Draft
Legislative Environmental Assessment for the Extension of the Withdrawal of Public Lands for Fort Bliss Army Reservation El Paso, Texas

October 2024

Prepared for:
United States Armed Forces
Fort Bliss Army Reservation El Paso, Texas
McGregor Range, Texas

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COVER SHEET

Draft Legislative Environmental Assessment for for Extension of the Withdrawal of Public Lands for Fort Bliss Army Reservation El Paso, Texas

a. *Responsible Agency:* United States Army

b. *Location:* Fort Bliss Army Reservation, El Paso, Texas

c. *Designation:* Draft Legislative Environmental Assessment

d. *Point of Contact:* Ms. Myra Guerrero, Fort Bliss Directorate of Public Works, Environmental Division, Conservation Branch, *myra.guerrero2.civ@army.mil*

Abstract:

The United States Army is preparing a Legislative Environmental Assessment to evaluate the potential environmental impacts associated with the proposed extension of the withdrawal of public lands within McGregor Range, New Mexico, part of Fort Bliss, Texas. The analysis shows that there would be no significant impacts associated with the proposed action. The withdrawal renewal must be approved by Congress.

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ACRONYMS AND ABBREVIATIONS

2007 Agreement	Memorandum of Agreement between US Department of the Interior, Bureau of Land Management, Las Cruces District Office and Headquarters US Army Garrison Fort Bliss, Texas Concerning Policies, Procedures, and Responsibility Related to Land Use Planning and Resource Management of McGregor Range
ACAM	Air Conformity Applicability Model
ACEC	area of critical environmental concern
ADNL	A-weighted Day-Night level
AFB	Air Force Base
APE	Area of Potential Effect
AQCR	Air Quality Control Region
Army	United States Army
AR	Army Regulation
BGEPA	Bald and Golden Eagle Protection Act
BLM	Bureau of Land Management
BMP	best management practice
CAA	Clean Air Act
CBR	Centennial Bombing Range
CDNL	C-weighted Day-Night level
CEJCs	Communities with environmental justice concerns
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CLF	Convoy Live Fire
CO_2e	carbon dioxide-equivalent
CT	Census Tract
CWA	Clean Water Act
DAGIR	Digital Air/Ground Integration Range
dB	decibel
DMPRC	Digital Multi-Purpose Range Complex
DNL	Day-Night Sound Level
DoD	United States Department of Defense
DOI	United States Department of the Interior
DOPAA	Description of Proposed Action and Alternatives
EA	Environmental Assessment
EIS	Environmental Impact Statement
EISA	Energy Independence and Security Act of 2007, as amended
EO	Executive Order
ERP	Environmental Restoration Program
ESA	Endangered Species Act of 1973, as amended
ESQD	explosives safety quantity distance
GHG	greenhouse gas
FAA	Federal Aviation Administration
FBTC	Fort Bliss Training Complex
FEMA	Federal Emergency Management Act
FIREX	live-fire exercises
FLPMA	Federal Land Policy and Management Act of 1976, as amended
FONSI	Finding of No Significant Impact
FTX	field training exercises
HAZMAT	hazardous material
ICRMP	Integrated Cultural Resources Management Plan
INRMP	Integrated Natural Resources Management Plan
IPaC	Information for Planning and Consultation
IPBC	Infantry Platoon Battle Course
LEA	Legislative Environmental Assessment

µg/m^3	micrograms per cubic meter
MBTA	Migratory Bird Treaty Act
MLWA	Military Lands Withdrawal Act of 1999
MOA	Military Operation Areas
MSL	mean sea level
N/A	not applicable
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act of 1969, as amended
NHPA	National Historic Preservation Act of 1966, as amended
NMCR-A506	New Mexico County Road A506
NMDGF	New Mexico Department of Game and Fish
NMED	New Mexico Environment Department
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
OSHA	Occupational Safety and Health Administration
P	peak
PA	Programmatic Agreement
PCBs	polychlorinated biphenyls
PFOA	perfluorooctanoic acid
PFOS	perfluorooctane sulfonate
PL	Public Law
POL	petroleum/oil/lubricants
ppm	parts per million
PSD	Prevention of Significant Deterioration
R-	Restricted (airspace)
RCRA	Resource Conservation and Recovery Act
ROI	Region of Influence
SC GHG	social cost of greenhouse gas
SDZ	surface danger zone
SHORAD	Short-Range Air Defense
SUA	special use airspace
SWMU	solid waste management unit
TA	training area
TCP	Traditional Cultural Property
tpy	tons per year
UAS	Unmanned aerial systems
US	United States
USACE	United States Army Corps of Engineers
USCB	United States Census Bureau
USC	United States Code
USEPA	United States Environmental Protection Agency
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service
WSA	Wilderness Study Area

CHAPTER 1 PURPOSE AND NEED FOR THE PROPOSED ACTION

1.1 INTRODUCTION

The United States (US) Army has prepared this Legislative Environmental Assessment (LEA) to address the potential environmental impacts associated with the extension of the withdrawal of public lands within the Fort Bliss McGregor Range, New Mexico, in compliance with the *National Environmental Policy Act of 1969* (NEPA) (42 *United States Code* [USC] § 4321 et seq.); regulations of the President's Council on Environmental Quality (CEQ) that implement NEPA procedures (Title 40 *Code of Federal Regulations* [CFR] Parts 1500–1508[1]); and 32 CFR Part 651, *Environmental Analysis of Army Actions*. The Army considered other pertinent environmental statutes, regulations, and compliance requirements during the preparation of this LEA, which are addressed in relevant sections.

The information presented in this LEA will serve as the basis for the Army's determination of whether the proposed action would result in a significant impact to human health and the environment, requiring the preparation of an Environmental Impact Statement (EIS), or whether the Army may reach a Finding of No Significant Impact (FONSI), avoiding the necessity of preparing an EIS. The LEA will also inform Congress as it considers whether to renew the withdrawal.

1.2 LOCATION AND BACKGROUND

Fort Bliss is a US Armed Forces Command installation, comprising approximately 1.12 million acres of land in Texas and New Mexico. Fort Bliss consists of the Main Cantonment Area (i.e., the Main Post, William Beaumont Army Medical Center, Logan Heights, and Biggs Army Airfield); Castner Range; and the Fort Bliss Training Complex (FBTC), which is made up of three large geographic segments: the South Training Areas, Doña Ana Range-North Training Areas, and McGregor Range (**Figure 1-1**). All branches of the military use the Fort Bliss ranges (Fort Bliss, 2021a).

McGregor Range is located in Otero County, New Mexico. Geographically, the Range is located within the Tularosa Basin to the south and west, Otero Mesa and its escarpment to the east and north, the Sacramento Mountain foothills to the far north, and the Hueco Mountains to the southeast. New Mexico County Road A506 (NMCR-A506) bisects the northern portion of McGregor Range. McGregor Range is located 30 miles north of El Paso, Texas; 60 miles south of Alamogordo, New Mexico; and 50 miles east of Las Cruces, New Mexico.

McGregor Range consists primarily of withdrawn public lands, which are lands owned by the Federal Government, reserved by Congress for the use of the Department of the Army, and administered by the Department of the Army and US Department of the Interior (DOI), Bureau of Land Management (BLM), pursuant to the *Military Lands Withdrawal Act of 1999* (Senate Bill 1338) (MLWA), *Federal Land Policy and Management Act of 1976*, as amended (43 USC § 1701 et seq.) (FLPMA), and McGregor Range Resource Management Plan (Fort Bliss, 2006).

The area encompassed by the current boundary of McGregor Range includes approximately 608,385 acres of withdrawn public lands and 71,083 acres of Army fee-owned lands. McGregor Range is surrounded by lands administered primarily by the BLM and US Forest Service (USFS) to the north and west, with pockets of privately owned lands to the east used for ranching. To the south and west are withdrawn and Army fee-owned lands in El Paso County, Texas, and Otero and Doña Ana counties in New Mexico (**Figure 1-2**). McGregor Range also includes 18,004 acres of USFS lands, which are used by the Army in accordance with an agreement between the USFS and the Army at Fort Bliss. Only the 608,385 acres of withdrawn public lands within McGregor Range are included for the extension as part of the proposed action.

[1] This LEA is following the 14 September 2020 update to the CEQ rules, including changes from 2022 (85 FR 43304).

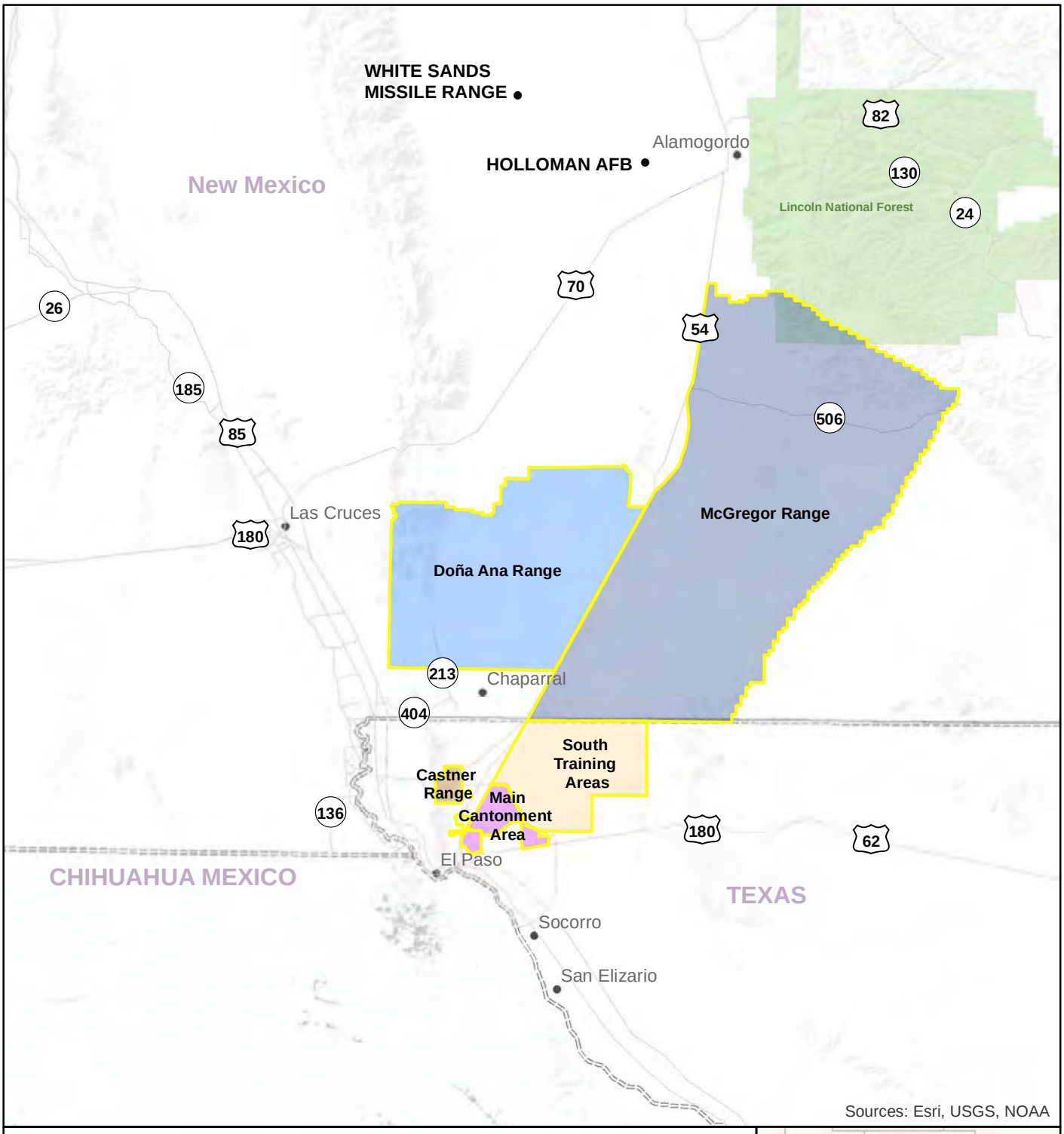


FIGURE 1-1
McGregor Vicinity Map

Installation Boundary

N

0 10 Miles

Coordinate System: NAD 83 UTM Zone 13N

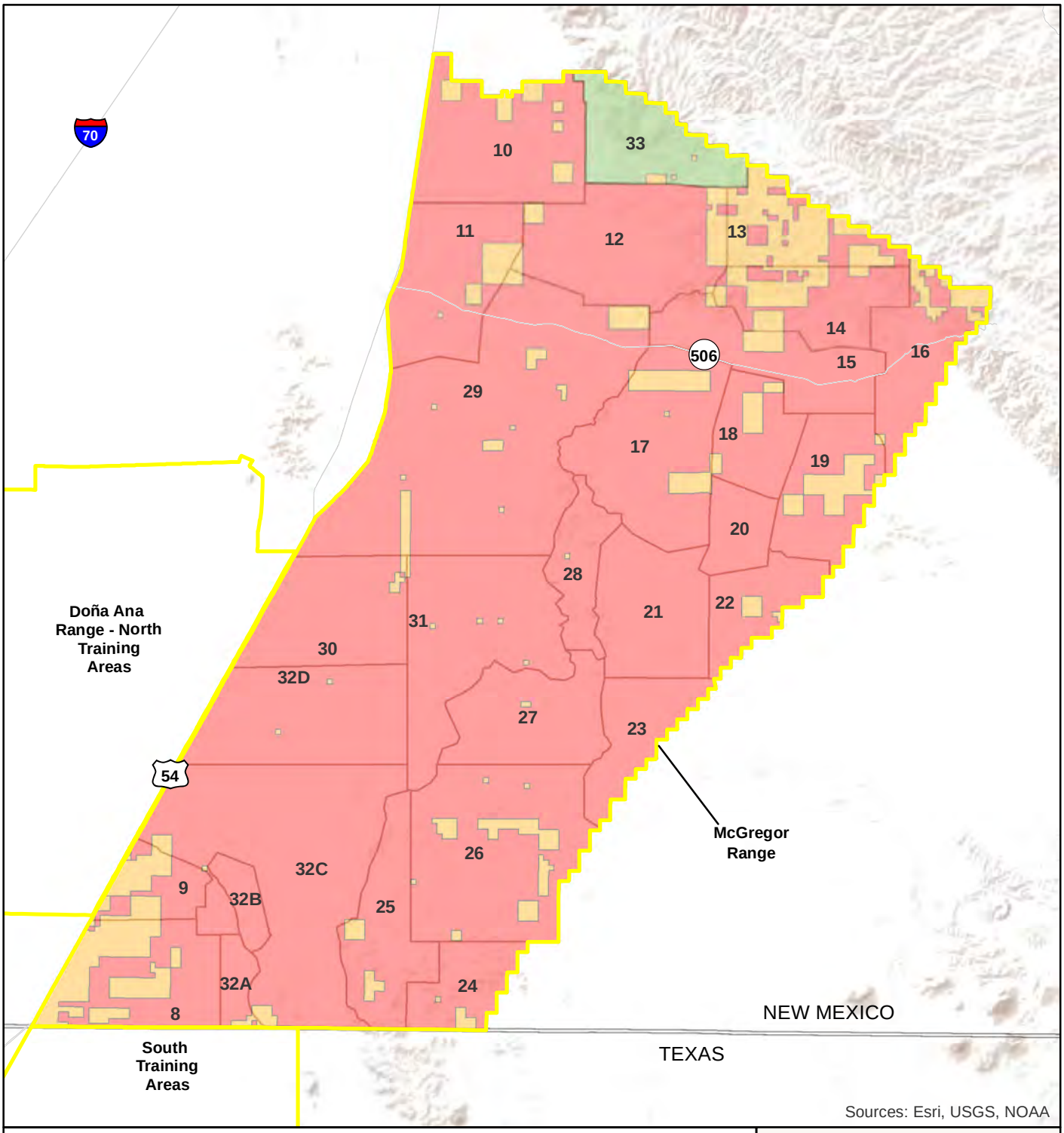
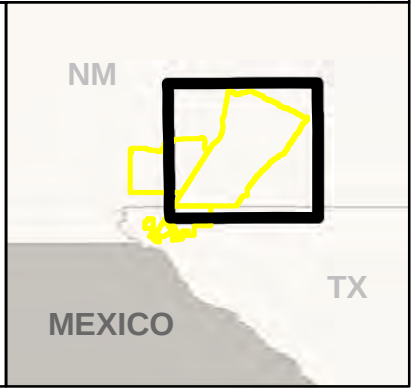


FIGURE 1-2
McGregor Range Land Ownership

Installation Boundaries
Army Fee-Owned Land
BLM Withdrawn Public Land
USDA Forest Service Land

N
0 5 Miles

Coordinate System: WGS 1984 UTM Zone 13N



The withdrawn lands within McGregor Range are managed by the Army and the BLM in accordance with a Memorandum of Agreement (2007 Agreement) signed 7 December 2007, expiring 6 November 2026 unless canceled or renewed before that date (DOI, 2007). The Fort Bliss environmental management programs are directly applicable to all lands and military activities on McGregor Range. The 2007 Agreement specifies the responsibilities of Fort Bliss and the BLM concerning policies, procedures, responsibilities related to land use planning and resource management of McGregor Range (DOI, 2007). The BLM recognizes that Fort Bliss missions have priority use on McGregor Range and will secure Fort Bliss concurrence before authorizing any non-military uses. The BLM has managerial responsibilities for public use of the withdrawn land, as enumerated in the *Military Lands Withdrawal Act of 1986* (Public Law [PL] 99-606). Daily uses, however, are subordinate to the military missions and uses of McGregor Range.

1.3 PURPOSE OF AND NEED FOR THE PROPOSED ACTION

The purpose of the proposed action is to continue to provide a safe and secure location to train soldiers and military personnel and test equipment to meet nationally directed missions and requirements. Access to lands the size of McGregor Range facilitates the Army modernization strategy and enables multi-domain operations. This training is central to the way the Army fights. Effective training consists of a careful progression of individual, crew, and unit training culminating in live-fire exercises (FIREX) and field training exercises (FTX).

The proposed action is needed to provide the Army with training areas of the size and configuration of McGregor Range to prepare soldiers and units for known and emerging threats. US military strategy requires strong armed forces that are trained, equipped, and ready to defend the nation's interests. Realistic training that fully engages military capabilities is the primary means to ensure readiness and prepare the US military to fight and win in combat. McGregor Range provides sufficient land and airspace to conduct training at realistic distances and access to a variety of environmental situations (e.g., simulated threats, operational air and ground space, topographic relief). Extension of the public land withdrawal of McGregor Range is necessary to:

- provide sufficient air/ground space to conduct real-world military training;
- provide training opportunities to include varied terrain; a full suite of training ranges and maneuver areas that support all heavy, light, and aviation combat units; and their combined various support units;
- provide training for soldiers to use the Patriot, Avenger, Stinger, Bradley Linebacker, and other advanced weapons systems;
- maintain the highest-quality military and operational readiness standards;
- support allied military education and training programs; and
- integrate Army, Navy, Air Force, and Marine Corps elements during joint FTXs, such as Roving Sands, and Fort Bliss-designated home station training.
- provide for enough off-road vehicle maneuver training area for utilization and land rehabilitation;
- provide area for new or modified ranges to accommodate changes in surface danger zones (SDZs) for future weapons or ammunition types;
- provide noise compatibility and adequate buffer zones;
- provide for all the training benefits, including Battalion-level movement-to-contact exercise capability and a variety of terrain environments, and offer capacity and flexibility to accommodate future mission changes and training requirements;
- retain the Army capability to fully utilize investment in facilities and improvements with no outside constraints; and

- be on land currently owned, leased, or withdrawn for Army use (would not require purchase, lease, or withdrawal of land not previously under Army control).

1.4 PUBLIC INVOLVEMENT AND AGENCY AND TRIBAL COORDINATION

1.4.1 Interagency and Intergovernmental Coordination and Consultation

The environmental analysis process includes public and agency review of information pertinent to a proposed action and alternatives. Per the requirements of the *Intergovernmental Cooperation Act of 1968* (42 USC § 4231(a)) and Executive Order (EO) 12372, *Intergovernmental Review of Federal Programs*, the Army notified Federal, state, and local agencies with jurisdiction that could potentially be affected by the proposed action and alternatives during the development of this LEA. A mailing list of the agencies coordinated with regarding the proposed action and copies of correspondence and responses received are included in **Appendix A**.

1.4.2 Government-to-Government Consultation

The *National Historic Preservation Act of 1966* (54 USC § 300101, et seq.) (NHPA) and its regulations at 36 CFR Part 800 direct Federal agencies to consult with federally recognized Indian Tribes when a Federal agency undertaking may affect Tribal lands or properties of religious and cultural significance to a Tribe. Consistent with the NHPA and US Department of Defense Instruction 4710.02, *Interactions with Federally Recognized Tribes*, when proposing and conducting agency actions on McGregor Range, the Army has invited federally recognized Tribes that are historically affiliated with lands in the vicinity to consult on all proposed undertakings that have a potential to affect properties of cultural, historical, or religious significance to the Tribes. The Tribal consultation requirements are distinct from NEPA review requirements and require separate notification to all relevant Tribes. The timelines for Tribal consultation are also distinct from those of NEPA public involvement. Nevertheless, the results of this consultation will be considered in the LEA. The Fort Bliss point of contact for consultation with Indian Tribes is the Garrison Commander, who may also delegate this responsibility to the Fort Bliss Cultural Resources Manager. The point of contact for consultation with the Tribal Historic Preservation Officer and the Advisory Council on Historic Preservation is the Fort Bliss Cultural Resources Manager. A mailing list of the Tribal governments coordinated with regarding agency actions at McGregor Range and copies of correspondence and responses received are included in **Appendix A.**

1.4.3 Other Agency Consultations

Agency actions at McGregor Range involve coordination with several organizations and agencies. Compliance with Section 7 of the *Endangered Species Act of 1973*, as amended (16 USC § 1531 et seq.) (ESA), and implementing regulations (50 CFR Part 402) requires communication with the US Fish and Wildlife Service (USFWS) in cases where a Federal action could affect listed threatened or endangered species, species proposed for listing, or candidates for listing.

Other Federal agencies the Army has coordinated with include the BLM, USFS, US Air Force, Federal Aviation Administration, US Bureau of Indian Affairs, US Army Corps of Engineers, US Environmental Protection Agency (USEPA), and White Sands Missile Range.

The Army coordinated with the following state government agencies regarding potential effects from Army activities on McGregor Range and actions expected to continue, should Congress extend the public land withdrawal:

- NHPA Section 106 compliance – State Historic Preservation Officer at the New Mexico Historic Preservation Division;
- Air quality, water quality, hazardous wastes, and human health effects – New Mexico Environment Department; and
- Habitat and species of concern – The New Mexico Department of Game and Fish (NMDGF).

Other local agencies the Army might coordinate with include Otero County Commissioners; City of El Paso, Texas Planning; Las Cruces, New Mexico Planning; and the office of the Governor of New Mexico.

Finally, a notice of the proposed action and alternatives was provided to elected officials that represent the state at the federal and local levels. A mailing list of the agencies coordinated with regarding the proposed action and copies of correspondence and responses received are included in **Appendix A**.

1.4.4 Public Involvement

The Army invites the public and other interested stakeholders to review and comment on the LEA and Draft FONSI. Accordingly, a Notice of Availability of the LEA and Draft FONSI was published in the following newspapers to commence a 30-day public comment period:

- *El Paso Times*,
- *Las Cruces Sun-News*,
- *El Diario*, and
- *Alamogordo Daily News*.

During the public comment period, the LEA and Draft FONSI are available online for view or download at https://home.army.mil/bliss/index.php/about/Garrison/directorate-public-works/environmental. Additionally, printed copies of the LEA and Draft FONSI are available by request (see **Cover Sheet**) and placed at the following local libraries for review:

- Alamogordo Public Library – Alamogordo, New Mexico;
- Thomas Branigan Memorial Library – Las Cruces, New Mexico;
- El Paso Public Library, José Cisneros Cielo Vista Branch – El Paso, Texas; and
- El Paso Public Library, Richard Burges Branch – El Paso, Texas.

1.5 DECISION TO BE MADE

Under the *Engle Act of 1958* (PL 85-337), only Congress can withdraw and reserve public lands for defense purposes when the land aggregates more than 5,000 acres for any one defense project. Because McGregor Range encompasses 608,385 acres of withdrawn public lands, the decision whether to extend the withdrawal and reservation for defense purposes lies solely with Congress. This LEA is being prepared first to determine if an EIS is necessary, and if not, to inform Congress in its decision whether to extend the withdrawal. Congress may also specify conditions and requirements for the withdrawal.

1.6 SCOPE OF THE ENVIRONMENTAL ANALYSIS

NEPA requires Federal agencies to consider alternatives to the proposed action and to analyze potential impacts of alternative actions. Potential impacts of the proposed action and alternatives described in this EA will be assessed in accordance with the CEQ regulations, which require that Federal agencies analyze the potentially affected environment and degree of the effects of the action**.** This LEA analyzes the following environmental resources: air quality, including greenhouse gas, and climate change; water, geological, cultural, and biological resources; land use; noise; infrastructure, including transportation, and utilities; human health and safety; hazardous materials and waste; airspace; socioeconomics; and environmental justice and protection of children.

Consistent with the CEQ regulations, this LEA is organized into the following sections:

- Chapter 1, Purpose and Need for the proposed action, includes an introduction and information on the project location and background, purpose and need statements, public involvement and agency

and Tribal coordination, decision to be made, scope of environmental analysis, and applicable laws and environmental regulations.

- Chapter 2, Description of the proposed action and alternatives, includes a description of the proposed action, selection standards for alternative screening, alternatives eliminated from further consideration, a description of the selected alternatives for analysis, summary of potential environmental consequences, and any mitigation and environmental commitments. Chapter 2 also includes programs and policies that are considered part of the proposed action, such as the Installation Natural Resources Management Plan.
- Chapter 3, Affected Environment and Environmental Consequences, includes a description of the natural and man-made environments within and surrounding McGregor Range that may be affected under the proposed action and alternatives and identifies potential impacts and mitigation measures.
- Chapter 4, Reasonably Foreseeable Actions and Cumulative Impacts, includes a list of other actions planned within the vicinity of the proposed action and described potential cumulative impacts of each resource area when compared to other reasonably and foreseeable action.
- Chapter 5, List of Preparers, provides a list of the preparers of this LEA.
- Chapter 6, References, contains references for studies, data, and other resources used in the preparation of this LEA.
- Appendices, as required, provide relevant correspondence, studies, modeling results, and public review information.

The expected geographic scope of any potential consequences is defined as the Region of Influence (ROI). McGregor Range and its environs are considered in determining the ROI for each resource. The ROI boundaries vary depending on the nature of each environmental resource. For example, the ROI for some resources, such as socioeconomics and air quality, extends over a larger jurisdiction than others, such as land use and utilities.

1.7 APPLICABLE LAWS AND ENVIRONMENTAL REGULATIONS

Implementation of the proposed action and alternatives would involve coordination with several organizations and agencies (see **Section 1.4**). Adherence to the requirements of specific laws, regulations, Best Management Practices, and necessary permits are described in detail in each resource section in Chapter 3.

1.7.1 National Environmental Policy Act

NEPA requires that Federal agencies consider potential environmental consequences of its proposed actions. The law's intent is to protect, restore, or enhance the environment through well-informed Federal decisions. The CEQ was established under NEPA for the purpose of implementing and overseeing Federal policies as they relate to this process. In 1978, the CEQ issued *Regulations for Implementing the Procedural Provisions of NEPA* (40 CFR Parts 1500–1508). This LEA has been prepared in compliance with NEPA (42 USC § 4321 et seq.); regulations of the President's CEQ that implement NEPA procedures (40 CFR Parts 1500–1508[2]); AR 200-1, *Environmental Protection and Enhancement*; and 32 CFR Part 651, *Environmental Analysis of Army Actions*.

1.7.2 Environmental Analysis of Army Actions

The *Environmental Analysis of Army Actions* is the process by which the Army facilitates compliance with environmental regulations (32 CFR Part 651), including NEPA, which is the primary legislation affecting the

[2] This LEA is following the 14 September 2020 update to the CEQ rules with 2022 changes (85 FR 43304).

agency's decision-making process. The decision by Congress is not subject to NEPA but will be informed by this analysis.

1.7.3 Land Withdrawal Renewal

As outlined at 43 CFR Part 2300, the land withdrawal process consists of the following steps: 1) conduct pre-application consultations, 2) prepare the application and publish the application in the *Federal Register*, 3) prepare supporting studies and reports, 4) prepare BLM recommendations, 5) transmit the case file to the Director of BLM and Secretary of the Interior, 6) submit draft legislation and the case file to Congress, and 7) await legislative action by Congress. This LEA satisfies the requirement to prepare environmental review to accompany other supporting studies and reports (Step 3).

The process for the extension of renewing the withdrawal of public lands comprising McGregor Range is governed by the following interrelated laws and regulations:

- The *Engle Act of 1958* requires an Act of Congress for all military withdrawals of 5,000 acres or more. This Act provides the umbrella legislative authority for the MLWA and any legislation to extend the McGregor withdrawal.
- The MLWA established the current withdrawal of McGregor Range, which will terminate on 6 November 2026. The MLWA directs the Secretary of the Army to manage the withdrawn lands and to use them for military training and testing. The MLWA further authorizes the Secretary of the Army to close areas as necessary for military operations, public safety, or national security. The MLWA includes provisions for requesting extension of the withdrawal and makes the Secretary of the Army responsible for all applicable environmental requirements during the withdrawal period.
- The FLPMA was enacted by Congress "to establish public land policy; to establish guidelines for its administration; to provide for the management, protection, development, and enhancement of the public lands; and for other purposes." It is the primary legislation guiding the BLM in its responsibility to manage the public lands and resources in a combination of ways that best serve the present and future needs of the American people.
- The land withdrawal regulations at 43 CFR Part 2300 describe the rules and procedures implementing the Secretary of the Interior's authority to process land withdrawal applications. The application for the extension of the McGregor Range withdrawal would be processed in accordance with 43 CFR Part 2300.

1.7.4 Other Laws and Regulations

Other laws and regulations applicable to the management and use of McGregor Range by, respectively, the BLM and the Army include, but are not limited to, the following:

- *National Historic Preservation Act of 1966* (54 USC § 300101, et seq.) (NHPA);
- *Safe Drinking Water Act* (42 USC § 300 et seq.);
- *Clean Water Act* (33 USC § 1251 et seq.) (CWA);
- *Resource Conservation and Recovery Act* (42 USC § 6901 et seq.) (RCRA);
- *Energy Independence and Security Act* (PL 110-140) (EISA);
- *Comprehensive Environmental Response, Compensation, and Liability Act* (42 USC § 9601 et seq.) (CERCLA);
- Federal *Clean Air Act* (42 USC § 7401 et seq., as amended) (CAA);
- *Migratory Bird Treaty Act* (16 USC § 703–712) (MBTA);
- *Bald and Golden Eagle Protection Act* (16 USC § 668–668d) (BGEPA);
- *Toxic Substances Control Act* (15 USC § 2601 et seq.);
- Federal *Noxious Weed Act of 1974* (PL 93-629);

- *Plant Protection Act of 2000* (PL 106-224);
- EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* (1994);
- EO 13990, *Interim National Environmental Policy Act Guidance on Consideration of Greenhouse Gas Emissions and Climate Change* (Jan 2023), *Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in Army National Environmental Policy Act Reviews* (Jun 2023), and *Army National Environmental Policy Act Requirements for the Assessment of Greenhouse Gas Emission and Climate Change Effects* (Jun 2023);
- EO 13045, *Protection of Children from Environmental Health Risks and Safety Risks* (1997), as amended by EO 13296 (2003); and
- EO 14096, *Revitalizing Our Nation's Commitment to Environmental Justice for All* (2023).

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CHAPTER 2 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

2.1 DESCRIPTION OF THE PROPOSED ACTION

Following extension, Congress would extend the withdrawal supporting McGregor Range. Under the proposed action, the Army would continue the current mission and training activities conducted at McGregor Range, complete previously approved construction and demolition activities, and maintain existing infrastructure. New mission and construction activities proposed by the Army within McGregor Range would be evaluated in separate environmental analyses as required under NEPA and 32 CFR Part 651. All reasonably foreseeable new missions and construction activities are analyzed in the cumulative impacts discussion within this LEA.

2.1.1 Land Withdrawal Extension

Under the proposed action, Congress would extend the withdrawal supporting McGregor Range with substantially the same conditions as provided in the *National Defense Authorization Act for Fiscal Year 2000* (PL 106-65). As mentioned in **Section 1.7.3**, the MLWA established the current withdrawal of McGregor Range, which terminates 6 November 2026. The Army is requesting withdrawal of the public lands constituting McGregor Range for an additional 25 years (until 6 November 2051) starting after the current withdrawal expires. No changes to the current McGregor Range boundary would be requested. Under the proposed action, Congress would extend the withdrawal of 608,835 acres of public land previously withdrawn for military use under PL 106-65. The 71,083 acres of Army fee-owned lands and 18,004 acres of USFS lands used by the Army under the 2007 Agreement would not be affected by the proposed action (see **Section 1.2** and **Figure 1-2**).

2.1.2 Current Training Activities Expected to Continue Should Congress Extend the Withdrawal of Public Lands at McGregor Range

McGregor Range has supported both FIREX and maneuver training exercises that coincide with the Army's mission at Fort Bliss since the 1940s. Mission activities conducted on McGregor Range include training to maintain the operational readiness of active-duty, reserve, and National Guard units of all branches of the US military through various training, operations and field exercises, and testing. McGregor Range is open to the public when authorized by the Army through an FBTC Recreational Access Permit. The Range is closed to the public during training exercises, and the public must receive permission to enter the Range on a case-by-case and day-by-day basis.

The training conducted at McGregor Range ensures the ability of US military units to

- intercept and destroy missiles in flight,
- intercept and destroy aircraft in flight,
- conduct maneuver and live fire training,
- conduct mobilization and pre-deployment training of units at Fort Bliss,
- protect US military forces at home and abroad, and
- safeguard civilian populations.

McGregor Range land uses are distinguished from those of other parts of the FBTC through the live-firing of high-to-medium-altitude missiles. Other uses of McGregor Range include small missile, small arms, and other weapons impact areas; drop zone and landing strip activities; and billeting, administration, and mission support activities at the Range Camps. Much of McGregor Range's surface area is used as SDZs during FIREX. The most southern parts of McGregor Range are used for off-road vehicle maneuver training.

Currently, 12 military uses occur at McGregor Range (**Table 2-1)**. No change in military uses would be anticipated under the proposed action. The FBTC contains 33 numbered training areas (TAs) to help manage and schedule the different training missions. The smaller, more manageable training areas provide greater flexibility in management of land uses and help ensure safety. Training areas are used for the firing of guided missiles, automatic weapons, tank weapons, conventional artillery, aerial gunnery and small arms, launch and control of aerial targets, and explosive ordnance activities at the Orogrande, McGregor/Meyer, and Doña Ana Range complexes; McGregor Range includes 26 of Fort Bliss's 33 training areas (TAs 8–33).

Due to the overlapping nature of training area land uses, the 12 military uses described in **Table 2-1** were grouped into mappable training land use areas (designated A–G and other uses). Each military use carries with it a number of permitted uses that are compatible with each training land use from a mission standpoint. **Table 2-2** lists the mappable training land use areas and indicates which training activities are permitted in each land use area. Depending on the activity, military activities may take place concurrently. **Figure 2-1** shows the mappable land use categories and associated military uses on McGregor Range.

Under the proposed action, the existing military uses at McGregor Range would continue and no change in mission activities would be anticipated. Utilization of McGregor Range would continue in conformance with Army training doctrines and Army management, conservation, and safety requirements.

McGregor Range is used for a variety of military training activities, including heavy, light, and dismounted maneuvers; individual and collective firing ranges; and missile training and testing programs. Approximately half of McGregor Range is used for heavy off-road vehicle maneuvers. Military activities within the Culp Canyon Wilderness Study Area (WSA) and the Black Grama (*Bouteloua eriopoda)* Grassland Area of Critical Environmental Concern (ACEC) are limited to dismounted maneuvers (refer to **Section 3.2.2** for additional information about these areas). Military activities in northeast McGregor Range north of NMCR-A506 include a controlled FTX zone and off-road, light-wheeled vehicle uses within 500 meters (0.3 mile) of existing roads on slopes of less than 30 percent. Under a Memorandum of Agreement between the USFS and the Army, the military uses TA 33 with USFS concurrence. Military activities on TA 33 include on-road vehicle maneuvers and dismounted maneuvers (Fort Bliss, 2021a).

Under the proposed action, the Army would continue the current mission and training activities, construction and demolition activities, and maintain existing infrastructure on McGregor Range. Future mission changes and construction and demolition activities would be evaluated under separate NEPA analysis.

Table 2-1.
McGregor Range Training Complex Military Uses

Military Uses	Description[a]
Off-road vehicle maneuver: heavy	Space for ground units to practice movements and tactics. Different unit types may work in support of one another (combined arms), or a unit may operate on its own to practice a specific set of tasks. The "heavy" designation refers to areas where maneuvers may consist of all types of vehicles and equipment, including both tracked and wheeled vehicles. This category includes fixed sites (e.g., bivouac, assembly, command, logistic support), limited digging (e.g., fighting positions), and other miscellaneous training activities.
Off-road vehicle maneuver: light	Space for ground units to practice movements and tactics. Different unit types may work in support of one another (combined arms), or a unit may operate on its own to practice a specific set of tasks. The "light" designation refers to areas where vehicle maneuvers are restricted to light, wheeled vehicles (e.g., high-mobility, multi-purpose wheeled vehicles). This category includes fixed sites (e.g., bivouac, assembly, command, logistic support), limited digging (e.g., fighting positions), and other miscellaneous training activities.
Dismounted maneuver	Space for ground units to practice movements and tactics. Different unit types may work in support of one another (combined arms), or a unit may operate on its own to practice a specific set of tasks. The "dismounted" designation refers to areas where maneuvers are restricted to foot traffic only. This category includes fixed sites (e.g., bivouac, assembly, command, logistic support), limited digging (e.g., fighting positions), and other miscellaneous training activities.
On-road vehicle maneuver	Use of wheeled or tracked vehicles on existing roads.
Aircraft operations	Fixed-wing and rotary-wing over flights and air-to-air training.
Controlled-access FTX areas	Fixed sites (e.g., bivouac, assembly, command, logistic support), limited digging (e.g., fighting positions), and concentration of troops and vehicles may occur only at designated locations. Controlled FTX allow for fixed sites and specified activities described in this military use at designated locations regardless of the underlying maneuver use.
Mission support facilities	Ranges (including live-fire), test facilities, landing zones/pads/strips, drop zones, radar facilities, and similar facilities.
Live-fire	Firing of individual and crew-served weapons systems (surface-to-surface, surface-to-air, and air-to-surface); launch sites and firing points; laser certified ranges, and similar activities. These activities occur under controlled conditions.
SDZ/safety footprint	Target debris areas and safety footprints for weapons and laser use.
Surface impact areas	Areas in which Range activities are expected to produce unexploded ordnance.
Range camps	Built environment close to training locations that provide limited administrative, living, quality-of-life, and other support services, includes previously approved demolition and construction activities.
Environmental management	Environmental management and training area maintenance activities; conservation efforts including Areas of Critical Environmental Concern and Wilderness Study Areas.

Source: US Army, 2010
Notes:
a Other permitted uses may not necessarily be concurrent with listed training activities.
FTX = field training exercises; SDZ = surface danger zone

Table 2-2.
McGregor Range Land Use Categories and Military Uses

Land Use Categories	Military Uses											
	Off-Road Vehicle Maneuver: Heavy	Off-Road Vehicle Maneuver: Light	On-Road Vehicle Maneuver	Dismounted Maneuver	Aircraft Operations	Controlled-Access FTX	Mission Support Facilities	Live-Fire	SDZ/Safety Footprint	Surface Impact	Range Camps	Environmental Management
A	●	●	●	●	●	●	●	●	●			●
B		●	●	●	●	●	●	●				●
C			●	●	●	●	●	●	●			●
D			●	●	●		●	●	●			●
F			●	●	●	●			●			●
G			●	●	●				●			●
Range Camps					●		●		●		●	●
Surface Impact Areas					●				●	●		
WSA/ACEC				●	●				●			●

Source: US Army, 2010
Notes:
● Military use category occurs in training land use; uses may not be concurrent.
ACEC = area of critical environmental concern; FTX = field training exercises; SDZ = surface danger zone; WSA = Wilderness Study Area

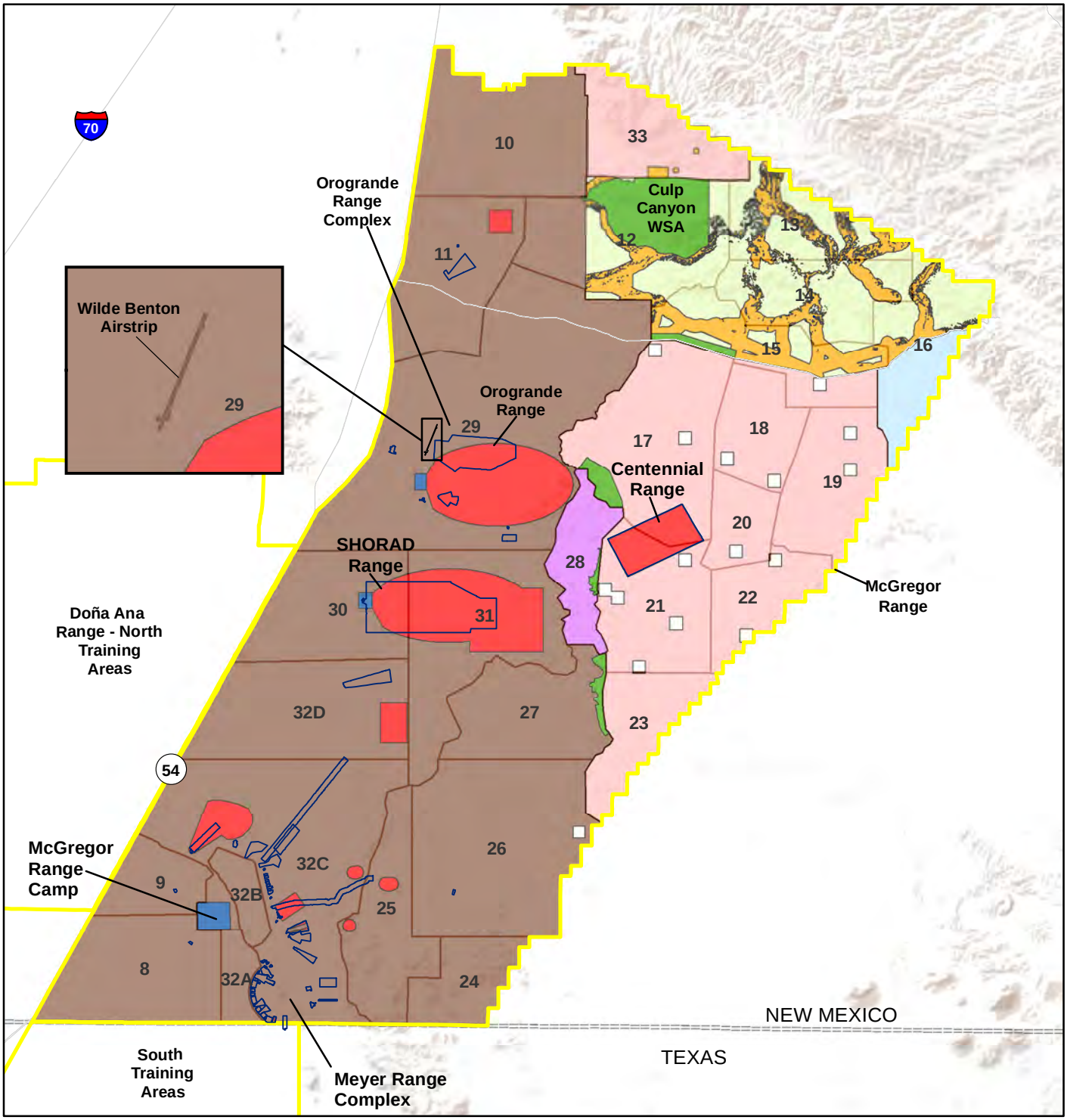


FIGURE 2-1
McGregor Range Land Use

- Installation Boundaries
- Ranges
- A
- B
- C
- D
- F
- G
- Range Camps
- Surface Impact Areas
- WSA/ACEC

N

0 5 Miles

Coordinate System: WGS 1984 UTM Zone 13N

2.1.2.1 McGregor Range Firing Range Complexes

Two complexes of firing ranges exist on McGregor Range: Orogrande Range Complex, east of Orogrande, and McGregor/Meyer Range Complex adjacent to the McGregor Base Camp, north of the Texas/New Mexico border. The Orogrande Range Complex is a multi-echelon training complex focused on platoon qualification and Company/Battalion-level collective task training. It allows units to conduct platoon or larger gunnery exercises on a Digital Multi-Purpose Range Complex (DMPRC) and a Digital Air/Ground Integration Range (DAGIR). Additionally, a Combined Arms Collective Training Facility, urban assault course, machine gun range, light demolition range, and a live-fire shoot house are located on the Orogrande Range Complex. There is space to combine maneuver and gunnery on the DMPRC and the DAGIR. The US Army Operational Test Command Air Defense Artillery Test Directorate uses the Orogrande Range Complex to conduct operational tests and experiments. Finally, the Orogrande Range Complex has the capability to instrument aerial and ground systems, collect precise system performance data, process these data, and provide comprehensive analytical reports (Fort Bliss, 2021a).

The McGregor/Meyer Range Complex supports individual qualification and basic skills training for crews and squad drills and Overseas Contingency Operations Mobilization task training. It provides individual weapons training, small arms weapons qualification ranges, convoy live-fire courses, live-fire/breach facility, shoot houses, and an urban assault course. The McGregor/Meyer Range Complex has 18 firing ranges for small arms familiarization and qualification. Two of these ranges are equipped with the Remote Electronic Target System. The McGregor/Meyer Range Complex also contains grenade ranges; a nuclear, biological, and chemical gas chamber; a light anti-tank range; an individual tactical training range; and a pistol qualification range. The Short-Range Air Defense (SHORAD) Range within the McGregor/Meyer Range Complex has 16 firing points for forward area air defense and laser weapons systems and supports combined arms operational testing. Detainee operation training occurs within the training detention facility located within the McGregor/Meyer Range Complex. The McGregor Base Camp is located within the complex to support units using it (Fort Bliss, 2021a).

2.1.2.2 McGregor Range Airspace

There are three Restricted (R-) Area airspaces in McGregor Range: R-5103A, R-5103B, and R-5103C (**Figure 2-2**). Typical missions conducted in the R-5103 airspace include aerial gunnery missions, paradrop missions, and low-altitude aerial tactical navigation; these missions can be conducted day or night. The R-5103A airspace supports mission operations from ground surface to 17,999 feet above mean sea level and the R-5103B and R-5013C airspace support mission operations from ground surface to unlimited. Use of all three restricted airspace use is scheduled by Fort Bliss Directorate of Plans, Training, Mobilization, and Security/Range Control, with the Albuquerque Air Route Traffic Control Center as the controlling agency.

Two major Air Force and Army joint-use assets are located on McGregor Range. Holloman Air Force Base (AFB) and Fort Bliss use the Centennial Range, consisting of approximately 5,200 acres on Otero Mesa south of NMCR-A506 for air-to-ground target training. The Wilde Benton airstrip, located in the northern area of McGregor Range, is a 7,800-foot, hard-packed surfaced dirt airstrip capable of handling aircraft up to and including the C-130 and the C-17 (Fort Bliss, 2021a).

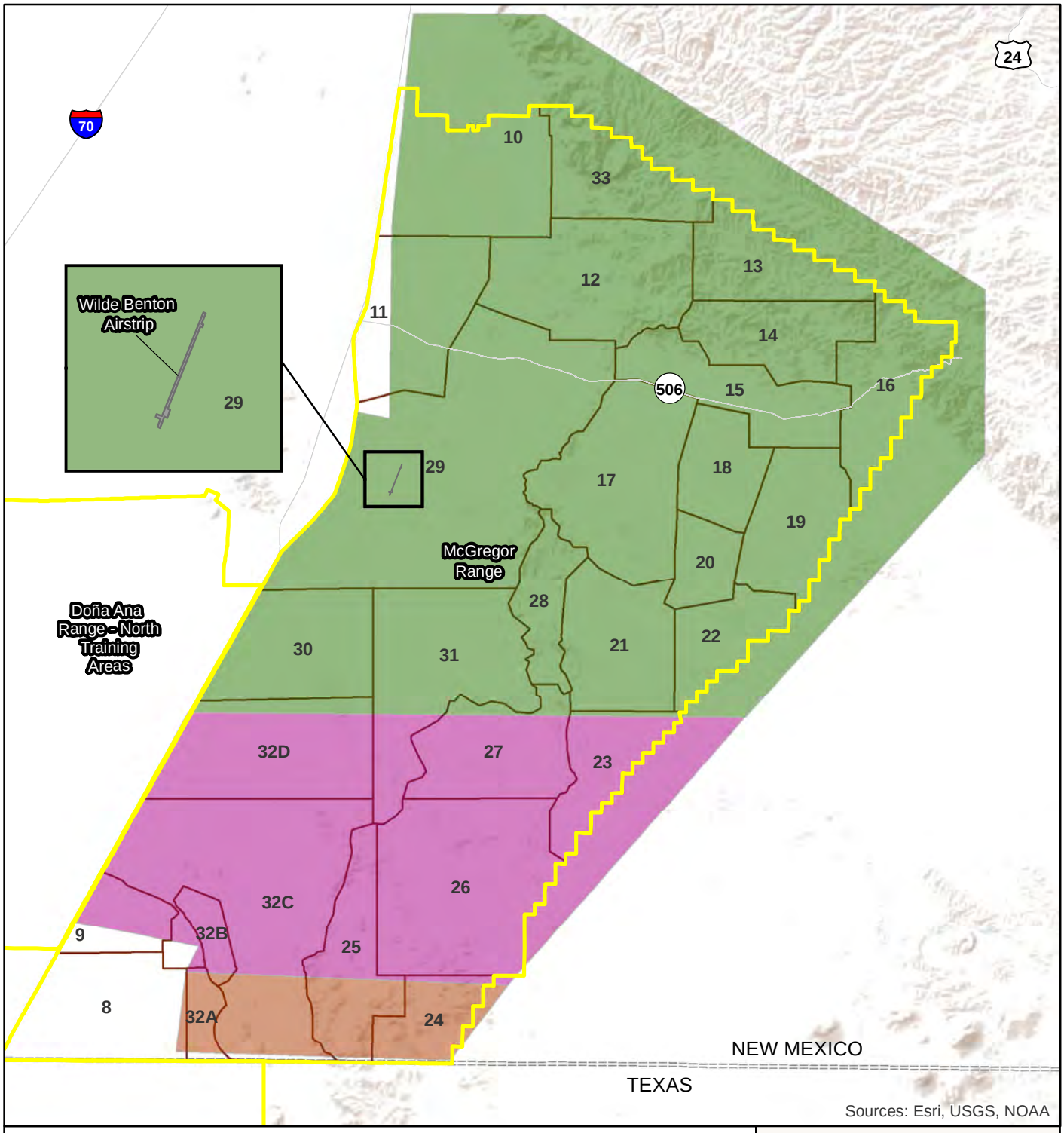


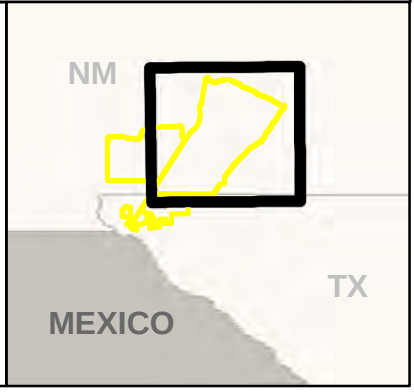
FIGURE 2-2
McGregor Range Restricted Airspace

Installation Boundaries
R-5103C
R-5103A
R-5103B

N

0 5 Miles

Coordinate System: WGS 1984 UTM Zone 13N



2.2 SELECTION STANDARDS FOR ALTERNATIVES SCREENING

The following selection standards were developed to establish a means for determining the reasonableness of an alternative and whether an alternative should be carried forward for further analysis in the LEA. Consistent with 32 CFR § 651.34, the following selection standards meet the purpose of and need for the proposed action and were used to identify reasonable alternatives for analysis in the LEA. The supporting alternatives must

1. provide for enough off-road vehicle maneuver training area for utilization and land rehabilitation;

2. provide area for new or modified ranges to accommodate changes in SDZs for future weapons or ammunition types;

3. provide noise compatibility and adequate buffer zones;

4. provide for all the training benefits, including Battalion-level movement-to-contact exercise capability and a variety of terrain environments, and offer capacity and flexibility to accommodate future mission changes and training requirements;

5. retain the Army capability to fully utilize investment in facilities and improvements with no outside constraints or additional capital investments; and

6. be on land currently owned, leased, or withdrawn for Army use (would not require purchase, lease, or withdrawal of land not previously under Army control).

2.3 ALTERNATIVES

NEPA and CEQ regulations mandate the consideration of reasonable alternatives to the proposed action. "Reasonable alternatives" are those that could meet the purpose of and need for the proposed action. The NEPA process is intended to support flexible, informed, decision-making; the analysis provided by this LEA and feedback from stakeholders will inform decisions Congress might make about whether, when, and how to execute the proposed action. Among the alternatives evaluated for each project is a no action alternative, which evaluates the potential consequences should Congress not extend the withdrawal that supports Army activities on McGregor Range and serves to establish a comparative baseline for analysis.

Based on the selection standards outlined in **Section 2.2**, the Army identified no reasonable alternatives to the proposed action.

2.3.1 Proposed Action – Extension of the Withdrawal of Public Lands

The proposed action is described in detail in **Section 2.1**.

2.3.2 No Action Alternative

CEQ NEPA regulations require evaluation of the no action alternative. The no action alternative serves as a baseline for evaluating the impacts of the proposed action.

Under the no action alternative, Congress would not extend the withdrawal of the 608,385 acres of public land currently withdrawn in support of the military mission on McGregor Range. Oversight of the land would return to the BLM with public access extremely limited until cleanup of all contamination from munitions use is complete. If Congress does not extend the withdrawal, use of McGregor Range for mission training activities focusing on vehicular maneuver and FIREX would no longer exist. Because these training activities require extensive land masses and remote locations, these critical mission operations currently being conducted on McGregor by the Army, Air Force, and other Federal agencies could not be moved to another location on Fort Bliss. They would need to be transferred to other Department of Defense (DoD)

installations capable of integrating them into their existing mission activities. There would be no further military use of the land returned to the public domain. Restricted airspace above the land area would continue to be used for aircraft training by Army aviation and US Air Force units. The existing space for mission training activities and associated infrastructure would not exist within McGregor Range. Any future missions planning to use McGregor Range would need to be relocated elsewhere. In addition, the training conducted and facilities located on the following ranges would have to be relocated to other DoD installations:

- Orogrande Range 83 DAGIR and Range 88 DMPRC;
- McGregor Range Camp;
- Wilde Benton Airstrip;
- SHORAD Range; and
- McGregor Range Firing Complex, consisting of 30 small arms ranges M4 Zero through M240B qualification as well as sniper and MK-19 ranges and collective ranges to include Range 37 Convoy Live Fire (CLF) and Range 40 Infantry Platoon Battle Course (IPBC).

2.3.3 Alternatives Considered But Not Carried Forward

The Army considered additional alternatives for the proposed action as described below.

2.3.3.1 Relocate Training on McGregor Range to Doña Ana Range

Under this alternative, training conducted on McGregor Range as well as training facilities would be moved to Doña Ana Range. This alternative is unreasonable because of both cost and the resulting reduction in readiness training capacity, which would not meet selection standards 4 and 5. McGregor constitutes approximately 62 percent of the total Fort Bliss land area and comprises 26 training areas, 40 ranges, 21 training facilities, and 32 launch sites. Doña Ana Range does not have the land mass to absorb current McGregor Range missions. Attempts to relocate McGregor missions to Doña Ana would result in a significant reduction of the capacity for maneuver and combat readiness training. For instance, military units would not be able to conduct pre-deployment Combined Arms Live Fire Exercises (CALFEXs), which validate the ability of Company Commanders to plan and conduct a tactically sound, safe, and realistic live fire, applying the principles of mechanized maneuver tactics, and syncing air and ground live fire operations within a realistic combat environment. CALFEX is a crucial home station training need prior to readiness and preparation for National Training Center (NTC) validation prior to deployment. Additionally, Doña Ana and Oro Grande base camps are not equipped to absorb current McGregor base camp populations. Relocation of McGregor Range facilities would require costly construction and development at Doña Ana Range, which would not meet selection standard 5. For these reasons, this alternative is not carried forward for full analysis.

2.3.3.2 Return the Centennial Bombing Range to BLM for Public Use

Under this alternative, use of the Centennial Bombing Range (CBR) by the Air Force would be discontinued and the area would be transferred to federal public land. This alternative is unreasonable because it would make training more costly and would also require a long and expensive remediation effort, which would not meet selection standard 5. If the CBR were eliminated as a critical training asset for the Air Force, a new bombing range would need to be located elsewhere. Discontinuing operations on the CBR would increase flight time for aircraft as they would need to travel greater distances to conduct training. The closest established bombing range to Fort Bliss is Red Rio which is 105 miles north at White Sands Missile Range. Increased travel for aircraft would result in increased fuel costs to existing military aviation units and increased emissions releases in the area. Closing the CBR would impact Holloman and Davis-Monthan Air Force Bases, Fort Bliss Air Units, and other US military service branches along with US Allies. Closing the CBR also would require funding to conduct military munitions remediation before the parcel could be made available for public use. For these reasons, this alternative is not carried forward for full analysis.

2.3.3.3 Return Culp Wilderness Study Area to Status as Public Land

This alternative was eliminated from further consideration. Military use of the Culp WSA includes dismounted operations (soldiers traveling by foot) and light infantry tactics. This training provides technological capabilities that the soldier utilizes in scrub woodland and mountainous terrains to prepare for and use during combat deployments. The WSA also serves as a buffer for missile training and testing missions conducted by the US and its Allies, separating public land with unlimited access from the CBR. Loss of the Culp WSA would both reduce training capacity and increase danger to the public, which would not meet selection standard 4. For these reasons, this alternative is not carried forward for full analysis. It should be noted that the Culp WSA is currently available for limited public uses for hunting and recreation.

2.3.3.4 Move All Training Currently Conducted on McGregor Range to Another Army Installation

Under this alternative, soldiers at Fort Bliss would conduct field training at other Army installations with similar facilities. These could be places that are hundreds of miles away from Fort Bliss, such as Fort Cavazos, Texas, or Fort Carson, Colorado. This would be impractical for several reasons. First, those locations are already dedicated to training the soldiers who are stationed there. In addition, moving Fort Bliss units to distant locations would be both expensive and time-consuming, which would not meet selection standard 5. Soldiers would be taken away from their home station and their families more than they already are for remote training and deployments. For these reasons, this alternative is not carried forward for full analysis.

2.4 SUMMARY OF ENVIRONMENTAL CONSEQUENCES

The potential impacts associated with proposed action and no action alternative are summarized in **Table 2-3**. The summary is based on information discussed in detail in **Chapter 3** (Affected Environment and Environmental Consequences) of this LEA and includes a concise definition of the issues addressed and the potential environmental impacts associated with each alternative.

Table 2-3.
Summary of Environmental Consequences

Resource	Proposed Action	No Action
Land Use	Would result in no significant impacts or changes to land use within McGregor Range.	Would result in long-term changes to land use within McGregor Range.
Air Quality, including Greenhous Gas and Climate Change	Would result in no significant impacts or changes to air quality or the attainment status of the El Paso-Las Cruces-Alamogordo Intrastate Air Quality Control Region.	Could result in long-term, minor, adverse impacts to air quality for criteria pollutants in other regions from relocation of military activities. Could result in short-term exceedance of Prevention of Significant Deterioration thresholds for particulate matter (PM_{10}) emissions from clean-up efforts to restore the land to public use and remove military infrastructure. Would result in long-term, beneficial impacts to the El Paso-Las Cruces-Alamogordo Intrastate Air Quality Control Region from the discontinuation of military use.

Resource	Proposed Action	No Action
Airspace	Would result in no significant impacts or changes to airspace within McGregor Range.	If the restricted airspace within McGregor Range is maintained in its current configuration, the no action alternative would not affect airspace or airport activities in the airspace region of influence (see **Section 3.4.1**).
Earth Resources	Would result in no direct or indirect impacts to geology, topography, and soils; negligible, adverse impacts to paleontology.	Would result in beneficial impacts to soils from reduced compaction and discontinuation of live-fire involving surface-to-surface and air-to-surface missiles.
Water Resources	Would result in no adverse impact on water resources.	Would result in no adverse impacts to water resources.
Biological Resources	Would result in no adverse impact to biological resources.	Would result in no adverse impacts to biological resources. In addition, the removal of military activity would have beneficial impacts in those areas that are now subject to land and human disturbance. Vegetation would recover, and wildlife species that currently avoid those areas may reoccupy those areas in the absence of human activity or after recovery of vegetation.
Cultural Resources	Would result in no adverse impacts to cultural resources.	Would result in no adverse impacts to cultural resources.
Noise	Would result in no significant, adverse impacts to the noise environment.	Would result in a minor, beneficial impact on noise levels within and near McGregor Range due to the reduction in military activities at McGregor Range.
Hazardous Materials and Waste, Toxic Substances, and Contaminated Sites	Would result in minor, adverse impacts to hazardous materials, petroleum products, waste, toxic substances, and contaminated sites.	Would be anticipated to result in minor, adverse impacts to hazardous materials, wastes, and toxic substances from demolition activities. Relocating the Range activities to a new location could result in impacts from residues associated with live-fire and munitions if the land had not already been previously impacted by live-fire and munitions. Relocating Range activities to another location would be evaluated under separate environmental analysis. There would be long-term, beneficial impacts due to cleanup of the Environmental Restoration Program site and live-fire and munitions sites at McGregor Range. In addition, there would no longer be a need for bulk storage of materials in above- or belowground storage tanks on the Range, and the use of hazardous materials by Fort Bliss personnel on the Range would end. This would eliminate the current risks associated with hazardous chemicals usage, such as a release or other accidents.

Resource	Proposed Action	No Action
Infrastructure, including Transportation and Utilities	Would result in no adverse impacts to potable water supply, communications, solid waste, transportation, electricity, or natural gas.	Would be anticipated to result in long-term, beneficial impacts to infrastructure. Would result in long-term, beneficial impacts to the Rio Grande and Mesilla and Hueco Bolson basins because of the potential to alleviate some of the strain on the Rio Grande and Mesilla and Hueco Bolson basins that supply potable water for the Range.
Safety	Would result in no adverse impacts to ground and explosives safety.	Would have a long-term, adverse impact on safety within McGregor Range. Areas within the Range have had extensive mission operations and exercises, which would require considerable effort to clean up for public use. In addition, long-term, beneficial impacts to ground and explosives safety would occur. By returning McGregor Range to the BLM, military training exercises and missions would cease. There would be no unexploded ordnance from training missions in surface impacts areas, live-fire and missile training would not continue, and the overall safety of McGregor Range would improve.
Socioeconomics	Would result in no adverse impacts to socioeconomics.	Would result in a long-term, adverse impacts to socioeconomics.
Environmental Justice and Protection of Children	Would result in no adverse impacts to environmental justice and protection of children.	Would result in no adverse impacts to environmental justice and protection of children.

CHAPTER 3 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

3.1 ANALYSIS APPROACH

To provide a framework for the analyses in this LEA, the Army defined a study area specific to each resource or sub-resource area. Referred to as a ROI, these areas delineate a boundary where possible effects from the considered alternatives would have a reasonable likelihood to occur. Beyond these ROIs, potential adverse effects on resources would not be anticipated. For the purposes of analysis, potential effects are described as follows:

- **Beneficial –** positive effects that improve or enhance resource conditions;
- **Adverse –** negative or harmful results;
- **Negligible –** effects likely to occur but at levels not readily observable by evaluation;
- **Minor –** observable, measurable, tangible effects qualified as below one or more significance threshold(s);
- **Moderate –** tangible effects that are readily apparent, qualified as below one or more significance threshold(s); and
- **Significant –** obvious, observable, verifiable effects qualified as exceeding one or more significance threshold(s); not mitigable to below significance.

When relevant to the analyses in this LEA, potential effects are further defined as direct or indirect; short- or long-term; and temporary, intermittent, or permanent. Based upon the nature of the proposed action and the affected environment, both qualitative and quantitative thresholds were used as benchmarks to qualify effects. Further, a cumulative effects analysis considering the proposed action in conjunction with other past, present, and reasonably foreseeable planned actions is described in **Section 4**.

3.2 LAND USE

3.2.1 Definition of the Resource

Land use is the natural or developed condition of a given parcel of land or area and the type of functions and structures it supports. Land use designations vary by jurisdiction, but common terms include residential, commercial, industrial, agricultural, and recreational space. Land use is typically guided and regulated by management plans, policies, regulations, and ordinances that determine the type and extent of land use allowable in specific areas, including specially designated land uses or environmental conservation lands. Land use within McGregor Range is broadly classified and managed using planning districts, which are areas that contain common functions and types of operational activities. The *Fiscal Year (FY) 25–31 Range Complex Master Plan* for McGregor Range establishes range and maneuver land requirements supporting the Installation training mission and the Senior Commander's prioritized training requirements (US Army, 2023a).

For a list of laws and regulations related to land use, the proposed action, and the process for withdrawal of public lands see **Section 1.7.3**.

The ROI includes the 608,385 acres of BLM-withdrawn public lands within McGregor Range.

3.2.2 Existing Conditions

Section 1.2 and **Figure 1-1** provide information regarding the location of Fort Bliss and McGregor Range. McGregor Range is approximately 62 percent of the total Fort Bliss land area and contains 26 training areas. Approximately 87 percent of McGregor Range (more 600,000 acres) is public land administered by

the BLM and co-managed by Fort Bliss and the BLM under the 2007 Agreement (per PL 106-65). Per the Agreement, Fort Bliss controls construction and maintenance of improvements for McGregor Range (DOI, 2007). Approximately 10 percent (71,000 acres) of McGregor Range is land owned-in-fee by the Army. The remainder of McGregor Range, approximately 3 percent (18,000 acres), is part of the Lincoln National Forest, which is public land managed by the USFS. Only the 608,385 acres of BLM-withdrawn public lands within McGregor Range are included for renewal as part of the proposed action (US Army, 2010). McGregor Range includes seven major land uses, which are described below.

Military Land Use

McGregor Range is used for a variety of missile testing and training programs, individual and collective training ranges, and unit field maneuver. Two complexes of ranges are located on McGregor Range: Orogrande Range east of the town of Orogrande, and Meyer Range, adjacent to the McGregor Range Camp north of the Texas/New Mexico border. Wilde Benton, a 2-mile-long dirt airstrip, exists slightly north and east of the Orogrande Range (**Figure 2-2**). Approximately half of McGregor Range (352,000 acres), permits the Off-Road Vehicle Maneuver: Heavy military use. Controlled FTX military activities (allowing concentrations of personnel and vehicles at fixed sites and digging) are designated in areas where off-road vehicle maneuver is not permitted, except TA 33. Under an agreement between the USFS and the Army, military use is permitted on TA 33 with the concurrence of the USFS.

Centennial Bombing Range, consisting of approximately 5,200 acres within McGregor Range on Otero Mesa south of NMCR-A506 (occupying portions of TAs 17 and 21), is used for air-to-ground target training (US Army, 2010).

Non-Military Land Uses

Non-military uses are allowed on McGregor Range provided they do not conflict with military uses or pose safety risks to the public. The BLM's Record of Decision and Resource Management Plan Amendment for McGregor Range (May 2006) documents the most recent management plan for the 606,233 acres of public land now withdrawn from the public domain for military use, detailing the co-management responsibilities of BLM and Fort Bliss on withdrawn lands and Army fee-owned lands with regard to lands, rangeland management, and recreation, as well as habitat management and special species management, cultural resources, and fire management (US Army, 2010).

Public Road Access and Utility Rights of Way

Under the terms of the 2007 Agreement (DOI, 2007) and PL 106-65, Section 3014, *Management of Lands*, paragraph (a)(2)(B), the BLM authorizes rights of way on a case-by-case basis with the concurrence of Fort Bliss. Fort Bliss is responsible for authorizing rights of way and short-term leases and permits on the Army fee-owned lands. NMCR-A506 provides access to the southeastern portion of Otero County and to Dell City, Texas, as well as to communities in the southern part of the Sacramento Mountains. For certain training activities, Fort Bliss closes NMCR-A506. Smaller Range roads provide the only ingress to some grazing allotments in the northern part of McGregor Range on USFS land and in the Culp Canyon WSA. The BLM's Record of Decision and Resource Management Plan Amendment for McGregor Range designates two linear corridors to accommodate future utilities (e.g., power line, pipeline, fiber optics) and identifies 171,948 acres to be excluded from consideration for any type of right of way unless otherwise mandated by law (i.e., right-of-way exclusion areas) (US Army, 2010).

Public Recreation

Fort Bliss and the BLM share responsibilities for access permits on both the withdrawn lands and the Army fee-owned lands. The BLM does not allow recreational off-road vehicle use on McGregor Range. Per EO 11644, amended by EO 11989, this prohibition does not apply to combat or combat support vehicles when used for national defense purposes. The NMDGF, Fort Bliss, and the BLM share responsibilities for hunting on McGregor Range. The NMDGF authorizes hunts for big game on McGregor Range in the Fort Bliss and BLM joint-use areas (US Army, 2010). Other common recreational uses allowed with a permit include biking, bird watching, camping, hiking, horseback riding, and scouting events.

Livestock Grazing

The BLM is responsible for livestock grazing, including permitting/leasing and overall management on both the withdrawn lands and the Army fee-owned lands. The BLM and Fort Bliss share responsibilities for livestock water maintenance. The maintenance and construction of livestock control fences and water pipelines are the responsibility of the BLM for areas on McGregor Range outside impact areas. Fort Bliss is responsible for maintenance and construction of livestock control fences inside impact areas on McGregor Range.

Per PL 106-65 and the 2007 Agreement, the BLM manages livestock grazing on approximately 270,000 acres (DOI, 2007). The BLM grazing is limited to 14 grazing units. The actual number of units available each year for grazing, their season of use, and the livestock use of each grazing unit varies, depending upon ecological conditions (US Army, 2010).

Wilderness Study Areas

The BLM and Fort Bliss share responsibilities regarding WSA management and compliance on the withdrawn lands. Pursuant to the FLPMA and the *Wilderness Act of 1964*, WSAs are roadless areas that the BLM manages so as not to impair their suitability for preservation as wilderness until Congress acts to either permanently protect them as Wilderness Areas or release them from WSA status to non-wilderness areas. Culp Canyon WSA consists of approximately 11,000 acres in TA 12. While Fort Bliss uses the WSA for military training, activity within the Culp Canyon WSA is limited to dismounted maneuver and other recreational activities as mentioned above (US Army, 2010).

Area of Critical Environmental Concern

The 3,718-acre Black Grama Grassland ACEC is situated on four sites in the northeastern portion of McGregor Range. The BLM, Fort Bliss, and New Mexico State University share responsibility for management of the Black Grama Grassland ACEC through a cooperative agreement among the three entities. The Black Grama Grassland ACEC is closed to motorized vehicle use (US Army, 2010).

3.2.3 Environmental Consequences

3.2.3.1 Evaluation Criteria

A significant impact on or from land use within the ROI would occur if the proposed action results in the following:

- land use that would discontinue or substantially change existing or adjacent land use; and/or
- land use that would be inconsistent with applicable management plans, policies, regulations, and ordinances.

3.2.3.2 Proposed Action

The proposed action would not result in any significant impacts or changes to land use or noise zones in the ROI. Under the proposed action, the withdrawal of public lands would be renewed, which would allow the US Army to continue its current mission, continue military training for the US Army and other services and allied forces, and provide flexibility to support future programs based on McGregor Range's mission capabilities. Under the proposed action, ongoing mission activities would continue to be managed to minimize potential environmental impacts, as described in *McGregor Range Resource Management Plan* (Fort Bliss, 2006), *Integrated Natural Resources Management Plan* (INRMP) (Fort Bliss 2021a), *Integrated Cultural Resources Management Plan* (ICRMP) (Fort Bliss, 2022a), and other environmental plans. Noise zones and impacts are described in **Section 3.9**.

3.2.3.3 No Action Alternative

The no action alternative would be anticipated to have a permanent, but less than significant, adverse impact on current land use within the ROI. Under the no action alternative, the land withdrawal at McGregor Range would not be renewed and oversight of the land would be returned to the BLM. There would be no further military use of the land returned to the public domain. Restricted airspace above the land area would continue to be used for aircraft training by Army aviation and US Air Force units within the region.

If the land withdrawal is not renewed, the existing space for mission training activities and associated infrastructure would not exist within McGregor Range. Potential future missions planning on using McGregor Range would need to be relocated elsewhere. In addition, the training conducted and facilities located on the following ranges would have to be relocated to other DoD installations:

- Orogrande Range 83 DAGIR and Range 88 DMPRC;
- SHORAD Range; and
- McGregor Range Firing Complex, consisting of 30 small arms ranges M4 Zero through M240B qualification as well as sniper and MK-19 ranges and collective ranges to include Range 37 CLF and Range 40 IPBC.

Areas within McGregor Range have had extensive mission operations and exercises, which would require considerable effort to clean up for public use under the no action alternative. Studies and surveys would be required to determine the extent of potential hazards to the public and the hazards would need to be remediated to safe levels, which could cause extended delays to these areas being available for other uses. Use of some lands returned to the public domain would be restricted until after cleanup of ordnance and explosive hazards and contaminated areas have been remediated to safe levels. Some areas may be deemed too costly to clean up and would remain permanently inaccessible to public use.

According to the Military Munitions Rule and USEPA munitions response guidelines, military munitions are excluded from the regulatory definition of solid waste when fired on an operational range under the management of the DoD. Under the no action alternative, the ownership of the land from the operational ranges would be transferred to the BLM, and the military munitions would no longer be exempt, resulting in the need for CERCLA-related munitions response actions. Accordingly, the Army would be required to take action as required by CERCLA for cleanup of military munitions. This would trigger the Environmental Condition of Property process, which would culminate in the preparation of an Environmental Baseline Survey as well as additional environmental investigations.

Once the lands have been returned to the BLM, the BLM would be responsible for managing and maintaining the lands for multiple uses and sustained yield.

3.3 AIR QUALITY, INCLUDING GREENHOUSE GAS AND CLIMATE CHANGE

3.3.1 Definition of the Resource

Air pollution is a threat to human health and damages trees, crops, other plants, waterbodies, and animals. It creates haze or smog that reduces visibility in national parks and cities and interferes with aviation. To improve air quality and reduce air pollution, Congress passed the CAA and its amendments in 1970 and 1990, which set regulatory limits on air pollutants and help to ensure basic health and environmental protection from air pollution.

The USEPA has divided the country into geographical regions known as air quality control regions to evaluate compliance with the National Ambient Air Quality Standards (NAAQS). In accordance with CAA requirements, the air quality in each region is measured by the concentration of various pollutants in the atmosphere. Measurements of these “criteria pollutants” in ambient air are expressed in units of parts per million (ppm) or in units of micrograms per cubic meter ($\mu g/m^3$). The ROI is the El Paso-Las Cruces-

Alamogordo Intrastate Air Quality Control Region (AQCR) (40 CFR § 81.82), which includes McGregor Range.

The CAA directed the USEPA to develop, implement, and enforce environmental regulations that would ensure clean and healthy ambient air quality. To protect public health and welfare, the USEPA developed numerical concentration-based standards (i.e., NAAQS) for pollutants that have been determined to impact human health and the environment and established both primary and secondary NAAQS under the provisions of the CAA (**Table 3-1**). The primary NAAQS represent maximum levels of background air pollution that are considered safe, with an adequate margin of safety to protect public health. Secondary NAAQS represent the maximum pollutant concentration allowable for the protection of vegetation, crops, and other public resources in addition to maintaining visibility standards.

Ozone is not usually emitted directly into the air but is formed in the atmosphere by photochemical reactions involving sunlight and previously emitted pollutants, or "ozone precursors." These ozone precursors consist primarily of nitrogen oxides and volatile organic compounds that are directly emitted from a wide range of emission sources. For this reason, regulatory agencies limit atmospheric ozone concentrations by controlling volatile organic compound pollutants (also identified as reactive organic gases) and nitrogen oxides.

When a region or area meets NAAQS for a criteria pollutant, that region or area is classified as in "attainment" for that pollutant. When a region or area fails to meet NAAQS for a criteria pollutant, that region or area is classified as "nonattainment" for that pollutant.

Per the CAA, the USEPA's Prevention of Significant Deterioration (PSD) New Source Review permit program regulates criteria and certain non-criteria air pollutants for air quality control regions designated as unclassified or in attainment status with respect to the Federal standards. In such areas, a PSD review is required for new "major source" or "major modification of existing source" emissions that exceed 100 or 250 tons per year (tpy) of a regulated CAA pollutant, dependent on the type of major stationary source. For "minor source" emissions, a PSD review is required if a project increases a "major source" threshold.

Greenhouse Gas

Greenhouse gases (GHGs) are gases that trap heat in the atmosphere. These emissions are generated by both natural processes and human activities. The accumulation of GHGs in the atmosphere helps regulate the earth's temperature and contributes to global climate change. GHGs include water vapor, carbon dioxide, methane, nitrous oxide, ozone, and several hydrocarbons and chlorofluorocarbons. Each GHG has an estimated global warming potential, which is a function of its atmospheric lifetime and its ability to absorb and radiate infrared energy emitted from the earth's surface. The global warming potential of a particular gas provides a relative basis for calculating its carbon dioxide-equivalent (CO_2e) or the amount of CO_2e to the emissions of that gas. Carbon dioxide has a global warming potential of 1 and is therefore the standard by which all other GHGs are measured. The GHGs are multiplied by their global warming potential, and the resulting values are added together to estimate the total CO_2e.

The USEPA regulates GHGs primarily through a permitting program known as the GHG Tailoring Rule. This rule applies to GHG emissions from larger stationary sources. Additionally, the USEPA promulgated a rule for large GHG emission stationary sources, fuel and industrial gas suppliers, and carbon dioxide injection sites if they emit 25,000 metric tons or more of CO_2e per year (40 CFR § 98.2(a)(2)).

Table 3-1.
National Ambient Air Quality Standards

Pollutant		Primary/ Secondary[a,b]	Averaging Time	Level[c]	Form
Carbon monoxide		Primary	8 hours	9 ppm	Not to be exceeded more than once per year
			1 hour	35 ppm	
Lead		Primary and Secondary	Rolling 3-month average	0.15 µg/m^3	Not to be exceeded
Nitrogen dioxide		Primary	1 hour	100 ppb	98th percentile of 1-hour daily maximum concentrations, averaged over 3 years
		Primary and Secondary	1 year	53 ppb	Annual mean
Ozone		Primary and Secondary	8 hours	0.070 ppm	Annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years
Particle Pollution	$PM_{2.5}$	Primary	1 year	12.0 µg/m^3	Annual mean, averaged over 3 years
		Secondary	1 year	15.0 µg/m^3	Annual mean, averaged over 3 years
		Primary and Secondary	24 hours	35 µg/m^3	98th percentile, averaged over 3 years
	PM_{10}	Primary and Secondary	24 hours	150 µg/m^3	Not to be exceeded more than once per year onaverage over 3 years
Sulfur dioxide		Primary	1 hour	75 ppb	99th percentile of 1-hour daily maximum concentrations, averaged over 3 years
		Secondary	3 hours	0.5 ppm	Not to be exceeded more than once per year

Source: NAAQS table

µg/m^3 = micrograms per cubic meter; NAAQS = National Ambient Air Quality Standards; $PM_{2.5}$ = particulate matter less than or equal to 2.5 microns in diameter; PM_{10} = particulate matter less than or equal to 10 microns in diameter; ppb = parts per billion; ppm = parts per million; USEPA = US Environmental Protection Agency

Notes:

a. Primary Standards: the levels of air quality necessary, with an adequate margin of safety to protect public health. Each state must attain the primary standards no later than three years after that state's implementation plan is approved by the USEPA.

b. Secondary Standards: the levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

c. Concentrations are expressed first in units in which they were promulgated.
   (1) In areas designated nonattainment for the lead standards prior to the promulgation of the current (2008) standards, and for which implementation plans to attain or maintain the current (2008) standards have not been submitted and approved, the previous standards (1.5 µg/m^3 as a calendar quarter average) also remain in effect.
   (2) The level of the annual nitrogen dioxide standard is 0.053 ppm. It is shown here in terms of ppb for the purposes of clearer comparison to the 1-hour standard level.
   (3) Final rule signed October 1, 2015, and effective December 28, 2015. The previous (2008) ozone standards are not revoked and remain in effect for designated areas. Additionally, some areas may have certain continuing implementation obligations under the prior revoked 1-hour (1979) and 8-hour (1997) ozone standards.
   (4) The previous sulfur dioxide standards (0.14 ppm 24-hour and 0.03 ppm annual) will additionally remain in effect in certain areas: (1) any area for which it is not yet 1 year since the effective date of designation under the current (2010) standards, and (2) any area for which an implementation plan providing for attainment of the current (2010) standard has not been submitted and approved and which is designated nonattainment under the previous sulfur dioxide standards or is not meeting the requirements of a state implementation plan call under the previous sulfur dioxide standards (40 CFR § 50.4(3)). A state implementation plan call is a USEPA action requiring a state to resubmit all or part of its state implementation plan to demonstrate attainment of the required NAAQS.

As directed by EO 13990, CEQ published the *National Environmental Policy Act Guidance on Consideration of Greenhouse Gas Emissions and Climate Change* on 9 January 2023. This guidance updated CEQ's 2016 GHG guidance and states that agencies shall quantify a project's reasonably foreseeable direct and indirect GHG emissions and monetize the social cost of those GHG emissions (i.e., calculate the social cost of GHG [SC GHG]). The SC GHG estimates the incremental increases in GHG emissions, such as reduced agricultural productivity, human health effects, property damage from increased flood risk, and the value of ecosystem services. EO 13990 also encourages agencies to avoid and mitigate GHG emissions to the greatest extent possible. The current social cost of carbon is estimated at $53 per metric ton (International Working Group of the Social Cost of Greenhouse Gas, 2021).

3.3.2 Existing Conditions

3.3.2.1 Regional Climate

The regional climate of Fort Bliss and McGregor Range is a semi-arid to arid subtropical desert climate. The region generally has low rainfall, relatively low humidity, with hot summers and moderate winters. The average July high temperature is 93.1 degrees Fahrenheit (°F) while the average low temperature is 64.7°F. Average temperatures in spring, summer, and fall are 60.9°F (April), 79.0°F (July), and 62.7°F (October), respectively. Winter temperatures tend to be mild; December and January are the coolest months of the year, with an average daily high temperature of 53.9°F and an average minimum temperature of 32°F (National Oceanic and Atmospheric Administration [NOA], 2023).

El Paso normally receives about 10.02 inches of precipitation annually, but extended periods of drought have been recorded (NOAA, 2023). Precipitation follows a bimodal pattern with seasonal peaks in winter and summer. The average snowfall that is received occurs mostly in December (3.4 inches) and January (2.5 inches). Winter rains are more common and are generally characterized by gentle rainfall and occur primarily in December, January, and February with an annual average of 0.79, 0.40 and 0.48 inches, respectively. Winter rains originate from frontal systems that begin in the Pacific Ocean and move eastward across Arizona and into New Mexico. Summer rains result from moisture moving into New Mexico and Texas from Mexico, the Gulf of Mexico, and/or the Gulf of California. Summer rains or monsoons tend to be highly localized and result in brief, torrential downpours often accompanied by high winds and lightning, causing flooding and flows in otherwise dry stream channels. Monsoon season typically occurs from June through September. July is normally the wettest month of the year with an average of 1.80 inches of rain.

New Mexico's climate is gradually changing; most of the state has warmed at least 1°F in the last century. Throughout the southwestern US, heat waves are becoming more common, and snow is melting earlier in spring. Future predictions for our climate suggest an increase of 5–7°F over the next 50 years (Dunbar, 2022). Increasing temperatures are likely to decrease the flow of water in the Colorado, Rio Grande, and other rivers. These impacts will convert some rangelands to desert, limiting livestock production and increasing the frequency and intensity of wildfires (USEPA, 2016). The increased average temperatures are not anticipated to significantly impact the ongoing operations at Fort Bliss and McGregor Range over the course of the proposed action.

Fort Bliss is considered a "major source" contributor for air pollution and maintains a Title V Operating Permit in Texas, which requires monitoring emissions and reporting the findings. Fort Bliss and McGregor Range are located in the El Paso-Las Cruces-Alamogordo Intrastate AQCR, which is in attainment for all NAAQS parameters.

3.3.2.2 Emission Sources

Stationary air emission sources at Fort Bliss include internal combustion engines, fossil fuel fired boilers and heaters, surface coating operations, processes using organic solvents, liquid fuel storage tanks, abrasive blasting operations, unpaved roads, and other miscellaneous activities (Fort Bliss, 2022b).

3.3.3 Environmental Consequences

3.3.3.1 Evaluation Criteria

The environmental impact methodology for air quality impacts presented in this LEA is derived from Air Force Manual 32-7002, *Environmental Compliance and Pollution Prevention* (February 2020). The proposed action is broken down into basic units. For example, a basic development project that consists of replacing a building with a new building could be broken down into demolition (square feet [ft^2]), grading (ft^2), building construction (ft^2 and height), architectural coatings (ft^2), and paving (ft^2). These data are then input into the Air Force's Air Conformity Applicability Model (ACAM), which models emissions based on the inputs and estimates air emissions for each specific criteria and precursor pollutant, as defined in the NAAQS. The calculated emissions are then compared against the applicable threshold based on the attainment status of the ROI. If the annual net increase in emissions from the project are below the applicable thresholds, then the proposed action and alternatives are not considered significant and would not be subject to any further conformity determination. Assumptions of the model, methods, and detailed summary results are provided in **Appendix B** of this EA.

3.3.3.2 Proposed Action

The El Paso-Las Cruces-Alamogordo Intrastate AQCR is in attainment for all criteria air pollutants (40 CFR § 81.332). The PSD thresholds are used as an indicator of potential air quality impact insignificance. Due to the toxicity of lead, however, the use of the lead PSD threshold as an indicator of potential air quality impact insignificance is not protective of human health or the environment. Therefore, the *de minimis* value of 25 tpy for lead is used instead. A PSD value is not used for CO_2e; however, it is still listed within the ACAM model to show that it is below the GHG Tailoring Rule of 25,000 metric tpy. The 250 tpy PSD threshold is used as an indicator of potential air quality impact insignificance for all other parameters.

Routine Fort Bliss operations include vehicle travel over unpaved roads that causes fugitive dust and GHG emissions from internal combustion engines. Vehicle travel on unpaved roads from routine operations has previously been determined to be 126,862 miles and varies across several vehicle types (Fort Bliss, 2022b). A worst-case scenario of 10 miles per gallon of fuel is used to estimate the emissions from the vehicles, for an annual estimated fuel use of 13,000 gallons.

Table 3-2 summarizes the results of the criteria pollutants emissions analysis annualized over the course of implementation of the Proposed Action within the ROI.

Table 3-2.
Annual Air Emissions and PSD Thresholds – Proposed Action

Pollutant	Annual Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (yes or no)
Volatile organic compound	0.352	250	No
Nitrogen oxides	0.120	250	No
Carbon monoxide	2.293	250	No
Sulfur oxides	0.001	250	No
PM_{10}	2.913	250	No
$PM_{2.5}$	0.274	250	No
Lead	0.000	25	No
Ammonia	0.016	250	No
Carbon dioxide-equivalent	219.36	N/A	N/A

N/A = not applicable; $PM_{2.5}$ = particulate matter less than or equal to 2.5 microns in diameter; PM_{10} = particulate matter less than or equal to 10 microns in diameter

The proposed action would not result in any PSD threshold exceedances. The proposed action would not result in any changes to air quality or the attainment status of the ROI. Therefore, there would be no significant impacts. Under the proposed action, the Army would continue the current mission and training activities conducted at McGregor Range. Under the proposed action, the Army would continue the current mission and training activities, construction and demolition activities, and maintain existing infrastructure on McGregor Range. Future mission changes and construction and demolition activities would be evaluated under separate NEPA analysis.

Greenhouse Gas and Climate Change – CO_2e Emissions

The total combined direct and indirect GHG emissions were estimated through ACAM for the estimated ongoing operations of the Proposed Action (**Table 3-3**).

Table 3-3.
GHG Emissions – Proposed Action Annual Operations

CO_2	CH_4	N_2O	CO_2e	Exceedance
198	0.00993337	0.00319348	199	No

CH_4 = methane; CO_2 = carbon dioxide; CO_2e = carbon dioxide-equivalent; N_2O = nitrous oxide

Unlike regional air quality, the affected area of GHG and climate change is global. As such, the intensity or degree of the GHG/climate change effects of the proposed action are compared with the state, US, and global GHG inventories (**Table 3-4**).

Table 3-4.
Total GHG Relative Significance – Proposed Action

Parameter		CO_2	CH_4	N_2O	CO_2e
2024–2035	State total	155,196,766	1,869,961	79,051	157,145,778
2024–2035	US total	15,409,362,537	76,880,735	4,502,123	15,490,745,395
2024–2035	Proposed Action	2,374	0.1192	0.038322	2,389
Percent of state total		0.00038244%	0.00000159%	0.00001212%	0.00037999%
Percent of US total		0.00000385%	0.00000004%	0.00000021%	0.00000385%

CH_4 = methane; CO_2 = carbon dioxide; CO_2e = carbon dioxide-equivalent; N_2O = nitrous oxide

Greenhouse Gas and Climate Change – Social Cost of GHG

On a global scale, the potential climate change effects of an action are indirectly addressed through approximating the long-term monetary damage that may result from GHG emissions effect on climate change. The ACAM social cost of GHG (SC GHG) report is included in **Appendix B**. GHGs produced by fossil-fuel combustion are primarily carbon dioxide, methane, and nitrous oxide. These three GHGs represent more than 97 percent of all US GHG emissions, and the costs per ton are calculated individually instead of through the combined CO_2e. It is important to note that SC GHG is a monetary quantification of the theoretical economic damages that could result from emitting GHGs into the atmosphere. **Table 3-5** presents the cost per ton of GHG emissions for the years of the Proposed Action**.**

Table 3-5.
SC GHG Per Ton[a]

Year	CO_2	CH_4	N_2O
2024	$82.00	$2,200.00	$29,000.00
2025	$83.00	$2,200.00	$30,000.00
2026	$84.00	$2,300.00	$30,000.00
2027	$86.00	$2,300.00	$31,000.00
2028	$87.00	$2,400.00	$32,000.00
2029	$88.00	$2,500.00	$32,000.00
2030	$89.00	$2,500.00	$33,000.00
2031	$91.00	$2,600.00	$33,000.00
2032	$92.00	$2,600.00	$34,000.00
2033	$94.00	$2,700.00	$35,000.00
2034	$95.00	$2,800.00	$35,000.00
2035	$96.00	$2,800.00	$36,000.00

Notes:
a Amounts are in 2020 US dollars.
CH_4 = methane; CO_2 = carbon dioxide; CO_2e = carbon dioxide-equivalent; N_2O = nitrous oxide

Overall, the proposed action would be estimated to release approximately 2,389 metric tons of GHG from 2024 through 2035, or 199 metric tons of GHG annually. This figure would account for approximately 0.00038 percent of the state total and 0.000004 percent of the US total of GHG projected to be released during the period 2024–2035. The SC GHG related to the GHG release would be estimated to be $212.64; approximately 0.00025 percent of the state total and 0.0000031 percent of the US total SC GHG over the same period. This amount would not result in a significant increase in GHG emissions.

The proposed action would not result in any significant impacts or changes to GHG emissions in the ROI or climate change. Under the proposed action, the Army would continue the current mission and training activities conducted at McGregor Range, GHG emissions would continue from previously approved construction and demolition activities and from ongoing operations of existing infrastructure.

3.3.3.3 No Action Alternative

The no action alternative would have short-term, minor, adverse impacts on regional air quality from criteria pollutants and could exceed PSD thresholds for PM_{10} emissions. Under the no action alternative, the land withdrawal at McGregor Range would not be renewed and oversight of the land would be returned to the BLM. There would be no further military use of the land returned to the public domain. Potential future missions planning on using McGregor Range would need to be relocated or reconstructed elsewhere. In addition, the training conducted and facilities located on the following ranges would have to be relocated to other DoD installations:

- Orogrande Range 83 DAGIR and Range 88 DMPRC;
- SHORAD Range; and
- McGregor Range Firing Complex, consisting of 30 small arms ranges M4 Zero through M240B qualification as well as sniper and MK-19 ranges and collective ranges to include Range 37 CLF and Range 40 IPBC.

Air Quality

The Orogrande Range includes the DMPRC and DAGIR range facilities. The DMPRC has a total area of 5,064 acres, and approximately 5 percent of the total area has been graded for improvements. The DAGIR has a total area of 11,861 acres, and approximately 3 percent of the total area has been graded for

improvements. The SHORAD Range is 256 acres in size and approximately 1 percent of the area has been graded for improvements. Reconstructing the DMPRC, DAGIR, and SHORAD ranges on another location within Fort Bliss or another DoD installation would be expected to require improvements in a similar area and grading footprint. The total area of grading needed to reconstruct these sites on another installation is estimated to be 611 acres, or 26,642,213 ft^2. These grading assumptions were input into the ACAM model and annualized over three years; the estimated time remaining before the 2007 Agreement expires in November 2026.

Table 3-6 summarizes the results of the ACAM analysis annualized over the course of implementation of the no action alternative within the AQCR. **Table 3-7** summarizes the highest annual ACAM emissions for each pollutant compared to their respective thresholds for the no action alternative within the AQCR.

Table 3-6.
Annual Air Emissions – No Action Alternative

Pollutant	2024	2025	2026
Volatile organic compound	1.282	1.157	1.101
Nitrogen oxides	12.300	10.547	9.649
Carbon monoxide	10.612	9.853	9.540
Sulfur oxides	0.022	0.022	0.022
PM_{10}	1,060.673	1,060.594	1,060.555
$PM_{2.5}$	0.487	0.414	0.379
Lead	0.000	0.000	0.000
Ammonia	0.003	0.003	0.003
Carbon dioxide-equivalent	1.282	1.157	0.022

$PM_{2.5}$ = particulate matter less than or equal to 2.5 microns in diameter; PM_{10} = particulate matter less than or equal to 10 microns in diameter

Table 3-7.
Highest Annual Air Emissions and PSD Thresholds – No Action Alternative

Pollutant	Highest Annual Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (yes or no)
Volatile organic compound	1.282	250	No
Nitrogen oxides	12.300	250	No
Carbon monoxide	10.612	250	No
Sulfur oxides	0.022	250	No
PM_{10}	1,060.673	250	Yes
$PM_{2.5}$	0.487	250	No
Lead	0.000	25	No
Ammonia	0.003	250	No
Carbon dioxide-equivalent	1.282	N/A	N/A

N/A = not applicable; $PM_{2.5}$ = particulate matter less than or equal to 2.5 microns in diameter; PM_{10} = particulate matter less than or equal to 10 microns in diameter

Under the no action alternative, potential future missions planning on using McGregor Range would need to be relocated or reconstructed elsewhere. Reconstructing a similar footprint of the DMPRC, DAGIR, and SHORAD ranges elsewhere may result in over 600 acres of grading and emissions of PM_{10} that exceed PSD thresholds. If all these facilities are reconstructed elsewhere, a General Conformity determination would be required to determine if these emissions would be consistent with the state implementation plan

for the AQCR that is selected for these mission operations and facilities, assuming the new location is in non-conformity.

Greenhouse Gas and Climate Change – CO_2e Emissions

The total combined direct and indirect GHG emissions were estimated through ACAM on a calendar-year basis through the expected life cycle of the no action alternative (**Table 3-8**).

Table 3-8.
GHG Emissions – No Action Alternative

Year	CO_2	CH_4	N_2O	CO_2e	Exceedance
2024	2,159	0.08779455	0.01780999	2,167	No
2025	2,159	0.08769012	0.01778039	2,166	No
2026	2,158	0.08749895	0.01775907	2,165	No

CH_4 = methane; CO_2 = carbon dioxide; CO_2e = carbon dioxide-equivalent; N_2O = nitrous oxide

Unlike regional air quality, the affected area of GHG and climate change is global. As such, the intensity or degree of the GHG/climate change effects of the proposed action are compared with the state, US, and global GHG inventories (**Table3-9**).

Table 3-9.
Total GHG Relative Significance – No Action Alternative

Parameter		CO_2	CH_4	N_2O	CO_2e
2024–2037	State total	155,196,766	1,869,961	79,051	157,145,778
2024–2037	US total	15,409,362,537	76,880,735	4,502,123	15,490,745,395
2024–2037	No Action Alternative	6,476	0.262984	0.053349	6,498
Percent of state total		0.00417254%	0.00001406%	0.00006749%	0.00413509%
Percent of US total		0.00004202%	0.00000034%	0.00000118%	0.00004195%

CH_4 = methane; CO_2 = carbon dioxide; CO_2e = carbon dioxide-equivalent; N_2O = nitrous oxide

Greenhouse Gas and Climate Change – Social Cost of GHG

On a global scale, the potential climate change effects of an action are indirectly addressed through approximating the long-term monetary damage that may result from GHG emissions effect on climate change. The ACAM social cost of GHG (SC GHG) report is included in **Appendix B**. GHGs produced by fossil-fuel combustion are primarily carbon dioxide, methane, and nitrous oxide. These three GHGs represent more than 97 percent of all US GHG emissions, and the costs per ton are calculated individually instead of through the combined CO_2e. It is important to note that SC GHG is a monetary quantification of the theoretical economic damages that could result from emitting GHGs into the atmosphere. **Table 3-10** presents the cost per ton of GHG emissions for the years of the no action alternative**.**

Table 3-10.
SC GHG Per Ton[a]

Year	CO_2	CH_4	N_2O
2024	$82.00	$2,200.00	$29,000.00
2025	$83.00	$2,200.00	$30,000.00
2026	$84.00	$2,300.00	$30,000.00

Notes:
a Amounts are in 2020 US dollars.
CH_4 = methane; CO_2 = carbon dioxide; CO_2e = carbon dioxide-equivalent; N_2O = nitrous oxide

The SC GHG for the no action alternative was estimated by calendar year by multiplying the annual emission for a given year by the corresponding cost per ton (**Table 3-11**).

Table 3-11.
SC GHG – No Action Alternative

Year	CO_2	CH_4	N_2O	GHG
2024	$16.22	$0.02	$0.09	$16.34
2025	$16.42	$0.02	$0.10	$16.54
2026	$16.62	$0.02	$0.10	$16.74
2027	$17.01	$0.02	$0.10	$17.14
2028	$17.21	$0.02	$0.10	$17.34
2029	$17.41	$0.02	$0.10	$17.54
2030	$17.61	$0.02	$0.11	$17.74
2031	$18.00	$0.03	$0.11	$18.14
2032	$18.20	$0.03	$0.11	$18.34
2033	$18.60	$0.03	$0.11	$18.74
2034	$18.80	$0.03	$0.11	$18.93
2035	$18.99	$0.03	$0.11	$19.14

CH_4 = methane; CO_2 = carbon dioxide; GHG = greenhouse gas; N_2O = nitrous oxide

As with the proposed action, a relative comparison of SC GHG assessment under the no action alternative was also performed (**Table 3-12)**.

Table 3-12.
SC GHG Relative Significance – No Action Alternative

Parameter		CO_2	CH_4	N_2O	CO_2e
2024–2035	State total	$55,198,316.41	$18,637,273.46	$10,276,646.14	$84,112,236.01
2024–2035	US total	$5,480,596,608.99	$766,244,659.23	$585,275,978.04	$6,832,117,246.27
2024–2035	No Action Alternative	$211.10	$0.30	$1.25	$212.64
Percent of state totals		0.00038244%	0.00000159%	0.00001212%	0.00025281%
Percent of US totals		0.00000385%	0.00000004%	0.00000021%	0.00000311%

CH_4 = methane; CO_2 = carbon dioxide; CO_2e = carbon dioxide-equivalent; N_2O = nitrous oxide

Overall, the no action alternative would release approximately 2,170 metric tons of GHG from 2024 through 2026. This figure would account for approximately 0.0041 percent of the state total and 0.000042 percent of the US total of GHG projected to be released during the period 2024–2037. The SC GHG related to the GHG release would be estimated to be $539.65; approximately 0.0028 percent of the state total and 0.000034 percent of the US total SC GHG over the same period. This amount would not result in a significant increase in GHG emissions. There would be no significant difference in GHG and SC GHG between the no action alternative and the proposed action on a national and global scale.

3.4 AIRSPACE

3.4.1 Definition of the Resource

Airspace management involves the direction, control, and handling of flight operations in the airspace that overlies the borders of the US and its territories. The Federal Aviation Administration (FAA) has the responsibility to plan, manage, and control the structure and use of all airspace over the US. FAA rules govern the national airspace system, and FAA regulations establish how and where aircraft may fly.

Collectively, the FAA uses these rules and regulations to make airspace use as safe, effective, and compatible as possible for all types of aircraft such as private propeller-driven planes, rotary-wing aircraft such as helicopters, commercial aircraft, military jets, and drones.

Aircraft use different kinds of airspace according to the specific rules and procedures defined by the FAA for each type of airspace. For the proposed action, the airspaces used are Restricted (R-) Areas and Military Operation Areas (MOAs) over land. R-Areas are typically used by the military due to safety or security concerns. Hazards include the existence of unusual and often invisible threats from artillery use, aerial gunnery, or guided missiles. A MOA is designated airspace outside of Class A airspace used to separate or segregate certain nonhazardous military activities from Instrument Flight Rules traffic and to identify for Visual Flight Rules traffic where these activities are conducted (14 CFR § 1.1). Activities in MOAs include, but are not limited to, air combat maneuvers, air intercepts, and low-altitude tactics. The defined vertical and lateral limits vary for each MOA. While MOAs generally extend from 1,200 ft above ground level to 18,000 ft mean sea level (MSL), the floor may extend below 1,200 ft above ground level if there is a mission requirement and minimal adverse aeronautical effect. MOAs allow military aircraft to practice maneuvers and tactical flight training at airspeeds in excess of 250 knots indicated airspeed (approximately 285 miles per hour). The FAA requires publication of the hours of operation for any MOA so that all pilots, both military and civilian, are aware of when other aircraft could be in the airspace.

Each military organization responsible for a MOA develops a daily use schedule. Although the FAA designates MOAs for military use, other pilots may transit the airspace. To avoid conflicts, MOAs are designed to avoid entirely or have specific avoidance procedures around busy airports; these procedures also apply to small private and municipal airfields. Such avoidance procedures are maintained for each MOA, and military aircrews build them into daily flight plans.

In addition to the lower limits of charted airspace, all aircrews adhere to FAA avoidance rules. Aircraft must avoid congested areas of a city, town, settlement, or any open-air assembly of persons by 1,000 feet above the highest obstacle within a horizontal radius of 2,000 feet of the aircraft. Outside of congested areas, aircraft must avoid any person, vessel, vehicle, or structure by 500 feet. Installations, such as Fort Bliss, may establish additional avoidance restrictions under MOAs.

Under 49 USC § 40103, *Sovereignty and Use of Airspace*, and PL No. 103-272, the US Government has exclusive sovereignty over the nation's airspace.

The ROI for airspace management and use includes McGregor Range and environs as well as the special use airspace (SUA) used by Fort Bliss over McGregor Range and within the R-25103 Complex (A/B/C), as depicted in **Figure 2-2**.

3.4.2 Existing Conditions

The SUA associated with Fort Bliss exists as part of a larger series of SUA units that cover much of the southeastern quadrant of New Mexico, including a complex set of R-Areas, MOAs, and military training routes. The SUA is designed to ensure the segregation of incompatible, non-participating aircraft from potentially hazardous operations occurring either in flight (e.g., munitions releases, unmanned aerial systems [UAS] operations) or on the ground (e.g., artillery ranges, testing activities).

There are three restricted airspaces in McGregor Range: R-5103A, R-5103B, and R-5103C (see **Figure 2-2**). Typical missions conducted in the R-5103 airspace include aerial gunnery missions, paradrop missions, and low-altitude aerial tactical navigation; these missions can be conducted day or night. The R-5103A airspace supports mission operations from ground surface to 17,999 feet above MSL, and the R-5103B and R-5013C airspace support mission operations from ground surface to unlimited. Use of the three restricted airspace is scheduled by Fort Bliss Directorate of Plans, Training, Mobilization, and Security/Range Control, with the Albuquerque Air Route Traffic Control Center as the controlling agency.

The major airspace units within McGregor Range (R-5103A/B/C) are subdivided vertically and horizontally, enabling airspace managers and schedulers to activate particular blocks of airspace that are sized appropriately to the activities occurring within them (see **Figure 2-2**). Four military units are the users or scheduling agencies of this airspace: one at Fort Bliss, one at White Sands Missile Range, and two at Holloman AFB. A wide variety of activities occur within the SUA; however, for the SUA managed by Fort Bliss within McGregor Range (R-5103 A/B/C), the four principal uses and purposes of the SUA are as follows:

- Protect non-participating aircraft from Range activities occurring on the ground.
- Promote realistic training, allowing scenarios to unfold without training distracters such as suspensions required when civilian aircraft penetrate the R-Areas.
- Segregate non-participating aircraft from high-speed military fighter aircraft engaged in simulated aerial combat.
- Segregate non-participating aircraft from UAS flight operations.

Military fighter aircraft stationed at Holloman AFB and elsewhere use the upper extents of Fort Bliss' airspace, in conjunction with that of White Sands Missile Range's airspace, to train in aerial combat (US Army, 2010).

3.4.3 Environmental Consequences

3.4.3.1 Evaluation Criteria

The type, size, shape, and configuration of individual airspace elements in a region are based upon, and are intended to satisfy, competing aviation requirements. Potential impacts could occur if air traffic in the region and/or the air traffic control systems were encumbered by changed flight activities associated with the proposed action or another alternative.

Adverse impacts to airspace in the ROI would occur if the proposed action results in the following:

- restricts movement of other air traffic in the area;
- creates conflicts with air traffic control in the region;
- changes operations within airspace already designated for other purposes;
- a need to designate controlled airspace where none previously existed;
- reclassification of controlled airspace from a less restrictive to a more restrictive classification; and/or
- a need to designate regulatory SUA.

When any substantial change is planned, such as new or revised defense-related activities within an airspace area or a change in the complexity or density of aircraft movements, the FAA reassesses the airspace configuration. For purposes of analysis, a significant impact is considered an increase in traffic without the regulatory guidance to handle the traffic load.

3.4.3.2 Proposed Action

The proposed action would not result in any significant impacts or changes to airspace in the ROI. Under the proposed action, the flight activity within McGregor Range would be expected to remain at levels consistently observed throughout the past several years. **Table 3-13** shows the number of scheduled airspace missions conducted within R-5103A/B/C over the past three years (i.e., 2020–2022).

Table 3-13.
McGregor Range Airspace Missions (2020–2022)

Year	Airspace Missions per Year
2020	4,695
2021	5,546
2022	4,810

Source: Fort Bliss, 2023a

It should be noted that the number of flights can fluctuate slightly depending upon flying hour budget allocations, deployment of tenant flying activities, and the number of transient aviation units using R-5103A/B/C as part of combined exercises.

Under the proposed action, Fort Bliss would not modify or change existing military training airspace or the SUA within McGregor Range. If modifications or changes to the airspace within McGregor Range are proposed after the extension of the withdrawal of public lands occurs, this would be evaluated under separate environmental analysis.

3.4.3.3 No Action Alternative

The no action alternative would have long-term, minor, adverse impacts to airspace in the ROI. Under the no action alternative, the land withdrawal at McGregor Range would not be renewed and oversight of the land would be returned to the BLM. There would be no further military use of the land returned to the public domain. Restricted airspace above McGregor Range would continue to be used for some military aircraft training.

Under the no action alternative, air-to-ground and ground-to-air activities would be minimized or discontinued within the lands returned to the BLM. Because the restricted airspace within McGregor Range is maintained in its current configuration, the no action alternative would not affect airspace or airport activities in the ROI. Any changes to the airspace above McGregor Range would require separate environmental analysis.

3.5 EARTH RESOURCES

3.5.1 Definition of the Resource

Earth resources include geology, topography, paleontological resources, and soils, the characteristics of which help determine whether land is suitable for development. Geology refers to the structure and configuration of surface and subsurface features. Characteristics of geology include the physical features of the land, subsurface rock types, and structural elements. Over long periods of time, geological processes determine topography: the shape, height, and position of the land surface. Paleontological resources, commonly known as fossils, refer to the remains of life preserved in a geologic context. Soil refers to the unconsolidated materials overlying bedrock or other parent material. Soils are defined by their composition, slope, and physical characteristics. Attributes of soil, such as elasticity, load-bearing capacity, shrink-swell potential, and erodibility, determine its suitability to support a particular land use, including development.

The ROI for earth resources is McGregor Range.

3.5.2 Existing Conditions

3.5.2.1 Geology and Topography

McGregor Range is located in southern New Mexico in an area that was a stable, shallow marine shelf from approximately 570 to 290 million years ago. The majority of sedimentary deposits on the shelf were marine shales and shaly limestones until tectonic disturbances altered the environment from marine to terrestrial, changing the type of deposits and creating higher elevation landmasses to the east, west, and southwest (Fort Bliss, 2021a).

Most of the sedimentary rocks in the area are made up of limestone strata from the San Andres formation. Topography on McGregor Range is varied, with the Hueco Mountains in the southeast corner and the Sacramento Mountains in the northeast corner. The Otero Mesa, crossing into the ROI from the east and the Tularosa Basin, crossing into the ROI from the west, converge toward the middle of the Range. The Sacramento Mountains contain Precambrian granite that lies beneath a layer of Paleozoic sedimentary rock, whereas the Hueco Mountains are made of marine limestone that was deposited during the Pennsylvanian and Permian periods. Elevation ranges from approximately 3,800 to 8,500 feet above MSL, with the highest and lowest elevations occurring in the Sacramento Mountains and the Tularosa Basin, respectively (Fort Bliss, 2021a).

3.5.2.2 Mineral and Energy Resources

The most recent mineral and energy resource analysis of McGregor Range was completed in 1998. This analysis was part of *McGregor Range Land Withdrawal Legislative Environmental Impact Statement* (1999), which was prepared in support of the Army's previous application to renew the withdrawal that was set to expire in 2001. Metallic, non-metallic/industrial, and energy resources were evaluated based on the likelihood that enough of any one resource would be present in a large enough quantity that it could be extracted economically under current or future conditions. The certainty of these evaluations was based on a scale of A–D: with A indicating an inadequate amount of available information to make a determination of resource potential, B indicating that the available information is adequate to suggest the level of resource potential, C indicating that the available information is a decent measure of the level of resource potential, and D indicating that the available information clearly defines the level of resource potential (US Army, 1998).

Twelve types of metallic mineral resources and 14 types of non-metallic/industrial mineral resources were found on the Range. The metallic mineral resources found were beryllium, copper, gold, iron, lead-zinc, manganese, molybdenum, niobium, platinum-group elements, silver, thorium and rare earth elements, and tin. All metallic mineral resources were rated as having low to moderate potential to occur with certainty levels ranging from B to D. The industrial mineral resources found included barite, fluorite, borate, building stone, clay, garnet, halite, dolostone, nepheline syenite, silica, and sulfur. All except building stone were rated as having low potential; building stone was rated as having low to moderate potential. The potential of these industrial mineral resources had certainty levels ranging from B to D. Construction aggregate, limestone, and gypsum were also found, all three rated as having low to high potential for development with certainty levels of D, D, and B to C, respectively. The determination of potential levels for industrial mineral resources considered the exploration, development, mining, milling, transportation, and marketing needed to make use of said resources (US Army, 1998).

The energy resource analysis looked at leasable energy resources (e.g., petroleum, geothermal, and coal) and minerals (e.g., uranium) that could be extracted and utilized. The Army developed a geothermal heating system on McGregor Range in 2014 that provides energy-efficient heating and cooling for structures at the Westbrooke Village on the Range (Fort Bliss, 2014) The potential for petroleum resources was rated as low to moderate with a certainty level of C, and the potential for uranium resources was rated as none to low with certainty levels of C and D. No potential for coal resources was found due to the absence of rocks dating back to the Cretaceous period (US Army, 1998).

3.5.2.3 Paleontology

The Otero Mesa Formation is a part of the early Permian Yeso Group and is exposed along the base of the Otero Mesa escarpment on McGregor Range. The formation is made up of reddish-brown mudstone-dominated intervals, capped by sandstone beds. Historically, the Otero Mesa Formation has yielded a small number of trace plant, vertebrate, and invertebrate fossil localities. Trace plant fossils primarily consist of leaves and stems of walchian conifers, vertebrate fossils primarily consist of footprints from small amphibians and reptiles, and invertebrate fossils include burrows and tracks of various organisms that were left in the mud (Fort Bliss, 2023b). Literature reviews and an examination of the BLM Las Cruces District Office database indicated the presence of trace fossil material as well as several previously documented places located within the ROI. A paleontological survey of 1,868.5 acres was conducted in support of the proposed action between April and May 2023 because paleontological resources were identified as needing inventory on several parcels within the ROI. The survey included all visible outcrops of the Otero Mesa Formation as well as portions of a 200-foot buffer from these outcrops (Fort Bliss, 2023b). Numerous trace fossils were observed during the survey including vertebrate trace fossils with claw drag marks or swim traces and small footprints with tail drag marks and possible belly resting impressions. Preservation of these fossils ranged from poor to excellent and most of the plant and invertebrate fossils were moderately well preserved; however, the overall density of localities containing trace fossils that could be considered scientifically important (mainly vertebrae trace fossils) was not high.

3.5.2.4 Soils

There are 58 different types of soil found in McGregor Range; **Table 3-14** below lists soil types occurring within the ROI that comprise 1 percent or more of the total area. The Bissett-Rock and Altuda-Rock outcrop complexes and Reyab silt loam make up the largest percentage of the ROI (12, 9.8, and 9.3 percent, respectively) (Natural Resources Conservation Service, 2023). Most soils in the Range are broadly classified as poorly developed rocky desert soils or unconsolidated sediment of sand and/or very fine gravel. Only a few areas contain soils that are developed with an organic layer. These soils have higher levels of biodiversity than the poorly developed soils and are important to local plant and animal species (Fort Bliss, 2021a).

Biological (or cryptobiotic) soil crusts are an important component of arid and semi-arid ecosystems worldwide, including in southern New Mexico. Cryptobiotic soils are made up of microscopic living organisms like algae, fungi, and cyanobacteria. Cyanobacteria, the main component of most biological soil crusts, release a fiber-like material that binds soil together into a hardened surface layer made up of living organisms and non-living soil matter. This layer is the cryptobiotic soil crust and is crucial for protecting dry soils from wind and water erosion. Many cryptobiotic soil crusts can absorb water more efficiently than regular soils, which helps to reduce runoff and slow evaporation and gives them a higher water content. They create ideal conditions for healthy desert plant communities. These crusts, however, are fragile and are easily crushed by human, livestock, and motorized vehicle traffic, resulting in exposure of the soils underneath and putting them at risk for erosion, among other things. Research suggests that cryptobiotic soil can take several years to several centuries to fully recover, leaving the area unprotected from accelerated erosion and nutrient loss (National Park Service, 2023).

Cryptobiotic soils are known to occur in limited-use areas and may be present in other portions of McGregor Range. While a small study of cryptobiotic soil was conducted on Fort Bliss in the past, it only covered a minor portion of the Range; no studies have been conducted across its entirety (JCU, 1998).

The cryptobiotic soils within and outside of limited-use areas are potentially vulnerable to the military training mission. The training use of limited-use areas includes roll-throughs with heavy vehicles, so complete avoidance of cryptobiotic soils is not possible.

Prime Farmland

Prime farmland is protected under the *Farmland Protection Policy Act of 1981* and is defined as land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber,

and oilseed crops, and is also available for these uses. Prime farmland is not present in the ROI and is not discussed further in this LEA.

Table 3-14.
Soil Types Associated with the Proposed Action[a]

Symbol	Name	Slope (%)	Acres in ROI	Percent of ROI
2 & 3	Reyab silt loam	0–3	62,578.7	9.3
6	Pendero fine sand	2–5	20,215.2	3.0
7	Copia loamy fine sand	5–15	24,078.2	3.6
12	Infantry-Sonic complex	3–10	29,704.7	4.4
17	Mcnew-Copia complex	2–5	11,949.4	1.8
21	Hueco loamy fine sand	1–3	17,816.9	2.6
22	Copia-Nations complex	1–3	52,369.2	7.7
25	Mariola fine sandy loam	1–3	10,218.1	1.5
26 & 27	Sonic very gravelly fine sandy loam	1–15	16,981.4	2.5
28	Crossen-Tinney complex	1–3	18,777.1	2.8
29	Tinney loam	1–3	7,299.0	1.1
30	Crossen gravelly fine sandy loam	2–5	11,099.6	1.6
31	Pendero-Copia-Nations complex	2–5	8,460.8	1.3
33–34	Bankston extremely channery loam	8–35	14,078.5	2.1
42	Copia-Patriot complex	2–5	18,356.3	2.7
48–50	Reyab loam	0–5	30,181.2	4.5
51–53	Bissett-Rock outcrop complex	5–65	80,953.9	12.0
54–56	Altuda-Rock outcrop complex	5–65	65,945.4	9.8
59	Salado loam	1–3	7,649.5	1.1
61	Philder-Jerag complex	2–5	14,550.2	2.2
63	Jerag very fine sandy loam	1–5	39,842.6	5.9
65	Armesa-Salado complex	1–3	17,022.5	2.5
66	Jerag-Armesa complex	2–5	26,162.3	3.9
67	Oryx loam	1–5	9,405.4	1.4
75–77	Deama-Rock outcrop complex	5–65	20,069.7	3.0
78–80	Deama-Penalto-Rock outcrop complex	5–65	62,578.7	1.4

Source: Natural Resources Conservation Service, 2023

a Soil types that make up less than 1 percent of the Region of Influence are not included in this table. Additionally, soils of the same type with different slopes were combined for simplicity (i.e., 2 & 3, 54–56).

3.5.3 Environmental Consequences

3.5.3.1 Evaluation Criteria

Evaluation criteria for environmental consequences in the context of geologic resources include a determination regarding how the proposed action and alternatives impact the physical characteristics of the resource.

Adverse impacts to earth resources in the ROI would occur if the proposed action results in the following:

- substantial alteration of unique, valued, or beneficial geologic or topographic conditions;
- substantial soil loss or erosion off site;

- measurable loss or degradation of a valued or beneficial soil function; and/or
- disturbance of soils with contaminant(s) above regulatory threshold(s).

Significant impacts to earth resources would occur if the underlying topography, soil composition, or geology was altered such that the function of these resources would change irreversibly, resulting in impacts to the broader environment.

3.5.3.2 Proposed Action

Geography, Mineral and Energy Resources

The proposed action would have no adverse impacts to geology in the ROI. Under the proposed action, current military training activities on McGregor Range would continue; previously planned construction activities would occur; and the underlying geology on the Range would not change.

Topography

The proposed action would have no adverse impacts to topography in the ROI. Under the proposed action, current military training activities on McGregor Range would continue; previously planned construction activities would occur; and the topography on the Range would not be altered.

Mineral and Energy Resources

The proposed action would have no adverse impacts to mineral and energy resources in the ROI. Under the proposed action, current military training activities on McGregor Range would continue; no construction activities would occur and mineral and energy resources on the Range would not change.

Paleontology

The proposed action would result in negligible, adverse impacts to paleontological resources in the ROI. Based on the lack of high density of scientifically important fossil resources, the LEA concludes that range activities associated with the proposed action would generally have a low potential of destroying critical paleontological localities. The outcrop belt did not show much evidence of being used for other range activities such as off-road vehicle usage. In addition, because the outcrop area is remote, there is minimal potential for disturbance from other activities such as grazing or excavation.

Soils

The proposed action would have no adverse impacts to soils in the ROI The proposed action would not involve any ground-disturbing activity and would not result in soil disturbance, except from activities already occurring under normal operations on the McGregor Range. These activities include off-road vehicle maneuvering, dismounted maneuvering, the use of FTX sites where troops and vehicles may concentrate, limited digging associated with FTX sites, and live-fire activities involving surface-to-surface and air-to-surface missiles where ordnance disturbs soils upon collision with the ground. Areas that contain cryptobiotic soils are small and isolated and therefore do not draw training units for free maneuvers. Additionally, soil compaction on the Range is primarily due to the movement of equipment to the main on-road-only maneuver corridors and, therefore, would not affect these areas or put cryptobiotic soils at risk of being crushed (US Army, 2010).

Military operations on McGregor Range include maintenance of training areas, which involves noxious weed and invasive plant control efforts. Noxious weeds and invasive plants can negatively affect soil health by reducing soil nutrients. Certain invasive plants have shallow root systems and crowd out native species that tend to have deeper root systems, which negatively affects the diversity and abundance of soil microorganisms. Shallow root systems are also less effective at cycling necessary nutrients through the soil (Teixeira et al., 2020; Working Lands for Wildlife, 2018). Management of noxious weed and invasive plant species provides benefits to soils on the Range.

With renewal of the withdrawal, all regular training activities and operations would continue. No direct or indirect impacts to this resource would be anticipated to occur with implementation of the proposed action.

3.5.3.3 No Action Alternative

The no action alternative would have beneficial impacts to earth resources in the ROI. Under the no action alternative, the land withdrawal at McGregor Range would not be renewed and oversight of the land would be returned to the BLM. There would be no further military use of the land returned to the public domain.

If military operations at McGregor Range ceased, reduced soil compaction from the discontinuation of off-road vehicle maneuvering and dismounted maneuvering, as well as from discontinued use of FTX sites for concentrating troops and vehicles would result in minor, long-term, beneficial impacts to soils as compaction can reduce soil health (Rutgers University, 2023). There would also be negligible, long-term, beneficial impacts to soils from the discontinuation of soil disturbance from limited digging at FTX sites and from discontinuation of FIREX involving surface-to-surface and air-to-surface missiles.

3.6 WATER RESOURCES

3.6.1 Definition of the Resource

3.6.1.1 Surface Water

The USEPA defines surface waters as waters of the US, which are primarily lakes, rivers, estuaries, coastal waters, and wetlands. Jurisdictional waters, including surface water resources, as defined in 33 CFR § 328.3, are regulated under Sections 401 and 404 of the CWA and Section 10 of the *Rivers and Harbors Act*. Man-made features not directly associated with a natural drainage, such as upland stock ponds and irrigation canals, are generally not considered jurisdictional waters.

3.6.1.2 Stormwater

Stormwater is surface water runoff generated from precipitation and has the potential to introduce sediments and other pollutants into surface waters. Stormwater is regulated under the CWA Section 402 National Pollutant Discharge Elimination System (NPDES) program. Impervious surfaces such as buildings, roads, parking lots, and even some natural soils increase surface runoff. Stormwater management systems are designed to contain runoff on site during construction and to maintain predevelopment stormwater flow characteristics following development through either the application of infiltration or retention practices. EISA establishes stormwater design requirements for development and redevelopment projects. Under these requirements, Federal facility projects larger than 5,000 ft^2 must maintain or restore, to the maximum extent feasible, the predevelopment hydrology of the property with respect to the water temperature, rate, volume, and duration of flow.

3.6.1.3 Groundwater

Groundwater is water that exists in the saturated zone beneath the earth's surface in pore spaces and fractures and includes aquifers. Groundwater is recharged through percolation of water on the ground's surface (e.g., precipitation and surface water bodies) and upward movement of water in lower aquifers through capillary movement. Groundwater is an essential resource that can be used for drinking, irrigation, and industrial processes, and can be described in terms of depth from the surface, aquifer or well capacity, water quality, recharge rate, and surrounding geologic formations. Groundwater quality and quantity are regulated under several different programs. The Federal sole source aquifer regulations, also authorized under the *Safe Drinking Water Act*, protect aquifers that are critical to water supply.

3.6.1.4 Floodplains

Floodplains are areas of low-level ground along rivers, stream channels, or coastal waters that provide a broad area to inundate and temporarily store floodwater. In their natural vegetated state, floodplains slow the rate at which the incoming overland flow reaches the main water body. Floodplains are subject to periodic or infrequent inundation due to rain or melting snow. The risk of flooding is influenced by local topography, the frequency of precipitation events, and the size and characteristics of the watershed upslope of the floodplain.

The Federal Emergency Management Agency (FEMA) evaluates and maps flood potential, which defines the 100-year (regulatory) floodplain. The 100-year floodplain is the area that has a one-percent annual chance of inundation by floodwater. FEMA uses letter designations for flood zone classification. Zone A designates 100-year floodplains where flood depths (base flood elevations) have not been calculated and further studies are needed. Zone AE floodplains include calculated base flood elevations. Base flood elevations are minimum elevation standards for buildings. Zone X indicates areas outside of the FEMA 100-year regulatory floodplain and indicate a low risk of flooding hazards (FEMA, 2020). Federal, state, and local regulations often limit floodplain development to passive uses, such as recreational and preservation activities, to reduce the risks to property and human health and safety.

EO 11988, *Floodplain Management*, provides guidelines that agencies should carry out as part of their decision-making process on projects that have potential impacts to or within the floodplain. This EO requires that Federal agencies avoid, to the extent possible, the long- and short-term adverse impacts associated with the occupancy and modification of floodplains and avoid direct and indirect support of floodplain development wherever there is a practicable alternative. EO 13690, *Establishing a Flood Risk Management Standard and Process for Further Soliciting and Considering Stakeholder Input*, established a Federal Flood Risk Management Standard and a process for further soliciting and considering stakeholder input; however, this EO was later revoked by Section 6 of EO 13807, *Establishing Discipline and Accountability in the Environmental Review and Permitting Process for Infrastructure*. EO 13807 did not revoke or otherwise alter EO 11988. EO 13807 was revoked by EO 13990, *Protecting Public Health and the Environment and Restoring Science To Tackle the Climate Crisis.* EO 13690 was then reinstated by EO 14030, *Climate-Related Financial Risk.*

3.6.1.5 Wetlands

The CWA regulates discharges of pollutants in surface waters of the US. Section 404 of the CWA established a program to regulate the discharge of dredged and fill material into waters of the US, including wetlands. The USACE defines wetlands as “those areas that are inundated or saturated with ground or surface water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted to life in saturated soil conditions” (Environmental Laboratory, 1987). Wetlands generally include swamps, marshes, bogs, and similar areas (33 CFR Part 328). EO 11990, *Protection of Wetlands*, the purpose of which is to reduce adverse impacts associated with the destruction or modification of wetlands, defines wetlands more broadly than the Section 404 program. This EO directs Federal agencies to provide leadership in minimizing the destruction, loss, or degradation of wetlands.

Water resources are protected and identified under several Federal laws and EOs including; The Clean Water Act; NPDES permit under Section 402 of the CWA; the *Federal Water Pollution Control Act of 1948*, as amended by the CWA; 33 CFR § 328.3; 33 CFR Part 328; EISA*; Safe Drinking Water Act*; Section 10 of the *Rivers and Harbors Act*.; FEMA; EO 13690, *Establishing a Flood Risk Management Standard and Process for Further Soliciting and Considering Stakeholder Input;* and EO 11990, *Protection of Wetlands.* El Paso Water, the source of McGregor Range’s drinking water, has adopted stringent water conservation measures to ensure sustainable water consumption. The City of El Paso’s Conservation Ordinance No. 752 was developed to ensure water conservation compliance.

The ROI for water resources is McGregor Range and the surrounding Tularosa Basin Watershed.

3.6.2 Existing Conditions

3.6.2.1 Surface Water

The majority of McGregor Range is within the Tularosa Basin Watershed while a small portion of the northeast McGregor Range is in the Salt Basin. Both basins are characterized by small ephemeral (seasonal) springs that discharge towards the central areas of the basin. Surface water on Fort Bliss mostly consists of ephemeral streams (Fort Bliss, 2021a).

3.6.2.2 Stormwater

During the months of July through September, brief, heavy rainstorms can cause localized flooding (Fort Bliss, 2021a). These storms account for more than half of the average annual precipitation of 8.8 inches on McGregor Range. Floodplain management on Fort Bliss is achieved through the Installation's compliance with EO 11988.

The majority of McGregor Range is undeveloped. Stormwater on the Range feeds into ephemeral springs and drains from the steep terrain on the northeastern perimeter of the Range toward the Tularosa Basin at the middle and west boundary of the Range. Earthen impoundments called dirt tanks, intended for livestock and wildlife use, catch runoff during precipitation events which happen commonly in the summer months. Between July and September, more than half of the average annual precipitation typically occurs (Fort Bliss, 2021a).

3.6.2.3 Groundwater

Three groundwater basins exist beneath McGregor Range; the Hueco Bolson, Tularosa, and Salt basins. The Hueco Bolson Basin is located beneath the southwest portion of the Range and primarily is recharged by runoff from the Hueco, Franklin, and Organ mountains. Tularosa Basin lies on the western boundary of the Range and is recharged primarily by storm runoff from the Organ and Sacramento mountains. The Salt Basin lies beneath the northeastern portion of the Range and is recharged primarily by precipitation and groundwater flow between flats (Texas Water Development Board, 2021). The Hueco Bolson and Tularosa basins are characterized by brackish water with higher salinity. (Fort Bliss, 2021a).

3.6.2.4 Floodplains

The majority of McGregor Range is categorized by FEMA as Zone X, an area of minimal flood risk. Isolated areas of Zone A, also known as the 100-year floodplain, occur along creeks and streams throughout the Range (**Figure 3-1**).

3.6.2.5 Wetlands

There are 32 wetlands on McGregor Range (Fort Bliss, 2009, 2010). The National Wetlands Inventory classifies the majority of wetlands on the Range as riverine. The National Wetlands Inventory has also identified freshwater emergent wetlands, freshwater ponds, and lakes. There are no jurisdictional wetlands on McGregor Range (Fort Bliss, 2021a).

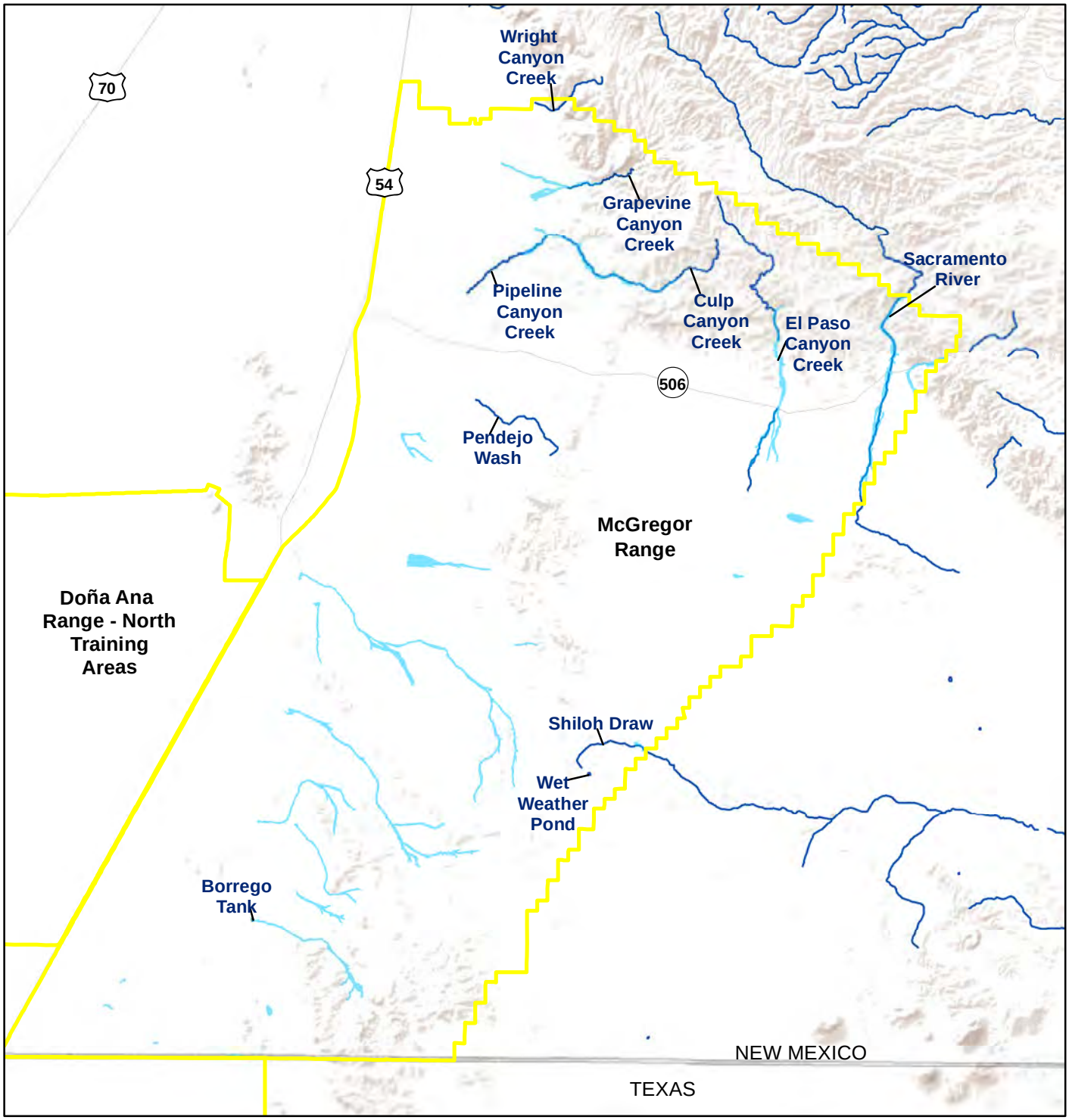


FIGURE 3-1
Floodplains and Surface Waters

Installation Boundaries
Water Features
100-Year Floodplain

N

0 5 Miles

Coordinate System: WGS 1984 UTM Zone 13N

3.6.3 Environmental Consequences

3.6.3.1 Evaluation Criteria

A significant impact to water resources within the ROI would occur if the proposed action results in the following:

- overdrafts groundwater basins;
- exceeds safe annual yield of water supply sources;
- adversely affects water quality of the region; and/or
- violates established laws or regulations adopted to protect sensitive water resources.

3.6.3.2 Proposed Action

The proposed action would have no adverse impacts to water resources in the ROI. Under the proposed action, Fort Bliss would continue to follow standard operating procedures and standard mitigation measures for the management and protection of water resources on the withdrawn lands on McGregor Range. The water rights the Army currently holds are exclusive to the Army and would not automatically transfer to the BLM. Procedures and management outlined in the Fort Bliss INRMP (Fort Bliss, 2021a) would ensure the conservation and sustainability of natural resources on Fort Bliss, as well as compliance with environmental laws and regulations. Because the proposed action would result in no change to the land management of McGregor Range, no adverse effects to water resources would be anticipated to occur.

3.6.3.3 No Action Alternative

The no action alternative would have no adverse impacts to water resources in the ROI. Under the no action alternative, the land withdrawal at McGregor Range would not be renewed and oversight of the land would be returned to the BLM. There would be no further military use of the land returned to the public domain. Army management plans protecting McGregor Range would no longer have jurisdiction on the waters of the Range. No adverse impacts to water resources would be anticipated by relinquishing management of the waters to the BLM, as these resources would remain under protection of the Federal Government and the BLM would continue managing this resource in accordance with laws and regulations specified in **Section 3.6.1.7**.

3.7 BIOLOGICAL RESOURCES

3.7.1 Definition of the Resource

Biological resources include native or invasive plants, animals, and the habitats upon which they rely for sustenance and survival. These resources include terrestrial and aquatic species; game and non-game species; special status species (i.e., state or federally listed species and species of concern such as migratory birds); and environmentally sensitive habitats or natural areas that have functional or intrinsic value to humans.

3.7.1.1 Endangered Species Act

The ESA established protection for threatened and endangered species and the ecosystems upon which they depend. Sensitive and protected biological resources include plant and animal species listed as threatened, endangered, or special status by USFWS. The ESA also allows the designation of geographic areas as critical habitat for threatened or endangered species. Under the ESA, an “endangered species” is defined as any species in danger of extinction throughout all, or a large portion, of its range. A “threatened species” is defined as any species likely to become an endangered species in the foreseeable future. The USFWS maintains a list of candidate species being evaluated for possible listing as threatened or endangered under the ESA. Although candidate species receive no statutory protection under the ESA,

USFWS has attempted to advise government agencies, industry, and the public that these species are at risk and may warrant protection in the future under the ESA. Refer to **Section 1.4.3** for additional information on the Section 7 consultation process under the ESA.

3.7.1.2 Migratory Bird Treaty Act

The MBTA makes it unlawful for anyone to take migratory birds or their parts, nests, or eggs unless permitted to do so by regulations. Per the MBTA, "take" is defined as "pursue, hunt, shoot, wound, kill, trap, capture, or collect" (50 CFR § 10.12). Birds protected under the MBTA include nearly all species in the US except for non-native/human-introduced species and some game birds.

EO 13186, *Responsibilities of Federal Agencies to Protect Migratory Birds*, requires all Federal agencies undertaking activities that may negatively impact migratory birds to follow a prescribed set of actions to further implement the MBTA. EO 13186 directs Federal agencies to develop a memorandum of understanding with USFWS that promotes the conservation of migratory birds.

The *National Defense Authorization Act for Fiscal Year 2003* (PL 107-314, 116 Stat. 2458) provided the Secretary of the Interior the authority to prescribe regulations to exempt the armed forces from the incidental take of migratory birds during authorized military readiness activities. Congress defined military readiness activities as all training and operations of the US Armed Forces that relate to combat and the adequate and realistic testing of military equipment, vehicles, weapons, and sensors for proper operation and suitability for combat use. Further, in October of 2012, the Authorization of Take Incidental to Military Readiness Activities was published in the *Federal Register* (50 CFR § 21.15), authorizing incidental take during military readiness activities unless such activities may result in significant adverse effects on a population of a migratory bird species.

In December 2017, the US DOI issued M-Opinion 37050, which concluded that the take of migratory birds from an activity is not prohibited by the MBTA when the purpose of that activity is not the take of a migratory birds, eggs, or nests. On August 11, 2020, the US District Court, Southern District of New York, vacated M-Opinion 37050. Thus, incidental take of migratory birds is again prohibited. The interpretation of the MBTA remains in flux, and additional court proceedings are expected.

3.7.1.3 Bald and Golden Eagle Protection Act

The BGEPA prohibits actions to "take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or any manner, any bald eagle [or any golden eagle], alive or dead, or any part, nest, or egg thereof." Further, the BGEPA defines "take" as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb," and "disturb" is defined as "to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, injury to an eagle, a decrease in productivity by substantially interfering with the eagle's normal breeding, feeding or sheltering behavior, or nest abandonment by substantially interfering with the eagle's normal breeding, feeding, or sheltering behavior." The BGEPA also prohibits activities around an active or inactive nest site that could result in disturbance to returning eagles.

3.7.1.4 Aquatic Resources

Aquatic resources are habitats that contain either permanent or sufficient temporary water to support plant or wildlife species that require water or hydric soils for at least part of their life cycle.

3.7.1.5 Invasive Species

Invasive species are non-native species in an ecosystem whose introduction causes or is likely to cause economic or environmental harm, or harm to human, animal, or plant health. EO 13751, *Safeguarding the Nation from the Impacts of Invasive Species*, requires Federal agencies to identify actions that may affect invasive species; use relevant programs to prevent introductions of invasive species; detect, respond, and

control such species; monitor invasive species populations; and provide for restoration of native species. Invasive species damage native habitat and impede management by outcompeting native species.

Biological resources are protected and identified under several Federal laws and EOs, including BGEPA, ESA, *National Defense Authorization Act for Fiscal Year 2003* (PL 107-314, 116 Stat. 2458); EO 13751, *Safeguarding the Nation from the Impacts of Invasive Species*; and EO 13186, *Responsibilities of Federal Agencies to Protect Migratory Birds.*

The ROI for this resource is McGregor Range.

3.7.2 Existing Conditions

3.7.2.1 Vegetation

Fort Bliss is located in the northern Chihuahuan Desert eco-region with a climate characterized by low rainfall, relatively low humidity, hot summers, and moderate winters. This region has a semi-arid to arid, subtropical desert climate (Fort Bliss, 2021a). Topographic relief on Fort Bliss is substantial, with elevations ranging from approximately 3,900 to 8,900 feet above MSL, and provides a diverse array of physical environments. The soils on McGregor Range are highly susceptible to both water and wind erosion (Fort Bliss, 2021a).

There is a high degree of biodiversity at Fort Bliss due to its varied topography and size. The western part of McGregor Range consists of basin desert shrubland and basin sandshrub. The central portion of the Range includes foothills desert shrub and foothills desert shrubland. The eastern side contains mesa grassland and foothills desert grassland. Two high-quality sand sagebrush (*Artemisia filifolia*) communities exist on McGregor Range. The shinnery oak (*Quercus havardii*) occurs in the northern portion of the Range and in 1-square-mile habitat islands (Fort Bliss, 2021a).

3.7.2.2 Wildlife

McGregor Range is mostly undeveloped with an abundance of wildlife. Arroyo-riparian drainage areas that occur in the Hueco Mountains on McGregor Range are used more by wildlife than adjacent upland areas (Fort Bliss, 2021a). Mammals found on McGregor Range include the coyote (*Canis Latrans),* the mule deer (*Odoceileus hemionus*), pronghorn antelope *(Antilocapra americana),* and mountain lion (*puma concolor*). The black-tailed prairie dog (*Cynomys ludovicianus*) is a keystone species (i.e., its existence is critical to the survival of other species in the same ecosystem) on Otero Mesa in McGregor Range. Birds found on the McGregor Range include the northern mockingbird (*Mimus* polyglottos), the house finch (*Carpodacus mexicanus*), and the rock wren (*Salpinctes obsoetus*). Reptiles found on McGregor Range include the Texas horned lizard (*Phrynosoma cornutum*), prairie rattlesnake (*Crotalus viridis*), and box turtle (*Terrapene epidu*).

3.7.2.3 Aquatic Resources

Surface water is rare and mostly ephemeral (seasonally flooded) on McGregor Range. Precipitation events can lead to runoff from the Hueco and Sacramento mountains and cause playa lakes. These lakes are ephemeral natural depressions that are typically wet in the summer and fall and are usually surrounded with vegetation. Playas can provide valuable wetland functions like surface water drainage and recharging of aquifers. There are no jurisdictional wetlands on McGregor Range.

3.7.2.4 Threatened or Endangered Species

The 2021 INRMP for Fort Bliss identified a total of 14 protected species that are known to occur or have the potential to occur within McGregor Range (**Table 3-15)**. McGregor Range does not contain any critical habitat designated by the USFWS, but four plots of land on Otero Mesa have been designated by the BLM as ACECs (Fort Bliss, 2021a).

Table 3-15.
Federal and State Listed Species within McGregor Range

Species	Status	Comments
Plants		
Kuenzler hedgehog cactus (*Echinocereus fendleri var. kuenzleri*)	FT, SE	Potential to occur in the ROI.
Sand prickly pear *(Opuntia arenaria)*	SE	Potential to occur in the ROI.
Sacramento Prickly Poppy (*Argemone pleiacantha ssp. Pinnatisecta*)	FE	No critical habitat identified in the ROI.
Reptiles		
Gray-banded kingsnake (*Lampropeltis alterna*)	SE	Potential to occur in the ROI.
Mottled rock rattlesnake (*Crotalus 3-28epidus*)	ST	Potential to occur in the ROI.
Birds		
Baird's sparrow (*Ammodramus bairdii*)	ST	Known to occur in the ROI.
Bald eagle (*Haliaeetus leucocephalus*)	ST	Known to occur in the ROI.
Bell's vireo *(Vireo bellii)*	ST	Known to occur in the ROI.
Interior least tern (*Sterna antillarum athalassos*)	SE	Known to occur in the ROI.
Mountain plover *(Charadius montanus)*	FE, ST	Known to occur in the ROI.
Northern aplomado falcon (*Falco femoralis septentrionalis*)	FE, SE	Known to occur in the ROI.
Peregrine falcon (*Falco peregrinus*)	ST	Known to occur in the ROI.
Piping plover (*Charadrius melodus*)	FE, SE	Known to occur in the ROI.
Mammals		
Spotted bat (*Euderma maculatum*)	ST	Known to occur in the ROI.

Source: Fort Bliss, 2021a
FE = federally endangered; FT = federally threatened; ROI = Region of Influence; SE = state endangered; ST = state threatened

Fort Bliss has an active monitoring and survey program for sensitive, threatened, and endangered plant and animal species to ensure that newly discovered sensitive species receive adequate protection (Fort Bliss, 2021a). Species on McGregor Range being managed under plans by Fort Bliss include the Northern Aplomado falcon (Falco femoralis), Baird's sparrow (Ammodramus bairdii), bald eagle (Haliaeetus leucocephalus), mountain plover (Anarhynchus montanus), and peregrine falcon (Falco peregrinus) (Fort Bliss, 2021a, Appendix I).

3.7.2.5 Migratory Birds

Of the approximately 336 bird species on Fort Bliss, most are protected under the MBTA. Eighty of the 336 bird species on Fort Bliss occur throughout the year, 129 species are temporary during migration, 42 species are present in spring and summer only, and the remaining 85 species are observed in the winter. Specific to McGregor Range, burrowing owls (Athene cunicularia), ferruginous hawks (Buteo regalis), and songbirds are a few of the species that occur on the grasslands of Otero Mesa. The Sacramento Mountains provide bald eagle winter range and golden eagle (Aquila chysaetos) nesting areas. Cliffs in the Hueco Mountains and Otero Mesa Escarpment provide habitat for raptors. McGregor Range hosts a range of habitats for raptors and other migratory birds.

3.7.2.6 Invasive and Exotic Species

The oryx (Oryx gazella) and barbary sheep (Ammotragus lervia) are two species that are non-native to the area and occur on McGregor Range. Both species have hunting seasons on Fort Bliss. The African rue (Peganum harmala), salt cedar (Tamarix spp.), and Maltese star thistle (Centaurea melitensis) are invasive plant species present on the McGregor Range. The African rue is being actively controlled (Fort Bliss, 2021a).

3.7.3 Environmental Consequences

3.7.3.1 Evaluation Criteria

Potential adverse effects on biological resources would depend on factors unique to an individual or population of plant(s) or animal(s). These include the resource's value or importance to humans (e.g., commercial, recreational, ecological, and scientific); legal status under Federal, state, or local law and/or international treaty; range and abundance across geography or jurisdiction; and vulnerability or sensitivity to a particular activity considering distance from source, exposure duration, and a myriad of other variables.

A significant impact to biological resources within the ROI would occur if the proposed action results in the following:

- negatively affects species or habitats of concern;
- causes reductions in population size or distribution of species of high concern;
- disturbs or destroys habitats of concern;
- removes or changes critical protections provided to species and habitats of concern;
- causes substantial amount of vegetation removal from riparian habitats;
- results in direct loss or substantial degradation of terrestrial (e.g., fragmentation) or aquatic (e.g., wetlands) habitats; and/or
- causes an adverse effect on the recovery of a federally listed or candidate species.

3.7.3.2 Proposed Action

The proposed action would have no new adverse impacts to biological resources in the ROI. Under the proposed action, the withdrawal of public land as described in PL 106-65 for McGregor Range would be extended for 25 years. Fort Bliss would continue to follow standard operating procedures and standard mitigation measures for the management and protection of biological resources on the withdrawn lands on McGregor Range. Procedures and management outlined in the Fort Bliss INRMP (Fort Bliss, 2021a) would ensure the conservation and sustainability of natural resources on Fort Bliss, as well as compliance with environmental laws and regulations. Because the proposed action would result in no change to the land management of McGregor Range, no adverse effects to biological resources would be anticipated to occur.

Existing military activities on the McGregor Range have not adversely affected any threatened or endangered species, and Fort Bliss has not had to formally consult with the USFWS under Section 7. Under the proposed action, Fort Bliss would continue existing monitoring and survey programs for sensitive, threatened, and endangered plant and animal species as needed and coordinate as needed with the USFWS. If a specific activity within McGregor Range would have the potential to adversely affect threatened or endangered species, Fort Bliss would consult with USFWS under Section 7 of the ESA for the specific activity.

Although Section 7 informal compliance under the ESA is not required for the proposed action, the Army initiated informal coordination using the USFWS' online Information for Planning and Consultation (IPaC) tool. The Army entered information concerning the location and nature of the projects that the Army conducts on McGregor Range and actions that would continue under the proposed action into IPaC to obtain an official species list from the USFWS in the form of a confirmatory letter with attachment (see **Appendix A**). The Army reviewed the results of the informal coordination and incorporated relevant information into this LEA where applicable.

3.7.3.3 No Action Alternative

The no action alternative would be anticipated to have no adverse effects to biological resources in the ROI. Under the no action alternative, the land withdrawal at McGregor Range would not be renewed and oversight of the land would be returned to the BLM. There would be no further military use of the land

returned to the public domain. The Army would be relinquishing management of the lands to the BLM and all biological resources would remain under protection and management by the Federal Government and be subject to the review requirements of the USFWS.

The removal of military activity would have beneficial impacts to biological resources in those areas that are now subject to land and human disturbance. Vegetation would recover, and wildlife species that currently avoid those areas may reoccupy those areas in the absence of human activity or after recovery of vegetation. Management plans protecting aquatic resources, threatened, endangered, and species of special concern would no longer have jurisdiction on the habitats they serve to protect, and the BLM would be responsible for future management of biological resources. The Army's existing management plans such as the INRMP and the *Wildland Fire Management Plan* would be phased out as land management transitions. The BLM would need to revisit these approaches and take over management of these resources.

3.8 CULTURAL RESOURCES

3.8.1 Definition of the Resource

Cultural resources are any prehistoric or historic district, site, building, structure, or object considered important to a culture or community for scientific, traditional, religious, or other purposes. Cultural resources include the following subcategories:

- Archaeological sites (i.e., prehistoric or historic sites where human activity has left physical evidence of that activity, but no structures remain standing);
- Historic Architectural properties (i.e., buildings, structures, groups of structures, or designed landscapes that are of historic or aesthetic significance); and
- Traditional Cultural Properties (TCPs) (resources of traditional, religious, or cultural significance to American Indian tribes).

Significant cultural resources are those listed on the National Register of Historic Places (NRHP) or determined to be eligible for listing. To be eligible for the NRHP, properties must be 50 years old and have national, state, or local significance in American history, architecture, archaeology, engineering, or culture. They must possess sufficient integrity of location, design, setting, materials, workmanship, feeling, and association to convey their historical significance and meet at least one of four criteria for evaluation:

1. Associated with events that have made a significant contribution to the broad patterns of our history (Criterion A);

2. Associated with the lives of persons significant in our past (Criterion B);

3. Embody distinctive characteristics of a type, period, or method of construction, or represent the work of a master, or possess high artistic values, or represent a significant and distinguishable entity whose components may lack individual distinction (Criterion C); and/or

4. Have yielded or be likely to yield information important in prehistory or history (Criterion D).

Properties that are less than 50 years old can be considered eligible for the NRHP under criteria consideration G if they possess exceptional historical importance. Those properties must also retain historic integrity and meet at least one of the four NRHP criteria (Criteria A, B, C, or D). The term "historic property" refers to National Historic Landmarks, NRHP-listed, and NRHP-eligible cultural resources.

Cultural resources are protected and identified under several Federal laws and EOs including the *American Indian Religious Freedom Act of 1978* (42 USC § 1996), the *Archaeological Resources Protection Act of 1979*, as amended (16 USC §§ 470aa–470mm), the *Native American Graves Protection and Repatriation*

Act of 1990 (25 USC §§ 3001–3013), the NHPA, as amended through 2016, and associated regulations (36 CFR Part 800). The NHPA requires Federal agencies to consider effects of Federal undertakings on historic properties prior to deciding or taking an action and integrate historic preservation values into their decision-making process. Federal agencies fulfill this requirement by completing the NHPA Section 106 consultation process, as set forth in 36 CFR Part 800. NHPA Section 106 also requires agencies to consult with federally recognized American Indian tribes with a vested interest in the undertaking. NHPA Section 106 requires all Federal agencies to seek to avoid, minimize, or mitigate adverse effects to historic properties (36 CFR § 800.1(a)). Because there is no new undertaking associated with the proposed action, no Section 106 consultation is required.

For cultural resources analyses, the ROI is defined by the Area of Potential Effect (APE). The APE is defined as the "geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist," (36 CFR § 800.16(d)) and thereby diminish their historic integrity. The direct and indirect APE for the proposed action is the land proposed for withdrawal within McGregor Range.

3.8.2 Existing Conditions

Fort Bliss has an ICRMP, which provides direction for the protection and management of cultural resources on Fort Bliss, including McGregor Range, in compliance with the NHPA and other legal requirements (Fort Bliss, 2022a). The ICRMP describes surveys and other activities undertaken by Fort Bliss to ensure compliance with its Programmatic Agreement (PA), a legal agreement among the Army, the State Historic Preservation Officers of Texas and New Mexico, and the Advisory Council on Historic Preservation. The PA and the ICRMP include standard operating procedures for the management of historic properties on Fort Bliss that apply to all entities conducting activities that may affect those properties. The PA guides Fort Bliss in its management of cultural resources and meets its NHPA, Section 106 responsibilities. Fort Bliss is also operating under research and significance standards that guide the determination of NRHP eligibility of archaeological sites across the Installation.

The 2007 Agreement specifies that the proponent of an undertaking, whether BLM or Fort Bliss, is responsible for permitting and oversight of historic resource investigations as part of compliance with Section 106 of the NHPA (DOI, 2007). The two agencies share information on completed projects and coordinate future projects annually. As of 2021, about 80 percent of McGregor Range training areas had been inventoried for archaeological resources, including approximately 71 percent of McGregor of which 73 percent is withdrawn BLM land (Fort Bliss, 2022a).

3.8.2.1 Archaeological Sites

There are a total of 6,764 archaeological sites within the boundary of McGregor Range. Of these, 1,795 are eligible for listing on the NRHP, 4,311 are not eligible, 645 are potentially eligible, and 13 have not been designated. A total of 150 of the NRHP-eligible sites have been mitigated, leaving 1,645 eligible sites unmitigated. Within the PA, Fort Bliss established "red zones" or off-limits areas within McGregor Range to protect high densities of archaeologic sites and regionally significant sites from maneuver impacts. Temporal aspects of the sites within McGregor Range are described in **Table 3-16**.

Table 3-16.
Temporal Affiliation of Archaeological Sites within McGregor Range

Temporal Affiliation	Number of Archaeological Sites
Prehistoric	4,628
No Temporal Affiliation	1,481
Historic	373
Prehistoric; Historic	248
Prehistoric; Protohistoric	19
No Designation	9
Prehistoric; Protohistoric; Historic	3
Protohistoric	2
Protohistoric; Historic	1

Source: Fort Bliss, 2022a

3.8.2.2 Historic Architectural Properties

Historic architectural properties on McGregor Range include ranching and homestead structures and Cold War-era structures.

Historic architectural properties within McGregor Range include the McGregor Base Camp and the Firebee-Towbee Launch Site. The McGregor Base Camp includes one historic architectural property, Building 9480, an AN/FPS-36 surveillance radar located approximately 800 feet north of the base camp. The remaining architectural properties, which were built between 1951 and 1959 and consist of three semi-permanent barracks and two semi-permanent dining facilities, were either mitigated under the 2006 Unaccompanied Personnel Housing Program Comment or were determined ineligible for listing in 2015. The Firebee-Towbee Lauch Site is considered a historic district and contains seven buildings and one launch pad near the Orogrande Range Base Camp (Fort Bliss, 2022a).

3.8.2.3 Traditional Cultural Properties

Fort Bliss consults with seven Native American Tribes with interests in lands managed by the Installation. Fort Bliss continues to coordinate with Native American Tribes to identify TCPs within Fort Bliss and McGregor Range and determine the appropriate management strategy for each site. No TCPs have been identified on McGregor Range; however, consultation with Native American Tribes has resulted in the identification of known sacred sites within the Range.

3.8.3 Environmental Consequences

3.8.3.1 Evaluation Criteria

Adverse effects on cultural resources would occur if the proposed action results in the following:

- physically altering, damaging, or destroying all or part of a resource;
- altering characteristics of the surrounding environment that contribute to the resource's significance;
- introducing visual or audible elements that are out of character with the property or alter its setting;
- neglecting the resource to the extent that it deteriorates or is destroyed; and/or
- the sale, transfer, or lease of the property out of agency ownership (or control) without adequate enforceable restrictions or conditions to ensure preservation of the property's historic significance.

For the purposes of this LEA, an impact is considered significant if it alters the integrity of a NRHP-listed, eligible, or potentially eligible resource or potentially impacts TCPs.

3.8.3.2 Proposed Action

The proposed action would have no adverse effects to cultural resources, including known sacred sites, in the ROI. Under the proposed action, the withdrawal of public land as described in PL 106-65 for McGregor Range would be extended for 25 years. Fort Bliss would continue to follow standard operating procedures and standard mitigation measures for the management and protection of cultural resources on the withdrawn lands included within the APE. Procedures, as outlined in the Fort Bliss ICRMP (Fort Bliss, 2022a), address mission conflicts, management, and coordination for Section 106 of the NHPA, and other necessary consultation. In addition, limited use areas and off-limit areas within McGregor Range would remain in effect.

Eligible archaeological sites within McGregor Range would continue to be monitored by the Fort Bliss Cultural Resources Manager. Consistent with 36 CFR § 800.13, in the event of an unanticipated discovery of archaeological remains, human remains, or damage to an archaeological site or a historic structure, the material remains would be left in place, work within a radius of 100 feet of the find would immediately cease, and the Fort Bliss Cultural Resources Manager would be notified immediately. Work would resume only after the appropriate actions have been taken by the Fort Bliss Cultural Resources Manager.

Because the proposed action would result in no change to the lands managed and operated on McGregor Range, no adverse effects to cultural resources that are listed or eligible for listing on the NRHP would be anticipated to occur under the proposed action.

3.8.3.3 No Action Alternative

Implementation of the no action alternative would be anticipated to have no adverse effect on cultural resources in the ROI that are listed or eligible for listing on the NRHP. Under the no action alternative, the land withdrawal at McGregor Range would not be renewed and oversight of the land would be returned to the BLM. There would be no further military use of the land returned to the public domain. The Army would be relinquishing management of the lands to the BLM and all cultural resources would remain under protection and management by the Federal Government and be subject to the review requirements of the NHPA.

3.9 NOISE

3.9.1 Definition of the Resource

Sound is a physical phenomenon consisting of minute vibrations that travel through a medium, such as air or water, and are sensed by the human ear. Noise is generally described as unwanted sound. Unwanted sound can be grounded in objectivity (e.g., hearing loss or damage to structures) or subjectivity (e.g., an individual's level of tolerance or annoyance to different sounds). Noise events elicit varying responses within a population or area based on the activity generating noise and its perceived importance and related factors, such as setting, time of day, exposure period or duration, and receptor sensitivity. In addition to humans, noise may also affect wildlife as indicated by behavioral changes during nesting, foraging, migration, or other life-cycle activities (USEPA, 1978).

Noise and sound levels are expressed in logarithmic units measured by decibels (dB). A sound level of 0 dB is approximately the threshold of human hearing and is barely audible under extremely quiet listening conditions. Normal speech equates to a sound level of approximately 60 dB, sound levels above 120 dB begin to be felt inside the human ear as discomfort, and sound levels between 130 and 140 dB are felt as pain (Berglund and Lindvall, 1995). To mimic the human ear's non-linear sensitivity and perception of different frequencies of sound, the spectral content is weighted to de-emphasize very low and very high

frequencies to better replicate human sensitivity and is denoted as an A-weighted decibel (dBA). All sound levels presented in this document are in units dBA unless otherwise noted.

In accordance with DoD guidelines and standard practice for environmental impact analysis documents, the noise analysis herein uses the Day-Night Average Sound Level (DNL) and the Onset-Rate Adjusted DNL. DNL is a cumulative measure of multiple flight and engine maintenance activities throughout an average year.

The *Noise Control Act of 1972* (PL 92-574) directs Federal agencies to comply with applicable Federal, state, and local noise control regulations. In 1974, the USEPA provided information suggesting that continuous and long-term noise levels greater than 65 dBA are normally unacceptable for noise-sensitive receptors such as residences, schools, churches, and hospitals (USEPA, 1974).

AR 200-1 offers land use recommendations, which, if adopted both on and off the Army installation, would facilitate future development that is unaffected by military noise. It also provides guidance on how to manage noise and address noise complaints.

The ROI includes the lands within and adjacent to McGregor Range.

3.9.2 Existing Conditions

The *Fort Bliss Installation Compatible Use Zone Study* (Fort Bliss, 2021b) quantifies the noise environment from military training sources and recommends the most appropriate uses of noise-impacted areas. In the range areas of Fort Bliss, including McGregor Range, existing sources of noise include military aviation activities, small arms ranges, use of artillery, large caliber weapons training, combat demolition activities, and vehicular traffic. Aviation activities occur primarily enroute between Biggs Army Airfield and the McGregor and Doña Ana ranges along a flight track that generally overflies US Highway 54. Impulse noise from small arms artillery and large-caliber weapons training also occurs at McGregor Range. **Table 3-17** lists the noise limits for each of the three noise zones on Fort Bliss, including McGregor Range. **Figure 3-2** shows the three noise zones within McGregor Range.

Table 3-17.
Noise Limits for Noise Zones

Noise Zones	Noise Limits			Noise-Sensitive Land Use
	Aviation ADNL (dB)	Impulsive CDNL (dB)	Small Arms (dBP)	
Land Use Planning Zone	60–65	57–62	N/A	Generally, compatible
I	<65	<62	<87	Generally, compatible
II	65–75	62–70	87–104	Generally, not compatible
III	>75	>70	>104	Not compatible

Source: AR 200-1, Table 14-1, *Noise Limits for Noise Zones*
ADNL = A-weighted Day-Night Level; dB = decibel ; CDNL = C-weighted Day-Night Level; N/A = not applicable; P = Peak

Small arms FIREX are concentrated at McGregor Range Small Arms Range. Small arms ranges are used year-round for training and weapons qualifications. Small arms weapons are heavily utilized throughout Fort Bliss, including McGregor Range, at dedicated small arms ranges, as well as multi-purpose ranges and aerial gunnery ranges. Small arms firing activities occur during daytime and nighttime hours depending upon training mission requirements. The small arms range on McGregor Range is located far enough from the Installation's boundary that noise impacts are considered negligible. Noise impacts from small arms ranges are localized and under most weather conditions do not cause annoyance (Fort Bliss, 2021b).

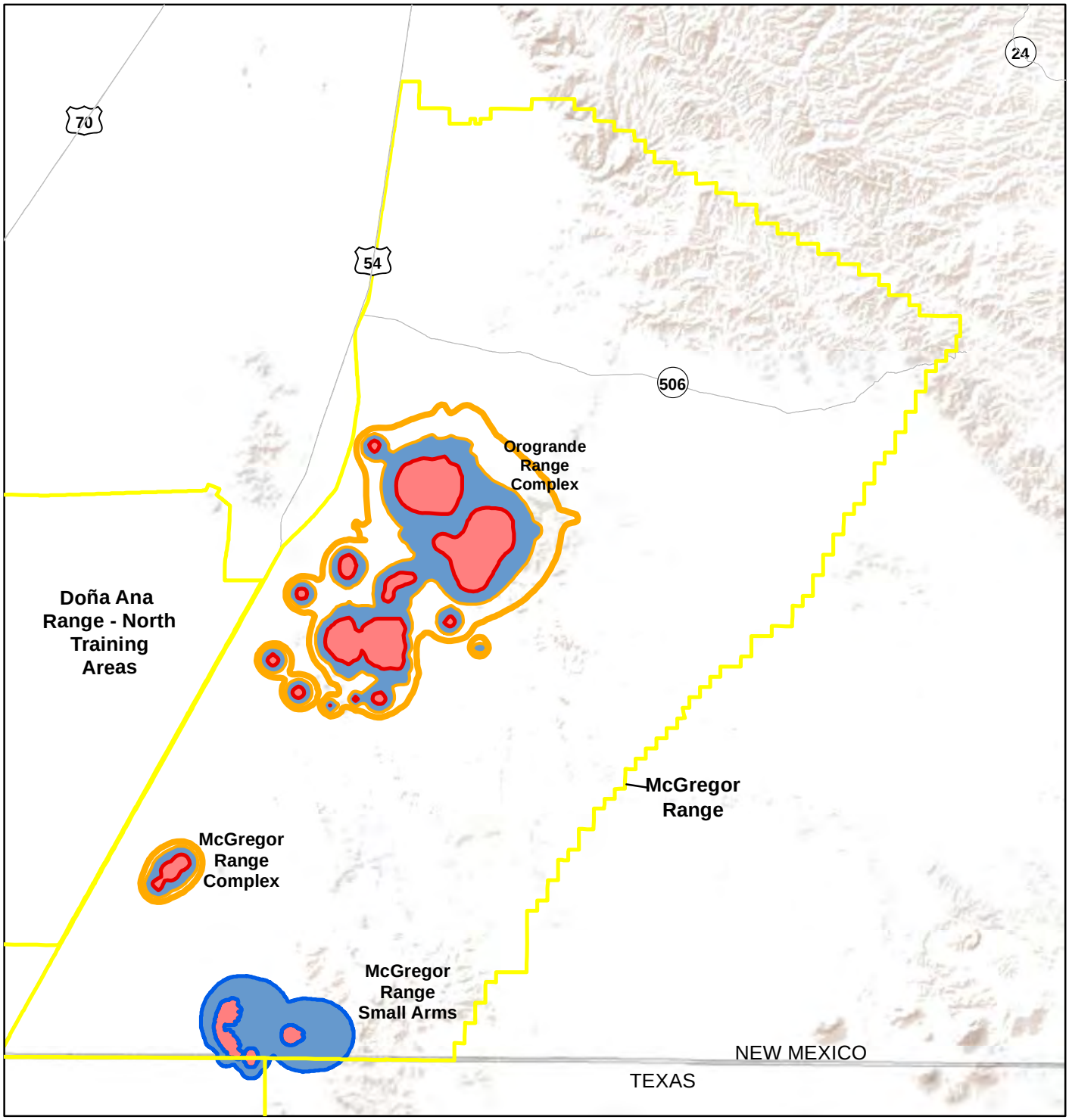


FIGURE 3-2
McGregor Range Noise Zones

Installation Boundaries
LUPZ
Zone II
Zone III

N

0 5 Miles

Coordinate System: WGS 1984 UTM Zone 13N

Most large-caliber firing operations within the McGregor Range are concentrated in the central portion of the Range. The small percentage of noise zones that extend off the Installation encompass uninhabited desert land. There are no noise zones within McGregor Range that encompass sensitive land uses (Fort Bliss, 2021b).

Aircraft noise from military operations at Fort Bliss consists of aircraft operations from Biggs Army Airfield, single overflights, and UAS. Noise zones for Biggs Army Airfield do not extend beyond the Installation's boundary. On the Installation, noise zones remain localized to the airfield runway and parking aprons. Aircraft operating in regulated and restricted airspaces, either in or out of designated flight corridors, aviation training areas, maintenance test flight areas, or within the local flying area all have the potential to cause annoyance and possibly generate noise complaints from single overflights. Measures are currently in place to help mitigate the effects of aircraft noise, including minimum flight altitudes and avoidance procedures for developed areas. Noise impacts from UAS aircraft launch, recovery, and mission activities are considered minimal. UAS operate inside the Fort Bliss restricted airspace (R-5103A/B/C or R-5107A/K) in approved operating zones and training areas. Generally, the noise produced from UAS activities within the shared airspace is considerably quieter than other larger aircraft activities. Once UAS aircraft reach mission altitudes, the annoyance potential from overflight is considered low (Fort Bliss, 2021b).

3.9.3 Environmental Consequences

3.9.3.1 Evaluation Criteria

When evaluating noise effects, several aspects are examined:

- the degree to which noise levels generated by training and operations, as well as construction and demolition activities, would be higher than the ambient noise levels; and
- the degree to which there would be hearing loss and/or annoyance.

3.9.3.2 Proposed Action

The proposed action would have no significant adverse impacts to the noise environment in the ROI. Under the proposed action, the nature and levels of noise from aircraft and land missions and operations within McGregor Range would be identical to existing conditions. None of the potential actions examined in this LEA would present a risk of adverse noise impacts; as such, no new modeling was conducted for this LEA. In addition, exposure to small arms artillery, large-caliber weapons, and aircraft noise would not increase under the proposed action.

3.9.3.3 No Action Alternative

The no action alternative would have a minor, beneficial impact to noise levels in the ROI. Under the no action alternative, the land withdrawal at McGregor Range would not be renewed and oversight of the land would be returned to the BLM. There would be no further military use of the land returned to the public domain. Under the no action alternative, military aviation activities would continue, and restricted airspace would be used as described in **Section 3.4**.

Noise from aircraft within and near McGregor Range would be similar to current conditions and would continue to be the dominant source of noise at Fort Bliss. Military operations involving small arms ranges, artillery, large-caliber weapons training, combat demolition activities, and vehicular traffic within the BLM-owned lands of McGregor Range would be expected to cease and would be moved to another DoD location, potentially reducing the noise experienced by persons utilizing McGregor Range under BLM management. Noise impacts from military operations would be slightly lower than current levels, but because aviation activities would continue, the change would be minimal.

3.10 HAZARDOUS MATERIALS AND WASTE, TOXIC SUBSTANCES, AND CONTAMINATED SITES

3.10.1 Definition of the Resource

RCRA establishes the mandatory procedures and requirements for Federal facilities that use, accumulate, transport, treat, store, or dispose of hazardous materials and wastes. Under RCRA, the USEPA can grant authority to the state to establish and enforce its own hazardous waste management program, provided the state's requirements are no less stringent than the USEPA's (USEPA, 2022). In Texas, the Texas Commission on Environmental Quality implements the RCRA program; the New Mexico Environment Department (NMED) implements RCRA in that state. Fort Bliss's Hazardous Waste Management Plan complies with rules from both states.

The *Solid Waste Disposal Act*, as amended by RCRA, which was further amended by the *Hazardous and Solid Waste Amendments of 1984* (PL 98-616), defines hazardous wastes as any solid, liquid, contained gaseous, or semi-solid waste, or any combination of wastes, that pose a substantial present or potential hazard to human health or the environment. In general, both hazardous materials and hazardous wastes include substances that, because of their quantity, concentration, physical, chemical, or infectious characteristics, might present substantial danger to public health and welfare or the environment when released or otherwise improperly managed.

CERCLA, as amended by the *Superfund Amendments and Reauthorization Act* and the *Toxic Substances Control Act* (15 USC § 2601 et seq., as implemented by 40 CFR Part 761), defines hazardous materials (HAZMAT) as any substance with physical properties of ignitability, corrosivity, reactivity, or toxicity that might cause an increase in mortality, serious irreversible illness, and incapacitating reversible illness, or that might pose a substantial threat to human health or the environment.

The Occupational Safety and Health Administration (OSHA) is responsible for the enforcement and implementation of Federal laws and regulations pertaining to worker health and safety under 29 CFR Part 1910. OSHA also includes the regulation of HAZMAT in the workplace and ensures appropriate training in their handling.

Section 311 of the CWA, as amended by the *Oil Pollution Act* (PL 101-380), establishes requirements to prevent, prepare for, and respond to oil discharges at specific types of facilities, including military installations. The goal of the *Oil Pollution Act* is to prevent oil from reaching navigable waters and adjoining shorelines, and to contain discharges of oil. The Act established the Spill Prevention, Control, and Countermeasures rule under 40 CFR Part 112, which requires facilities with an aggregate aboveground petroleum storage capacity greater than 1,320 gallons or an aggregate underground storage capacity of 42,000 gallons to develop and implement a Spill Prevention, Control, and Countermeasures plan. The plan establishes procedures, methods, and equipment requirements for managing the storage, transfer, and potential release of petroleum products. These plans must be prepared by or under the supervision of a professional engineer and must be designed to prevent a release from reaching navigable waters.

Army regulations concerning HAZMAT, hazardous wastes, toxic substances, and contaminated areas are laid out in AR 200-1. More specific rules and regulations applicable at this Installation are laid out in the *Fort Bliss Hazardous Materials and Waste Management Plan* (Fort Bliss, 2022c).

The Military Munitions Rule and later USEPA munitions response guidelines clarify when military munitions may be managed under RCRA. The rule states, "… military munitions that have been used as intended in training or in research, development, testing or evaluation would remain excluded from the regulatory definition of solid waste …" when fired on an operational range under the management of the DoD. Should the land this operational range is located on be transferred to another entity there would need to be an evaluation of the risks associated with munitions and explosives of concern. This could result in the need for CERCLA-related munitions response actions.

The ROI for this resource is McGregor Range and large gunnery ranges.

3.10.2 Existing Conditions

3.10.2.1 Hazardous Materials and Petroleum Products

The McGregor Range training area currently is used for vehicle maneuvering, FIREX, and aircraft operations. Tenants that use the training area may also camp on site and use the space for limited administrative tasks and associated support services. Tenants conduct routine maintenance and minor repair of vehicles, machinery, and weapons while using the Range. These activities require that tenants bring small amounts of HAZMAT and petroleum products with them in the field. Examples of such HAZMAT and petroleum products include cleaners/degreasers, gasoline, diesel, antifreeze, and various other lubricants. Tenants are required to call Hazardous Waste Field Services to pick up unused portions of any HAZMAT and petroleum products when on the Range (Fort Bliss, 2020).

The grounds and infrastructure within McGregor Range require periodic maintenance. HAZMAT typically used for grounds and infrastructure maintenance include pesticides/herbicides, paints, cleaners, and other miscellaneous materials. As part of the *Fort Bliss Pest Management Plan*, application of pesticides and herbicides must be reported and scheduling must be coordinated with mission activities to avoid inadvertently exposing personnel (Fort Bliss, 2017). Unused portions of HAZMAT used for grounds and infrastructure maintenance are taken off site or managed as hazardous waste, as detailed in the following subsections.

Several storage tanks, including both underground and aboveground storage tanks, are located within McGregor Range (Fort Bliss, 2020). The contents of these tanks include gasoline, diesel, JP-8 fuel, and motor oil.

3.10.2.2 Hazardous Waste

McGregor Range is located within the New Mexico portion of Fort Bliss and is managed under a separate USEPA identification number. Hazardous waste generation is reported under USEPA identification number NM4213720101 (Fort Bliss, 2021c), which lists McGregor Range as a large-quantity generator.[3] Although McGregor Range is designated a large-quantity generator, the Range only generated 3.2 tons (approximately 6,400 pounds) of hazardous waste, in the 2021 reporting year. The waste was classified into two categories (Fort Bliss, 2021c). The majority of the waste, 2.9 tons, was listed as “other organic liquids” generated from “discarding chemicals”; the remainder, 1.39 tons, was listed as “other inorganic liquid” containing lead. Use of proper procedures for the disposal of hazardous wastes and toxic substances ensures that all wastes generated on the Installation are disposed of according to applicable rules and regulations at state and Federal levels (Fort Bliss, 2022c).

Wastes generated on McGregor Range are stored at satellite accumulation points. These accumulation points are not permanent locations and are established as needed based on hazardous waste generation. Because of this, the number of waste storage areas on the Range varies over time, increasing or decreasing as needed to accommodate the needs of the generator (Fort Bliss, 2020). There are no 90-day waste accumulation points on the Range. Wastes generated on McGregor Range are transported to the Texas portion of the Installation for aggregation before being properly disposed of.

3.10.2.3 Toxic Substances

McGregor Range contains several buildings constructed prior to the 1980s. Buildings constructed prior to 1981 are more likely to contain asbestos-containing materials and lead-based paint. Polychlorinated

[3] As defined by the USEPA, a large-quantity generator is a facility that generates more than 2,200 pounds of hazardous waste or 2.2 pounds of acute hazardous waste per calendar month (see https://www.epa.gov/sites/default/files/2020-07/documents/10635_lqg-factsheet_508.pdf).

biphenyls (PCBs) are also known to be present in electrical transformers, capacitors, fluorescent light ballasts, and cable manufactured in the US prior to 1979.

Currently, Fort Bliss maintains lead management and asbestos management plans, which address how these toxic substances should be managed. Under these plans, if no asbestos and lead surveys are available or there is no certification from the builder stating that no asbestos and lead were used for the construction of a facility, a survey must be conducted for asbestos and/or lead even if buildings were constructed after 1981.

Fort Bliss manages PCBs under a PCB management plan that includes a PCB compliance tracking system database. The database includes an inventory of all tested electrical and hydraulic equipment with data plate information, an updated inventory of new electrical equipment, and tracking information for all out-of-service electrical equipment. Fort Bliss has conducted three PCB surveys and has removed and properly disposed of all PCB items with a PCB level over 500 ppm (Fort Bliss, 2013).

3.10.2.4 Radon

The Installation lies within Radon Zone 3, which is the lowest level for radon according the USEPA.[4] No mitigation measures are recommended in this zone and radon is not discussed further in this LEA.

3.10.2.5 Contaminated Sites

Table 3-18 shows the Environmental Restoration Program (ERP) sites that are located within McGregor Range, their status, and additional information for each site.

A preliminary investigation regarding the presence of perfluorooctane sulfonate/perfluorooctanoic acid (PFOS/PFOA) has been completed for the Fire Training Area at McGregor Range. The preliminary findings indicate that PFOS/PFOA substances were detected in the soil and further investigation is underway (Fort Bliss, 2023d).

3.10.2.6 Live-Fire and Munitions

Current training exercises utilizing McGregor Range include the live-firing of high-to-medium-altitude missiles, small arms firing of guided missiles, automatic weapons, tank weapons, conventional artillery, aerial gunnery, and small arms, as well as the launch and control of aerial targets and other explosive ordnance activities.

Munitions constituents can include explosives, toxic heavy metals, uranium, and in some specific instances, chemical warfare agents or materials. The impacts from these munitions and explosives of concern may include contamination of soil and surface- and groundwater. These impacts are evidenced in soil compliance samples from known ERP locations on McGregor Range (see **Table 3-18**). While operating in compliance with the rules and regulations of the permits held by the Range, there is a noted increase in heavy-metal concentrations in soils over time (Fort Bliss, 2002).

[4] See https://www.epa.gov/sites/default/files/2018-12/documents/radon-zones-map.pdf.

Table 3-18.
ERP Sites within McGregor Range

Name	Status	Information
McGregor Rubble Pit	Closed	This site is a landfill that was used in the 1960s for rubble and other refuse before being capped. This site is reported to have been used for the disposal of sanitary waste and rubble from the camp since World War II era and covers approximately 15 acres. Fort Bliss is required to conduct post-closure monitoring at this site; site inspection reports have been submitted. The site inspections are required to be submitted to NMED annually.
McGregor Range Oxidation Pond	Closed	This site is a lined wastewater oxidation pond, containing water and sediments.
McGregor Range Fire Training Area	Closed/Open	This site was used for fire protection training activities, including training with perfluorooctane sulfonate and/or perfluorooctanoic acid containing aqueous film forming foam. The site was used for training exercises related to firefighting until 1983. A burned jet fuselage and other automobile bodies remain on site. Wastes released into the 75-foot x 30-foot area include waste oil, fuel, solvents, fog oil, and other flammable liquids.
McGregor Range Drum Storage Area	Closed	This site is adjacent to the fire training area. At one time, the area housed 55-gallon drums of spent petroleum, oil, and lubricants from activities conducted on the Range. This site is less is than 1 acre, is fenced in, and ceased operations in 1983; excess drums of liquid were removed in 1991.
McGregor Range Open Detonation Unit	Closure Approval Anticipated	This site is an open detonation pit used for detonation of ordnance and other Range functions. Fort Bliss personnel are in the process of closing this site and anticipate applying for closure in 2024. This site is approximately 10 acres and contains two earthen pits and some small trenches. Empty 55-gallon drums, scrap metal, construction rubble, and parts of Nike and Hawk missiles are strewn across the site.

According to the *EPA Munitions Response Guidelines* (USEPA, 2010), the determination regarding whether military munitions are considered a solid or hazardous waste hinges on how the munitions are used. Munitions that are used for their intended purpose in the location they are intended to be used are not considered solid or hazardous waste and do not require disposal. If a range closes, the munitions are not initially considered solid or hazardous waste; however, munitions at a closed range would eventually be considered RCRA waste and would be subject to regulation, removal, and disposal. The term “eventually” is not defined. The guidance states that if a response action is carried out, the “intended use exemption” on the munitions included in the response action does not apply. In short, if a cleanup of a closed range occurs, the waste within the Range and removed from the Range is required to be managed under RCRA.

3.10.3 Environmental Consequences

3.10.3.1 Evaluation Criteria

A significant impact to HAZMAT and waste, petroleum/oil/lubricants (POL), toxic substances, and contaminated sites within the ROI would occur if the proposed action results in the following:

- is noncompliant with applicable Federal and state regulations;
- increases the amounts of hazardous waste generated or procured beyond Fort Bliss's current waste management procedures and capacities; and/or
- disturbs or creates contaminated sites resulting in negative effects on human health or the environment.

3.10.3.2 Proposed Action

The proposed action would have minor, adverse impacts to HAZMAT, hazardous waste, toxic substances, and contaminated sites in the ROI. Under the proposed action, operations at McGregor Range would remain unchanged. McGregor Range would continue to host training events, weapons, vehicles, and machinery. Minor risks associated with leaks from vehicles and machinery would continue to be present. However, Fort Bliss and other military users of McGregor Range would continue efforts to minimize, avoid, or contain impacts associated with the generation of hazardous wastes.

Hazardous Materials, Petroleum Products, Hazardous Waste, and Toxic Substances

Small amounts of POLs and/or universal waste (i.e., small amounts of battery and transmission fluid) would continue to be used on site, and generation of hazardous waste would be anticipated to continue at similar levels. Toxic substances such as asbestos, lead, and PCBs would continue to be managed under their respective management plans and contaminated sites would continue to be managed according to the status quo.

Contaminated Sites

Although the ERP sites within McGregor Range have been closed or are pending closure, these sites could still require some level of post-closure monitoring in cooperation with the Army to remain in compliance with RCRA permit requirements. Post-closure requirements may include annual inspections of the ERP site, required sampling, and submission of annual reports of these inspections.

Live-Fire and Munitions

The continued use of live-fire weapons would result in additional adverse impacts from munitions. According to the 1997 Military Munitions Rule, the munitions used for their intended purpose would continue to be exempt from RCRA regulations.

The proposed action would have no significant impact on the environment as it relates to HAZMAT, hazardous wastes, toxic substances, POLs, universal waste, and contaminated sites.

3.10.3.3 No Action Alternative

The no action alternative would be anticipated to have both adverse and beneficial impacts to HAZMAT, hazardous wastes, toxic substances, POLs, universal waste, and contaminated sites in the ROI. Under the no action alternative, the land withdrawal at McGregor Range would not be renewed and oversight of the land would be returned to the BLM. There would be no further military use of the land returned to the public domain. Military structures currently located on the Range would be demolished and the land would no longer be maintained by Fort Bliss personnel. The demolition of military structures currently on the Range would generate demolition debris known to contain toxic substances in the form of asbestos, lead, and PCB wastes.

Additionally, there would no longer be a need for bulk storage of materials in above- or underground storage tanks on the Range and the use of HAZMAT by Fort Bliss personnel on the Range would end. This would eliminate the current risks associated with toxic substances and hazardous chemical usage such as a release or other accidents resulting in long-term beneficial impacts from the no action alternative.

According to the Military Munitions Rule and USEPA munitions response guidelines, military munitions are excluded from the regulatory definition of solid waste when fired on an operational range under the management of the DoD. Under the no action alternative, the ownership of the land from the operational ranges would be transferred to the BLM, and the military munitions would no longer be exempt, resulting in the need for CERCLA-related munitions response actions. Accordingly, the Army would be required to take action as required by CERCLA for cleanup of military munitions. This would trigger the Environmental Condition of Property process, which would culminate in the preparation of an Environmental Baseline Survey as well as additional environmental investigations.

According to the *EPA Munitions Response Guidelines* (USEPA, 2010), munitions response actions would be required to be part of the transfer of land to the BLM and may be required prior to the property transfer. Munitions response actions are costly and time consuming and would require considerable financial and natural resources to complete. Such an action would result in the unearthing and disposal of large amounts of solid and hazardous waste.

Although the ERP sites within McGregor Range have been closed or are pending closure, these sites could still require some level of post-closure monitoring in cooperation with the Army to remain in compliance with RCRA permit requirements. Post-closure requirements may include annual inspections of the ERP sites, required sampling, and submission of annual reports of these inspections.

Additionally, removal of McGregor Range would not absolve the Army of its obligations to sustain the mission. As such, these operations would have to be relocated to another site. Given that impacts to soil and groundwater are almost certain when live-fire is used, relocating the Range activities to a new location would create a new tract of land that would be impacted by residues associated with live-fire if the land had not already been previously impacted by live-fire and munitions. This would result in moderate, long-term, adverse impacts to the location selected to host training activities displaced by the closure of McGregor Range. Relocating Range activities to another location would need to be evaluated under separate environmental analysis.

In the context of the no action alternative, the most measurable adverse impacts would result from live-fire and associated activities being relocated to another site. Munitions response actions associated with transferring the land would expend substantial financial resources and would require unearthing and disposing of a large amount of hazardous waste. Transferring live-fire and associated activities to another location would need to be evaluated under separate environmental analysis.

3.11 INFRASTRUCTURE, INCLUDING TRANSPORTATION AND UTILITIES

3.11.1 Definition of the Resource

Infrastructure consists of systems and structures that enable a population in a specified area to function. Infrastructure is wholly man-made, with a high correlation between the type and extent of infrastructure and the degree to which an area is characterized as developed. The availability of infrastructure and its capacity to support more users, including residential and commercial expansion, are generally regarded as essential to the economic growth of an area.

Infrastructure includes utilities, solid waste management, sanitary and storm sewers, and transportation. Utilities include electrical, natural gas, potable water supply, sanitary sewage/wastewater, and communications systems. Sanitary and storm sewers (also considered utilities) include systems that collect, move, treat, and discharge liquid waste and stormwater. Transportation is the system of roadways,

highways, and transit services in the vicinity of the Installation that provide ingress/egress, as well as access to regional goods and services.

Fort Bliss is a Pilot Integrated Net Zero Installation. This designation aimed to achieve a net-zero status in energy, water, and waste by 2020 (US Army, 2011).

El Paso Water, the source of McGregor Range's drinking water, has adopted stringent water conservation measures to ensure sustainable water consumption. The City of El Paso, with El Paso Water, has developed Conservation Ordinance No. 752 to ensure water conservation compliance.

The State of New Mexico follows its Solid Waste Management Plan, which was developed in accordance with the *New Mexico Solid Waste Act* §§ 74-9-1 through 74-9-43. The plan aims to divert solid waste through recycling and composting efforts while routing remaining waste to larger, regional landfills. Since implementation of the plan, solid waste is managed through regulated systems and illegal dumping has been reduced (NMED, 2015, 2023).

The State of Texas' *Waste Reduction Policy Act* aims to prevent and reduce pollution in Texas. The Texas Commission of Environmental Quality Rule 30 Texas Administrative Code 335, Subchapter Q, requires facilities to report annually on their activities to prevent pollution and prepare a 5-year pollution prevention plan that must include the following elements:

- a list of all hazardous wastes and toxics release inventory chemicals,
- the activities that generate the waste or toxic release inventory chemicals,
- an explanation of pollution prevention projects,
- an implementation schedule,
- the measurable pollution prevention goals,
- an employee awareness program, and
- a pollution prevention plan executive summary.

The ROI includes the lands within and adjacent to McGregor Range.

3.11.2 Existing Conditions

3.11.2.1 Transportation

McGregor Range can be primarily accessed from Fort Bliss via US Highway 54 or Railroad Drive. US Highway 54 is the main connector from El Paso, Texas, where Fort Bliss is located, north into New Mexico, where McGregor Range is located. McGregor Range is accessible to the public via NMCR - A506 or Otero County roads. Some roads throughout the Range are accessible only with a permit. McGregor Range is open to the public via the previously identified roads unless closed due to Army training exercises (BLM, 2023; New Mexico, 2023).

3.11.2.2 Potable Water Supply

Drinking water at McGregor Range is supplied by the City of El Paso, Texas. River and groundwater make up 97 percent of drinking water provided by the City. Groundwater is pumped from the Mesilla and Hueco Bolson basins, which are located beneath portions of New Mexico, Texas, and Chihuahua, Mexico (State of New Mexico, 2004; El Paso Water, 2018). The Hueco Bolson Basin supplies the main potable water for the Range areas of Fort Bliss (US Army, 2011). A desalination plant is present on Fort Bliss and draws brackish water from the Hueco Bolson Basin and produces potable water. This plant is a joint project between the City of El Paso and Fort Bliss and allows the City of El Paso to meet peak summer water

demand (El Paso Water, 2018). The City of El Paso is exploring options to develop systems to increase use of water reclamation (El Paso Water, 2023).

3.11.2.3 Communications

McGregor Range utilizes FBTC communication systems during active training missions. Based on 2023 geographic information system data provided by Fort Bliss, two communications antennas support McGregor Range. Additional communications support is provided through the McGregor Range Camp, which manages all Range control functions and houses organizational support facilities (Global Security, 2023). Communication lines within McGregor Range connect the McGregor/Meyer Range Complex, 40 Range, SHORAD Range Camp, Orogrande Range Camp, Centennial Safety Area, and Centennial Range.

3.11.2.4 Solid Waste

Solid waste management at Fort Bliss is supplied by El Paso Environmental Services. Within McGregor Range are three solid waste management units (SWMU). A SWMU is a location at which solid wastes have been placed, at any time, regardless of intended use (USEPA, 2011). SWMU 21 is the McGregor Range Former Fire Fighting Training Area, SWMU 22 is the McGregor Range Waste Drum Storage Area, and SWMU 66 is the McGregor Range Borrow Pit Buried Drum Site. All three SWMUs have been recommended for no further action under Fort Bliss' RCRA permit requirements (US Army, 2004). In 2020, the DoD issued a Memorandum on Integrated Solid Waste Management Metrics which aimed to continue to divert waste from incineration and landfill by reducing annual waste generation by 2 percent of total waste each year through fiscal year 2025. Because the onsite landfill has reached capacity, Fort Bliss' qualified recycling program diverts waste to be recycled where possible. Waste that cannot be recycled is diverted to other landfills within 50 miles of Fort Bliss, including the City of El Paso Clint Landfill and Camino Real Landfill (US Army, 2023b).

3.11.2.5 Electricity and Natural Gas

Electrical services to Fort Bliss are provided by Rio Grande Electric Cooperative, Inc. Electrical distribution systems include transmission lines, underground lines, and overhead energized lines. Based on geographic information system data provided by Fort Bliss, electrical lines within McGregor Range primarily follow US Highway 54 and NMCR-A506. The majority of the major ranges within McGregor Range, including the Meyer Range Complex, 40 Range, SHORAD Range, and Orogrande Range, receive electricity via electrical lines. Additionally, 12 generators are distributed throughout McGregor Range with 8 located in proximity to a gas line located in the southwest portion of the Range. One substation is located in the southwest portion of the Range, associated with the abovementioned generators. This substation was put in service in 1996 and has a capacity rate of 10,000 kilovolts. In 2013, Fort Bliss announced the establishment of a 20-megawatt solar farm to power a large portion of the Installation and work to reduce energy consumption. This effort, along with other solar arrays, contributed to Fort Bliss' goal of achieving 25-percent renewable energy by 2015 (US Army, 2013). Texas Gas Service provides public and privatized utility natural gas to Fort Bliss. Presently, only the McGregor/Meyer Range Complex is serviced with natural gas lines.

3.11.3 Environmental Consequences

3.11.3.1 Evaluation Criteria

A significant impact to or from infrastructure, including transportation and utilities, within the ROI would occur if the proposed action results in the following:

- measurable change or service reduction within the regional transportation network;
- prolonged or repeated interruption of public transportation services regionally;
- prolonged or repeated service disruptions to utility end users; and/or

- substantial increase in utility demand relative to existing and planned regional uses.

Adverse impacts to infrastructure would occur if the proposed action resulted in the following:

- disrupts or improves the existing levels of service,
- increases energy or water consumption, and/or
- exceeds the capacity of sanitary sewer and solid waste management systems.

Adverse impacts to transportation would occur if the proposed action results in the following:

- substantially increases traffic that would cause a decrease in the level of service,
- substantially increases the use of the street systems or mass transit, and/or
- fails to meet on-Installation parking needs.

Adverse impacts to utilities would occur if the proposed action results in the following:

- creates a demand that exceeds the existing supply capacity, and/or
- requires services in conflict with adopted plans and policies for the area.

3.11.3.2 Proposed Action

Transportation

The proposed action would have no impacts to transportation in the ROI. Under the proposed action, transportation and access to the Range would not change. No impact to the frequency or duration of transportation needs would be expected to occur under the proposed action.

Potable Water Supply

The proposed action would have no impacts to the potable water supply in the ROI. Under the proposed action, the potable water supply would remain as is and would not strain the supply used for Fort Bliss. McGregor Range would continue supporting water conservation efforts already set in place.

Communications

The proposed action would have no impacts to communications in the ROI. Under the proposed action, there would be no change to communications equipment or procedures at McGregor Range. The McGregor Range Camp and support facilities would remain as is and continue to provide communication support for training missions.

Solid Waste

The proposed action would have no impacts to solid waste in the ROI. Under the proposed action, there would be no change to solid waste management at McGregor Range. Solid waste generation would remain as is. Solid waste would continue to be managed and diverted to off-Installation landfills or sorted for recycling per Fort Bliss' qualified recycling program. Off-Installation landfills are located within 50 miles of McGregor Range. McGregor Range would not contribute to a change in Fort Bliss' overall generation of solid waste.

Electricity and Natural Gas

The proposed action would have no impacts to electricity and natural gas in the ROI. Under the proposed action, electricity and natural gas usage would remain unchanged. McGregor Range would remain operating at the status quo, which is in-line with Fort Bliss' overall energy conservation efforts.

3.11.3.3 No Action Alternative

The no action alternative would be anticipated to have no adverse impacts on this resource area in the ROI; however, there would be some long-term, beneficial impacts to infrastructure. Under the no action alternative, the land withdrawal at McGregor Range would not be renewed and oversight of the land would be returned to the BLM. There would be no further military use of the land returned to the public domain.

Long-term, beneficial impacts to the Rio Grande and Mesilla and Hueco Bolson basins would be anticipated to occur under the no action alternative. There would be the potential to alleviate some of the strain on the Rio Grande and Mesilla and Hueco Bolson basins, which supply potable water for the Range. These water resources are currently under conservation measures and have been for decades. The reduction of facility use and the number of personnel on the Range would also result in less solid waste generation and reduced use of electricity, natural gas, and communications systems.

A reduction in training activities at McGregor Range may alleviate some water usage strain, reduce solid waste, and reduce the need for electricity, natural gas, and communication systems. Transportation at McGregor Range would remain open to the public for recreational uses. There would be no anticipated changes to transportation under the no action alternative.

3.12 SAFETY

3.12.1 Definition of the Resource

This section discusses safety concerns associated with ground, explosives, and flight activities. Ground safety considers issues associated with ground operations and maintenance activities that support unit operations including arresting gear capability, jet blast/maintenance testing, and safety danger. Aircraft maintenance testing occurs in designated safety zones. Ground safety also considers the safety of personnel and facilities from flight operations in the vicinity of the airfield and in the airspace. Clear zones and accident potential zones around the airfield restrict the public's exposure to areas with a higher accident potential. Explosives safety relates to the management and safe use of ordnance and munitions.

Army regulations address human health and safety to reduce, to the greatest extent practicable, the potential for death, serious bodily injury, illness, or property damage. Regulations include AR 385-10 *The Army Safety Program*, Department of the Army Pamphlet 385-63, *Range Safety*, and DoD Manual 6055.09 Volume 7, *DoD Ammunition and Explosives Safety Standards: Criteria for Unexploded Ordnance, Munitions Response, Waste Military Munitions, and Material Potentially Presenting an Explosive Hazard*.

The ROI for this resource area is McGregor Range.

3.12.2 Existing Conditions

McGregor Range and surrounding areas consist of withdrawn public lands, ranch lands, and Army fee-owned lands. When authorized by the Army through an FBTC Recreational Access Permit, this area is open to the public for hiking, backpacking, camping, horseback riding, and hunting. (BLM, 2023; New Mexico, 2023).

3.12.2.1 Ground Safety

McGregor Range regularly hosts training exercises in support of the Army's mission at Fort Bliss. Training exercises within the Range occur within surface impact areas; that is, areas that are expected to produce unexploded ordnance. Surface impact areas are located in defined land use areas and are associated with aircraft operations, SDZ/safety footprint, and surface impact military uses of the FBTC. Training missions are performed in accordance with Army safety regulations and occupational health and safety standards. The Range is closed to the public during Army training exercises, and some portions of the Range are permanently off-limits to recreation due to the possible presence of unexploded ordnance. To maximize

public safety, public access is granted through an FBTC Recreational Access Permit. Once the permit is received, access is granted on a case-by-case and day-by-day basis (BLM, 2023).

3.12.2.2 Explosives Safety

During training exercises, Army personnel may engage in FIREX, missile training and testing, and FTX. FIREX consist of individual or crew-served training and are conducted under controlled conditions. Training that occurs within designated surface impact areas has the potential to contain unexploded ordnance. Best management practices (BMPs) are implemented to support training and crew safety. Training missions are performed in accordance with Army safety regulations and occupational health and safety standards. The Range is closed to the public during Army training exercises. Explosives safety quantity distance (ESQD) arcs, which represent the prescribed minimum distance between sites storing or handling explosive materials and specified exposures, such as inhabited buildings, have been established in two locations on McGregor Range near munitions storage areas. Land uses within ESQD arcs are restricted in order to protect the public. One ESQD arc, the McGregor Automated Site Planning ESQD arc, is located directly west of McGregor Range Camp. Two smaller ESQD arcs, referred to as the Japanese Ammunition Storage Modules, are located on the eastern edge of McGregor Range Camp.

3.12.3 Environmental Consequences

3.12.3.1 Evaluation Criteria

Safety-related impacts from a proposed activity are assessed according to the potential to increase or decrease safety risks to personnel, the public, property, or the environment. For the purposes of this LEA, an impact is considered significant if Army or OSHA criteria are exceeded or if established safety measures are not being properly implemented, resulting in unacceptable safety risk to personnel.

Adverse impacts to safety in the ROI would occur if the proposed action results in the following:

- substantially increases risks associated with the safety military personnel or the local community;
- substantially hinders the ability to respond to an emergency; and/or
- introduces a new health or safety risk for which the Base is not prepared or does not have adequate management and response plans in place.

3.12.3.2 Proposed Action

The proposed action would have no impacts to ground or explosives safety in the ROI. Under the proposed action, ground and explosives safety standards at McGregor Range would remain unchanged. McGregor Range would remain operating at the status quo and would maintain Army training exercises and limited public recreation access. The Range would remain closed to the public when Army training exercises are in progress. At other times, the range would be open to the public via permit, with transportation allowed only on permitted roads. No changes to ground or explosives safety would be expected to occur under the proposed action.

Under the proposed action, explosives safety standards at McGregor Range would remain unchanged. McGregor Range would remain operating at the status quo and would maintain Army training exercises and limited public recreation access. The Range would remain closed to the public when Army training exercises are in action, open to the public via permit, and only allow transportation on permitted roads. No changes to explosives safety would be expected to occur under the proposed action.

3.12.3.3 No Action Alternative

The no action alternative would have a long-term, adverse impact on safety in the ROI. Under the no action alternative, the land withdrawal at McGregor Range would not be renewed and oversight of the land would

be returned to the BLM. There would be no further military use of the land returned to the public domain. Areas within McGregor Range have had extensive mission operations and exercises, which would require considerable effort to clean up for public use. Studies and surveys would be required to determine the extent of potential hazards to the public and the hazards would need to be remediated to safe levels, which could cause extended delays for these areas to be available for other uses. Use of some lands returned to the public domain would be restricted until remediated to safe levels. Some areas may be deemed too costly to clean up and would remain permanently inaccessible to public use.

In addition, the no action alternative would have long-term, beneficial impacts to ground and explosives safety in the ROI. By returning McGregor Range to the BLM, military training exercises and missions would not occur. Disposition of additional unexploded ordnance from training missions would not occur in surface impacts areas. Live-fire and missile training would not continue, and the overall safety of McGregor Range would improve.

3.13 SOCIOECONOMICS

3.13.1 Definition of the Resource

Socioeconomics is the relationship between economics and social elements, such as population levels and economic activity. Several factors can be used as indicators of economic conditions for a geographic area, such as demographics, median household income, unemployment rates, percentage of dependents living below the poverty level, employment, and housing data. Employment data identify gross numbers of employees, employment by industry or trade, and unemployment trends. Data on industrial, commercial, and other sectors of the economy provide baseline information about the economic health of a region. Socioeconomic data are typically presented at the county, state, and national levels to characterize baseline socioeconomic conditions in the context of regional, state, and national trends.

The ROI for socioeconomics includes McGregor Range, Fort Bliss, and the surrounding environs.

3.13.2 Existing Conditions

3.13.2.1 Population

Population estimates for the ROI from 2012 to 2022 and total growth percentages are provided in **Table 3-19**. All the geographic areas included in this analysis experienced overall population increases over the 10-year period 2012–2022 (US Census Bureau [USCB], 2023a, 2023b).

Table 3-19.
Population Estimates and Growth near McGregor Range

Geographic Area	2012	2022	Total Growth (percent)
United States	309,138,711	331,097,593	7.1
New Mexico	2,055,287	2,112,463	2.8
Texas	25,208,897	29,243,342	16
El Paso County, Texas	801,115	863,832	7.8
Otero County, New Mexico	64,176	67,850	5.7

Source: USCB, 2023a, 2023b.

3.13.2.2 Employment

Average annual unemployment rates and total jobs in 2022 for the US, both states, and both counties included in this analysis are presented in **Table 3-20**. The industry employing the highest percentage of people in all five geographic areas was Government and Government Enterprises. The Healthcare and

Social Assistance and Retail Trade industries employed the second and third highest percentages, respectively. In both El Paso County and Otero County, more than half of those employed work in an industry that supports Fort Bliss. In El Paso County, Texas, approximately 20.3 percent of the employed population works in Government and Government Enterprises, approximately 13.9 percent of which are Federal civilian employees, and approximately 30.2 percent of which are in the military. In Otero County, New Mexico, approximately 34.5 percent of the employed population works in Government and Government Enterprises, approximately 17.9 percent of which are Federal civilian employees, and approximately 43.9 percent of which are in the military.

Table 3-20.
Employment Characteristics

Geographic Area	Total Employment (# of Jobs)	Unemployment Rate
United States	201,142,600	3.6
Texas	18,276,115	3.9
New Mexico	1,087,348	4.0
El Paso County, TX	461,729	4.3
Otero County, NM	28,766	4.1

Source: Bureau of Economic Analysis, 2023a–2023e; USCB, 2023a, 2023b

In 2021, Fort Bliss was responsible for directly employing just under 47,000 people in Texas (**Table 3-21**). This includes approximately 29,002 full-time active-duty military personnel; 2,383 full-time, part-time, and contract civilian personnel; and 4,744 other full-time employees that are not a part of active-duty or reserve military employment. Population directly affiliated with Fort Bliss contributed at least $22.9 billion to the Texas economy in that same year (Texas Comptroller, 2021). If the proposed action is implemented, an updated economic impact report would be needed to quantify in greater detail the roles that Fort Bliss and McGregor Range play in the local economy.

Table 3-21.
Fort Bliss Employment

Position	Full-Time Equivalent
Full-Time Department of Defense	
Active-Duty Army	27,392
Active-Duty Navy & Marines	34
Active-Duty Air Force	905
Active-Duty National Guard/Reserve	671
Full-Time Civilian Personnel	
Appropriated	1,729
Non-Appropriated	330
Part-Time Civilian Personnel	
Appropriated	1
Non-Appropriated	323
Other	
Civilian Contractors (staff)	2,730
Other Full-Time Employees	4,744
Average Daily Student Load	8,112
Total Direct Employment	**46,971**

Source: Texas Comptroller, 2021.

3.13.2.3 Housing

USCB housing estimates for 2022 are presented in **Table 3-22**. Otero County, New Mexico, had the highest percentage of vacant units in the ROI, more than double the national percentage and just under double the New Mexico percentage. Otero County also had the highest homeowner vacancy rate and the lowest median home value. El Paso County and Otero County had the same rental vacancy rate, the highest in the ROI.

Table 3-22.
USCB Housing Estimates for 2022

Parameter	United States	New Mexico	Texas	El Paso County, Texas	Otero County, New Mexico
Total units	140,943,613	943,149	11,654,971	317,665	32,244
Occupancy rate	89.2	86.2	90.0	92.1	73.9
Vacancy rate	10.8	13.8	10.0	7.9	26.1
Owner-occupied (percent)	64.8	68.7	62.4	63.0	65.7
Renter-occupied (percent)	35.2	31.3	37.6	37.0	34.3
Median value ($)	281,900	216,000	238,000	153,600	139,100
Homeowner vacancy rate	1.1	1.3	1.2	1.2	2.5
Rental vacancy rate	5.5	6.7	7.4	7.6	7.6

Source: USCB, 2023c

3.13.2.4 Schools

Fort Bliss lies within the El Paso Independent School District in El Paso County. The district operates four elementary schools, one middle school, and one high school on Federal property. There are 10 other school districts in the El Paso area that are available to military students living off-Base depending on where they reside; however, military families have the opportunity to send their children to schools in different districts based on space availability. In addition, there are a variety of private and parochial schools and charter schools, as well as a robust homeschool network on and off the Installation. Fort Bliss has six institutions for higher education on the Installation including the University of Texas El Paso and El Paso Community College. Fort Bliss also offers an Army Continuing Education System Education Center for soldiers and/or spouses, which can also be used by retired military and Army civilians (DoD, 2023). As of 2021, approximately 1,722 students attended school on the Installation, and approximately 10,059 attended school off the Installation (Texas Comptroller, 2021).

3.13.3 Environmental Consequences

3.13.3.1 Evaluation Criteria

Consequences to socioeconomic resources are assessed in terms of the potential impacts on the local economy from implementation of the proposed action. The level of impacts from expenditures associated with the proposed action was assessed in terms of direct impacts on the local economy and indirect impacts on other socioeconomic resources (e.g., housing, employment). The magnitude of potential impacts can vary greatly depending on the location of an action. For example, implementation of an action that creates 10 employment positions might be unnoticed in an urban area but might have significant impacts in a rural region. In addition, if potential socioeconomic changes from a proposed action result in substantial shifts in population trends or in adverse effects on regional spending and earning patterns, such changes may be considered adverse.

3.13.3.2 Proposed Action

Population

The proposed action would have no impacts to population in the ROI. The proposed action would result in the continuation of the current training operations within McGregor Range without modification. Military personnel would not be relocated or reassigned under the proposed action, and there would be no shift in the population as a result. The population number in the ROI would continue to fluctuate based on factors unrelated to the proposed land withdrawal.

Employment

The proposed action would have no impacts to employment in the ROI. The proposed action would ensure that the current training activities at McGregor Range would continue. Implementation would not increase or decrease the number of jobs available within the ROI and would have no impact on local employment associated with McGregor Range. The Range would continue to employ current personnel, adjusting the number of employees as necessary to meet mission requirements and support mission activities. No impacts to direct or indirect employment in the ROI would occur with implementation of the proposed action.

Housing

The proposed action would have no impacts to housing in the ROI. The proposed action would not involve relocation of any additional military personnel or their dependents to or away from the Base or surrounding areas and would not result in a need for additional housing stock or an increase in empty units.

Schools

The proposed action would have no impacts to schools or education resources in the ROI. The proposed action would not involve the relocation of any additional military personnel or their dependents to or away from the Base or surrounding areas. The proposed action would not affect enrollment at schools within the ROI. Individuals employed at McGregor Range with children enrolled in local schools would remain in the area. No impacts to educational resources would occur with implementation of the proposed action.

3.13.3.3 No Action Alternative

The no action alternative could have long-term, adverse impacts to socioeconomics in the ROI. Under the no action alternative, the land withdrawal at McGregor Range would not be renewed and oversight of the land would be returned to the BLM. There would be no further military use of the land returned to the public domain. If current mission operations, potential future mission plans, and the ranges and associated training areas and facilities were relocated away from Fort Bliss to other DoD installations, the ROI would be anticipated to experience a decrease of population. Employment opportunities for civilian and military personnel could decrease; since Federal civilian and military positions make up over 40 percent of employment in El Paso County and over 60 percent of employment in Otero County, implementation of the no action alternative would have the potential to create a corresponding decrease in economic contributions associated with Fort Bliss. If military personnel were sent elsewhere, local civilian and other full-time employees that support the military mission could lose their jobs, and local businesses that support the Installation could experience losses requiring them to lay off employees. It should be noted that the number of military personnel that could be relocated with implementation of the no action alternative is not known at this time.

Any off-Installation housing used by military personnel who were relocated could be left vacant, which could have the potential to impact the local economy negatively due to a decrease in local income from rental properties and result in lowered property values if those units remained vacant for an extended period. Additionally, depending on the number of personnel that were relocated, local schools off the Installation attended by the approximately 10,059 students associated with Fort Bliss could have the potential to be impacted by lower attendance and see lowered funding as a result.

3.14 ENVIRONMENTAL JUSTICE AND PROTECTION OF CHILDREN

3.14.1 Definition of the Resource

Federal agencies are directed by EOs to address disproportionate and adverse human health and environmental effects (including risks) and hazards, including those related to the legacy of racism or other structural or systemic barriers, in communities with environmental justice concerns (CEJCs) and assess environmental health and safety risks to children.

EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, pertains to environmental justice issues and relates to various socioeconomic groups and disproportionate impacts that could be imposed on them. This EO requires that Federal agencies' actions substantially affecting human health or the environment do not exclude persons, deny persons benefits, or subject persons to discrimination because of their race, color, or national origin. EO 12898 was enacted to ensure the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Consideration of environmental justice concerns includes race, ethnicity, and the poverty status of populations in the vicinity of a proposed action.

EO 13045, *Protection of Children from Environmental Health Risks and Safety Risks*, states that each Federal agency "(a) shall make it a high priority to identify and assess environmental health risks and safety risks that may disproportionately affect children; and (b) shall ensure that its policies, programs, activities, and standards address disproportionate risks to children that result from environmental health risks or safety risks."

EO 14096, *Revitalizing Our Nation's Commitment to Environmental Justice for All*, signed 21 April 2023, builds on and supplements the foundational efforts of EO 12898. It broadens the definition of environmental justice to include income, race, color, national origin, Tribal affiliation, or disability. EO 14096 was enacted to strengthen the Federal Government's commitment to deliver environmental justice to all communities in the US via an ambitious approach that utilizes scientific research, high-quality data, and meaningful Federal engagement with CEJCs, and that makes use of the tools available to the Federal Government, including enforcement of civil rights and environmental laws.

For the purposes of this analysis, populations that could constitute a CEJC, referred to in this analysis as "populations of concern" are defined as Alaska Natives and American Indians, Asians, Blacks or African-Americans, Native Hawaiians, and Pacific Islanders or persons of Hispanic origin (of any race); low-income populations include persons living below the poverty threshold as determined by the USCB; and youth populations are children under the age of 18 years.

Environmental justice considerations have been codified into US legislation under EO 12898 *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, EO 13045 *Protection of Children from Environmental Health Risks and Safety Risks*, and EO 14096 *Revitalizing Our Nation's Commitment to Environmental Justice for All*. EO 12898 requires that Federal agencies' actions that substantially affect human health or the environment do not exclude persons, deny them benefits, or discriminate against them because of race, color, or national origin. EO 13045 requires Federal agencies to prioritize identification and assessment of environmental health and safety risks that might disproportionately affect children and address said risks in their policies and standards. EO 14096 states that agencies must consider adopting or requiring measures to avoid, minimize, or mitigate disproportionate and adverse human health and environmental effects (including risks) and hazards of Federal activities on CEJCs, to the maximum extent practicable, and to address any contribution of such Federal activities to adverse effects—including cumulative impacts of environmental and other burdens—already experienced by such communities.

The ROI for environmental justice and the protection of children is McGregor Range, Fort Bliss, and the surrounding environs (**Figure 3-3**).

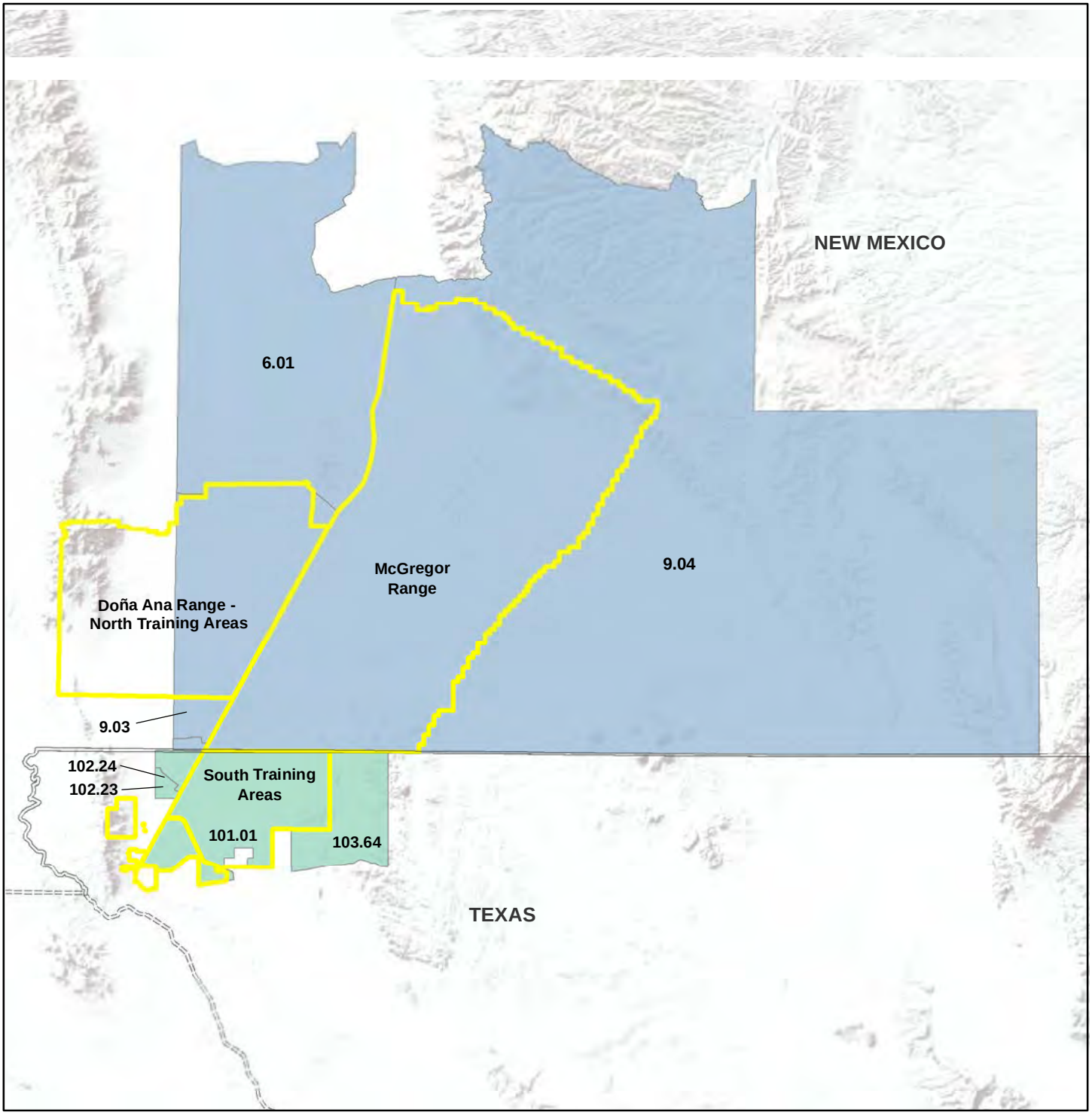


FIGURE 3-3
Environmental Justice Census Tracts

State Boundary
Texas Census Tracts
Installation Boundaries
New Mexico Census Tracts

N
0 20 Miles

Imagery: ESRI, 2022
Coordinate System: WGS 1984 UTM Zone 13N

3.14.2 Existing Conditions

3.14.2.1 New Mexico

Based on 2022 USCB population estimates, approximately 3.2 percent of New Mexico's population resides in Otero County. Approximately 35.8 percent of the population of Otero County, New Mexico, identified their race as one that is a population of concern, in addition to 39 percent of the population reporting as Hispanic or Latino (**Table 3-23**) (USCB, 2023b).

Table 3-23.
Total Population and Populations of Concern – New Mexico

Parameter (percent of total population)	United States	New Mexico	Otero County	Census Tract 6.01	Census Tract 9.03	Census Tract 9.04
Total population[a]	331,097,593	2,112,463	67,850	876	7,574	4,015
White	65.9	59.2	64.2	63.8	44.7	59.4
Black or African American	12.5	2.1	3.7	12.3	1.8	0.1
American Indian and Alaskan Native	0.8	9.4	6.7	1.3	1.5	0.3
Asian	5.8	1.6	1.2	2.4	0.1	0.0
Native Hawaiian and Other Pacific Islanders	0.2	0.1	0.1	0.0	0.0	0.0
Other race	6.0	11.1	8.1	0.0	24.1	28.4
Two or more races	8.8	16.5	16.0	20.2	27.9	11.9
Hispanic or Latino[b]	18.7	49.8	39.0	22.1	89.3	77.4

Source: USCB, 2023b
a Actual numbers.
b Hispanic and Latino denote a place of origin.

Table 3-24 summarizes the percentages of the population living below the poverty level and the percentage of children (i.e., the population under the age of 18) living in the ROI. The census tracts (CTs) with the highest percentages of the population living below the poverty level are CT 9.03 (30.9 percent living below the poverty level) and CT 9.04 (23.5 percent living below the poverty level). When compared to the percentages in the other geographic areas, CTs 9.03 and 9.04 could constitute potential CEJCs.

Table 3-24.
Percent Youth and Poverty Rates

Geographic Area	Total Population	Living Below Poverty Level (%)	Children (%)[a]
United States	331,097,593	12.5	22.1
New Mexico	2,112,463	18.3	22.4
Otero County	67,850	19.4	22.3
Census Tract 6.01	876	(b)	0.0
Census Tract 9.03	7,574	30.9	23.1
Census Tract 9.04	4,015	23.5	22.9

Source: USCB, 2023b, 2023d
a The USCB categorizes all people under the age of 18 as "youth"; this EA uses "children" for the same group.
b An estimate could not be computed because there was an insufficient number of sample observations.

3.14.2.2 Texas

Based on 2022 USCB population estimates, approximately 3 percent of Texas' population resides in El Paso County. Approximately 50.4 percent of the population of El Paso County, Texas, identified their race as one that is a population of concern, in addition to approximately 82.9 percent reporting as Hispanic or Latino (**Table 3-25**) (USCB, 2023b).

Table 3-25.
Total Population and Populations of Concern – Texas

Parameter (percent of total population)	United States	Texas	El Paso County	Census Tract 101.01	Census Tract 102.23	Census Tract 102.24	Census Tract 103.64
Total population[a]	331,097,593	29,243,342	863,832	6,597	4,258	4,665	2,811
White	65.9	59.1	49.6	57.3	42.7	51.6	65.6
Black or African American	12.5	12.1	3.2	13.3	23.3	4.5	0.0
American Indian and Alaskan Native	0.8	0.6	0.7	2.2	0.0	0.0	1.6
Asian	5.8	5.2	1.3	2.2	1.2	1.5	0.0
Native Hawaiian and Other Pacific Islanders	0.2	0.1	0.2	0.5	0.0	0.0	0.0
Other race	6.0	7.8	15.2	6.0	12.0	10.6	6.5
Two or more races	8.8	15.1	29.8	18.4	20.9	31.8	26.3
Hispanic or Latino[b]	18.7	39.90	82.90	24.6	59.9	66.6	88.40

Source: USCB, 2023b
a Actual numbers.
b Hispanic and Latino denote a place of origin.

Table 3-26 summarizes the percentages of the population living below the poverty level and the percentage of children living in the ROI. The CTs with the highest percentages of the population living below the poverty level are CT 102.23 (22.3 percent living below the poverty level) and CT 103.64 (29.4 percent living below the poverty level). When compared to the percentages in the other geographic areas, CTs 102.23 and 103.64 could constitute potential CEJCs.

Table 3-26.
Percent Youth and Poverty Rates

Geographic Area	Total Population	Living Below Poverty Level (%)	Children (%)[a]
United States	331,097,593	12.5	22.1
Texas	6766	13.9	25.3
El Paso County	863,832	19.5	26.5
Census Tract 101.01	6,597	3.9	33
Census Tract 102.23	4,258	22.3	28.7
Census Tract 102.24	4,665	12	39.6
Census Tract 103.64	2,811	29.4	20.7

Source: USCB, 2023b, 2023d
a The USCB categorizes all people under the age of 18 as "youth"; this EA uses "children" for the same group.

3.14.3 Environmental Consequences

3.14.3.1 Evaluation Criteria

Environmental justice impacts could occur if an adverse environmental or socioeconomic consequence to the human population fell disproportionately upon CEJCs or youth populations.

3.14.3.2 Proposed Action

The proposed action would have no adverse impacts to CEJCs or youth populations in the ROI. The proposed action would take place entirely within McGregor Range. The proposed action would not involve relocation of any additional military personnel or their dependents to the Base or surrounding areas, and no increased demand for potentially limited community resources would occur. Additionally, the proposed action would not involve the addition of or changes to current operations and would not result in impacts to environmental quality within the ROI. Therefore, disproportionate and adverse impacts to CEJCs or youth populations would not occur with implementation of the proposed action.

3.14.3.3 No Action Alternative

The no action alternative would result in no adverse impacts to CEJCs or youth populations in the ROI. Under the no action alternative, the land withdrawal at McGregor Range would not be renewed and oversight of the land would be returned to the BLM. There would be no further military use of the land returned to the public domain. The discontinuation of military operations within McGregor Range would have the potential to result in a reduction of noise levels experienced by persons utilizing McGregor Range under BLM management, including populations of concern. No disproportionate and adverse impacts to CEJCs or youth populations would occur under the no action alternative.

CHAPTER 4 REASONABLY FORESEEABLE ACTIONS AND CUMULATIVE IMPACTS

4.1 PAST, PRESENT, AND REASONABLY FORESEEABLE FUTURE ACTIONS

An effort was made to identify past, present, and reasonably foreseeable actions that would affect lands included in the proposed action as well as in the region. The past, present, and reasonably foreseeable future major projects anticipated to occur on or near McGregor Range are listed in **Table 4-1**.

Table 4-1.
Past, Present, and Reasonably Foreseeable Future Projects near McGregor Range

Project	Project Summary	Federal Agency	Timeframe
Target Mechanism Upgrades on Range 19, 23, and 33	Replace life-cycle target mechanisms within Ranges 19, 23, and 33.	Army	Completed January 2023
Target Mechanism Upgrades on Range 32, 37, and 40	Replace target mechanisms in Ranges 32, 37, and 40.	Army	Fiscal Year 2024
Range 24 Unexploded Ordnance Clearance	Conduct unexploded ordnance clearance within Range 24 to repair and add new hard targets.	Army	Fiscal Year 2024–2030
Subterranean Training Facility Addition to Range 35 Urban Assault Course	Construct a subterranean training facility addition to the Urban Assault Course.	Army	Fiscal Year 2025–2031
Automated Record Fire Range on Range 16, Meyer Range Complex	Construct automated record fire range to meet Army requirement model for Fort Bliss.	Army	Fiscal Year 2025–2031
Fort Bliss Obscurant Munition boxes	Expand obscurant munition firing exercise locations within the McGregor, Doña Ana, and Orogrande Ranges for suitable obscurant munition impacts.	Army	Fiscal Year 2024
Weapons Modernization Stations, Fielding, Operations, and Maintenance	Evaluate the stationing and fielding of new weapon systems at Fort Bliss.	Army	Fiscal Year 2024
Shiloh Pipeline	To improve livestock distribution, and secure a more uniform utilization of forage, with the overall goal of maintaining or improving range health. The need stems from lack of permanent water sources in the southern portions of Training Areas (Tas) 21, 22, and 23 of McGregor Range (Grazing Units 13, 14 and 15). In addition, these new water sources could be utilized by Ft. Bliss for firefighting purposes on McGregor Range.	Army	Fiscal Year 2024–2025

Project	Project Summary	Federal Agency	Timeframe
EPE Solar Arrays	Installation of Solar Array on McGregor Range to meet the Federal Government requirement to focus on renewable energy resources and increase energy security on the Installation.	Army	Fiscal Year 2025–2026
Advanced Water Purification Facility	The City of El Paso is designing a closed loop advanced water purification facility, which will produce up to 10 million gallons per day of water to supplement the city's drinking water supply.	The City of El Paso	TBD

Source: Fort Bliss, 2023c

4.2 CUMULATIVE EFFECTS ANALYSIS

The following analysis considers how projects identified in **Table 4-1** could cumulatively result in potential environmental consequences when considered with the proposed action.

4.2.1 Land Use

The proposed action, in combination with past, present, and reasonably foreseeable future actions within and in the vicinity of McGregor Range, would result in no cumulative impacts to land use. The proposed action would not change land use, would be consistent with existing land use, and would not affect future adjacent land use. Ongoing and reasonably foreseeable projects within McGregor Range would improve existing infrastructure but would not alter the existing land uses at the Installation.

4.2.2 Air Quality, Including Greenhouse Gas and Climate Change

Air Quality

The proposed action in combination with past, present, and reasonably foreseeable future actions within and in the vicinity of McGregor Range would not result in cumulative impacts to air quality or change in the attainment status of the El Paso-Las Cruces-Alamogordo Intrastate AQCR. Replacing target mechanisms, conducting unexploded ordnance clearance, and constructing facilities on McGregor Range would result in minor, adverse impacts to regional air quality from emissions from equipment and vehicles. The addition of up to four obscurant munitions boxes at McGregor Range would be anticipated to have short-term, localized, minor, adverse effects to air quality due to increases in the use of obscurant munitions; however, obscurant munitions training already occurs on Fort Bliss. The addition of new weapons systems, modernization stations, and fielding, operations, and maintenance projects would be anticipated to have minor, adverse impacts to regional air quality as a result of an increase in construction activities; military maneuvers; weapon system and artillery use; military operations, equipment, and vehicles; and from the increase in personnel to support these missions.

Greenhouse Gas and Climate Change

The proposed action in combination with past, present, and reasonably foreseeable future actions within and in the vicinity of McGregor Range would not result in significant cumulative impacts or changes to GHG emissions or climate change. Under the proposed action, the Army would continue the current mission and training activities conducted at McGregor Range, GHG emissions would continue from previously approved construction and demolition activities and from ongoing operations of existing infrastructure. The addition of new weapons systems, modernization stations, and fielding, operations, and maintenance projects would be anticipated to have minor, adverse impacts to GHG as a result of an increase in construction activities;

military maneuvers; weapon system and artillery use; military operations, equipment, and vehicles; and from the increase in personnel to support these missions.

4.2.3 Airspace

The proposed action in combination with past, present, and reasonably foreseeable future actions within and in the vicinity of McGregor Range would result in minor adverse cumulative impacts to airspace management and use. Airspace would continue to be managed and used as it is currently operated. The construction of an automated record fire range and addition of new weapons systems, modernization stations, and fielding, operations, and maintenance projects would include air and missile defense architecture to track weapon systems and an increase in mid-range missiles, long-range hypersonic weapon system usage, and laser and microwave training within the Range. These activities would need to be coordinated with Range safety and there could be a need to renegotiate airspace utilization.

4.2.4 Earth Resources

The proposed action in combination with past, present, and reasonably foreseeable future actions within and in the vicinity of McGregor Range would result in minor, adverse cumulative impacts to earth resources. While the proposed action would not involve ground-disturbing activities on McGregor Range, existing ground-disturbing activities would continue under normal operations; such activities include off-road vehicle maneuvering, dismounted maneuvering, the use of FTX sites where troops and vehicles may concentrate, limited digging associated with FTX sites, and FIREX involving surface-to-surface and air-to-surface missiles where ordnance disturbs soils upon collision with the ground. Replacing target mechanisms, conducting unexploded ordnance clearance, and construction of subterranean facilities and an automated record fire range would disturb soils during construction and operation activities. The construction of an automated record fire range and the addition of new weapons systems, modernization stations, and fielding, operations, and maintenance projects would have minor, adverse impacts to earth resources due to ground disturbance and soil compaction in the proposed mission operation areas. Impacts to soils would be managed on an individual basis and appropriate BMPs would be followed in accordance with applicable regulations.

4.2.5 Water Resources

The proposed action in combination with past, present, and reasonably foreseeable future actions within and in the vicinity of McGregor Range would result in minor, adverse cumulative impacts to water resources. All operations and activities on Fort Bliss would continue to follow regulatory measures identified in **Section 3.6.1**. The proposed addition of obscurant munitions boxes at McGregor Range would be anticipated to have short-term, localized impacts to soil chemistry from mission operations as a result of obscurant constituents and remnants possibly leaking into the soils, which eventually could lead to minor, adverse impacts to surface waters and groundwater within the Range. Long-term, beneficial impacts would be anticipated to occur from installation of the Shiloh Pipeline, which would creating more permanent water sources for grazing and firefighting operations at the southern training areas within McGregor Range. The proposed Advanced Water Purification System will utilize reclaimed water to purify and redistribute to water users when it is established. This system would provide improved resilience to drought and climate change.

4.2.6 Biological Resources

The proposed action in combination with past, present, and reasonably foreseeable future actions within and in the vicinity of McGregor Range could result in adverse cumulative impacts to biological resources if future actions expand operations into currently undisturbed areas. Currently, no past, present, or reasonably foreseeable future actions have proposed activities that would occur within undisturbed areas of the Range. All operations and activities on Fort Bliss would continue to implement procedures outlined in the Fort Bliss INRMP and regulatory measures identified in **Section 3.7.1**.

4.2.7 Cultural Resources

The proposed action in combination with past, present, and reasonably foreseeable future actions within and in the vicinity of McGregor Range could result in minor to moderate, adverse cumulative impacts to cultural resources, archaeological resources, historic resources, or Native American TCPs and sacred sites if the actions occurred within known sensitive cultural resources areas. All operations and activities on Fort Bliss would continue to implement procedures outlined in the Fort Bliss ICRMP and would follow guidelines for managing and coordinating NHPA Section 106. Currently, no past, present, or reasonably foreseeable future actions have proposed activities that would occur within known sensitive cultural resources areas.

4.2.8 Noise

The proposed action in combination with past, present, and reasonably foreseeable future actions within and in the vicinity of McGregor Range would result in minor, adverse cumulative impacts to regional noise. The proposed action would produce an increase in the existing noise environment. The proposed action would continue to operate under the current conditions and would not incrementally add to the existing noise environment. Obscurant munitions training already occurs on Fort Bliss and noise impacts would be anticipated to be similar to current conditions. The addition of new weapons systems, modernization stations, and fielding, operations, and maintenance projects would be anticipated to have adverse impacts to the regional noise environment but would be similar to noise levels already occurring within and near the Range. The operation of the automated record firing range would be anticipated to have an adverse impact to the regional noise environment; however, noise from these activities would be similar to noise levels already occurring within and near the Range.

4.2.9 Hazardous Materials and Waste, Toxic Substances, and Contaminated Sites

The proposed action in combination with past, present, and reasonably foreseeable future actions within and in the vicinity of McGregor Range would result in minor, adverse cumulative impacts to HAZMAT and waste, toxic substances, POLs, universal waste, and contaminated sites. Conducting unexploded ordnance clearance would result in a minor increase in waste disposal from munitions and residual components. Conducting obscurant missions and the addition of the new weapons systems, modernization stations, and fielding, operations, and maintenance projects would be unlikely to result in a significant increase of satellite accumulation points or waste.

4.2.10 Infrastructure, Including Transportation and Utilities

The proposed action in combination with past, present, and reasonably foreseeable future actions within and in the vicinity of McGregor Range would result in minor, adverse cumulative impacts to infrastructure, including transportation, and utilities. The proposed action would maintain the status quo of infrastructure and utility resources and continue to support Army training missions on McGregor Range. Maintaining utility conservation efforts on McGregor Range would result in long-term, beneficial impacts to infrastructure and utilities. The addition of obscurant munitions boxes would not be anticipated to impact infrastructure or utilities. The new weapons systems, modernization stations, and fielding, operations, and maintenance projects would have minor, adverse impacts to infrastructure and utilities from construction and operation of new facilities. Depending on mission conditions and location of these new mission operations, there could also be road closures in these areas due to safety concerns. The proposed installation of solar arrays on McGregor Range would be expected to have long-term, beneficial impacts by enhancing energy security on the Installation by providing a renewable, local energy source. The installation of the Shiloh Pipeline would provide additional water access throughout McGregor Range, which is currently limited to the vicinity of the McGregor Range Camp.

4.2.11 Safety

The proposed action in combination with past, present, and reasonably foreseeable future actions within and in the vicinity of McGregor Range would not result in cumulative impacts to regional and local safety

and occupational health. The proposed action would maintain the status quo of safety and occupational health and continue to support Army training missions at McGregor Range. Minor, adverse impacts would be anticipated from the proposed addition of new obscurant missions boxes and associated increase in obscurant munitions training, weapons systems, modernization stations, and fielding, operations, and maintenance projects. The Army would perform these operations in accordance with existing safety regulations, and these operations would use dedicated impact areas. It is anticipated that BMPs would be implemented for current and proposed mission operations and that impacts to safety and occupational health would be negligible. Installation of the Shiloh Pipeline would be expected to have long-term, beneficial impacts to safety at McGregor Range by providing permanent access to water for firefighting at the southern portion of the Range.

4.2.12 Socioeconomics

The proposed action in combination with past, present, and reasonably foreseeable future actions within and in the vicinity of McGregor Range would result in minor, adverse impacts to socioeconomics within the ROI. The proposed new weapons systems, modernization stations, and fielding, operations, and maintenance projects would result in an increase in military personnel to support these missions. The addition of military personnel from these actions would be anticipated to have a minor impact to socioeconomics in the ROI because the local area has the necessary resources to accommodate the number of personnel that would be relocated to Fort Bliss. In addition, the nature of the actions would not be anticipated to cause a large shift in the availability of employment opportunities or other economic factors.

4.2.13 Environmental Justice and Protection of Children

The proposed action, in addition to the past, present, and reasonably foreseeable future actions within and in the vicinity of McGregor Range, would be anticipated to have minor, adverse cumulative impacts to CEJCs or children. The proposed action and other projects listed above would be located entirely within the boundaries of Fort Bliss and McGregor Range. There would be an increase in noise within and near the project locations; however, noise from military operations and training would be similar to the current noise environment in the region. There would be an increase in military personnel supporting the weapons systems, modernization stations, and fielding, operations, and maintenance projects; however, this would not be anticipated to result in a significant demand for potentially limited community resources. Disproportionate and adverse impacts to CEJCs or youth populations would not be anticipated to occur with implementation of the proposed action and other reasonably foreseeable future actions.

4.3 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

Irreversible and irretrievable resource commitments are related to the use of nonrenewable resources and the effects that the uses of these resources have on future generations. Irreversible effects result primarily from the use or destruction of a specific resource (e.g., energy and minerals) that cannot be replaced within a reasonable time frame. Irretrievable resource commitments involve the loss in value of an affected resource that cannot be restored as a result of the action.23

The proposed action would not substantially increase the irreversible or irretrievable commitment of resources. Operational activities conducted on the withdrawn lands would remain the same. Training operations would consume nonrenewable resources such as gasoline for vehicles and fuel for aircraft; however, the demand for these resources would represent a negligible decrease to the overall supply of regional petroleum resources. Use of training ordnance would result in a commitment to chemicals and other ordnance materials; however, there would be no increase in the use of these materials under the proposed withdrawal extension.

4.4 RELATIONSHIPS BETWEEN SHORT-TERM USES AND LONG-TERM PRODUCTIVITY

CEQ regulations (40 CFR § 1502.16(a)(3)) specify that the analysis must address "…the relationship between short-term uses of man's environment and the maintenance and enhancement of long-term productivity." Attention should be given to impacts that narrow the range of beneficial uses of the environment in the long term or pose a long-term risk to human health or safety. This section evaluates the short-term benefits of the proposed action compared to the long-term productivity derived from not pursuing the proposed action or alternatives.

Short-term effects to the environment are generally defined as a direct consequence of a project in its immediate vicinity. The proposed action extends the withdrawal of BLM lands for military uses and provides for continuation of current military training activities. As such, there would be no short-term effects from the proposed action because McGregor Range is already in use for training; no adverse effects to the long-term productivity and future use are anticipated.

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