in containment</li> </ul>

<b>Training Area</b>	<b>Area (Acres)</b>	<b>Training Area (TA) Activities</b>	<b>Munitions</b>	<b>Facilities</b>	<b>Special Use and Use Restrictions (ENRD 2021)</b>
P	2,441	<ul style="list-style-type: none"> <li>• Intelligence and communications training and testing</li> <li>• Mounted (on trails and roads) and dismounted maneuver</li> <li>• Light bivouacking – tents, no field dining facility</li> <li>• Patrol bases/objective rally points/tactical assembly</li> <li>• Field and situational training exercises, ruck marches, land navigation, tracking training, mountaineering</li> <li>• Air operations –helicopter landing, personnel ingress and egress</li> </ul>	<ul style="list-style-type: none"> <li>• Blanks,</li> <li>• Simulated munitions</li> <li>• Artillery simulators</li> <li>• Ground pyrotechnics</li> </ul>	<ul style="list-style-type: none"> <li>• McClure and Papa LZ</li> </ul>	<ul style="list-style-type: none"> <li>• Tracked and wheeled vehicles permitted off existing roads and trails within LZs</li> <li>• Terrain is mountainous; therefore military activities are restricted to the relatively flat areas</li> <li>• Foot traffic only off existing roads and trails</li> <li>• Recreational users are prohibited from rock climbing and rappelling</li> <li>• Helicopter landing in established LZs only</li> <li>• Seasonal restrictions for air operations</li> <li>• Pyrotechnics must be used in containment</li> </ul>
P1	596	<ul style="list-style-type: none"> <li>• Intelligence and communications training and testing</li> <li>• Mounted (on trails and roads) and dismounted maneuver</li> <li>• Light bivouacking – tents, no field dining facility</li> <li>• Patrol bases/objective rally points/tactical assembly</li> <li>• Field and situational training exercises, ruck marches, land navigation, tracking training, mountaineering</li> </ul>	<ul style="list-style-type: none"> <li>• Blanks,</li> <li>• Simulated munitions</li> <li>• Artillery simulators</li> <li>• Ground pyrotechnics</li> </ul>	<ul style="list-style-type: none"> <li>• Site Papa TTB</li> <li>• Site Papa MOUT</li> </ul>	<ul style="list-style-type: none"> <li>• Tracked and wheeled vehicles permitted off existing roads and trails within the TTB and MOUT</li> <li>• Foot traffic only off existing roads and trails</li> <li>• Pyrotechnics must be used in containment</li> </ul>
Q	3,289	<ul style="list-style-type: none"> <li>• Intelligence and communications training and testing</li> <li>• Mounted (on trails and roads) and dismounted maneuver</li> <li>• Light bivouacking – tents, no field dining facility</li> <li>• Patrol bases/objective rally points/tactical assembly</li> <li>• Field and situational training exercises, ruck marches, land navigation, tracking training, rappelling</li> <li>• Air operations –helicopter landing, personnel ingress and egress</li> </ul>	<ul style="list-style-type: none"> <li>• Blanks,</li> <li>• Simulated munitions</li> <li>• Artillery simulators</li> <li>• Ground pyrotechnics</li> </ul>	<ul style="list-style-type: none"> <li>• Scheelite and Gate 2 LZs</li> <li>• Rappel Cliffs (limited availability)</li> </ul>	<ul style="list-style-type: none"> <li>• Tracked and wheeled vehicles permitted off existing roads and trails within LZs</li> <li>• Terrain is mountainous; therefore military activities are restricted to the relatively flat areas</li> <li>• Foot traffic only off existing roads and trails</li> <li>• Helicopter landing in established LZs only</li> <li>• Seasonal restrictions for air operations</li> <li>• Pyrotechnics must be used in containment</li> </ul>
S	2,486	<ul style="list-style-type: none"> <li>• Intelligence and communications training and testing</li> <li>• Mounted (on trails and roads) and dismounted maneuver</li> <li>• Light bivouacking – tents, no field dining facility</li> <li>• Patrol bases/objective rally points/tactical assembly</li> <li>• Field and situational training exercises, ruck marches, land navigation, tracking training, mountaineering</li> </ul>	<ul style="list-style-type: none"> <li>• Blanks,</li> <li>• Simulated munitions</li> <li>• Artillery simulators</li> <li>• Ground pyrotechnics</li> </ul>	<ul style="list-style-type: none"> <li>• None</li> </ul>	<ul style="list-style-type: none"> <li>• Terrain is mountainous; therefore military activities are restricted to the relatively flat areas</li> <li>• Foot traffic only off existing roads and trails</li> <li>• Pyrotechnics must be used in containment</li> </ul>
T1	2,383	<ul style="list-style-type: none"> <li>• Small-arms, live-fire ranges</li> <li>• Bivouacking</li> <li>• Rappelling</li> </ul>	<ul style="list-style-type: none"> <li>• Live munitions</li> <li>• Explosives</li> <li>• Blanks,</li> <li>• Simulated munitions</li> <li>• Artillery simulators</li> <li>• Ground pyrotechnics</li> </ul>	<ul style="list-style-type: none"> <li>• Ranges 1, 2, 2B, 3, 4</li> <li>• Range 1B Bivouac area</li> <li>• Rappel tower</li> <li>• TBD 02 LZ</li> </ul>	<ul style="list-style-type: none"> <li>• Tracked and wheeled vehicles permitted off existing roads and trails within bivouac areas</li> <li>• Testing and training sites located in protected AMA within this training area adhere to special use restrictions:</li> <li>• Pyrotechnics must be used in containment</li> </ul>
T1A	101	<ul style="list-style-type: none"> <li>• Intelligence and communications training and testing</li> <li>• Light bivouacking – tents, no field dining facility</li> <li>• Patrol bases/objective rally points/tactical assembly</li> <li>• Field and situational training exercises, ruck marches, and land navigation</li> </ul>	<ul style="list-style-type: none"> <li>• Live munitions</li> <li>• Explosives</li> <li>• Blanks,</li> <li>• Simulated munitions</li> <li>• Artillery simulators</li> <li>• Ground pyrotechnics</li> </ul>	<ul style="list-style-type: none"> <li>• None</li> </ul>	<ul style="list-style-type: none"> <li>• Testing and training sites located in protected AMA within this training area adhere to special use restrictions:</li> <li>• Pyrotechnics must be used in containment</li> </ul>

<b>Training Area</b>	<b>Area (Acres)</b>	<b>Training Area (TA) Activities</b>	<b>Munitions</b>	<b>Facilities</b>	<b>Special Use and Use Restrictions (ENRD 2021)</b>
T2	2,019	<ul style="list-style-type: none"> <li>• Small-arms, live-fire ranges</li> <li>• Bivouacking</li> <li>• Air operations – Helicopter landing, personnel ingress and egress</li> </ul>	<ul style="list-style-type: none"> <li>• Live munitions</li> <li>• Explosives</li> <li>• Blanks,</li> <li>• Simulated munitions</li> <li>• Artillery simulators</li> <li>• Ground and aerial pyrotechnics</li> </ul>	<ul style="list-style-type: none"> <li>• Ranges 5, 6, 8, 9, 10</li> <li>• Ranges 6 and 8 bivouac</li> <li>• Range 8 Classroom</li> <li>• Range 6A, TBD 01, and TBD 03 LZs</li> </ul>	<ul style="list-style-type: none"> <li>• Tracked and wheeled vehicles permitted off existing roads and trails within LZs</li> <li>• Testing and training sites located in protected AMA within this training area adhere to special use restrictions:</li> <li>• No recreation or hunting permitted</li> <li>• Helicopter landing in established LZs only</li> <li>• Pyrotechnics must be used in containment</li> <li>• Aerial pyrotechnics in Range 6A only; fire and weather restrictions for aerial pyrotechnics</li> </ul>
T3	1,691	<ul style="list-style-type: none"> <li>• Small-arms, live-fire ranges</li> <li>• Air operations – Helicopter landing, personnel ingress and egress</li> </ul>	<ul style="list-style-type: none"> <li>• Live munitions</li> <li>• Explosives</li> <li>• Blanks,</li> <li>• Simulated munitions</li> <li>• Explosives</li> <li>• Artillery simulators</li> <li>• Ground pyrotechnics</li> </ul>	<ul style="list-style-type: none"> <li>• Ranges 11 and 13</li> <li>• Woodcutter's LZ</li> </ul>	<ul style="list-style-type: none"> <li>• Tracked and wheeled vehicles permitted off existing roads and trails within LZs</li> <li>• Testing and training sites located in protected AMA within this training area adhere to special use restrictions</li> <li>• Helicopter landing in established LZs only</li> <li>• Pyrotechnics must be used in containment</li> </ul>
U	1,572	<ul style="list-style-type: none"> <li>• Intelligence and communications training and testing</li> <li>• Mounted (on trails and roads) and dismounted maneuver</li> <li>• Light bivouacking – tents, no field dining facility</li> <li>• Patrol bases/objective rally points/tactical assembly</li> <li>• Field and situational training exercises, ruck marches, land navigation, and tracking training</li> </ul>	<ul style="list-style-type: none"> <li>• Blanks,</li> <li>• Simulated munitions</li> <li>• Artillery simulators</li> <li>• Ground pyrotechnics</li> </ul>	<ul style="list-style-type: none"> <li>• Tinker Land Navigation Course</li> </ul>	<ul style="list-style-type: none"> <li>• Foot traffic only off existing roads and trails</li> <li>• Pyrotechnics must be used in containment</li> </ul>
U1	1,124	<ul style="list-style-type: none"> <li>• Intelligence and communications training and testing</li> <li>• Mounted (on trails and roads) and dismounted maneuver</li> <li>• Bivouacking</li> <li>• Patrol bases/objective rally points/tactical assembly</li> <li>• Field and situational training exercises, ruck marches, land navigation, and tracking training</li> <li>• Air operations –helicopter landing, personnel ingress and egress</li> </ul>	<ul style="list-style-type: none"> <li>• Blanks,</li> <li>• Simulated munitions</li> <li>• Artillery simulators</li> <li>• Ground pyrotechnics</li> </ul>	<ul style="list-style-type: none"> <li>• Site Uniform TTB</li> <li>• Site Uniform MOUT</li> <li>• Land Navigation U Navigation Course</li> <li>• Jaguar and Coatimundi LZ</li> </ul>	<ul style="list-style-type: none"> <li>• Tracked and wheeled vehicles permitted off existing roads and trails within TTBs, MOUTs, and LZs</li> <li>• Foot traffic only off existing roads and trails</li> <li>• Helicopter landing in established LZs only</li> <li>• Seasonal restrictions for air operations</li> <li>• Pyrotechnics must be used in containment</li> </ul>
V	548	<ul style="list-style-type: none"> <li>• Intelligence and communications training and testing</li> <li>• Mounted (on trails and roads) and dismounted maneuver</li> <li>• Light bivouacking – tents, no field dining facility</li> <li>• Patrol bases/objective rally points/tactical assembly</li> <li>• Field and situational training exercises, ruck marches, and land navigation</li> <li>• Air operations –helicopter landing, personnel ingress and egress.</li> </ul>	<ul style="list-style-type: none"> <li>• Blanks,</li> <li>• Simulated munitions</li> <li>• Artillery simulators</li> <li>• Ground pyrotechnics</li> </ul>	<ul style="list-style-type: none"> <li>• Air Transport Mockup (C-130 and C-141)</li> <li>• Rope bridge training facility,</li> <li>• Rappel Tower (40 ft.)</li> <li>• Range Ops LZ</li> </ul>	<ul style="list-style-type: none"> <li>• Tracked and wheeled vehicles permitted off existing roads and trails within LZs</li> <li>• Testing and training sites located in protected AMA within this training area adhere to special use restrictions:</li> <li>• Foot traffic only off existing roads and trails</li> <li>• Helicopter landing in established LZ only</li> <li>• Pyrotechnics must be used in containment</li> </ul>

<b>Training Area</b>	<b>Area (Acres)</b>	<b>Training Area (TA) Activities</b>	<b>Munitions</b>	<b>Facilities</b>	<b>Special Use and Use Restrictions (ENRD 2021)</b>
V1	784	<ul style="list-style-type: none"> <li>• Intelligence and communications training and testing</li> <li>• Mounted (on trails and roads) and dismounted maneuver</li> <li>• Light bivouacking – tents, no field dining facility</li> <li>• Patrol bases/objective rally points/tactical assembly</li> <li>• Field and situational training exercises, ruck marches, and land navigation</li> <li>• Air operations –helicopter landing, personnel ingress and egress</li> </ul>	<ul style="list-style-type: none"> <li>• Blanks,</li> <li>• Simulated munitions</li> <li>• Artillery simulators</li> <li>• Ground pyrotechnics</li> </ul>	<ul style="list-style-type: none"> <li>• Coues and Helipad I LZs</li> </ul>	<ul style="list-style-type: none"> <li>• Tracked and wheeled vehicles permitted off existing roads and trails within LZs</li> <li>• Testing and training sites located in protected AMA within this training area adhere to special use restrictions:</li> <li>• Foot traffic only off existing roads and trails</li> <li>• Helicopter landing in established LZs only</li> <li>• Pyrotechnics must be used in containment</li> </ul>
W	1,039	<ul style="list-style-type: none"> <li>• Intelligence and communications training and testing</li> <li>• Mounted (on trails and roads) and dismounted maneuver</li> <li>• Bivouacking</li> <li>• Patrol bases/objective rally points/tactical assembly</li> <li>• Field and situational training exercises, ruck marches, and land navigation</li> <li>• Air operations –helicopter landing, personnel ingress and egress</li> </ul>	<ul style="list-style-type: none"> <li>• Blanks,</li> <li>• Simulated munitions</li> <li>• Artillery simulators</li> <li>• Ground pyrotechnics</li> </ul>	<ul style="list-style-type: none"> <li>• ATV Wheeled Vehicle Driving Course,</li> <li>• Site Boston and Little Boston bivouac areas,</li> <li>• Site Boston Hill</li> <li>• Whiskey 1 and Boston LZs</li> </ul>	<ul style="list-style-type: none"> <li>• Tracked and wheeled vehicles permitted off existing roads and trails within ATV course, bivouac areas, and LZs</li> <li>• Foot traffic only off existing roads and trails</li> <li>• Helicopter landing in established LZs only</li> <li>• Pyrotechnics must be used in containment</li> </ul>
W1	153	<ul style="list-style-type: none"> <li>• Intelligence and communications training and testing</li> <li>• Mounted (on trails and roads) and dismounted maneuver</li> <li>• Light bivouacking – tents, no field dining facility</li> <li>• Patrol bases/objective rally points/tactical assembly</li> <li>• Field and situational training exercises, ruck marches, and land navigation</li> </ul>	<ul style="list-style-type: none"> <li>• Blanks,</li> <li>• Simulated munitions</li> <li>• Artillery simulators</li> <li>• Ground pyrotechnics</li> </ul>	<ul style="list-style-type: none"> <li>• None</li> </ul>	<ul style="list-style-type: none"> <li>• Foot traffic only off existing roads and trails</li> <li>• Pyrotechnics must be used in containment</li> </ul>
X	1,362	<ul style="list-style-type: none"> <li>• Intelligence and communications training and testing</li> <li>• Mounted (on trails and roads) and dismounted maneuver</li> <li>• Light bivouacking – tents, no field dining facility</li> <li>• Patrol bases/objective rally points/tactical assembly</li> <li>• Field and situational training exercises, ruck marches, and land navigation</li> </ul>	<ul style="list-style-type: none"> <li>• Blanks,</li> <li>• Simulated munitions</li> <li>• Artillery simulators</li> <li>• Ground pyrotechnics</li> </ul>	<ul style="list-style-type: none"> <li>• DeConcini Hill</li> </ul>	<ul style="list-style-type: none"> <li>• Testing and training sites located in protected AMA within this training area adhere to special use restrictions:</li> <li>• Foot traffic only off existing roads and trails</li> <li>• Pyrotechnics must be used in containment</li> </ul>
Y	1,445	<ul style="list-style-type: none"> <li>• Intelligence and communications training and testing</li> <li>• Mounted (on trails and roads) and dismounted maneuver</li> <li>• Light bivouacking – tents, no field dining facility</li> <li>• Patrol bases/objective rally points/tactical assembly</li> <li>• Field and situational training exercises, ruck marches, and land navigation</li> </ul>	<ul style="list-style-type: none"> <li>• Blanks,</li> <li>• Simulated munitions</li> <li>• Artillery simulators</li> <li>• Ground pyrotechnics</li> </ul>	<ul style="list-style-type: none"> <li>• Battle Lab Test Facility</li> <li>• Aerostat</li> </ul>	<ul style="list-style-type: none"> <li>• Foot traffic only off existing roads and trails</li> <li>• Pyrotechnics must be used in containment</li> </ul>

**Table A-2 Fort Huachuca Training Sites and Associated Activities on Fort Huachuca**

Training Site	Training Area	Area (Acres)	Munitions	Training Site Activities
Air Transport Mockup (C-130)	V	0.16	No	<ul style="list-style-type: none"> <li>• Air Transport Mockup for C-130 Aircraft.</li> </ul>
Air Transport Mockup (C-141)	V	0.81	No	<ul style="list-style-type: none"> <li>• Air Transport Mockup for C-141 Aircraft.</li> </ul>
Aircraft Training Mockup (C-5A)	V	N/A	N/A	<ul style="list-style-type: none"> <li>• C-5A aircraft training mock-up. Concrete platform depicting a C-5A aircraft cargo bay.</li> </ul>
ATV Wheeled Vehicle Driving Course	W	5.07	No	<ul style="list-style-type: none"> <li>• Flat terrain for fire department to conduct ATV certification training.</li> </ul>
Battalion Training Area 1	Cantonment	17.55	Yes	<ul style="list-style-type: none"> <li>• Intelligence and communications training and testing activities</li> <li>• Mounted and dismounted maneuver,</li> <li>• Light bivouacking – tents, no field dining kitchen</li> <li>• Tactical operations and training and tactical assembly</li> <li>• Field and situational training exercises</li> <li>• Air operations – helicopter landing, personnel ingress and egress</li> </ul>
Battalion Training Area 1A	Cantonment	3.56	Yes	<ul style="list-style-type: none"> <li>• Intelligence and communications training and testing activities</li> <li>• Mounted and dismounted maneuver,</li> <li>• Light bivouacking – tents, no field dining kitchen</li> <li>• Tactical operations and training and tactical assembly</li> <li>• Field and situational training exercises</li> <li>• Air operations – helicopter landing, personnel ingress and egress</li> </ul>
Battalion Training Area 2	Cantonment	4	Yes	<ul style="list-style-type: none"> <li>• BDE training area BTA 2.</li> </ul>

Training Site	Training Area	Area (Acres)	Munitions	Training Site Activities
Battalion Training Area 3	Cantonment	2.4	Yes	<ul style="list-style-type: none"> <li>• Intelligence and communications training and testing activities</li> <li>• Mounted and dismounted maneuver,</li> <li>• Light bivouacking – tents, no field dining kitchen</li> <li>• Tactical operations and training and tactical assembly</li> <li>• Field and situational training exercises</li> <li>Air operations – helicopter landing, personnel ingress and egress</li> </ul>
Battle Lab Test Facility	Y	1.72	Yes	<ul style="list-style-type: none"> <li>• Urban operations training</li> <li>• Breaching (including ground pyrotechnics)</li> <li>• Building clearing</li> <li>• Equipment testing</li> </ul>
Bivouac F1	F	9.62	Yes	<ul style="list-style-type: none"> <li>• Overnight sleeping</li> <li>• Equipment storage</li> <li>• Field kitchen, water, latrines, and generators</li> </ul>
Bivouac F2	F	39.01	Yes	<ul style="list-style-type: none"> <li>• Overnight sleeping</li> <li>• Equipment storage</li> <li>• Field kitchen, water, latrines, and generators</li> </ul>
Bivouac F3	F	4.07	Yes	<ul style="list-style-type: none"> <li>• Overnight sleeping</li> <li>• Equipment storage</li> <li>• Field kitchen, water, latrines, and generators</li> </ul>
Confidence Course	Cantonment	3.93	No	<ul style="list-style-type: none"> <li>• Facility is standard course</li> </ul>
Demonstration Hill Observation Point	K	2.02	Yes	<ul style="list-style-type: none"> <li>• Tactical operations and training and tactical assembly</li> <li>• Air operations – UAS launch and recovery, helicopter landing, personnel ingress and egress</li> <li>• Light bivouacking – tents, no field dining kitchen</li> <li>• Intelligence and communications training and testing</li> <li>• Mounted and dismounted maneuver</li> </ul>
Engagement Skills Trainer (EST) II	Cantonment	0.09	No	<ul style="list-style-type: none"> <li>• Indoor electronic fire-arms range</li> </ul>

Training Site	Training Area	Area (Acres)	Munitions	Training Site Activities
Havoc Bivouac	C	4.92	Yes	<ul style="list-style-type: none"> <li>• Overnight sleeping</li> <li>• Equipment storage</li> <li>• Field kitchen, water, latrines, and generators</li> </ul>
Land Navigation M	M	844.21	No	<ul style="list-style-type: none"> <li>• Land navigation course</li> </ul>
Land Navigation Tinker	U	573.64	No	<ul style="list-style-type: none"> <li>• Land navigation course</li> </ul>
Land Navigation U	U1	258.98	No	<ul style="list-style-type: none"> <li>• Land navigation course</li> </ul>
Leadership Reaction Course (LRC)	Y	0.5	No	<ul style="list-style-type: none"> <li>• Individual development training course</li> </ul>
Little Boston Bivouac	W	6.4	Yes	<ul style="list-style-type: none"> <li>• Overnight sleeping</li> <li>• Equipment storage</li> <li>• Field kitchen, water, latrines, and generators</li> </ul>
Maverick East Bivouac	L	1.49	Yes	<ul style="list-style-type: none"> <li>• Overnight sleeping</li> <li>• Equipment storage</li> <li>• Field kitchen, water, latrines, and generators</li> </ul>
North TAA	B	1.73	Yes	<ul style="list-style-type: none"> <li>• Tactical operations and training and tactical assembly</li> <li>• Air operations – UAS launch and recovery, helicopter landing, personnel ingress and egress</li> <li>• Light bivouacking – tents, no field dining kitchen</li> <li>• Intelligence and communications training and testing</li> <li>• Mounted and dismounted maneuver</li> </ul>
NBC Chamber	Cantonment	0.02	No	<ul style="list-style-type: none"> <li>• Nuclear, biological, chemical training chamber</li> </ul>
North Gate Bivouac	G	57.61	Yes	<ul style="list-style-type: none"> <li>• Equipment training and testing</li> <li>• Air operations including helicopter landing, personnel ingress and egress</li> <li>• Quartermaster liquid logistics exercises</li> <li>• Overnight sleeping</li> <li>• Equipment storage</li> <li>• Field kitchen, water, latrines, and generators</li> </ul>

Training Site	Training Area	Area (Acres)	Munitions	Training Site Activities
Oakley Warrior Training Complex	Cantonment	93.65	No	<ul style="list-style-type: none"> <li>Fixed obstacles and land navigation points.</li> </ul>
Obstacle Course	Cantonment	3.2	No	<ul style="list-style-type: none"> <li>Facility is standard course</li> </ul>
Pedestal Bivouac	D	1	No	<ul style="list-style-type: none"> <li>Overnight sleeping</li> <li>Equipment storage</li> <li>Field kitchen, water, latrines, and generators</li> </ul>
Range 1B Bivouac	T1	4.91	Yes	<ul style="list-style-type: none"> <li>Overnight sleeping</li> <li>Equipment storage</li> <li>Field kitchen, water, latrines, and generators</li> </ul>
Range 8 Classroom	T2	0.02	Yes	<ul style="list-style-type: none"> <li>Range classroom located at Range 8. 50-person maximum.</li> </ul>
Ranges 6 & 8 Bivouac	T2	4	Yes	<ul style="list-style-type: none"> <li>Overnight sleeping</li> <li>Equipment storage</li> <li>Field kitchen, water, latrines, and generators</li> </ul>
Rappel Cliffs (Restricted)	Q	0.65	No	<ul style="list-style-type: none"> <li>Rappelling, limited availability</li> </ul>
Rappel Tower (40')	V	0.11	No	<ul style="list-style-type: none"> <li>40' rappel tower located near range control</li> </ul>
Rope Bridge	V	0.06	No	<ul style="list-style-type: none"> <li>Two sites with supporting poles to build rope bridge crossings.</li> </ul>
South TAA	E	2.73	Yes	<ul style="list-style-type: none"> <li>Tactical operations and training and tactical assembly</li> <li>Air operations – UAS launch and recovery, helicopter landing, personnel ingress and egress</li> <li>Light bivouacking – tents, no field dining kitchen</li> <li>Intelligence and communications training and testing</li> <li>Mounted and dismounted maneuver</li> </ul>
Site Boston Bivouac	W	45.01	Yes	<ul style="list-style-type: none"> <li>Equipment training and testing</li> <li>Air operations – helicopter landing, personnel ingress and egress</li> <li>Overnight sleeping</li> <li>Equipment storage</li> <li>Field kitchen, water, latrines, and generators</li> </ul>



Training Site	Training Area	Area (Acres)	Munitions	Training Site Activities
Site Boston Hill Observation Point	W	6.42	Yes	<ul style="list-style-type: none"> <li>• Tactical operations and training and tactical assembly</li> <li>• Air operations – UAS launch and recovery, helicopter landing, personnel ingress and egress</li> <li>• Light bivouacking – tents, no field dining kitchen</li> <li>• Intelligence and communications training and testing</li> <li>• mounted and dismounted maneuver</li> </ul>
Site Freedom	N	51.93	Yes	<ul style="list-style-type: none"> <li>• Intelligence and communications training and testing activities</li> <li>• Mounted and dismounted maneuver</li> <li>• Light bivouacking – tents, no field dining kitchen</li> <li>• Patrol bases/objective rally points/tactical assembly</li> <li>• Field and situational training exercises, ruck marches, and land navigation</li> </ul>
Site Freedom East Bivouac	N	4.9	Yes	<ul style="list-style-type: none"> <li>• Overnight sleeping</li> <li>• Equipment storage</li> <li>• Field kitchen, water, latrines, and generators</li> </ul>
Site Freedom West Bivouac	N	2.42	Yes	<ul style="list-style-type: none"> <li>• Overnight sleeping</li> <li>• Equipment storage</li> <li>• Field kitchen, water, latrines, and generators</li> </ul>
Site Maverick North Bivouac	L	4.57	Yes	<ul style="list-style-type: none"> <li>• Overnight sleeping</li> <li>• Equipment storage</li> <li>• Field kitchen, water, latrines, and generators</li> </ul>
Site Maverick TTB	L	51.12	Yes	<ul style="list-style-type: none"> <li>• Intelligence and communications training and testing activities</li> <li>• Mounted and dismounted maneuver</li> <li>• Light bivouacking – tents, no field dining kitchen</li> <li>• Patrol bases/objective rally points/tactical assembly</li> <li>• Field and situational training exercises, ruck marches, and land navigation</li> <li>• Air operations – helicopter landing, personnel ingress and egress</li> </ul>

Training Site	Training Area	Area (Acres)	Munitions	Training Site Activities
Site Papa TTB	P1	10.38	Yes	<ul style="list-style-type: none"> <li>• Intelligence and communications training and testing activities</li> <li>• Mounted and dismounted maneuver</li> <li>• Light bivouacking – tents, no field dining kitchen</li> <li>• Patrol bases/objective rally points/tactical assembly</li> <li>• Field and situational training exercises, ruck marches, and land navigation</li> </ul>
Site Uniform TTB	U1	8.1	Yes	<ul style="list-style-type: none"> <li>• Intelligence and communications training and testing activities</li> <li>• Mounted and dismounted maneuver</li> <li>• Light bivouacking – tents, no field dining kitchen</li> <li>• Patrol bases/objective rally points/tactical assembly</li> <li>• Field and situational training exercises, ruck marches, and land navigation</li> <li>• Air operations – helicopter landing, personnel ingress and egress</li> </ul>
TA E Bivouac	E	5.67	Yes	<ul style="list-style-type: none"> <li>• Overnight sleeping</li> <li>• Equipment storage</li> <li>• Field kitchen, water, latrines, and generators</li> </ul>
TA K Bivouac	K	0.28	Yes	<ul style="list-style-type: none"> <li>• Overnight sleeping</li> <li>• Equipment storage</li> <li>• Field kitchen, water, latrines, and generators</li> </ul>
UAS Simulator	Cantonment	0.24	No	<ul style="list-style-type: none"> <li>• Indoor UAS simulator.</li> </ul>

**Table A-3 Firing Ranges on Fort Huachuca.**

Range ID	Training Area	Range Utilization / Feature Description	Live Fire	Feature Area (Acres)	Maximum Ammunition Permitted	Maximum Noise Level at Firing Point <sup>1</sup>
1	T1	Elevated Sniper Range with two firing points (220 m – 1300 m)	Yes	136.4	.50 cal	160 decibels peak (dbP)
1B	T1	Defensive Fire Range with six firing points consisting of six firing lanes (25 m – 200 m)	Yes	53.6	.50 cal	160 dbP
2	T1	M-16 Rifle Zero Range with 40 firing points and a target width of 300 m	Yes	5.1	5.56 millimeter (mm)	156 dbP
2B	T1	Law Enforcement Weapons Training and Qualifications with six firing points consisting of 12 lanes (2 m – 100 m)	Yes	4.5	5.56 mm	156 dbP
3	T1	Small bore multi-purpose range with 15 firing points, and 100 meters maximum range	Yes	3.2	7.62 mm <sup>2</sup>	156 dbP
4	T1	U.S. Army Standard Combat Pistol Qualification Course consisting of 15 lanes (31 m)	Yes	3.2	.45 caliber (cal)	162 dbP
5	T2	Hand Grenade Assault Course, using dummy bodies with or without practice fuses due to fire danger	No	2.1	M67 FRAG (ONLY)	171 dbP
5A	N/A	Currently inactive due to safety considerations. A high explosive hand grenade range with 12 firing points	Yes	3.8	N/A	N/A
6	T2	Zero and known distance range with 50 firing points and six firing lines from 100 m – 1,000 m	Yes	38.3	.50 cal	160 dbP
6A	T2	Move Under Direct Fire Night Infiltration Course (NIC)	Yes	2.6	7.62 mm	156 dbP
8	T2	Modified Record Fire (MRF) with 10 firing points and target distances from 50 m – 300 m	Yes	33.4	5.56 mm	156 dbP
9	T2	Multi-purpose machine gun range with 10 firing points (800 m)	Yes	68.3	.50 cal, 40 mm,	160 dbP

Range ID	Training Area	Range Utilization / Feature Description	Live Fire	Feature Area (Acres)	Maximum Ammunition Permitted	Maximum Noise Level at Firing Point <sup>1</sup>
10	T2	M-203/M320 grenade zero and qualification range (1500 m) and .50 caliber dual purpose range. High Explosive (HE) cannot be fired on this range	Yes	31.5	.50 cal, 40 mm, No HE	160 dbP
11	T3	Squad Battle Complex / Advanced Rifle Marksmanship (ARM) Range / Infantry Squad Battle Course	Yes	88.5	40 mm	150 dbP
12A	N/A	Currently inactive .50 caliber, 7.62 mm, and 40 mm live fire weapons range	N/A	N/A	N/A	N/A
13	T3	M-16 Marksmanship Record Fire Range with 16 firing positions and targets (50 m – 300 m)	Yes	42.3	5.56 mm	156 dbP
18	A	Elevated sniper range with four firing points (470 M– 1,750 m)	Yes	128.6	.50 cal	159 dbP
Combat Range	Z	3-mile range	Yes	8000	120 mm	185 dbP
CLFX	Z	Convoy Live Fire (CLF) / Entry Control Point (ECP), 3-mile range	Yes	728.3	5.56 mm	156 dbP
UOS East	Cantonment	Combat in Cities Facility	No	0.7	N/A	N/A
UOS South	Cantonment	Combat in Cities Facility	No	5.6	N/A	N/A
WIT 01	Z	Explosives and pyrotechnics, high risk training event	Yes	3.0	N/A	N/A
WIT 02	Z	Explosives and pyrotechnics, high risk training event	Yes	2.7	N/A	N/A

<sup>1</sup> Based on impulse noise levels and do not represent steady noise or time-weighted average.

**Table A-4. Fort Huachuca Air Operation Training Sites**

Training Sites	Training Areas	Description	Area (Acres)
Black Tower Complex	J	Contains unmanned facilities located at Rugge-Hamilton and Pioneer Airstrips and support and training facilities associated with the operation and training of the Shadow and Hunter UAS.	447
Hubbard Assault Airstrip and LZ	C, D	A dirt assault strip and LZ. Surveyed and approved by the USAF that can accommodate C-130 aircraft	65
Kilo Landing Strip and LZ	K	Dirt air strip and LZ that supports landing training operations and is capable of handling rotary-wing aircraft and small UAS systems.	3
LAAF	Cantonment	Supports military aircraft involved in test and training programs; troop movements; and standard military, commercial, and private travel operations. LAAF consists of three runways, including a 12,000-foot Class B main runway on an east-west axis, a 5,366-foot secondary runway on a southeast-northwest axis, and a 4,300-foot tertiary runway running parallel to the main runway; several taxiways, aprons, and parking areas for fixed and rotary-wing aircraft; and the ATC tower and support facilities.	1,588
<b>Landing Zones</b>			
Blacktail LZ	N	High Elevation	0.03
Boston LZ	W	Low Elevation	4.94
Coatimundi LZ	U1	Mid Elevation	0.62
Coues LZ	V1	Low Elevation	4.94
Eagle LZ	G	Low Elevation	1.10
Gate 2 LZ	Q	High Elevation	0.01
Hawk LZ	G	Low Elevation	2.30
Helipad A	N	High Elevation	0.02
Helipad D	O	High Elevation	0.03
Helipad E	O	High Elevation	0.04
Helipad I	V1	Low Elevation	0.03
Helipad O	K	Low Elevation	0.04
Hotel 1 LZ	H	Low Elevation	0.52
Hubbard LZ	B	Low Elevation	16.48
Jaguar LZ	U1	Mid Elevation	0.62
Kilo 1 LZ	K	Mid Elevation	2.68

Training Sites	Training Areas	Description	Area (Acres)
Maverick LZ	L	Low Elevation	0.52
Unsurveyed LZ	N	High Elevation	0.01
McClure LZ	P	High Elevation	0.03
North TAA LZ	B	Low Elevation	0.42
Papa LZ	P	High Elevation	0.03
Range 6A LZ	T2	Low Elevation	1.24
Range Ops LZ	V	Low Elevation	0.85
Scheelite LZ	Q	High Elevation	0.03
South TAA LZ	E	Low Elevation	0.54
TBD 01 LZ	T2	Low Elevation	0.04
TBD 02 LZ	T1	Low Elevation	0.04
TBD 03 LZ	T2	Low Elevation	0.04
Woodcutter's LZ	T3	Mid Elevation	2.04
Whiskey 1 LZ	W	Low Elevation	2.48
<b>Landing Zone Total Area</b>			<b>42.71</b>
<b>Drop Zones</b>			
Dust Devil DZ	B	Air drops for all approved units and training maneuver	816.7
Havoc DZ	C, D	Air drops for all approved units and training maneuver; bivouac and unit assembly training	411.6
Hubbard DZ	C, D	Air drops for all approved units and training maneuver	621.2
Humor DZ	B	Air drops for all approved units and training maneuver	481
Hyena DZ	E	Air drops for all approved units and training maneuver; contains a pre-existing dirt runway	388.1
Tombstone DZ	B, C, D	Air drops for all approved units and training maneuver	333.8
<b>Drop Zone Total Area</b>			<b>3052.4</b>

## **APPENDIX B. TENANTS AND PARTNERS**

## ***U.S. Army Intelligence Center of Excellence***

The USAICoE is the primary mission at Fort Huachuca and includes the Commanding General (CG) who acts as the Installation Commander. USAICoE develops doctrinally founded Military Intelligence (MI) professionals and drives Intelligence Warfighting Function force modernization, enabling Commanders to compete and win in Large Scale Combat Operations against peer threats in multi-domain contested environments. USAICoE trains approximately 10,000 Soldiers and civilians at Fort Huachuca annually. Soldiers receive technical classroom instruction, Initial Military Training (i.e., Advanced Individual Training and Basic Officer Leaders Course), daily physical readiness training, tactical training on Warrior Tasks and Battle Drills, radio communications, foot marches, combat life saving measures, map reading and land navigation, weapons familiarization and qualification, and field training exercises where Soldiers bivouac on site. Personnel and activities associated with these operations occur within the Cantonment and at established training facilities throughout the installation.

## ***2<sup>nd</sup> Battalion, 13<sup>th</sup> Aviation Regiment***

The 2<sup>nd</sup> Battalion 13<sup>th</sup> (2-13<sup>th</sup>) Aviation Regiment is responsible for the development and administration of training for all U.S. Army UAS pilots and ground support personnel. Training is conducted at the Black Tower Complex. The training tempo of the 2-13<sup>th</sup> Aviation Regiment can run up to 16 hours per day, 6 days per week, depending on weather and air traffic control staffing, and has the potential to increase up to 7 days per week and 24 hours per day. The current training activities include heavy use of electromagnetic spectrum, and multiple platforms are used simultaneously with each requiring its own radio frequency (Environmental and Natural Resources Division [ENRD] 2021).

The 2-13<sup>th</sup> Aviation Regiment operates the RQ-7B Shadow and MQ-1C Gray Eagle UAS Platforms. Operation and training of the RQ-7B Shadow is conducted at the Black Tower Complex. Approximately 500 operator and 650 maintenance personnel are trained annually. The number of instructors can exceed 375 for this system at any given time.

Operation and training of the MQ-1C Gray Eagle takes place in Hangar 1 at LAAF. Approximately 240 student maintenance personnel and 270 operators are trained annually. Hangar Flight operations from LAAF are conducted 24 hours per day, 5 days per week. Total instructor cadre at these locations is approximately 150 personnel (ENRD 2021).

Class IV Laser operations for both platforms (RQ-7B Shadow and MQ-1C Gray Eagle) take place west and southwest of the Black Tower Complex in Training Area M or on the John R. Fox Range (formerly the East Range).



## ***Network Enterprise Technology Command***

Network Enterprise Technology Command (NETCOM) is a global strategic and operational command dispersed in 20 countries and 17 Army installations in the Continental U.S. (CONUS) and overseas. NETCOM leads global operations for the Army's portion of the DoD Information Network (DoDIN). NETCOM conducts decisive cyberspace operation in support of Unified Action (ENRD 2021).

## ***U.S. Army Electronic Proving Ground***

The U.S. Army Electronic Proving Ground (EPG) executes developmental testing in direct support of Army Futures Command, Program Executive Offices, DoD partners, and industry partners to ensure Warfighters are enabled to dominate the future battlefield. Currently, the EPG conducts laboratory and field tests to evaluate new and proposed military network electronic warfare (EW) and C5ISR systems. EPG includes the Mission Command and Network Test Directorate and Test Resources and Laboratories Directorate.

The current EPG and Defense Information Systems Agency Joint Interoperability Test Command (JITC) testing is recognized as a Major Test Range and Test Facility Base (MRTFB). They were instrumental in establishing the Buffalo Soldier Electronic Test Range (BSETR) consisting of 2,500 square miles (mi<sup>2</sup>) (6,475 square kilometers [km<sup>2</sup>]) of electromagnetically quiet, high-altitude bowl to conduct full-frequency, full-power jamming as part of the DoD cyber warfare testing.

EPG includes Mission Command and Network Test Directorate and Test Resources and Laboratories Directorate and completes test events on all ranges throughout the installation and off post areas.

## ***Intelligence Electronic Warfare Test Directorate***

The IEWTD is part of the Army Developmental Test Command. IEWTD is responsible for conducting realistic operational tests of new and/or upgraded Intelligence and Electronic Warfare equipment, direction finding UAS, and other electronic warfare systems (ENRD 2021). Tests are conducted within the IEWTD test compound in the Cantonment, on Fort Huachuca ranges, and off post areas, including on Bureau of Land Management (BLM)-managed lands and within the San Pedro Riparian National Conservation Area (SPRNCA).

## ***Joint Interoperability Test Command***

Joint efforts include activities, operations, and organizations, in which elements of two or more of the military departments participate. The JITC is a Defense Information Systems Agency (DISA) organization responsible for ensuring the operation and interoperability of DoD communications systems and electronic equipment. JITC is the

DoD's Joint Interoperability Certifier and the only non-Service Operational Test Agency for Information Technology (IT)/National Security Systems. JITC provides risk-based Test, Evaluation and Certification services, tools, and environments to ensure Joint Warfighting IT capabilities are interoperable and support mission needs (JITC 2022).

### ***Air National Guard***

Fort Huachuca supports ANG unit training. Two units currently use Fort Huachuca as a part of their training mission – the Arizona ANG 162<sup>nd</sup> Wing (AZ ANG 162<sup>nd</sup>) and the Missouri ANG 139<sup>th</sup> Airlift Wing (MO ANG 139<sup>th</sup>). Other ANG units may use Fort Huachuca facilities in the future.

#### ***Arizona Air National Guard 162<sup>nd</sup> Wing***

The AZ ANG 162<sup>nd</sup> is based out of Davis-Monthan Air Force Base (DMAFB) in Tucson, Arizona. The AZ ANG 162<sup>nd</sup> umbrellas the Operations Support Squadron, 148<sup>th</sup> Fighter Squadron, 152<sup>nd</sup> Fighter Squadron, 195<sup>th</sup> Fighter Squadron, 214<sup>th</sup> Attack Squadron (ATKG), and 162<sup>nd</sup> Training Squadron (USAF 2022a). The AZ ANG 162<sup>nd</sup> uses LAAF as an Auxiliary Airfield. Training missions using LAAF include over 12,000 flight hours per year on multiple platforms, including the F-16, MQ-9, and remotely piloted vehicles.

#### ***Missouri Air National Guard 139<sup>th</sup> Airlift Wing***

The MO ANG 139<sup>th</sup> Airlift Wing (AW) is stationed at Rosecrans Air National Guard Base, St. Joseph, Missouri. Three units of the MO ANG 139<sup>th</sup> AW use Fort Huachuca to perform C-17 and C-130 training missions, conduct night-vision, mountainous terrain flight operations, airdrop, and air-land assault training operations through the unit's Advanced Airlift Tactics Training Center (AATTC) (ENRD 2021). The AATTC mission is to increase the warfighting effectiveness and survivability of forces through superior tactics, training, and intelligence (USAF 2022b). The MO ANG 139<sup>th</sup> AW utilizes the Hubbard LZ on the 1LT John R Fox Multi-Domain Operation (MDO) Range Complex (John R. Fox Range) for 2 days per training week to practice short field (dirt) landings and takeoffs. The munitions team shoots bottle rockets near aircraft flying at low altitude from Hill Fourr.

### ***Special Operations Command***

U.S. Special Operations Command (USSOCOM) develops and employs fully capable Special Operations Forces to conduct global special operations and activities as part of the Joint Force to support persistent, networked, and distributed Combatant Command operations and campaigns against state and non-state actors to protect and advance U.S. policies and objectives. USSOCOM missions on Fort Huachuca include air and ground operations. Air training includes UAS testing to include launch, recover, and maintenance, rotary-wing insertion and extraction of ground forces, vertical takeoff and landing (VTOL), air drops, and aerial gunnery. Ground operations include forward arming and refueling point (FARP) activities, military operations on urbanized terrain

(MOUT) activities, improvised explosive device (IED) detection, and blank/live fire operations.

## ***Federal Partners***

### ***Customs and Border Protection***

CBP safeguards America's borders, thereby protecting the public from dangerous people and materials while enhancing the Nation's global economic competitiveness by enabling legitimate trade and travel. CBP is divided into the Air and Marine Operations (AMO), a tenant on the Fort, and Border Patrol. CBP AMO staff at LAAF work with CBP Tucson Sector ground units and other law enforcement agencies to interdict foreign national smuggling operations, detect and report other illegal air or ground activities, and engage in Search and Rescue operations. The CBP AMO plans to construct and operate a Joint Permanent Air Facility at LAAF (CBP 2022). CBP AMO has operated out of temporary facilities at LAAF since 1999, providing operational control of the border. Current CBP AMO operations at LAAF include the Sierra Vista Air Unit (SVAU) and the UAS operations, which were deployed in 2005. In June 2022, CBP completed a Supplemental Environmental Assessment to construct and operate a permanent facility, increase CBP personnel from 47 to 100, and increase the size of CBP's AMO air fleet. CBP has operated an aerostat drug surveillance balloon in the southern portion of the South Range in R-2312 since 2012 (Aerostat Site). Border Patrol personnel out of the Naco Border Station conduct patrols for undocumented immigrants on the Fort, but these activities are not covered in this PEA.

### ***U.S. Bureau of Land Management***

BLM has responsibility for lands that adjoin the installation and for the SPRNCA. It also administers subsurface mineral rights on several thousand acres (ac) of non-federal land around Fort Huachuca and monitors some of the conservation easements (CEs) on the Babocomari Ranch, which were purchased using Readiness and Environmental Protection Initiative (REPI) funding. The BLM operates a 20-person wildfire "hotshot" crew out of the Cantonment. This crew supports wildfire suppression nationwide and assists Fort Huachuca with prescribed fires and wildfires when available.

### ***U.S. Forest Service***

USFS manages the Coronado National Forest (CNF), which is adjacent to Fort Huachuca to the southwest. CNF personnel provide forest management project support, firefighting capability, and coordination with the Installation under an Interservice Support Agreement. Fort Huachuca reimburses USFS for fire suppression and fuel load reduction efforts conducted on the installation. USFS manages a Fire Tanker Base located at LAAF which can handle every Air Tanker currently in operation – from the Single Engine Air Tankers to the Very Large Tankers such as the DC-10. The Air Tanker Base also supports lead planes and air attack aircraft.

## ***Other Tenants and Partners***

Table 1 identifies additional tenants and partners that provide administrative and testing and training support that is primarily contained within the Cantonment.

**Table 1. Other Tenants and Partners**

American Southwest Credit Union	Armed Forces Bank	Armed Forces Recruiting
Army and Air Force Exchange Service (AAFES)	Army Contracting Command (ACC) – APG Huachuca Division	Army Counterintelligence, Arizona Field Office
Army Materiel Command Logistics (LRC)	Army Materiel Command Test, Measurement, and Diagnostics Equipment Activity (AMC TMDE) Support Ctr	Carlson SATO Travel
Civilian Human Resources Agency (CHRA)/Civilian Personnel Advisory Center (CPAC) West Region	Defense Commissary Agency (DECA)	DoD Air Frequency
DoD Defense Counterintelligence and Security Agency	Equal Employment Opportunity (EEO)	Federal Bureau of Investigations (FBI)
Ft Huachuca Accommodation School	Fort Huachuca Veterinary Services	Ft Huachuca Weather Ops
4 <sup>th</sup> Brigade (MI) 102 <sup>nd</sup> Training DIV (MS) & 5/104 <sup>th</sup> MI BN	Homeland Security Investigations	Information Systems Engineering Cmd (ISEC)/ US Army Communications Electronics Command (CECOM)/Communications Security Logistics Activity (CSLA)
Intelligence-Capabilities Development and Integration Directorate (I-CDID)	Logistics Readiness Center (LRC)	Major Cybercrime Field Office (West)

Marine Corps Admin Detachment (MARDET)	Military Equal Opportunity (MEO)	Network Enterprise Center (NEC)
Office of Technology Development	Office of the Staff Judge Advocate (OSJA)	139 <sup>th</sup> Advanced Airlift Tactics Training Center (AATTC)
Raymond W. Bliss Heath Clinic (US Army Medical Activity Command [MEDDAC])	Regional Cyber Center (RCC)	Regional Cyber Center – Continental United States (CONUS)
Religious Support Office	Runion Dental Clinic (Dental Health Activity [DENTAC])	Sexual Harassment Assault Response and Prevention (SHARP)
Task Force Southwest, 178 <sup>th</sup> Engineer BN	38 <sup>th</sup> MP DET (Criminal Investigation Div [CID])	Thrift Shop
United Services Organization (USO)	University of Arizona	Unmanned Aircraft System Project Mgt Ofc
U.S. Army Communication Electronics Command	US Army Corps of Engineers	US Army Financial Management Command (USAFMCOM): Defense Finance Accounting Service (DFAS)/Defense Military Pay Office (DMPO) / Army Military Pay Office (AMPO) Huachuca
US Army Intelligence and Security Cmd (INSCOM) (ITRADS) – DET 52 & 308 <sup>th</sup> MI BN	US Post Office	

**APPENDIX C. LIST OF PREVIOUSLY CONDUCTED ARMY NEPA ANALYSES  
FOR FORT HUACHUCA**

Approval of Land Use and Real Estate Investment Strategies in Support of Real Property Master Planning. Final EIS, May 1999.

Armored Multi-Purpose Vehicle Life Cycle. Final EA, September 2020.

Army 2020 Force Structure Realignment. Final SPEA, June 2014.

Comprehensive Unmanned Aerial Vehicle Testing and Training at Fort Huachuca, Arizona. Final EA, June 2000.

Construction of Gray Eagle Runway at Black Tower and Testing and Use of Lasers on the West Range, Fort Huachuca, Arizona. Final PEA, April 2018.

Empire Challenge Events at Fort Huachuca, Arizona. Final EA, July 2011.

Extended Range/Multi-Purpose (ER/MP) Unmanned Aerial Vehicle System (UAVs) Life Cycle. Final EA, December 2004.

Future Development Master Plan Joint Interoperability Test Command Fort Huachuca, Arizona. Final EA, May 2004

Future Development Plan United States Army Intelligence Center Fort Huachuca, Arizona. Final PEA, November 2004

Implementation of the Real Property Master Plan at United States Army Garrison Fort Huachuca, Arizona. Final PEA, September 2014.

Stationing and Training of United States Army Reserve Units at Fort Huachuca, Arizona. Final EA, August 1988.

The Integrated Natural Resources Management Plan and Real Property Master Plan at Fort Huachuca, Arizona. Final EA, September 2009.

United States Army Electronic Proving Ground and the 2-13<sup>th</sup> Aviation Regiment – Testing and Use of Lasers on Fort Huachuca. Final PEA, February 2013.

United States Army Electronic Proving Ground Testing Activities on Fort Huachuca and Throughout Arizona. Final PEA, August 2011.