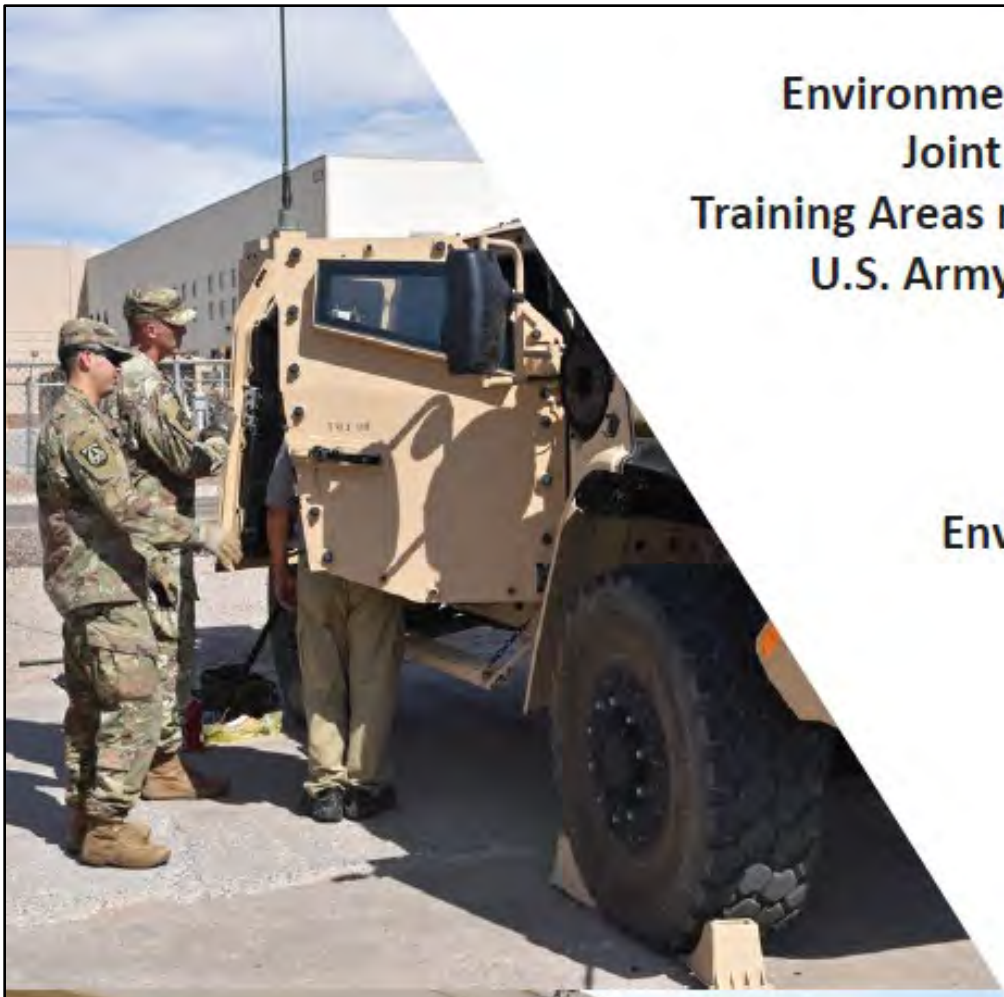
Environmental Assessment for the Joint Light Tactical Vehicle at Training Areas not Previously Analyzed U.S. Army Garrison, Fort Bliss, TX

Final
Environmental Assessment

November 2022



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Finding of No Significant Impact (FONSI)

Name of the Proposed Action: Environmental Assessment for the Joint Light Tactical Vehicle at Training Areas not Previously Analyzed, United States (U.S.) Army Garrison, Fort Bliss, Texas

Description of the Proposed Action: U.S. Army Garrison, Fort Bliss, Texas, has prepared an Environmental Assessment (EA) to evaluate the potential environmental effects associated with the operation of the Joint Light Tactical Vehicle (JLTV) Family of Vehicles (FoV) in established training areas at Fort Bliss. The Army previously analyzed JLTVs in a Programmatic EA prepared in 2015 (U.S. Army, 2015) and analyzed other light vehicle operations within the Off-Road Light Vehicle Maneuver areas in the Grow the Force Environmental Impact Statement (EIS) (U.S. Army, 2010). The Army currently operates the JLTV FoV at Fort Bliss but are unable to be operated on any Fort Bliss training complex (FBTC) light tactical maneuver areas.

Purpose and Need: The purpose of the Proposed Action is to provide adequate training opportunities for the JLTV at Fort Bliss. The Proposed Action is needed to fulfill capability gaps identified by the Army at Fort Bliss.

Environmental Consequences: The EA assessed potential environmental impacts on the following valued environmental components: land use; cultural resources; biological resources; geological and soil resources. Through implementation of best management practices there would be no significant impacts on the environment if the Proposed Action were implemented. Best management practices include coordinating with the Bureau of Land Management to coordinate relevant operation details to hunters and nearby residents; continuing to implement the Programmatic Agreement and its Standard Operating Procedures to minimize adverse effects to historic properties and continuing consultation with Tribes; taking measures to prevent potential damages to biological resources and implementing vehicle cleaning procedures to reduce invasive species; implementing appropriate surface water and erosion control measures and maintenance of access roads.

Public Review: U.S. Army Garrison, Fort Bliss, Texas, invited members of the public to comment on the Draft EA prior to document finalization from September 17 – October 17, 2022. Hard copies of the Draft EA were made available to the public at the following information repositories:

- Las Cruces: Thomas Branigan Memorial Library, 200 E. Picacho Avenue, Las Cruces, New Mexico 88001;
- El Paso: El Paso Public Library Richard Burges Branch, 9600 Dyer St C, El Paso, Texas 79924; and
- Alamogordo: Alamogordo Public Library, 920 Oregon Avenue, Alamogordo, New Mexico 88310.

This document was also made available electronically on the Fort Bliss environmental website: https://home.army.mil/bliss/index.php/about/Garrison/directorate-public-works/environmental

Following the 30-day review period, the Army addressed all relevant comments received. The EA did not identify significant impacts.

Conclusion: Based on the information and analysis presented in this EA and on the guidelines for determining the significance of proposed federal actions in 40 Code of Federal Regulations (CFR) 1508.27 and Army guidelines under 32 CFR 651, and review of public agency comments submitted during the 30-day comment period, Fort Bliss has concluded that implementation of the Proposed Action will not result in significant impacts on the quality of human and natural environments. In addition, all applicable federal, state, and local laws and regulations would be followed. For these reasons, a Finding of No Significant Impact is made, thereby making the preparation of an Environmental Impact Statement unwarranted.

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1/5/23

James A. Brady
Colonel, U.S. Army
Commanding

Date

FINAL

ENVIRONMENTAL ASSESSMENT FOR THE JLTV AT TRAINING AREAS NOT PREVIOUSLY ANALYZED, U.S. ARMY GARRISON, FORT BLISS, TEXAS

Prepared for:

U.S. ARMY GARRISON FORT BLISS

Reviewed by:

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ABBREVIATIONS AND ACRONYMS

ACHP	Advisory Council on Historic Preservation
AR	Army Regulation
Army	United States Army
BLM	Bureau of Land Management
BMP(s)	Best Management Practice(s)
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
dBA	A-weighted Decibel(s)
DoD	United States Department of Defense
DOPAA	Description of Proposed Action and Alternatives
EA	Environmental Assessment
EIS	Environmental Impact Statement
EO	Executive Order
EPA	United States Environmental Protection Agency
ESA	Endangered Species Act
FBTC	Fort Bliss Training Complex
FONSI	Finding of No Significant Impact
FoV	Family of Vehicles
FTX	Field Training Exercise
HMMWV	High Mobility Multipurpose Wheeled Vehicle
ICRMP	Integrated Cultural Resource Management Plan
INRMP	Integrated Natural Resource Management Plan
JLTV	Joint Light Tactical Vehicle
LINR	Locally Important Natural Resource
MBTA	Migratory Bird Treaty Act
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NMDGF	New Mexico Department of Game and Fish
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
PA	Programmatic Agreement
SDZ	Safety Danger Zone
SHPO	State Historic Preservation Office
SOP(s)	Standard Operating Procedure(s)
U.S.	United States
USC	United States Code
VEC	Valued Environmental Component
USFWS	United States Fish and Wildlife Service

1 PURPOSE OF AND NEED FOR THE PROPOSED ACTION

1.1 Introduction

This Environmental Assessment (EA) evaluates the potential environmental effects associated with the operation of the Joint Light Tactical Vehicle (JLTV) Family of Vehicles (FoV) in established training areas at Fort Bliss. Established in 1849, Fort Bliss is a multi-mission United States (U.S.) Army (Army) installation located in west Texas and southern New Mexico. Fort Bliss covers approximately 1.1 million acres used for training and maneuvers by the Army and other users (Figure 1-1).

The Army previously analyzed JLTVs in a Programmatic EA prepared in 2015 (U.S. Army, 2015) and analyzed other light vehicle operations within the Off-Road Light Vehicle Maneuver areas in the Grow the Force Environmental Impact Statement (EIS) (U.S. Army, 2010). The Army currently operates the JLTV FoV at Fort Bliss but are unable to be operated on any Fort Bliss training complex (FBTC) light tactical maneuver areas.

The Proposed Action would facilitate the use of the JLTV FoV within light tactical maneuver areas, specifically Land Use Category B areas (Figure 1-2). The use of the JLTV FoV is part of the Army's modernization efforts, which require that Soldiers and units are operationally trained at Fort Bliss.

This section states the purpose and need of the Proposed Action and outlines the scope of the environmental analysis for the considered alternatives.

This EA has been prepared to fulfill the requirements of the National Environmental Policy Act (NEPA) in accordance with the Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of NEPA, 40 Code of Federal Regulations (CFR) 1500 to 1508 and 32 CFR Part 651, (Army Regulation [AR] 200-2), Environmental Analysis of Army Actions (U.S. Army, 2002), and Army policy (U.S. Army, 2004 and 2017).

The environmental impacts from JLTV FoV operations were previously analyzed in the Joint Light Tactical Vehicle Family of Vehicles, Programmatic EA, and the associated Finding of No Significant Impact (FONSI) approved on July 21, 2015 (U.S. Army, 2015). The JLTV Programmatic EA does not specifically classify the JLTV as a medium tactical vehicle but identifies weight that exceeds the light tactical vehicle as identified in other documents.

The Fort Bliss Army Growth and Force Structure Realignment Final EIS (hereinafter referred to as the "Grow the Force EIS") and the associated Record of Decision, signed on June 8, 2010, assessed tactical vehicle weight and soil contact pressure in order to classify light, medium, and heavy tactical vehicles, and On-Road and Off-Road Vehicle Maneuver Areas (U.S. Army, 2010). The EIS assessed the High Mobility Multipurpose Wheeled Vehicle (HMMWV), weighing 7 tons, as a light tactical vehicle (see Table 2-2 U.S. Army, 2010). Table 1-1 presents weight comparisons for the JLTV and HMMWV.

Figure 1-1: Fort Bliss Vicinity Map

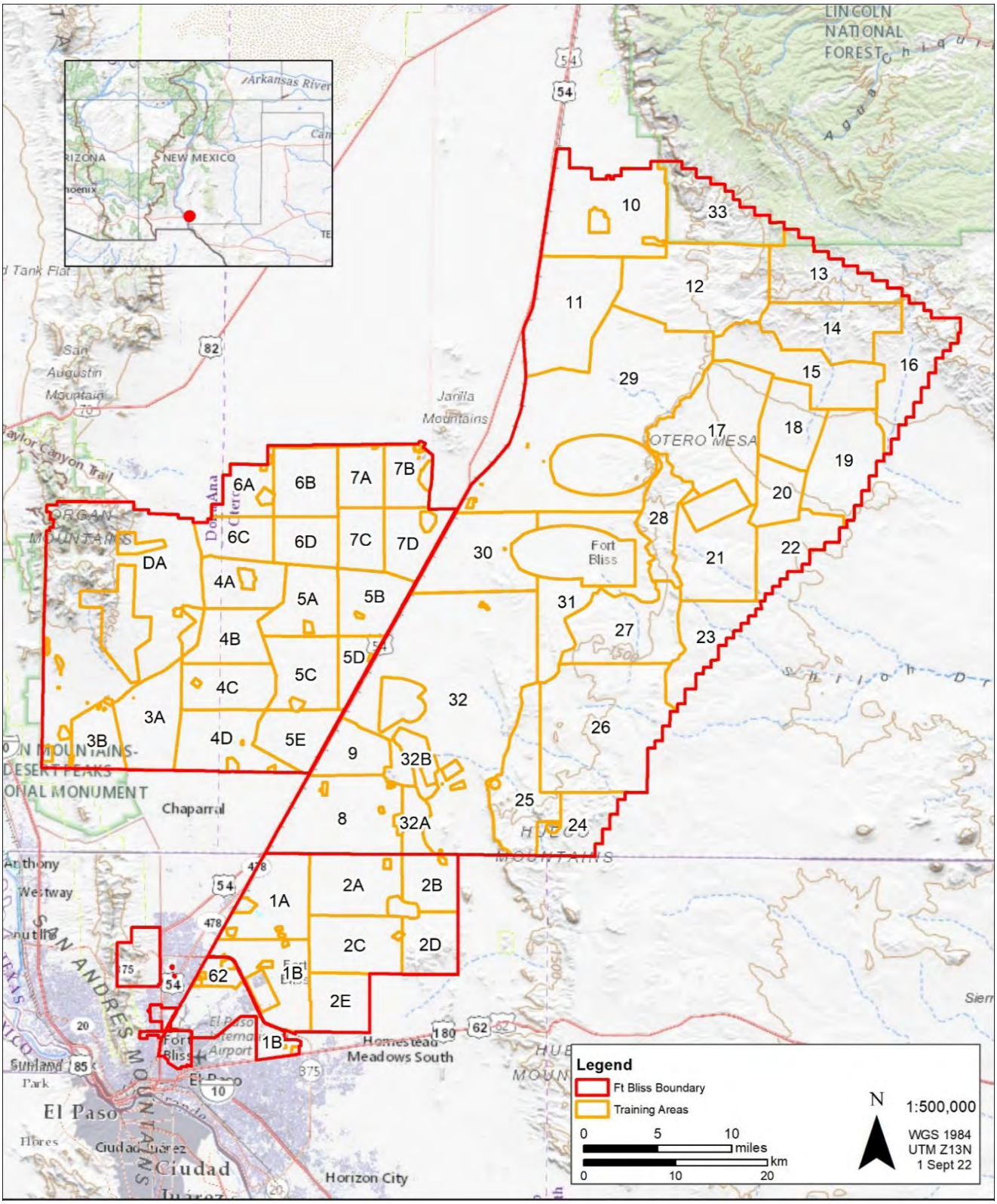


Figure 1-2: Fort Bliss Project Area and Proposed JLTV Operations Areas

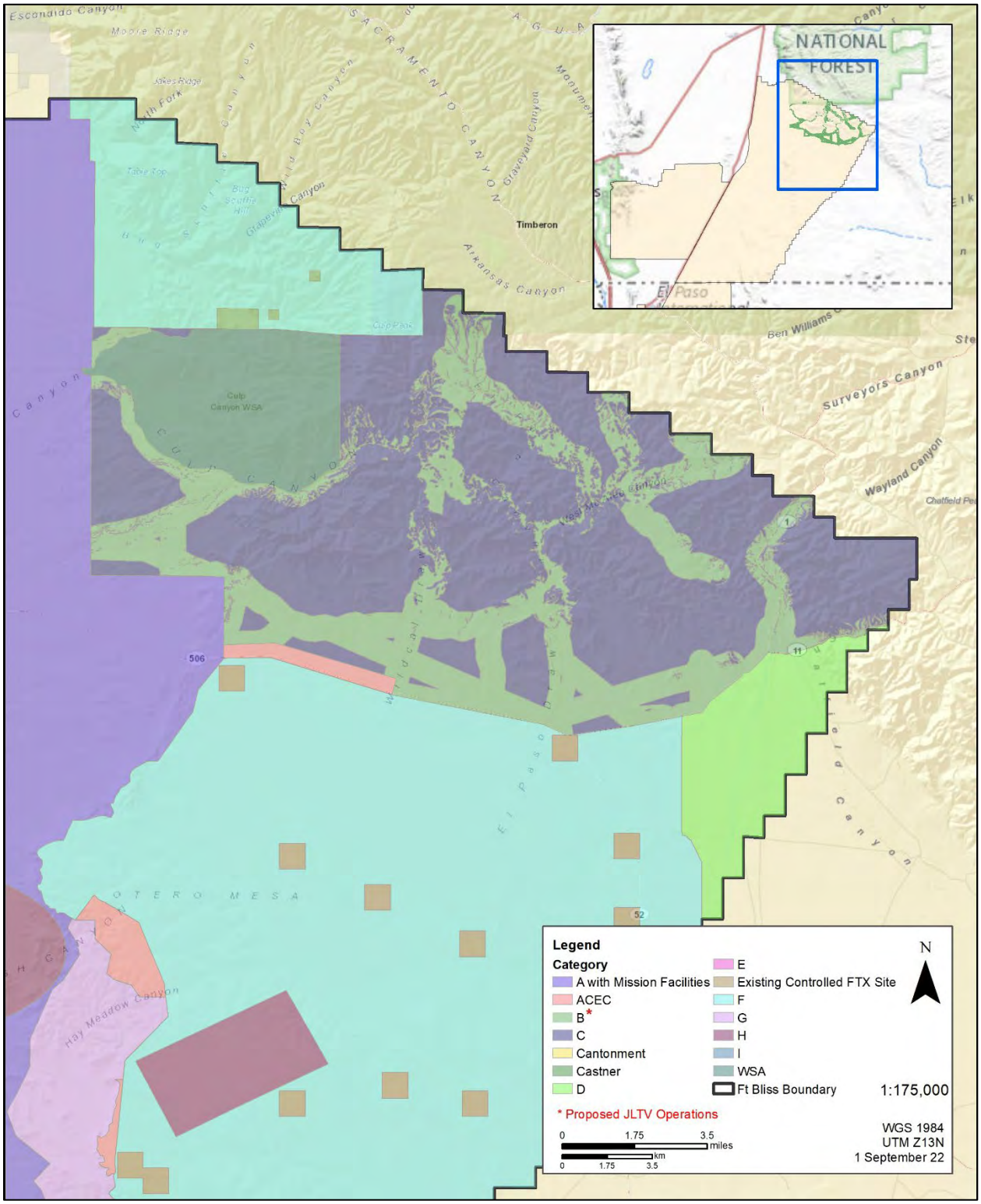


Table 1-1: JLTV vs. HMMWV Weight Comparison

	JLTV Maximum Weight	HMMWV Maximum Weight (M998)
Average Weight Characteristics		
Curb Weight	14,000 pounds	5,200 pounds
Gross Vehicle Weight	22,500 pounds	7,700 pounds
Soil Contact Pressure (kg/cm2)	5,400 pounds	4,000 pounds
Soil Contact Pressure Classification	Medium	Low
Legend: kg = kilogram; cm2 = centimeters squared		

The JLTV FoV can range from 11 to 11.5 tons and has a higher ground contact pressure than that of the HMMWV. The Grow the Force EIS assessed the HMMWV (7 tons) as a light tactical vehicle but not the JLTV. Thus, there is a gap in NEPA coverage to facilitate JLTV FoV training at Fort Bliss.

The JLTV FoV improves upon current light tactical vehicle performance by providing increased protection, improved transportability, extended mobility/maneuverability, enhanced sustainability, and a reduced logistics burden (U.S. Army, 2015). The JLTV FoV is a new-generation, multi mission capable, wheeled-vehicle system consisting of two variants, a two-seat and a four-seat model, and a companion trailer.

The two-seat model is configured with a single mission package as the Utility/Shelter Carrier. The four-seat model has three mission package configurations: the General Purpose, the Heavy Guns Carrier, and the Close Combat Weapons Carrier. Both mission role variants utilize companion trailers (U.S. Army, 2015). Additional physical characteristics of the JLTV FoV is presented in Table 1-2.

Table 1-2: JLTV Physical Characteristics – Additional Details

	Utility/Shelter Carrier	Close Combat Weapons Carrier	General Purpose and Heavy Guns Carrier
Average Weight Characteristics			
Curb Weight[1]	14,000 pounds	14,000 pounds	14,000 pounds
Gross Vehicle Weight[2]	22,000 pounds	22,500 pounds	22,500 pounds
Average Physical Dimensions			
Length	216 inches	208 inches	205 inches
Width	100 inches	100 inches	100 inches
Height	86 inches	86 inches	86 inches
Ground Clearance	27 inches	27 inches	27 inches
Performance			
Average Fuel Efficiency[3]	10 Payload-ton miles per gallon	10 Payload-ton miles per gallon	10 Payload-ton miles per gallon
Average Turning Radius	27 feet	27 feet	27 feet

[1] Curb Weight is the total weight of a vehicle with standard equipment, all necessary operating consumables to include oils, coolant and a full tank of fuel minus passengers or cargo.
[2] Gross Vehicle Weight is the weight of a vehicle at any given time. In this case, the Gross Vehicle Weight would include the curb weight, armor, expected accessories for the given configuration, and probable persons and cargo.
[3] Payload-ton miles per gallon = (Payload achieved at gross vehicle weight)/2000) *Overall miles per gallon.
Source: U.S. Army, 2015.

1.2 Purpose and Need

The purpose of the Proposed Action is to provide adequate training opportunities for the JLTV at Fort Bliss. The Proposed Action is needed to fulfill capability gaps identified by the Army at Fort Bliss. The Army Capability Production Document (U.S. Army, 2014) describes the need and requirements for modernization, recapitalization, and transformation of the light tactical vehicle fleet to support the current and emerging National Military Strategy. Operating the JLTV FoV is part of the Army's modernization efforts, which require that Soldiers and units are operationally trained at Fort Bliss.

JLTVs are currently stationed at Fort Bliss but are unable to be operated on any light tactical maneuver areas. The "Light" designation refers to areas where vehicle maneuver is restricted to light, wheeled vehicles (e.g., HMMWV). This category includes fixed sites (e.g., bivouac, assembly, command, logistics support), limited digging (e.g., fighting positions), and other miscellaneous training activities. Due to the JLTV weight exceedance to that of the HMMWV, the JLTV has not been assessed for operating in light tactical maneuver areas, specifically FBTC Land Use Category B, limiting the total area the JLTV FoV can travel throughout the Fort Bliss installation. Refer to Table 1-1 for the JLTV vs. HMMWV comparisons and Table 1-2 for the detailed physical characteristics of the JLTV FoV.

The Army is preparing this EA to evaluate all impacts within the training areas not previously evaluated, specifically Land Use Category B, so that the JLTV FoV can access all training areas needed to meet mission requirements.

1.3 Scope and Content of the EA

Per CEQ's updated NEPA regulations which went into effect May 2022, this EA considers the potential impacts of the Proposed Action and alternatives on the potentially affected environment and the degree of the effects or impacts of the action. Effects or impacts means changes to the human environment from the Proposed Action or Alternatives that are reasonably foreseeable and include the following 2022 updated NEPA regulations:

1. Direct effects, which are caused by the action and occur at the same time and place.
2. Indirect effects, which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable.
3. Cumulative effects, which are effects on the environment that result from the incremental effects of the action when added to the effects of other past, present, and reasonably foreseeable actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions (40 CFR 1508.1 (g)(1)-(3)).

The analysis is based upon impacts to environmental resource areas. Specific environmental resource areas analyzed in detail within this EA include land use, cultural resources, biological resources, and geological and soil resources, and cumulative impacts.

The analysis uses existing survey data (biological, cultural, and geological) and describes existing HMMWV operations and impacts to resource areas. The analysis then presents how

proposed JLTV operations may potentially impact resource areas. For example, how proposed JLTV operations may affect soils differently than existing HMMWV operations.

The Army's decision is whether or not to implement the Proposed Action and the No Action Alternative. The Army would issue a FONSI if the selected alternative would result in no significant impact to human or environmental health. If the selected alternative results in a significant impact, the Army would prepare an EIS.

1.4 Decision(s) to be Made

The Fort Bliss Garrison Commander is the proponent for the Proposed Action. If no significant environmental impacts are determined based on the evaluation of impacts in this EA, a FONSI will be signed by the Garrison Commander. If it is determined that the Proposed Action would have significant environmental impacts, the action would be modified and mitigated to the level of no significant impact. If the impact cannot be reduced to less than significant, a Notice of Intent to prepare an EIS would be published.

1.5 Public Participation

To facilitate the analysis and the decision-making process, the Army maintains a policy of open communication with interested parties and invites public participation. The Army urges all federal and state agencies, public and private organizations, and members of the public that have a potential interest in the Proposed Action, including minority, low-income, disadvantaged, and Native American groups to participate in the Army's NEPA and decision-making processes, as guided by CEQ regulations at 40 CFR Parts 1500-1508 and AR at 32 CFR Part 651.

The Draft EA and Draft FONSI were made available to federal, state, and local agencies, Native American tribes, and the public for review and comment for a 30-day period, September 17 – October 17, 2022 (See Appendix A). Fort Bliss also published a Notice of Availability for the Draft EA and Draft FONSI on September 17, 2022, September 18, 2022, and September 26, 2022, in the following newspapers (see Appendix A):

- El Paso Times;
- Las Cruces Sun-News (only available digitally on Saturdays);
- Alamogordo Daily News; and
- El Diario.

Fort Bliss also made the Draft EA and Draft FONSI available for online viewing at https://home.army.mil/bliss/index.php/about/Garrison/directorate-public-works/environmental and at the following libraries:

- Las Cruces: Thomas Branigan Memorial Library, 200 E. Picacho Avenue, Las Cruces, New Mexico 88001;
- El Paso: El Paso Public Library Richard Burges Branch, 9600 Dyer St C, El Paso, Texas 79924; and
- Alamogordo: Alamogordo Public Library, 920 Oregon Avenue, Alamogordo, New Mexico 88310.

Following the 30-day review period, the Army addressed all relevant comments received. The EA did not identify any significant impacts, the Army finalized the EA and prepared and signed a FONSI.

2 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

This chapter describes the Proposed Action and the alternatives. This chapter also describes the location and area under consideration, as well as the timing of the Proposed Action. Additionally, this chapter provides the screening criteria used by the Army to develop the range of considered alternatives and concludes with identifying the decision the Army will make.

To address the purpose and need, this EA analyzes two alternatives, the No Action Alternative (mandated in CEQ 40 CFR Parts 1500-1508 and Environmental Analysis of Army Actions 32 CFR Part 651.34) and the Proposed Action.

The following screening criteria have been established to identify alternatives that would meet the purpose and need for the action. To be considered a reasonable alternative, the Proposed Action must meet the four screening criteria:

1. Mission Compatibility – The alternative must appropriately incorporate and support the missions occurring at the installation.
2. Safety – The alternative must enable consideration of safety and installation security factors in plan development and site planning.
3. Environmental Factors – The alternative must consider historical, cultural, and biological resources in its planning and implementation.
4. Compliance with Federal Mandates and Department of Defense (DoD) or Army Goals – The alternative must enhance and ensure compliance with government mandates and DoD and Army goals and objectives.

2.1 Proposed Action

Based on the screening criteria, only one alternative, the Proposed Action, would meet the mission compatibility needs, safety factors, environmental factors, and compliance with DoD and Army goals.

The Proposed Action is for the Army to operate the JLTV FoV in training areas that were not previously analyzed in the JLTV FoV Programmatic EA (July 2015) (U.S. Army, 2015) or the Fort Bliss Army Growth and Force Structure Realignment Final EIS (U.S. Army, 2010).

Under the Proposed Action, the Army would operate the JLTV FoV in FBTC Land Use Category B. See Figure 1-2. Table 2-1 summarizes the current and proposed JLTV use of FBTC by military use category.

No construction of new facilities and no structural changes to facilities are anticipated for the JLTV to be used in existing training areas due to the similarities to the existing HMMWV. The JLTV FoV would continue to receive maintenance in designated maintenance areas that currently service vehicles on Fort Bliss.

Operation of the JLTV FoV would be similar to current JLTV FoV operations in other Fort Bliss training areas in the following ways:

- The JLTV FoV would operate in areas that are currently being used by the HMMWV and would follow the same range, operational, and best management practices (BMPs) that

apply to all Fort Bliss Range and Training Area Operations (Fort Bliss, 2020). For example, the maximum speed limit for all vehicles (both tactical and non-tactical) while operating within the boundaries of the Fort Bliss Training Center is 25 miles per hour when weather and environmental conditions permit.

- JLTV operations would occur both day and night.
- The estimated annual JLTV usage would be 1,500 miles per year and is anticipated that the JLTV would spend 60 percent of the time on existing improved surfaces and 40 percent on existing unimproved surfaces.[1] JLTV operations would vary between single vehicle operations and multiple vehicle convoys. At times single vehicles would be used for observation points. Multiple vehicles would be used when operations involve clearing an area or facility or performing convoy training.
- There is no anticipated change in the number of Soldiers and military units stationed at Fort Bliss as part of operating the JLTV FoV within the training areas identified in Figure 1-2.
- The number of training operations and frequency is anticipated to be similar to current training operations of the HMMWV in the training areas identified in Figure 1-2. JLTV operations would vary in the proposed training areas and would be dependent on training requirements and availability but would be similar to HMMWV operations that currently occur.
- The operation of the JLTV FoV in FBTC Land Use Category B is not anticipated to restrict or impede the flow of traffic on Government or essential civilian traffic conduits.

Table 2-1: Current and Proposed JLTV Use of FBTC

Military Use	Description	Current JLTV Ops Locations	Proposed JLTV Ops Locations
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 maneuver 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.	X	
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 maneuver is restricted to light, wheeled vehicles (e.g., HMMWV). This		X

[1] Based on information from the JLTV FoV Programmatic EA which provided average annual mileage for JLTV anticipated fielding and operations Army and Marine Corps-wide and not at specific base locations (see paragraph 4.6, U.S. Army, 2015).

Military Use	Description	Current JLTV Ops Locations	Proposed JLTV Ops Locations
	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 maneuver is 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.	X	
Aircraft Operations	Fixed-wing and rotary-wing over flights and air-to-air training.	X	
Controlled Field Training Exercise (FTX)	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.	X	
Mission Support Facilities	Ranges (including live-fire); test facilities; landing zones/pads/strips; drop zones; radar facilities; etc.	X	
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; etc. These activities occur under controlled conditions.	X	
Safety Danger Zone (SDZ)/Safety Footprint	Target debris areas and safety footprints for weapons and laser use.	X	
Surface Impact	Areas in which range activities are expected to produce unexploded ordnance.	X	
Range Camps	Built environment providing limited administrative, living, quality of life, and other support services in proximity to training locations.	X	
Environmental Management	Environmental management and training area maintenance activities; conservation efforts.	X	

Legend: SDZ = Safety Danger Zone

Source: Military Use table definitions from the Fort Bliss Grow the Force EIS, Table 2-2.

2.2 No Action Alternative

The No Action Alternative refers to the continuation of existing conditions without implementation of the Proposed Action. Under the No Action Alternative, the JLTV would not operate in FBTC Land Use Category B areas. This alternative does not satisfy the purpose and need for the Proposed Action.

2.3 Alternatives Considered But Not Carried Forward

The purpose and need statement served as a basis to identify potential alternatives to carry forward for environmental analysis. The Army did not consider potential alternatives that would require JLTV operations in areas outside of Fort Bliss (use of other DoD areas distance too great for practical commuting of Soldiers and vehicles for training) or use of alternative sites on Fort Bliss because they would not meet the purpose and need. Therefore, Fort Bliss eliminated these potential alternatives from further study.

3 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

This chapter presents a description of the environmental resources and baseline conditions that could be affected from implementation of the alternatives. It also presents an analysis of the potential effects of each alternative to each environmental resource area. The affected environment has been determined using the criteria in NEPA, CEQ, and the Army NEPA Guidance Manual (U.S. Army, 2007).

The action area is defined as the area of analysis that could be affected directly or indirectly by a Proposed Action, and not merely the immediate impact area involved in the action. Specific affected environment definitions are provided for each resource area carried forward for detailed analysis.

3.1 Valued Environmental Component (VEC) Analysis

This EA applies a method described in the NEPA Analysis Guidance Manual used to rate Valued Environmental Components (VECs) typically addressed in Army NEPA analyses (U.S. Army, 2007). This analytical process allows a level of consistency in evaluating impacts and comparing impacts across installations to help with Army-wide decision-making. It also advocates a process for focusing analysis on areas where impacts are most likely to occur, considering the type of actions involved in a geographic context. Participants included subject matter experts at Fort Bliss who have extensive knowledge of the various resources on the installation.

Table 3-1 summarizes the degree to which each VEC would potentially be affected by the Proposed Action. Possible ratings for each VEC range from low (L), moderate (M), to high (H). VECs rated low indicate that potential impacts to those resource areas were considered to be negligible or nonexistent so they are not analyzed in detail in this EA.

This EA identified four VECs with a rating of medium. No VECs were identified with a high rating. Therefore, this EA evaluates the following four VECs: Land Use, Cultural Resources, Biological Resources, and Geological and Soil Resources.

Table 3-1: Valued Environmental Components

VEC	Rating	Rationale/Special Considerations
Land Use	M	The Proposed Action would occur in existing Fort Bliss training areas and would not change the way in which the land is designated or managed. Training would continue consistent with range management procedures. Viewsheds would remain the same. Therefore, no impacts to land use would occur.
Cultural Resources	M	The Proposed Action would have no impacts in the cantonment area because no construction activities would occur and operationally there would be no noticeable changes when compared to current conditions. Minor, direct impacts within the training areas north and south of Highway 506 could occur from soil compaction over unidentified cultural sites. However, adherence to existing conservation protocols identified in the Integrated Cultural Resource Management Plan (ICRMP), Programmatic

VEC	Rating	Rationale/Special Considerations
		Agreement (PA), and other environmental protection plans would minimize impacts to less than significant.
Biological Resources	M	The Proposed Action may have different impacts to listed species within the grassland that might be impacted by the additional weight of JLTV.
Geological and Soil Resources	M	The Proposed Action may involve soil variation impacts between the larger tires and weight of the JLTV against the previously completed studies for the HMMWV.
Air Quality and Greenhouse Gas	L	Based on 40 CFR Sections 85.1703, 89.908 and 1068.225, the JLTV meets the definition of a combat vehicle because it includes integral armor. Therefore, the vehicle is covered by a National Security Exemption making it exempt from both on-highway and non-road diesel engine U.S. Environmental Protection Agency (EPA) emission standards requirements. Although a non-certified engine is used, JLTV is in compliance with EPA engine emission requirements through use of the National Security Exemption (U.S. Army, 2015). JLTV FoV training operations occur on varied surfaces. These surfaces include improved primary roads such as paved, gravel, sand, dirt, and dirt/rock mix and secondary roads (and/or unimproved roads) such as heavily rutted natural trails, mud, streams, etc. The operation of JLTV FoV and other tactical vehicles on improved, slightly improved, and unimproved surfaces result in the dispersion of dust and mineral particulate matter into the air. The total number of tactical vehicle operations on Fort Bliss are not anticipated to exceed current operations. In addition, no new roads or training areas would be constructed. Total JLTV FoV dust and particulate matter generation would be similar to existing systems. Therefore, impacts to air quality from the Proposed Action would be negligible. Under the No Action Alternative, JLTV training operations would not occur in Land Use Category B areas, and existing conditions would continue. Therefore, no impacts to air quality would occur. Greenhouse gases related to the operation of the JLTV FoV include combustion products from burning of fossil fuels in the engine (carbon dioxide and nitrogen oxides), refrigerant, and fire suppressant. Since the JLTV is replacing the HMMWV and is similar in purpose and size the increase in engine emissions is negligible. In addition, refrigerant and fire suppressant would remain in the system and not be released to the atmosphere during normal training operations. Thus, release of greenhouse gasses from JLTV FoV operations would not significantly contribute to climate change (U.S. Army, 2015).
Noise	L	Noise generally refers to an unwanted sound often creating an annoyance or is capable of causing harm. JLTV FoV noise data collected during the test phase found that the interior noise of the vehicle exceeds 85 decibels A-weighted (dBA) in some seating positions. Thus, operators are required to wear hearing protection. For exterior noise, it was determined that engine noise exceeds 85 dBA at certain locations outside the vehicle. Thus, hearing protection is required for both operators and

VEC	Rating	Rationale/Special Considerations
		maintenance personnel when working outside the vehicle (U.S. Army, 2015). The JLTV FoV would be operated at existing training sites which already support similar operation and maintenance activities. Maintenance facilities are located in developed areas away from residential neighborhoods to reduce community annoyance and protect environmental welfare. In addition, JLTV FoV noise generation is similar to existing systems which have not shown a significant impact to personnel or the environment (U.S. Army, 2015). Because there would be no increase in operations, no construction, and no substantial change in noise profile, JLTV training operations would not alter the existing noise environment. Therefore, impacts to the noise environment would be negligible. Under the No Action Alternative, JLTV training operations would not occur in Land Use Category B areas, and existing conditions would continue. Therefore, no impacts to the noise environment would occur.
Water Resources	L	Potential impacts on water quality during JLTV FoV training operations would be a result of fording operations (e.g., crossing a body of water with a vehicle), and leaks or spills of vehicle fluids resulting in the subsequent discharge or transport of these fluids into local bodies of water. The current training operations are consistent with those typical of heavy-duty, off-road capable trucks and do not present additional out-of-ordinary, exceptional hazards or risks to local bodies of surface water, wetlands, or floodplains (U.S. Army, 2015). As with most vehicles, the potential for spills due to unintentional accidents or catastrophic failure do exist when engaged in testing and training exercises. In this unlikely event, vehicle fluids could be released into the environment. However, training and maintenance operations would take place at existing facilities that have Spill Prevention Control and Countermeasures Plans and pre-planned protocols to immediately respond, contain, remediate, and prevent ground water contamination. Additionally, the JLTV FoV is designed and manufactured with industry standard fittings, seals, and fluid lines strategically routed through shielded areas of the vehicle to help mitigate damage to leak-prone areas under normal use (U.S. Army, 2015). Therefore, no impacts to surface water and groundwater would occur from the Proposed Action. Under the No Action Alternative, JLTV training operations would not occur in Land Use Category B areas, and existing conditions would continue. Therefore, no impacts to surface water and groundwater would occur.
Traffic and Transportation	L	The JLTV FoV can be moved by towing, self-propulsion, or by carrier via railways, highways, waterways, oceans, and airways. When training, the JLTV FoV would be operated on existing Government and public transportation infrastructures. There is no extraordinary characteristic of the JLTV FoV either in weight or dimensions that make it likely to contribute to excessive wear of drive surfaces. Also, operating the JLTV FoV would not restrict or impede the flow of traffic on Government or

VEC	Rating	Rationale/Special Considerations
		essential civilian traffic networks (U.S. Army, 2015). All training would continue on-base with no increase in personnel. Thus, no off-base impacts to transportation are anticipated. Therefore, no impacts to traffic and transportation would occur from the Proposed Action. Under the No Action Alternative, JLTV training operations would not occur in Land Use Category B areas, and existing conditions would continue. Therefore, no impacts to traffic and transportation would occur.
Facilities and Utilities	L	No new facilities would be constructed or additional utilities required under the Proposed Action. The JLTVs would be maintained in currently designated maintenance areas. Therefore, no impacts to facilities and utilities would occur from the Proposed Action. Under the No Action Alternative, JLTV training operations would not occur in Land Use Category B areas, and existing conditions would continue. Therefore, no impacts to facilities and utilities would occur.
Hazardous Materials, Hazardous Wastes, and Toxic Substances	L	An integral part of the JLTV FoV design was the requirement to eliminate or minimize the use of hazardous materials used when operating the JLTV FoV. During maintenance, processes such as grinding, sanding, and media blasting could release toxic metals as respirable particles. These activities would be performed in areas with proper ventilation controls by personnel following applicable plans and procedures while wearing the required protection equipment. Wastes generated from processes with heavy or toxic metals would be collected, handled, stored, and disposed of in accordance with applicable federal, state and local laws and regulations. Although hazardous materials are used, they would be managed according to federal, state, and local environmental regulations. These materials are comparatively similar to those required for other vehicles and present nothing unique in the way of stocking items, handling, storage, and disposal. Therefore, existing protocols for proper transport, handling, storage, application, and disposal of the hazardous materials and associated hazardous wastes would be used. Based upon the frequency of maintenance and repair conducted for currently fielded vehicles and trailers, the quantity of repairs remains limited to several vehicles and trailers per month. As a result, quantities of hazardous waste are limited in volume. Overall, the hazardous materials and wastes, as well as toxic substances do not present extra ordinary use, storage and quantities or require special materials or infrastructures as compared to current Light Tactical Vehicles fleet. Therefore, impacts to hazardous materials and wastes would be negligible. Under the No Action Alternative, JLTV training operations would not occur in Land Use Category B areas, and existing conditions would continue. Therefore, no impacts to hazardous materials and wastes would occur.
Environmental Justice	L	The Proposed Action would occur entirely within Fort Bliss training areas isolated from the general population; thus, there would be no impact to any populations, including minority populations, low-income populations, and children. Therefore, the Proposed Action would not disproportionately

VEC	Rating	Rationale/Special Considerations
		affect minority or low-income populations or children. Under the No Action Alternative, JLTV training operations would not occur in Land Use Category B areas, and existing conditions would continue. Therefore, no impacts to minority or low-income populations or children would occur.

Notes:
L rating = negligible or minor impact anticipated.
M rating = moderate impact anticipated (less than significant).
H rating = significant impact potential anticipated (likely to be mitigated to less than significant).

3.2 Land Use

Land use and its associated attributes addressed in this EA include general use patterns, management plans, and special use areas. The action area is primarily concerned with existing military land use maneuvers and potential recreational opportunities, including hunting. A full description of the land use categories can be found in the Grow the Force EIS (U.S. Army, 2010).

3.2.1 Affected Environment

3.2.1.1 Fort Bliss On-Station Land Use

Military Land Use

Several plans direct the land use planning and management process on Fort Bliss, including the Range Complex Master Plan, Real Property Master Plan, Integrated Natural Resource Management Plan (INRMP), Integrated Cultural Resource Management Plan (ICRMP), Integrated Training Area Management Plan, and Integrated Training Area Management, Range and Training Land Assessment Plan.

The objectives of these plans are to manage installation resources to provide the optimum environment that sustains the military mission; develop, initiate, and maintain progressive programs for land management and utilization; and maintain, protect, and improve environmental quality, aesthetic values, and ecological relationships. The primary results of these objectives are reduced environmental damage and effective land rehabilitation, reduced costs for land management and environmental compliance, and enhanced land stewardship (U.S. Army, 2010).

The Grow the Force EIS provides an overview of these plans and descriptions for the FBTC Military Land Uses. Land Use Categories are determined by the collection of military uses that occur on a particular FBTC. Table 3-2 presents the various FBTC Land Use categories across the entirety of Fort Bliss. The Proposed Action would be within the FBTC Land Use Category B. The FBTC Land Use designations within the general proximity of the action area is provided in Figure 3-1. A map of the full range of Military Uses is provided in the Grow the Force EIS. Table 3-3 provides the specific descriptions of FBTC Land Use Category B as defined in the Grow the Force EIS (U.S. Army, 2010).

Table 3-2: FBTC Land Use Categories

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

NOTE: Land Use Category codes do not follow those used in the 2007 SEIS.

Legend: WSA/ACEC = Wilderness Study Area/Area of Critical Environmental Concern; FTX = Field Training Exercise

Figure 3-1: Fort Bliss Current FBTC Land Use Designations

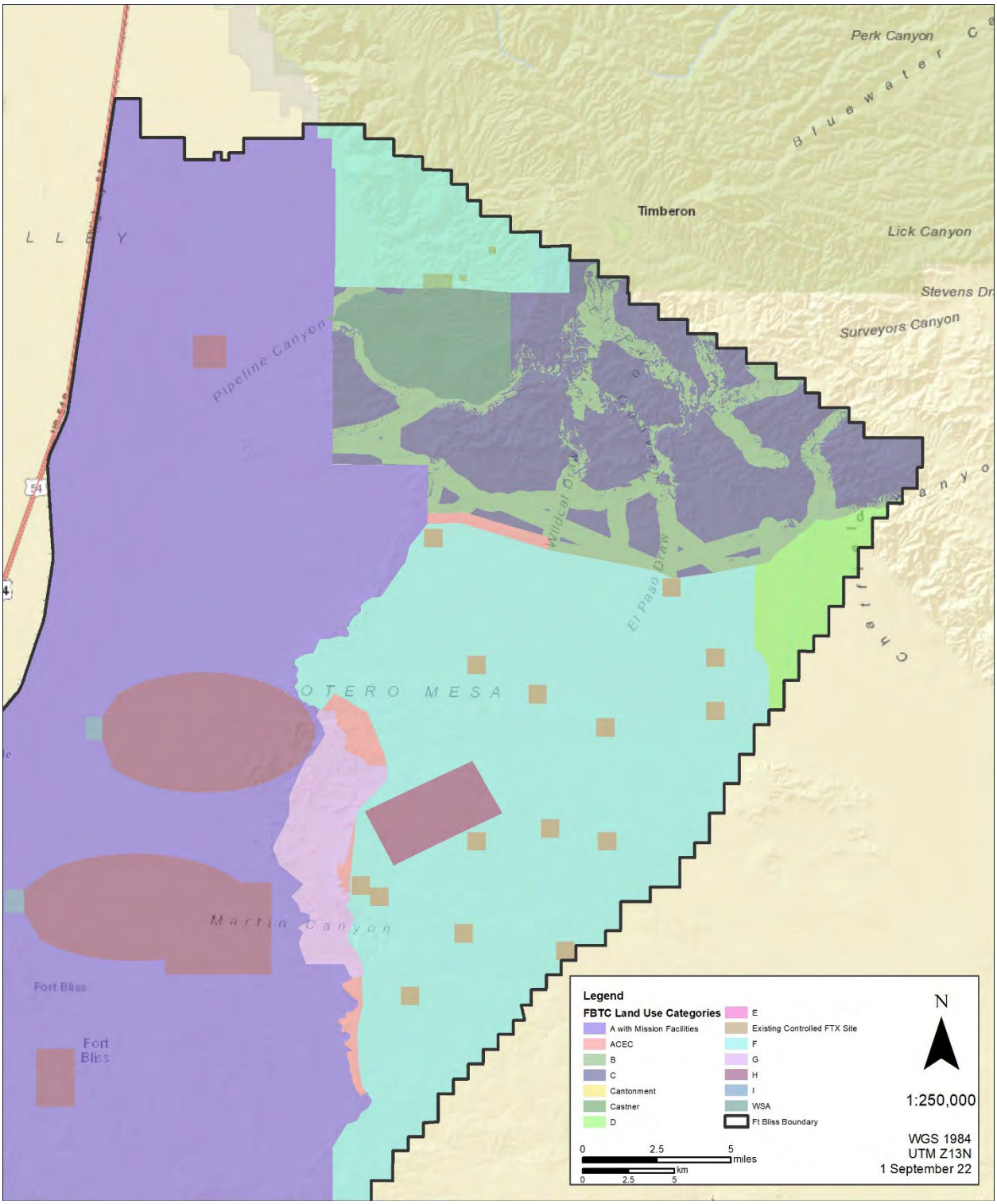
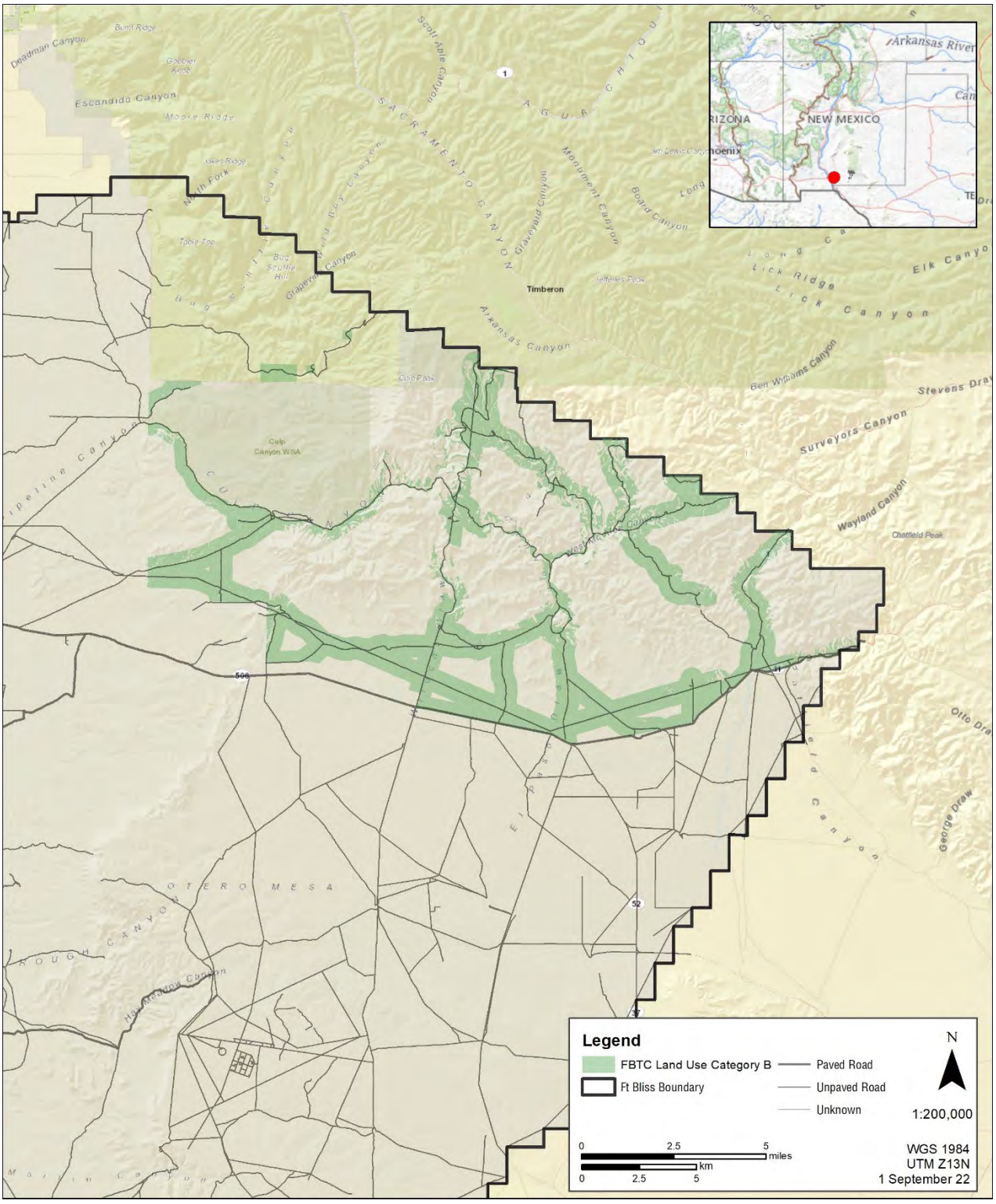


Table 3-3: FBTC Land Use Category B Descriptions

Military Use	Description
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 maneuver is restricted to light, wheeled vehicles (e.g., HMMWV). 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.
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 maneuver is 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.
Aircraft Operations	Fixed-wing and rotary-wing over flights and air-to-air training
Controlled FTX	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; etc.
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; etc. These activities occur under controlled conditions.
SDZ/Safety Footprint	Target debris areas and safety footprints for weapons and laser use.
Environmental Management	Environmental management and training area maintenance activities; conservation efforts.

Figure 3-2: Existing Roadways on Fort Bliss and Proposed JLTV Operations Areas

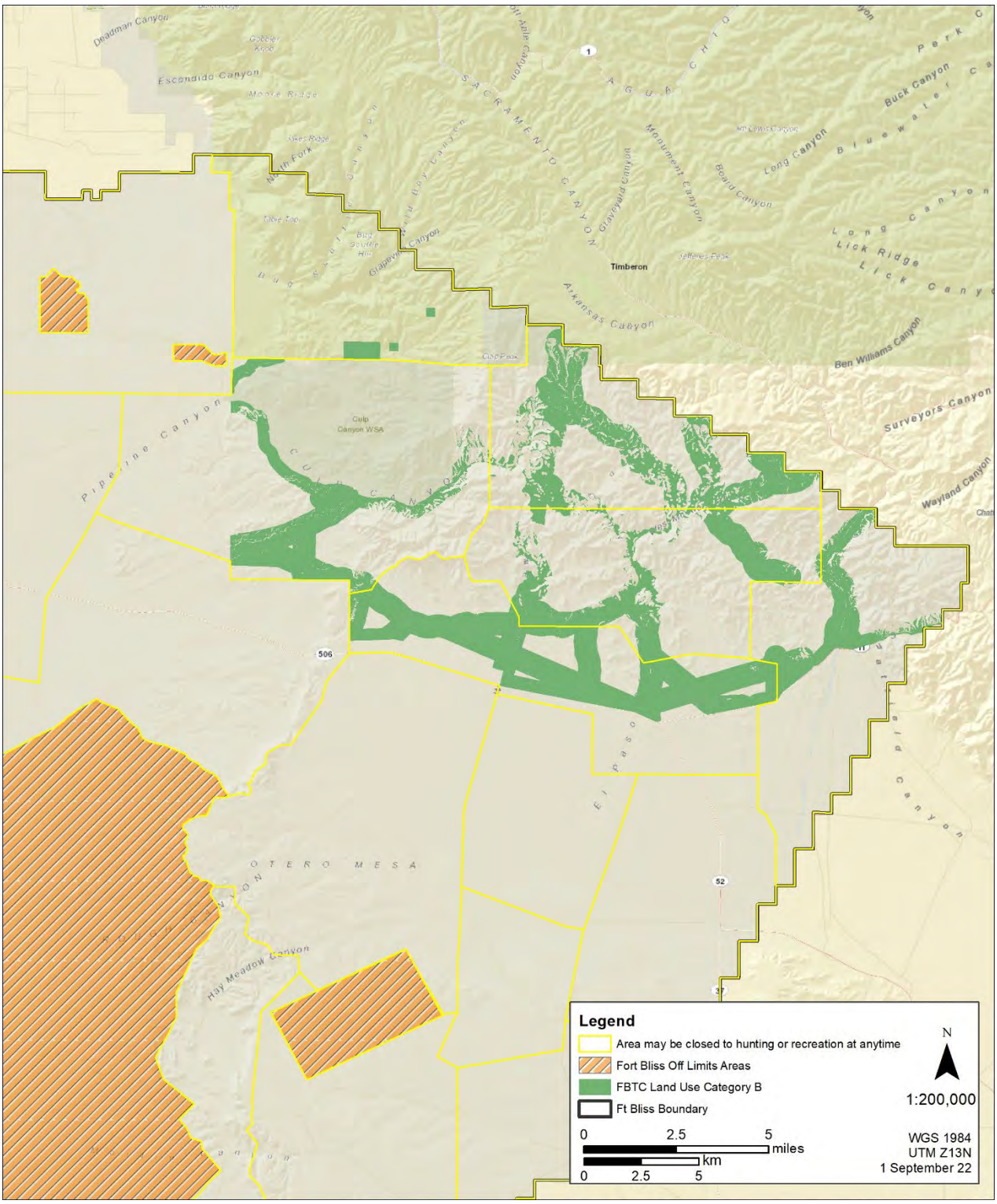


Recreational Land Use

Non-military uses are allowed on Fort Bliss, provided they do not conflict with military uses or pose safety risks to the public. Fort Bliss and the Bureau of Land Management (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 Executive Order [EO] 11644, amended by EO 11989, this prohibition does not apply to combat or combat support vehicles when used for national defense purposes.)

The New Mexico Department of Game and Fish (NMDGF), Fort Bliss, and the BLM share responsibilities for hunting on McGregor Range. The NMDGF authorizes hunts for deer, antelope, and other big game on McGregor Range in the joint-use areas (U.S. Army, 2010). Figure 3-3 illustrates Fort Bliss current recreational land use in reference to the action area.

Figure 3-3: Fort Bliss Current Recreational Land Use and Proposed JLTV Operations Areas



3.2.2 Environmental Consequences

Actions that would lead to significant land impacts include those that would: 1) be inconsistent or in noncompliance with applicable use plans or policies; 2) preclude the viability of an existing use activity; 3) preclude continued use or occupation of an area; 4) be incompatible with adjacent or vicinity use to the extent that public health or safety is threatened; or 5) conflict with range planning criteria established to ensure the safety and protection of human life and property.

3.2.2.1 Proposed Action

Under the Proposed Action, adequate training opportunities for the JLTV would be provided at Fort Bliss. These activities would be consistent with current Army and Fort Bliss land use management plans and guidance. They would not preclude the viability of existing activities within the project areas or other adjacent areas.

Existing land use designations would not change as a result of the Proposed Action, and the existing land uses within the action areas would continue with their existing purposes. Operations of the JLTV would occur on existing test courses, ranges, roads, and installations designated for the type of activities that would be performed. Similar non-tracked vehicles operate in FBTC Land Use Category B areas utilizing established and existing plans, training standard operating procedures (SOPs), environmental management procedures, BMPs, and mitigation measures. Operations would be consistent with existing operations that are deconflicted with public recreation and the same methods would be used.

Operations should be scheduled outside hunting seasons. When operations must be performed during hunting seasons, Fort Bliss would coordinate with BLM and NMDGF to properly communicate the relevant operation details to hunters and nearby residents. Road signs would be posted on roads used for operations to ensure recreational land users are aware of ongoing operations and evacuation orders. Through coordination with relevant partners, recreational activities would not be significantly impacted.

By following existing SOPs and BMPs, there would be no increased risk to public health and safety. Therefore, the implementation of the Proposed Action would result in no significant land use impacts.

3.2.2.2 No Action Alternative

Under the No Action Alternative, the Proposed Action would not occur and there would be no change to existing conditions. JLTV would continue not operating in FBTC Land Use Category B areas. Therefore, implementation of the No Action Alternative would not result in significant impacts to land use.

3.3 Cultural Resources

Archaeological resources consist of the material remains of prehistoric and/or historic human activity. The Archaeological Resources Protection Act of 1979 defines archaeological resources as “pottery, basketry, bottles, weapons, weapon projectiles, tools, structures or portions of

structures, pit houses, rock paintings, rock carvings, intaglios, graves, human skeletal materials, or any portion or piece of any of the foregoing items" (16 United States Code [USC] 470bb).

Architectural resources also include manmade structures including, but not limited to, standing buildings, dams, bridges, and canals. Under the National Historic Preservation Act of 1966 (NHPA) (16 USC 470 et seq.), only architectural resources older than 50 years are considered for protection; however, younger structures can be afforded the same protection under special circumstances.

Traditional cultural properties may include archaeological resources, architectural resources, topographic features, plant and animal habitat, and any other inanimate object deemed essential to the continuance of a traditional culture by Native Americans and other groups.

The NHPA provides for establishment of the National Register of Historic Places (NRHP), an official list of districts, sites, buildings, structures, and objects significant in American history, architecture, archaeology, and culture. Section 106 of the NHPA requires federal agencies with jurisdiction over a proposed federal project to take into account the undertaking's effect on cultural resources listed or eligible for listing in the NRHP and affords the State Historic Preservation Office (SHPO) and the Advisory Council on Historic Preservation (ACHP) opportunity to comment with regard to the undertaking.

The process of agency review and assessment of the effect of an undertaking on cultural resources is set forth in the implementing regulations formulated by the ACHP (36 CFR 800, Protection of Historic Properties). Other applicable laws and guidelines include but are not limited to the following:

- EO 11593, Protection and Enhancement of Cultural Environment (16 USC 470 [Supp. 1, 1971]);
- Native American Graves Protection and Repatriation Act (25 USC 3001 – 3013);
- Determination of Eligibility for Inclusion in the NRHP (36 CFR 63);
- Recovery of Scientific, Prehistoric, and Archaeological Data (36 CFR 66);
- Curation of Federally Owned and Federally Administered Archaeological Collections (36 CFR 79); and
- DoD Directive 4710.1, Archeological and Historic Resources Management.

In Texas, the SHPO is the Texas Historical Commission and in New Mexico, it is the director of the New Mexico Historic Preservation Division of the Department of Cultural Affairs. Compliance with the NHPA is an ongoing process for undertakings at Fort Bliss.

3.3.1 Affected Environment

The affected environment includes the cantonment area on Fort Bliss where maintenance and storage facilities would be used by the JTLVs, and Land Use Category B areas where training would occur (see Figure 1-2). As no facilities or infrastructure changes are required, no impacts to cultural resources are anticipated in the cantonment area on Fort Bliss and therefore the area is dismissed from further evaluation.

Fort Bliss manages cultural resources associated with all prehistoric and historic periods recognized in south-central New Mexico and western Texas. The *Fort Bliss Texas and New Mexico, Mission and Master Plan, Programmatic Environmental Impact Statement* (U.S. Army, 2000) describes in detail the cultural history of Native Americans and post-contact inhabitants in the region. The ICRMP for Fort Bliss (U.S. Army, 2016) also contains detailed information about the history of Fort Bliss. Both documents are incorporated herein by reference and can be found at https://home.army.mil/bliss/index.php/about/Garrison/directorate-public-works/environmental.

In 2006, Fort Bliss, the New Mexico and Texas SHPOs, and the ACHP signed a PA. That agreement has been amended several times and the amended PA details how Fort Bliss will meet its cultural resources requirements under Sections 106 and 110 of the NHPA. The PA streamlines compliance under Section 106, outlining undertakings that do not require project-by-project review by SHPOs; however, 36 CFR Part 800 is followed when addressing Section 106 with federally-recognized tribes. More detailed discussion of Fort Bliss' compliance under Section 106 and the PA is provided in the ICRMP (U.S. Army, 2016) and not repeated here. The PA includes SOPs that provide for consistent, day-to-day management of mission undertakings carried out on the installation that may affect historic properties, including those resulting from the Proposed Action.

As of November 2021, a total of 20,600 archaeological sites and more than 1,300 historic buildings and structures have been identified on Fort Bliss. Of these, 4,570 were found eligible for the NRHP (16.75 percent) and 9,788 (49.1 percent) were found not eligible for the NRHP. The remaining 34.15 percent have yet to be evaluated for NRHP eligibility. On Fort Bliss, there are three archaeological sites, one historic building, and one historic district listed in the NRHP. Additionally, there are five eligible districts and twelve historic landscapes identified on Fort Bliss (personal communication [email], Senior Archaeologist, Directorate of Public Works, Environmental Division, Conservation Branch, June 8, 2022) (Fort Bliss, 2022).

Previous investigations have identified sites that span the range of cultural and temporal periods from the Paleoindian to the Protohistoric and range from large multi-room pueblos to small lithic scatters and rock art. The Historic Period begins with Spanish exploration and culminates with the Cold War era. The 2017-2021 ICRMP provides a detailed cultural history of Fort Bliss and its surrounding environment, including the variety of types of sites that are known or can be expected within the Installation (U.S. Army, 2016).

Fort Bliss consults with seven Federally Recognized Native American Tribes regarding the management of cultural resources (Comanche Nation of Oklahoma, Fort Sill Apache Tribe, Kiowa Tribe of Oklahoma, Mescalero Apache Tribe, Pueblo of Isleta, White Mountain Apache Tribe, Ysleta del Sur Pueblo). Native American Tribes and Fort Bliss are also engaged in an effort to establish a comprehensive agreement regarding the inadvertent discovery and intentional excavation of Native American human remains and cultural items (U.S. Army, 2016).

3.3.2 Environmental Consequences

Without proper control, training activities have the potential to impact historic properties. The primary potential sources of impacts from training are: ground disturbance, vibration, noise, change in setting, access, and fires.

3.3.2.1 Proposed Action

Under the Proposed Action, there would be no increase in operations and the use and potential impact sources of the JLTV would be consistent with existing training operations. Vibration and noise levels would not be noticeably different from current conditions (see Section 3.1). There would be no change in setting or access. In terms of fires, the same response procedures would be applied to JLTV activities as those used by existing maneuvering operations. Additionally, there would be no increase in operational activities so neither the frequency of fires nor human trampling would increase the potential for impacts to cultural resources when compared to existing conditions.

The severity of ground-disturbance impacts depends on the soil type, and depth to bedrock, slope, and the intensity and repetition of the impact. Because the number of operations that are anticipated to occur would not differ from current levels and existing maneuver areas/roads/trails would be used, the only difference to ground disturbance is in how much the JLTV weighs in comparison to the HMMWV and the potential for associated soil compaction. JLTV operations would continue to follow existing controls to avoid and minimize impacts to known resources. Because the vehicles would stay on existing disturbed areas used for training and the increase in vehicle weight does not substantially differ from other vehicles, there would be no substantial increase in potential for ground-disturbing impacts to cultural resources. Therefore, the Proposed Action would have a less than significant adverse effect on cultural resources.

3.3.2.2 No Action Alternative

Under the No Action Alternative, the Proposed Action would not occur and there would be no change to existing conditions. JLTV would continue not operating in FBTC Land Use Category B areas. Fort Bliss would continue to implement the measures in the ICRMP to manage and protect cultural resources. Therefore, implementation of the No Action Alternative would not result in significant impacts to cultural resources.

3.4 Biological Resources

Biological resources are comprised of the collective native or naturalized vegetation, wildlife, and their associated habitats. Existing information on vegetation and wildlife and their associated habitat types in the vicinity of the proposed sites were reviewed, with particular emphasis on the presence of any species listed as threatened or endangered by federal or state agencies to assess their sensitivity to the effects of the Proposed Action. For this EA, biological resources are divided into three areas: vegetation communities, wildlife communities, and protected species under the following regulations:

- Bald and Golden Eagles, as protected under the Bald and Golden Eagle Protection Act (16 USC § 17 668 [1972]);

- Rare and endangered plants species by the New Mexico State Forestry Division's Endangered Plant Program;
- Protected species under the Migratory Bird Treaty Act ([MBTA], 16 USC §§ 703-712 [2004]);
- Threatened or endangered under the federal Endangered Species Act of 1973 ([ESA], 16 USC § 9 1531 et seq.) by the U.S. Fish and Wildlife Service (USFWS); and
- Threatened or endangered wildlife species under the New Mexico Wildlife Conservation Act (17-11 2-40.1 New Mexico Statutes Annotated [1978]) by NMDGF.

3.4.1 Affected Environment

3.4.1.1 Vegetative Communities

Fort Bliss lies within the Chihuahuan Desert ecoregion (as defined by The Nature Conservancy) except for a small portion of the Arizona-New Mexico Mountains ecoregion found in the north (U.S. Army, 2021). This ecoregion is known for its high level of biodiversity and endemism which is largely a result of the variable topographic relief and climatic gradients (Van Devender,1986; Allen et al., 1999.).

A model was developed for describing the vegetation communities for Fort Bliss, called vegetation map units (Muldavin et al., 1996). Each classification is given by the map unit physiographic name followed by the map unit name. The four-letter schema following most of the descriptions represent the scientific shorthand for species combining the first two letters of the genus and species together (e.g., *DO BOCU*). Table 3-4 provides the vegetative map units in the action area. A graphical representation of the following map units within the FBTC Land Use Category B area is presented in Figure 3-4.

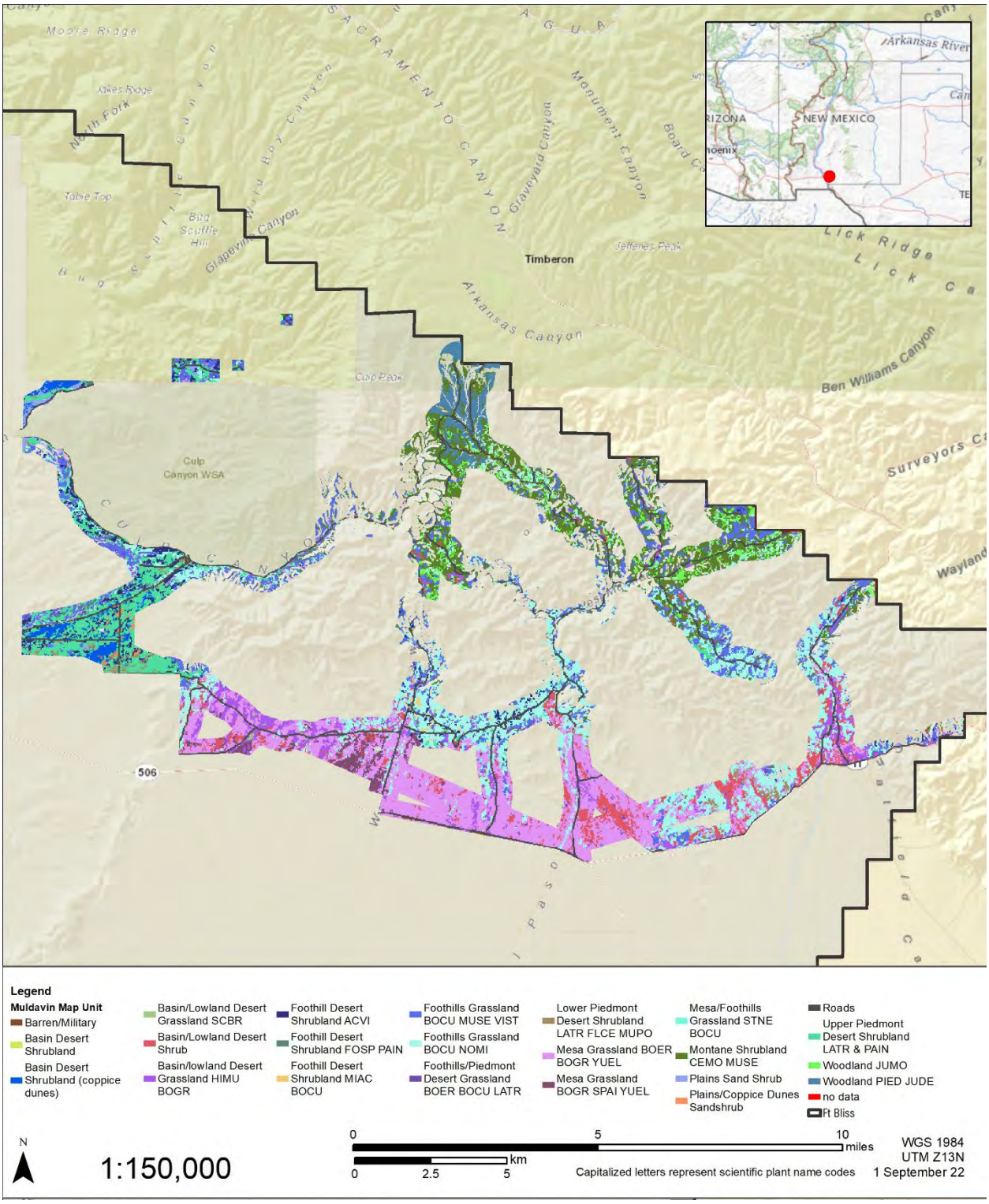
The action area is located within the following physiographic units. The units are provided in order of greatest acreage to least. Full descriptions of each Vegetative Map Unit can be found within Appendix C Map Unit Descriptions of Muldavin et al., 1996.

Table 3-4: Acreage of Vegetative Map Units within Proposed JLTV Operations Areas

Vegetative Map Unit	Acreage
Foothills Grassland BOCU NOMI	4,990
Mesa Grassland BOER BOGR YUEL	4,919
Montane Shrubland CEMO MUSE	3,142
Foothills Grassland BOCU MUSE VIST	2,847
Roads	1,959
Upper Piedmont Desert Shrubland LATR & PAIN	1,786
Basin/Lowland Desert Shrub	1,330
Basin/lowland Desert Grassland HIMU BOGR	1,156
Foothill Desert Shrubland ACVI	759
Woodland PIED JUDE	712
Woodland JUMO	617
Mesa Grassland BOGR SPAI YUEL	464
Basin Desert Shrubland (coppice dunes)	360

Vegetative Map Unit	Acreage
Lower Piedmont Desert Shrubland LATR FLCE MUPO	300
Plains Sand Shrub	197
Foothills/Piedmont Desert Grassland BOER BOCU LATR	86
Foothill Desert Shrubland FOSP PAIN	70
Mesa/Foothills Grassland STNE BOCU	54
Foothill Desert Shrubland MIAC BOCU	52
Plains/Coppice Dunes Sandshrub	40
Basin/Lowland Desert Grassland SCBR	20
Barren/Military	18
no data	10
Basin Desert Shrubland	1

Figure 3-4: Vegetation Class within Proposed JLTV Operations Areas



3.4.1.2 Wildlife Communities

The action area falls within the borderland region of New Mexico and Texas. This region is known for having an abundance of diversity in mammals, birds, amphibians and reptiles, and invertebrates due to the large diversity and presence of suitable habitats. A complete listing of all faunal species found on Fort Bliss can be found in the INRMP, Appendix D, Results of Planning Level Surveys (U.S. Army, 2021).

Mammals

Approximately 58 species of game and non-game mammals occur on Fort Bliss with 20 additional species with the presence of suitable habitat and a potential to occur. Fort Bliss supports all sizes of game and non-game mammals including 17 species of bats (U. S. Army, 2007).

Predator species on Fort Bliss include black bears, coyotes, foxes, badgers, bobcats, and cougars. Prey species include grazers like elk, deer, pronghorn, the introduced oryx, and numerous species of rodents and rabbits. Mesa grasslands are important pronghorn habitats, as such, they are primarily found on the Otero Mesa South of Highway 506, the Southeast McGregor Range, and the southern boundary of the Northeast McGregor Range North of Highway 506. Rodent surveys completed in 1997 and 1998 in the McGregor Range show the largest number of individuals and species in the swale and the acacia scrub habitat and the lowest number was in the mesquite dunes. The montane habitats of the Huecos, Organs, and Sacramento Foothills, are significant as they provide different rodent species than are found in the grasslands and basin, including Organ Mountain and gray footed chipmunks (U.S. Army, 2021, U.S. Army, 2010).

Birds

Most of the birds on Fort Bliss are migratory and are protected primarily by the MBTA (USFWS, 2008). The action areas associated with the Proposed Action cover a wide range of vegetative communities and habitat associations. As such, a variety of birds protected by the MBTA are expected to occur within these sites.

There are 336 documented species of birds on Fort Bliss, and most are protected under the MBTA of 1918. One-hundred and twenty-nine species are seen only during the spring and/or fall migration, 42 species are spring and summer residents, and the remaining 83 species occur principally during the winter (U. S. Army, 2000; U.S. Army, 2021). One hundred and forty-one species are rare to very rare, 72 are uncommon, 89 are fairly common, and 32 species are common.

Protocols and procedures for the protection of migratory birds are discussed in the INRMP (U.S. Army, 2021), Grow the Force EIS (U.S. Army, 2010), and the Mission and Master Plan Programmatic EIS (U.S. Army, 2000).

Amphibians and Reptiles

The habitat of Fort Bliss supports a diverse range of herpetofauna. Forty-nine species of reptiles and amphibians have been recorded on Fort Bliss (41 reptiles and 8 amphibians). The Hueco

Mountains had the highest herpetofauna diversity on Fort Bliss with 32 species. Lizards and snakes represent the most diverse documented groups with 20 known species each. There have been three species of turtles documented during surveys. A more detailed discussion of these species is provided in the INRMP (U.S. Army, 2021).

Invertebrates

Invertebrates play a major role in the structural and functional role of desert ecosystems. Invertebrates serve as a major food source (reptiles, amphibians, and birds), soil aeration, decomposition, pollination, and soil movement. The most abundant invertebrate found in arid ecosystems are ants and termites (Whitford et al., 1995). There is a diverse number of ant species in the Chihuahuan Desert that are important in increasing water soil movement by transporting subsurface soil to the surface. Termites are an important nutritional source for many species and are also critical in the decomposition of cattle dung (Narayanan, 2004).

The Organ Mountains and Bishop's Cap have endemic snail species (Ashmunella spp.) (Metcalf, 1984; Metcalf and Smartt, 1997). During the monsoon season in the Chihuahuan Desert an assortment of ephemeral invertebrates (primarily larvae and small shrimp-like crustaceans) hatch in the playas and reproduce before the water dries up. In turn, this invertebrate fauna provides important food for adult and larval toads, salamanders, and some birds (MacKay et al., 1990).

3.4.1.3 Protected Species

Regulatory Setting

The ESA mandates that all federal agencies consider the potential effects of their actions on species listed as federally threatened or endangered. Section 7 of the ESA requires federal agencies that fund, authorize, or carry out an action to ensure that their action is not likely to jeopardize the continued existence of any federally listed threatened or endangered species (including plant species) or result in the destruction or adverse modification of designated critical habitats. The USFWS maintains a worldwide list of endangered species. Species include birds, insects, fish, reptiles, mammals, crustaceans, flowers, grasses, and trees.

The ESA requires federal agencies, through consultation, to ensure that actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of designated critical habitat of such species. The law also prohibits any action that causes a "taking" of any listed species of endangered fish or wildlife. Likewise, import, export, interstate, and foreign commerce of listed species are all generally prohibited.

The MBTA prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by the USFWS.

The Eagle Act makes it illegal to import, export, take (which includes molest or disturb), sell, purchase, or barter any Bald Eagle or Golden Eagle or parts thereof. Under the Eagle Act (72 Federal Register 31132, June 5, 2007), "take" is defined as to "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, destroy, molest or disturb." "Disturb" is defined as "to agitate or

bother a Bald or Golden Eagle to the degree that causes, or is likely to cause, based on the best scientific information available: (1) injury to an eagle, (2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or (3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior."

Threatened and Endangered Species

The States of New Mexico and Texas, in coordination with the USFWS list threatened, endangered, and species of concern flora and fauna species that are known to occur, or have the potential to occur at Fort Bliss. Fort Bliss has further identified and classified Locally Important Natural Resources (LINRs) for protection. LINRs include Black Grama Grasslands, Sand Sagebrush Communities, Shinnery Oak Islands, and arroyo-riparian drainages and playas (U.S. Army, 2010). Detailed information regarding threatened and endangered species on Fort Bliss, the federal and state listed status, as well as known occurrences are analyzed within the Supplemental EIS, Grow the Force EIS, and INRMP.

Across Fort Bliss, 57 species of flora and fauna, classified as sensitive, threatened, or endangered, are known to occur or have the potential to occur. Eight of the 57 species are classified with federal status. Sneed pincushion cactus (Escobaria sneedii var. sneedii), Kuenzler's hedgehog cactus (Echinocereus fendleri var. kuenzleri), Sacramento Mountains Prickly Poppy (Argemone pleiacantha var. pinnatisecta), Interior least tern (Sterna antillarum athalassos), and Southwestern willow flycatcher (Empidonax trailii extimus) are listed as federally endangered. The Piping plover (Charadrius melodus) and Mexican spotted owl (Strix occidentalis lucida) are listed as threatened. The northern aplomado falcon (Falco femoralis septetrionalis) is a Nonessential Experimental Population within the States of New Mexico and Arizona and does occur on the Otero Mesa but is a transitory visitor (U.S. Army, 2021).

Of the eight listed species, only the Sneed's pincushion cactus (Escobaria sneedii var. sneedii) occurs on Fort Bliss. The remaining seven species are not known to occur; have no suitable habitat or insufficient habitat to maintain a population; or exist as rare, transitory, or seasonal migrants, and breeding is not known to occur on Fort Bliss. Of note, Sprague's Pipit (Anthus spragueii) is a federal candidate species for listing as endangered and does occur on the grasslands of Otero Mesa during the winter.

Bald and Golden Eagles

Bald and Golden eagles occur throughout southern New Mexico and Fort Bliss and likely use many of the areas considered in the analysis. Golden Eagles are the largest bird of prey in North America and use a wide variety of habitats for foraging and breeding. Golden Eagles may either be permanent residents or migrants throughout New Mexico. They often nest on cliffs in this area.

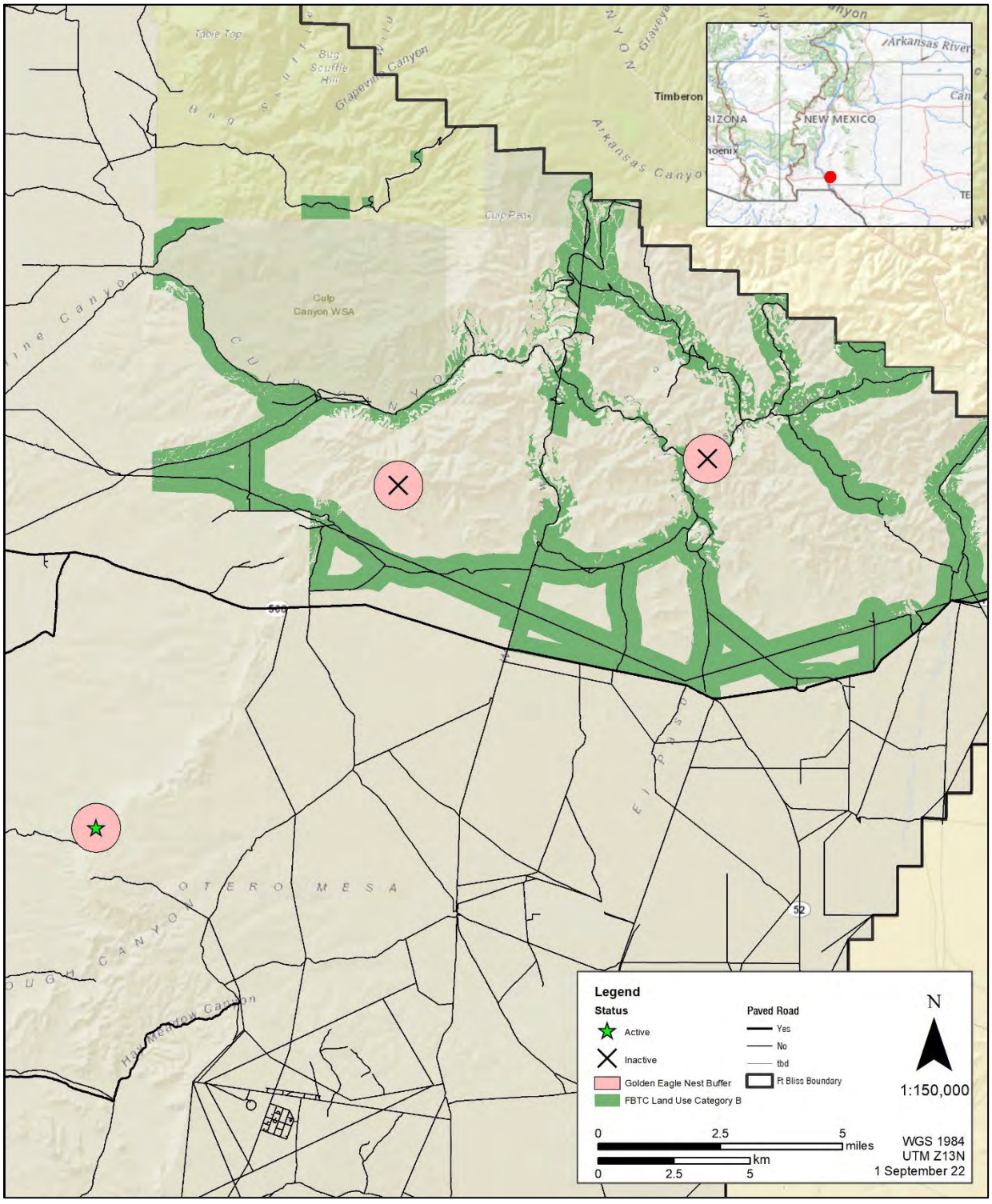
While no known active nests have been located in the action area, there are three nesting locations of Golden Eagles within the general vicinity of the action area. The nesting locations were observed and plotted using latitude and longitude coordinates into Google Earth. Management guidelines for the Golden Eagle from the USFWS recommend a minimum buffer for construction activities of 0.5 miles (800 meters) if the construction is visible from the nest.

Buffers were placed on each of the nesting locations, and it was determined that the closest active nesting location is a minimum of half a mile from the FBTC Land Use B areas (Figure 3-5).

Migratory Birds

Protocols and procedures for the protection of migratory birds on Fort Bliss are discussed in the Fort Bliss Grow the Force EIS and the Fort Bliss INRMP. The project areas associated with the Proposed Action cover a wide range of vegetative communities and habitat associations. As such, a variety of birds protected by the MBTA are expected to occur within these sites. A partial list of migratory birds found on Fort Bliss, not listed by the ESA as threatened or endangered, are winter residents Sprague's pipit (Anthus spragueii), Baird's sparrow (Ammodramus bairdii), McCown's longspur (Calcarius mccownii), American bald eagle (Haliaeetus leucocephalus) (occasional visitor foraging in the Sacramento Mountains), ferruginous hawk (Buteo regalis), Golden Eagle (Aquila chrysaetos) and chestnut-collared longspur (Calcarius ornatus).

Figure 3-5: Known Active and Inactive Eagles Nests



3.4.1.4 Invasive Species

The State of New Mexico, under the administration of the New Mexico Department of Agriculture, has designated numerous invasive weeds as noxious. Noxious in this context means plants not native to New Mexico, targeted for management and control, and that have a negative impact on the economy or the environment (New Mexico Department of Agriculture, 2020).

There are seven identified species considered noxious that are known to occur on Fort Bliss. African rue (Peganum harmala) exists in the cantonment areas, along roadways, and in disturbed areas on FBTC. African Rue is the only actively controlled invasive species on Fort Bliss. It invades disturbed sites and once successfully established can spread and outcompete native grasses (U.S. Army, 2021).

Russian thistle (Salsola tragus) has established on disturbed ground and exists throughout Fort Bliss. Salt cedar (Tamarix ramosissima) has been found at some stock tanks and at other widely scattered locations on Fort Bliss. Malta starthistle (Centaurea melitensis) poses potential problems for Fort Bliss. It has been found growing along U.S. Highway 54 and may occur along other roadways on Fort Bliss, although not yet documented.

Other noxious weeds concerning to Fort Bliss include Johnsongrass (Sorghum halepense), occurring in some drainages on Fort Bliss. Bermudagrass (Cynodon dactylon) is found on some abandoned farmland that is no longer irrigated. Lastly, Kochia (Bassia scoparia) which occurs on Otero Mesa (U. S. Army, 2009). Management decisions and control measures are detailed in the INRMP (U.S. Army, 2021).

3.4.2 Environmental Consequences

3.4.2.1 Proposed Action

The Proposed Action would provide adequate training opportunities for the JLTV FoV at Fort Bliss. These activities would be consistent with current Army and Fort Bliss land use management plans and guidance. They would not preclude the viability of existing activities within the project areas or other adjacent areas.

Vegetative Communities

To limit disturbance to floral communities and habitats, JLTV FoV would use existing roads for site-to-site relocation. Utilizing existing roadways should avoid the impacts and removal of vegetation. When operations are conducted off-road, areas that have already been impacted by previous disturbance would be utilized first.

Off-road use would create local micro habitat impacts to vegetation density and overall composition. Ground cover of native species is expected to decline in areas where operations occur. Some plants' initial growth and subsequent growth responses to off-road activities are preceded by effects on soil properties. Meaning, soil characteristics and soil compaction, play important roles in the distribution, abundance, growth rate, reproduction, and size of plants. Some vegetative responses are likely to lag changes in soil properties, and, by the time effects are detected in plants, site recovery could be more difficult and/or lengthy. As such, it is

important to implement management strategies for maintaining or improving soil condition before plants are affected and no longer provide enough cover to hold soils in place during restoration efforts. More information on soils is included in Section 3.5. Geological and Soil Resources.

To limit and reduce the spread of invasive plants affecting the project areas, preventative and control measures would include, but not be limited to, Environmental Awareness Program, vehicle and equipment cleaning procedures, treatment methods including manual, mechanical, and herbicidal, and restoration and revegetation practices.

Wildlife

To limit disturbance to fauna and habitat, JLTV FoV would use existing roads for site-to-site relocation. Utilizing existing roadways should avoid the removal of vegetation during migratory bird nesting season, which is between March and August.

Wildlife species would likely vacate areas temporarily when human activity level is high during instrumentation emplacement and test preparation. Small mammals, rodents, and reptiles would likely withdraw to burrows during these same activities. The likelihood that fauna would be hit directly by JLTV during testing operations or relocation from site to site is very small. Individual mortality, although unlikely, may occur; however, no population-level impacts are anticipated. Therefore, no major or long-term effects on wildlife populations are anticipated.

Threatened and Endangered Species

No known populations of federal or state listed threatened or endangered species or critical habitat are present within the action area. There is potential for certain species, such as the aplomado falcon and pinyon jay, to occur in the proposed project area seasonally, while foraging, or as transients.

The northern aplomado falcon in New Mexico is listed under Section 10(j) of the ESA as a Nonessential Experimental Population. As such, federal agencies are required to determine if their activities could jeopardize the continued existence of the species. They have been documented nesting and breeding in the Sacramento Mountains. Peregrine falcons prefer wooded and forested cliffs with large gulfs. They hunt over a wide variety of habitats that include an open, featureless habitat so long as there is ample prey. The Proposed Action is outside known nest or breeding areas and therefore is not anticipated to have any direct impact. Any northern aplomado falcon sighting would be reported to the USFWS within 24 hours.

The pinyon jay may be present within the northeastern areas of the action area. While not federally listed currently, it is considered a Species of Greatest Conservation Need, and Fort Bliss does manage and monitor for the pinyon jay. If discovered, they would likely only be in the area foraging or as a transient. Pinyon jays would likely vacate areas temporarily during human activity and JLTV operations. The mitigation measures below and recommendations in the migratory bird section would further ensure no direct or permanent impacts on the pinyon jay.

The proposed JLTV operations are outside the current known location for any listed threatened and endangered species and therefore no direct impacts are anticipated with the implementation of the Proposed Action.

Bald and Golden Eagles

While it is possible for an eagle to be injured or killed by a JLTV FoV while flying across an active training operation or site-to-site transport, the risk is low due to the low probability of a bird crossing the path of a moving vehicle.

The following avoidance/minimization measures would be implemented to prevent the take of eagles or eagle nests:

- Eagle biologists would monitor the currently known eagle nests to determine which nests are active during a given breeding season.
- Eagle nest locations (active and inactive) would be provided to the JLTV operators for their knowledge.
    - Human and vehicle activity would remain outside of the 0.5-mile (800-meter) buffer area for any active eagle nest, throughout the nesting season of mid-January through July.

3.4.2.2 No Action Alternative

Under the No Action Alternative, the Proposed Action would not occur and there would be no change to existing conditions. JLTV would continue not operating in FBTC Land Use Category B areas. Fort Bliss would continue to implement the measures in the INRMP to manage biological resources. Therefore, implementation of the No Action Alternative would not result in significant impacts to biological resources.

3.5 Geological and Soil Resources

Soil erosion effects are generally dependent upon a variety of factors, including geologic formations, soil structure and composition, climate, topography, and vegetative cover. The structure and composition refer to the physical features of soil, such as compaction, moisture, and composition, based on the bedrock material and mineral deposits. Climactic soil erosion effects primarily revolve around the abundance and intensity of precipitation in each environment. Topographic descriptions are typically in respect to the elevation, slope, aspect, and surface features (e.g., surface roughness) found within a given area. Vegetative cover is an interface between the atmosphere and soil surface, influencing the overall permeability and potential runoff.

This analysis focuses primarily on the geology, soils, topography, and soil erodibility of the action area. Detailed and full descriptions of the Fort Bliss geology, soils, topography, and soil erodibility can be found in the INRMP, Section 2.2 Physical Environment and Appendix B.

3.5.1 Affected Environment

3.5.1.1 Geology – U.S. Geological Survey Map

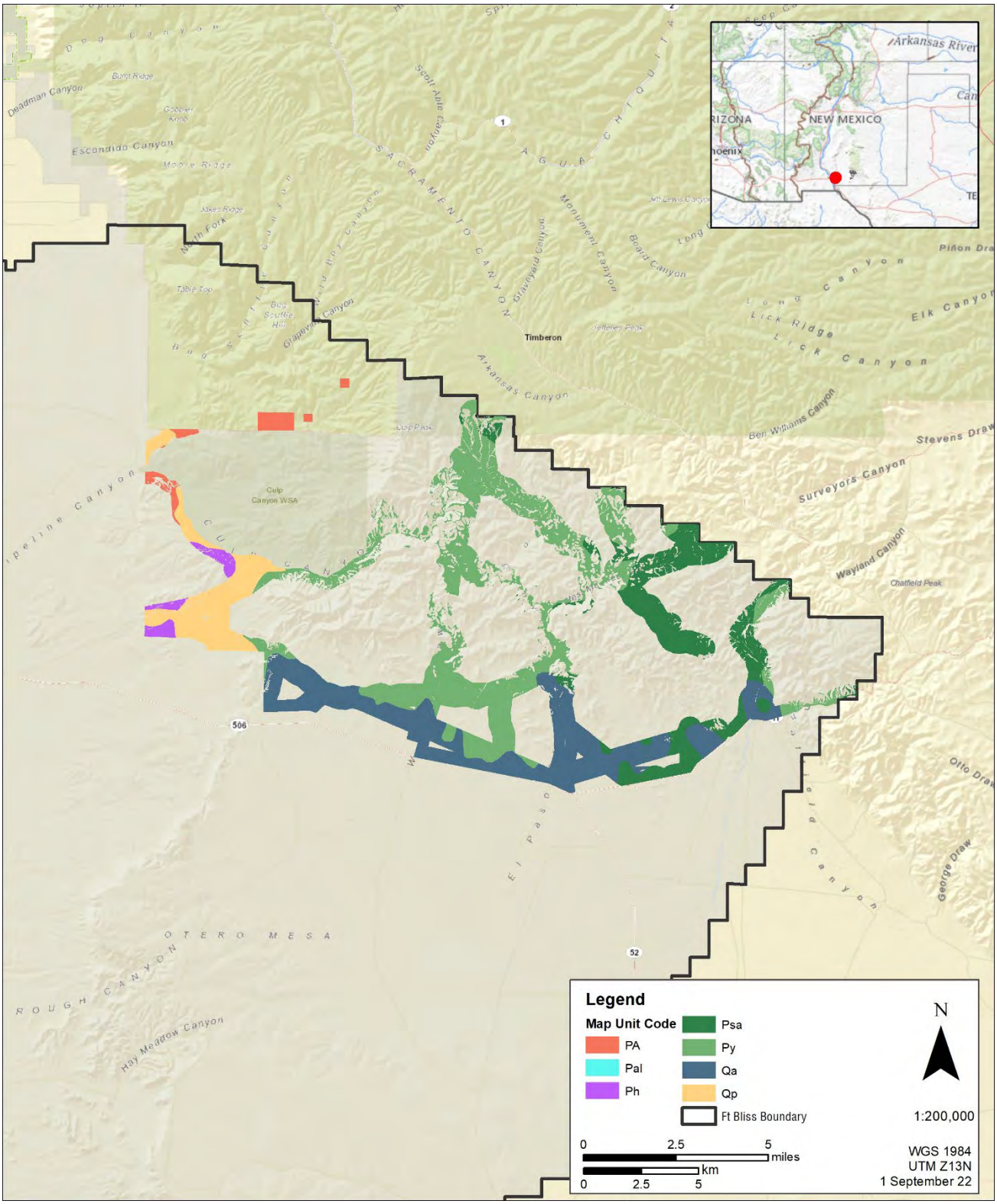
Fort Bliss is generally located within the Tularosa-Hueco Basin; a large inter-montane closed basin. Elevations range from approximately 3,800 feet on the basin floor to 8,800 feet in the Organ Mountains. The basin is between the Franklin and Organ mountains west and the Hueco and Sacramento mountains east. Fort Bliss is part of the Basin and Range Province and the north portion of the Chihuahuan Desert.

The 2003 Geologic Map of New Mexico (New Mexico Bureau of Geology & Mineral Resources, 2003) was used to determine and describe the geographic regions of the action area. Based on the New Mexico Bureau of Geology & Mineral Resources map, it was determined that the action area is comprised of seven unique geologic map units. Table 3-5 provides the map unit code, map unit description, map unit era, and the area for each formation represented in acres. A more complete regional geologic history of Fort Bliss is detailed in the INRMP (U.S. Army, 2021). Figure 3-6 illustrates the geologic map units.

Table 3-5: Geologic Map Units and Acreage for Proposed JLTV Operations Areas

Map Unit Code	Map Unit Description	Map Unit Era	Area (Acres)
Py	Yeso Formation (Leonardian) - Sandstones, siltstones, anhydrite, gypsum, halite, and dolomite	Paleozoic	9,932
Qa	Alluvium (Holocene to upper Pleistocene)	Quaternary	7,021
Psa	San Andres Formation (Guadalupian in the south, in part Leonardian to the north) - Limestone and dolomite with minor shale	Paleozoic	4,939
Qp	Piedmont alluvial deposits (Holocene to lower Pleistocene)—Includes deposits of higher gradient tributaries bordering major stream valleys, alluvial veneers of the piedmont slope, and alluvial fans. May locally include uppermost Pliocene deposits.	Quaternary	2,791
Pa	Abo Formation (Wolfcampian) — Red beds, arkosic at the base, finer and more mature above; may include limestone beds of Pennsylvanian age (Virgilian) in Zuni Mountains; in Robledo Mountains, the Abo may be considered a member of the Hueco Formation	Paleozoic	672
Ph	Hueco Formation or Group (Wolfcampian) — Limestone unit restricted to a south-central area. Pendejo Tongue of Hueco Formation divides Abo Formation into upper and lower parts in the Sacramento Mountains	Paleozoic	534
Pal	The lower part of Abo Formation (locally Virgilian to Upper Pennsylvanian)	Paleozoic	0.1

Figure 3-6: Geologic Map Units for Proposed JLTV Operations Areas



3.5.1.2 Soils

The U.S. Department of Agriculture National Resource Conservation Service (NRCS) provides results of a Web Soil Survey of the project area which indicates 38 mapped soil units. The complete list of each mapped soil unit, the total acreage, and percent of the total area of interest is depicted in Table 3-6, shown from largest representation to smallest.

Table 3-6: NRCS Mapped Soil Units

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
61	Philder-Jerag complex, 2 to 5 percent slopes	4,207.00	16.20%
79	Deama-Penalto-Rock outcrop complex, 15 to 35 percent slopes	2,366.40	9.10%
12	Infantry-Sonic complex, 3 to 10 percent slopes	1,923.70	7.40%
67	Oryx loam, 1 to 5 percent slopes	1,725.00	6.70%
77	Deama-Rock outcrop complex, 35 to 65 percent slopes	1,560.70	6.00%
50	Reyab loam, 1 to 5 percent slopes	1,468.30	5.70%
54	Altuda-Rock outcrop complex, 5 to 15 percent slopes	1,199.90	4.60%
55	Altuda-Rock outcrop complex, 15 to 35 percent slopes	1,160.30	4.50%
69	Double silt loam, 2 to 5 percent slopes	1,136.70	4.40%
78	Deama-Penalto-Rock outcrop complex, 5 to 15 percent slopes	989.70	3.80%
76	Deama-Rock outcrop complex, 15 to 35 percent slopes	896.9	3.50%
81	Cale silt loam, 2 to 5 percent slopes	843.5	3.30%
26	Sonic very gravelly fine sandy loam, 8 to 15 percent slopes	764.3	3.00%
56	Altuda-Rock outcrop complex, 35 to 65 percent slopes	773.20	3.00%
68	Oryx-Reyab complex, 1 to 3 percent slopes	786.70	3.00%
53	Bissett-Rock outcrop complex, 35 to 65 percent slopes	543.4	2.10%
83	Penagua-Modeama-Rock outcrop complex, 15 to 35 percent slopes	514.3	2.00%
65	Armesa-Salado complex, 1 to 3 percent slopes	387.80	1.50%
27	Sonic very gravelly fine sandy loam, 1 to 8 percent slopes	356.9	1.40%
52	Bissett-Rock outcrop complex, 15 to 35 percent slopes	348.8	1.30%
63	Jerag very fine sandy loam, 1 to 5 percent slopes	216.90	0.80%
66	Jerag-Armesa complex, 2 to 5 percent slopes	206.3	0.80%
73	Aguena fine sand, 5 to 15 percent slopes	176.60	0.70%
51	Bissett-Rock outcrop complex, 5 to 15 percent slopes	130.30	0.50%
80	Deama-Penalto-Rock outcrop complex, 35 to 65 percent slopes	117.80	0.50%
82	Modeama-Rock outcrop complex, 5 to 15 percent slopes	129.9	0.50%
28	Crossen-Tinney complex, 1 to 3 percent slopes	55.3	0.20%
30	Crossen gravelly fine sandy loam, 2 to 5 percent slopes	58.3	0.20%
33	Bankston extremely channery loam, 15 to 35 percent slopes	41	0.20%
75	Deama-Rock outcrop complex, 5 to 15 percent slopes	63.3	0.20%
59	Salado loam, 1 to 3 percent slopes	32.3	0.10%
74	Aguena fine sand, 15 to 35 percent slopes	13.5	0.10%
Subtotals for Soil Survey Area		**25,195.00**	**97.30%**

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
NOTCOM	No Digital Data Available	707.8	2.70%
Subtotals for Soil Survey Area		**707.8**	**2.70%**
ECF	Ector-Rock outcrop complex, 20 to 50 percent slopes	1.8	0.00%
ESB	Espy-Shanta variant association, gently sloping	0.6	0.00%
PCB	Pena-Cale-Kerrick association, nearly level	0.5	0.00%
DRF	Deama-Rock outcrop complex, 20 to 50 percent slopes	0.3	0.00%
RRF	Rock outcrop-Lozier Complex, 20 to 65 percent slopes	0.2	0.00%
PEC	Philder very fine sandy loam, 0 to 9 percent slopes	0	0.00%
Subtotals for Soil Survey Area		**3.4**	**0.00%**
Totals for Area of Interest		**29,827.40**	**100.00%**

3.5.1.3 Topography

The action area ranges from relatively flat areas with little to no topographic relief (Otero Mesa) to areas of steep relief (Sacramento Mountains). The areas being analyzed approximately range from 4,957 feet to 7,191 feet (1,511 – 2,192 meters). In general, all the elevation and relief is in the northeastern region sloping to the southwest.

3.5.1.4 Soil Erodibility

The most critical effect on soils would be the potential for increased soil erosion (water and wind) as a result of increases in vehicle traffic during off-road maneuvering activities (U.S. Army, 2010). Soil erosion from wind, water, and road use is a concern due to its impacts on the surrounding plant communities and the resulting cost of road maintenance. The NRCS uses several factors to evaluate soil erodibility (NRCS, 2021):

- Road and trail erosion hazard ratings are based on soil erosion factor K, slope, and content of rock fragments.
- A wind erodibility group consists of soils that have similar properties affecting their susceptibility to wind erosion in cultivated areas. The soils assigned to group 1 are the most susceptible to wind erosion, and those assigned to group 8 are the least susceptible.
- The erosion factor K indicates the susceptibility of soil to sheet and rill erosion by water. Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water.

A rating of “slight” indicates that little or no erosion is likely. “Moderate” indicates that some erosion is likely, that the roads or trails may require periodic maintenance. “Severe” indicates that significant erosion is expected that the roads or trails require frequent maintenance, and that costly erosion-control measures are needed. Table 3-7 provides a summary of the soil erodibility for the soil types present within the action area.

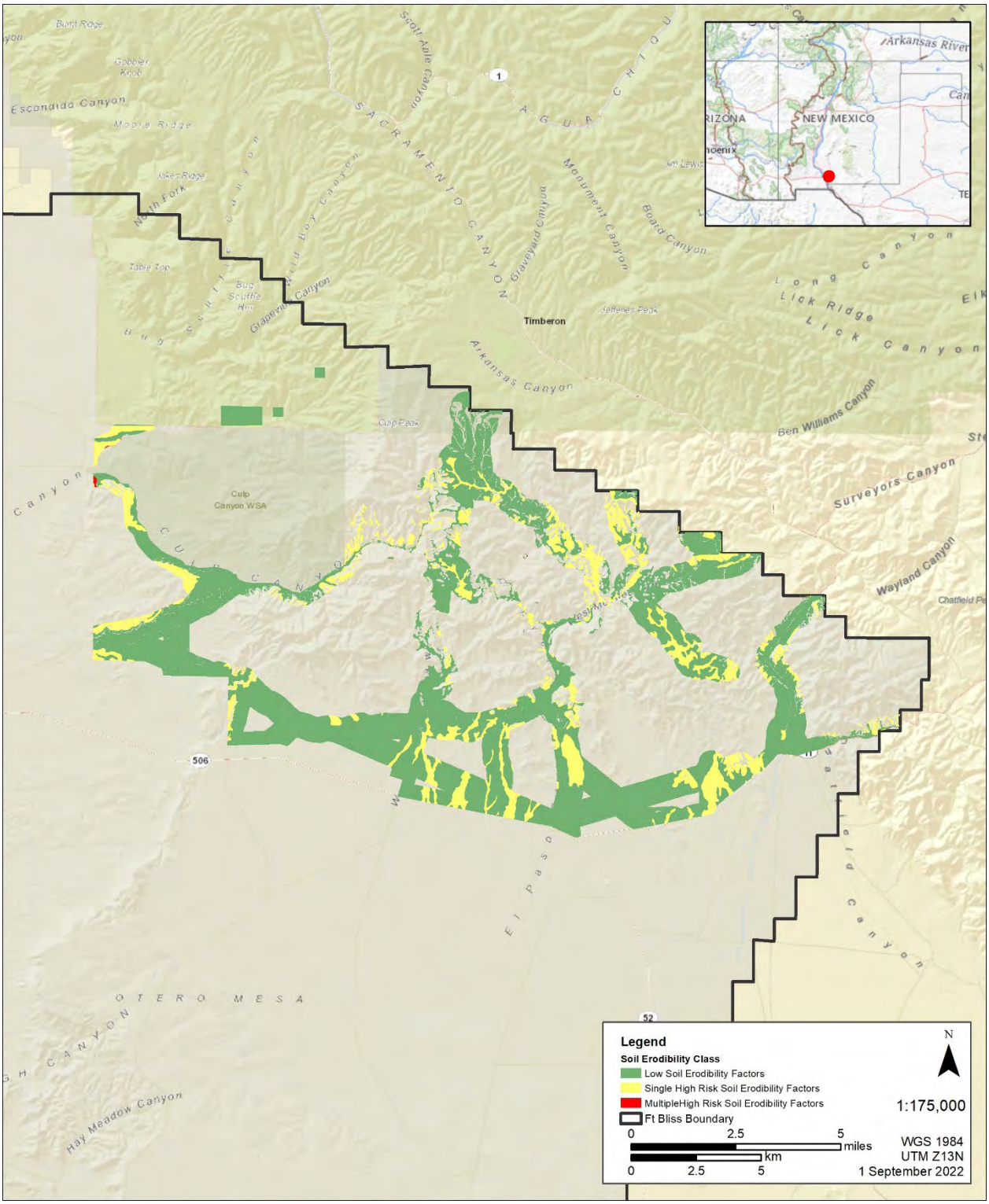
Table 3-7: Soil Erodibility within the Proposed JLTV Operations Areas

Map Unit Symbol	Map Unit Name	Erosion Hazard (Road, Trail)	Wind Erodibility Group	K factor, Whole Soil
12	Infantry-Sonic complex, 3 to 10 percent slopes	Slight	6	0.05
26	Sonic very gravelly fine sandy loam, 8 to 15 percent slopes	Moderate	6	0.05
27	Sonic very gravelly fine sandy loam, 1 to 8 percent slopes	Moderate	6	0.05
28	Crossen-Tinney complex, 1 to 3 percent slopes	Slight	5	0.10
30	Crossen gravelly fine sandy loam, 2 to 5 percent slopes	Slight	5	0.10
33	Bankston extremely channery loam, 15 to 35 percent slopes	Moderate	8	0.05
50	Reyab loam, 1 to 5 percent slopes	Moderate	4L	0.49
51	Bissett-Rock outcrop complex, 5 to 15 percent slopes	Moderate	6	0.10
52	Bissett-Rock outcrop complex, 15 to 35 percent slopes	Severe	6	0.10
53	Bissett-Rock outcrop complex, 35 to 65 percent slopes	Severe	6	0.10
54	Altuda-Rock outcrop complex, 5 to 15 percent slopes	Moderate	6	0.15
55	Altuda-Rock outcrop complex, 15 to 35 percent slopes	Moderate	6	0.15
56	Altuda-Rock outcrop complex, 35 to 65 percent slopes	Severe	6	0.15
59	Salado loam, 1 to 3 percent slopes	Slight	4L	0.32
61	Philder-Jerag complex, 2 to 5 percent slopes	Slight	5	0.24
63	Jerag very fine sandy loam, 1 to 5 percent slopes	Moderate	3	0.28
65	Armesa-Salado complex, 1 to 3 percent slopes	Slight	3	0.28
66	Jerag-Armesa complex, 2 to 5 percent slopes	Moderate	3	0.28
67	Oryx loam, 1 to 5 percent slopes	Moderate	4L	0.37
68	Oryx-Reyab complex, 1 to 3 percent slopes	Slight	4L	0.32
69	Double silt loam, 2 to 5 percent slopes	Moderate	4L	0.55
73	Aguena fine sand, 5 to 15 percent slopes	Moderate	1	0.02
74	Aguena fine sand, 15 to 35 percent slopes	Severe	1	0.05
75	Deama-Rock outcrop complex, 5 to 15 percent slopes	Moderate	6	0.10
76	Deama-Rock outcrop complex, 15 to 35 percent slopes	Moderate	6	0.10
77	Deama-Rock outcrop complex, 35 to 65 percent slopes	Severe	6	0.10
78	Deama-Penalto-Rock outcrop complex, 5 to 15 percent slopes	Moderate	6	0.10
79	Deama-Penalto-Rock outcrop complex, 15 to 35 percent slopes	Moderate	6	0.10
80	Deama-Penalto-Rock outcrop complex, 35 to 65 percent slopes	Severe	6	0.10

Map Unit Symbol	Map Unit Name	Erosion Hazard (Road, Trail)	Wind Erodibility Group	K factor, Whole Soil
81	Cale silt loam, 2 to 5 percent slopes	Moderate	4L	0.64
82	Modeama-Rock outcrop complex, 5 to 15 percent slopes	Moderate	8	0.10
83	Penagua-Modeama-Rock outcrop complex, 15 to 35 percent slopes	Moderate	6	0.20
NOTCOM	No Digital Data Available	Not Rated	N/A	N/A
DRF	Deama-Rock outcrop complex, 20 to 50 percent slopes	Severe	6	0.10
ECF	Ector-Rock outcrop complex, 20 to 50 percent slopes	Severe	5	0.15
ESB	Espy-Shanta variant association, gently sloping	Moderate	4L	0.24
PCB	Pena-Cale-Kerrick association, nearly level	Slight	4L	0.37
RRF	Rock outcrop-Lozier complex, 20 to 65 percent slopes	Not Rated	N/A	N/A

A generalized map of the above information is provided in Figure 3-6. The information was sorted by the following criteria. If a map unit symbol had none of the above ratings within the severe or high risk, it was coded as Low Soil Erodibility Factors. If a map unit had at least one high risk or severe rating, it was grouped and coded as Single High-Risk Soil Erodibility Factors. If a map unit had multiple high-risk or severe ratings it was sorted and coded as Multiple High-Risk Soil Erodibility Factors. Of note, only map unit 74, representing the smallest unit at 13.5 acres, fell into the Multiple high-risk category.

Figure 3-7: Soil Erodibility Classification by Soil Map Unit



3.5.1.5 Soil Compaction

Wheeled vehicles, such as the JLTV FoV, have the potential to cause soil compaction. Soil compaction can impact surface water infiltration, surface water runoff, loss of vegetative cover, and poor plant growth or seed germination (U.S. Army, 2010).

Wheel ruts are the result of contact pressure exerted by the vehicle exceeding the structural capacity of the soil. Rutting typically occurs more often in soils that are silty or clayey versus those soils that are composed primarily of sand because sand soils have no cohesion. Ruts concentrate the surface runoff, much like a natural rill or channel, which increases the sediment transport capability of surface water runoff. A more extensive discussion on soil erodibility and soil compaction can be found in the Grow the Force EIS, 2021 INRMP, and 2007 Supplemental EIS.

The Grow the Force EIS calculated soil contact pressure to classify common military vehicles within three categories of low, medium, and high. The classification is determined by dividing the weight of the gross weight of the vehicle by the total tire contact width. As shown in Table 3-8, the JLTV FoV falls within the medium soil contact pressure classification. Other wheeled vehicles used on Fort Bliss are shown in the table for relative comparisons.

Table 3-8: JLTV FoV Soil Contact Pressure Classification

Type of Vehicle	Weight (tons)	Total tire contact width (cm)	Soil Contact Pressure (kg/cm2)	Soil Contact Pressure Classification
HEMTT (M977)	19.4	44.5	6	H
Stryker	19	40.6	5	H
All-Terrain Lifter Articulated System (ATLAS)	16.75	59.7	4	M
MTV (M1084)	11.8	35.6	3	M
Joint Light Tactical Vehicle (JLTV)	**7**	**31.8**	**2.7**	**M**
Light Medium Tactical Vehicle (LMTV) (M1078)	7.4	31.8	3	M
High Mobility Multipurpose Wheeled Vehicle (HMMWV (M998)	2.6	26.7	2	L

Notes:
L = low
M = medium
H = high

Soil trafficability is a metric utilized to quantify the capacity of soils to support military vehicles based on soil strength, stickiness, slipperiness, and variation with weather (U.S. Army, 1994). NRCS further takes this classification and breaks it into seven types of generalized vehicles and three condition types. Based on the known JLTV FoV weight, soil contact pressure, and other physical features it was determined that Vehicle Trafficability Type 5 was the most appropriate descriptive class to describe the JLTV (NRCS, 2021).

Table 3-9 shows the three condition types rated by NRCS and their various ratings. The 1 pass, wet season and dry season are largely similar in the soil areas that are ranked fair and poor.

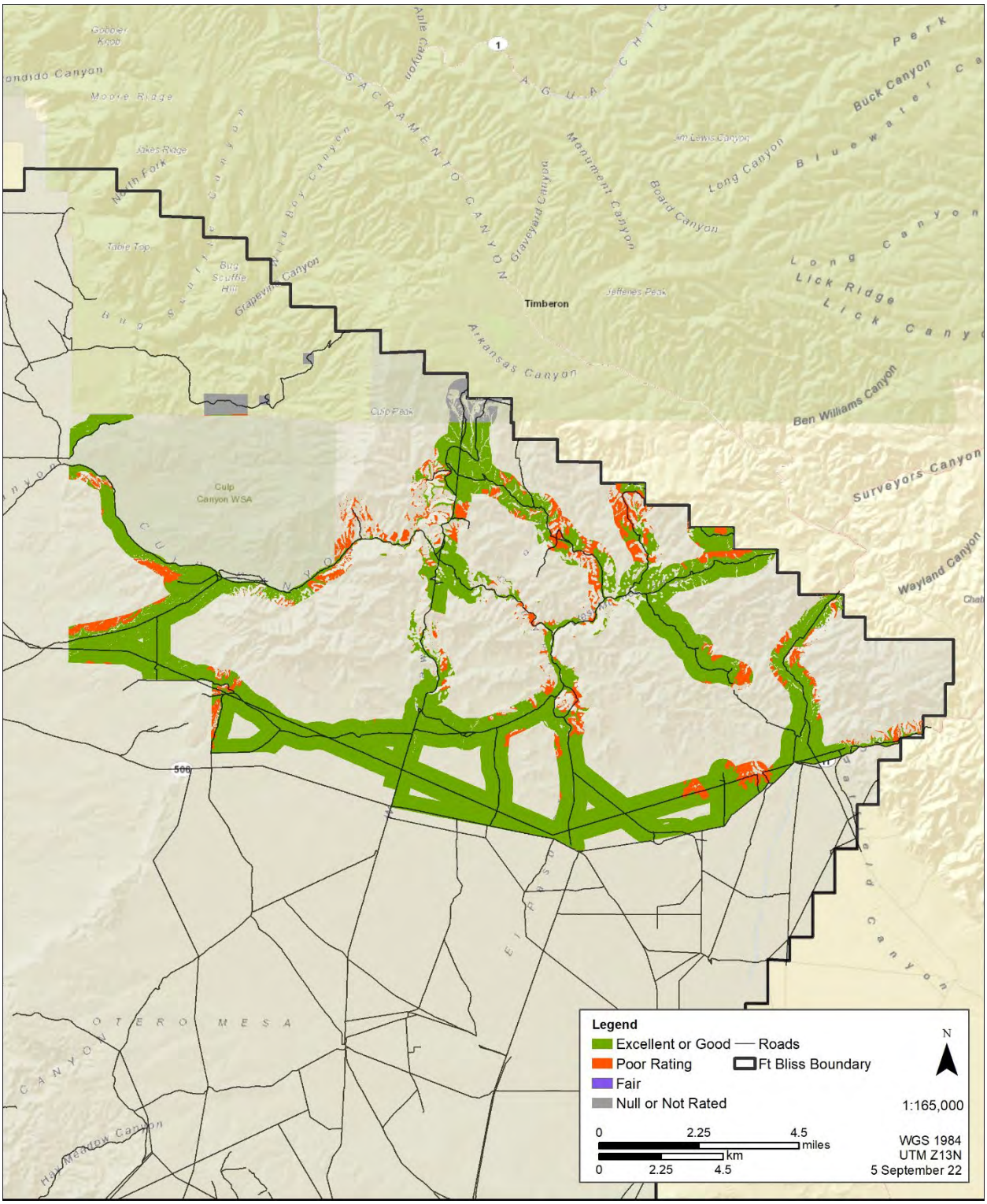
The only difference between the two is a significant area of soils are considered excellent for trafficability instead of good when conditions are dry.

Table 3-9: Vehicle Trafficability, Type 5

Rating Value	Excellent	Good	Fair	Poor	Null or Not Rated
1 Pass, Wet Season	-	85.70%	0.00%	11.60%	2.70%
50 Passes, Wet Season	-	20.00%	-	77.00%	2.70%
Dry Season	65.10%	20.60%	0.00%	11.60%	2.70%

Figure 3-8 synthesizes the NRCS results for vehicle trafficability, type 5, 1 pass, wet season and dry season results with an overlay of existing roads. Notable, most of the areas that have a poor rating are along areas with steep relief or the edge of the FBTC Land Use Category B. Further, all areas that contain areas rated poor have existing roadways within the vicinity that can be utilized.

Figure 3-8: Soil Trafficability Rating



3.5.2 Environmental Consequences

3.5.2.1 Proposed Action

The Proposed Action would provide necessary training space and opportunities for the JLTV FoV within the FBTC Land Use Category B operations areas. Two military uses within FBTC are particularly important with regard to soil erosional effects and JLTV operations: off-road vehicle maneuvers and on-road vehicle maneuvers.

The analysis of soil contact pressure determined the JLTV FoV is classified as medium. The JLTV FoV is slightly heavier than the vehicles currently operating in the proposed operational area, and therefore could potentially increase soil erosion or soil compaction. To assess this potential, existing roadways would be monitored for erosion and improved and maintained as required.

With regards to on-road vehicle maneuvers, the FBTC Land Use Category B does not differentiate between various vehicle weights, and therefore, maneuvers on existing roadways would not differ from current and ongoing operations.

Off-road maneuvers will largely maintain a similar frequency of operations that are currently occur within FBTC Land Use Category B. Importantly, the only difference to ground disturbance is the JLTV FoV weight (primarily off-road), and therefore soil contact pressure, in comparison to the vehicles currently used in FBTC Category B areas.

The analysis for soil erodibility, based on multiple factors from NRCS, determined there is very minimal acreage within the action area (refer to Table 3-6; 13.5 acres) that is at an increased risk for erodibility based on the factors considered. Only map unit 74, representing the smallest unit at 13.5 acres, fell into the Multiple High-Risk Category. There are areas with a potential for rutting and erosion, these areas should be the primary area for monitoring. The JLTV FoV would largely operate in existing training areas that are already disturbed by ongoing operations and would therefore have a less than significant adverse effect on soil erodibility.

The analysis for soil compaction from the Grow the Force and NRCS factors, determined areas and operating conditions where and when monitoring should occur. The NRCS results for trafficability for 50 passes on wet soil showed that a majority (77 percent) of soil classes will qualify as a poor rating. Importantly, wet conditions, but a single pass yielded similar soil ratings as overall dry conditions. Therefore, during wet conditions it should be evaluated as to whether operations can significantly limit the number of passes the JLTV FoV perform in a given area, or delay test operations until conditions are generally drier. If operations must be carried out, existing roadways would be utilized when possible.

Following the provided monitoring, BMPs, and mitigation measures outlined along with existing SOPs and BMPs, implementation of the proposed alternative would have no significant impact on soil erosion effects.

3.5.2.2 No Action Alternative

Under the No Action Alternative, the Proposed Action would not occur and there would be no change to existing conditions. JLTV would continue not operating in FBTC Land Use Category

B areas. Therefore, implementation of the No Action Alternative would not result in significant impacts to geological and soil resources.

4 CUMULATIVE IMPACTS

This section presents cumulative effects. Each resource area was evaluated to identify the direct and indirect environmental impacts of their actions. The 2022 updated CEQ NEPA regulations require federal agencies to address cumulative impacts related to their proposed actions. A cumulative impact is defined in the 2022 updated CEQ regulations as "effects on the environment that result from the incremental effects of the action when added to the effects of other past, present, and reasonably foreseeable actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time (40 CFR 1508.1 (g)(3)). This section describes the process used to identify potential cumulative impacts related to the proposed JLTV actions at Fort Bliss and discusses those impacts for each of the resources addressed in Chapter 3.

4.1 Process for Identification of Cumulative Effects

CEQ has published guidance for assessing cumulative impacts in *Considering Cumulative Effects under the National Environmental Policy Act* (January 1997). In summary, the process outlined by CEQ includes identifying significant cumulative effects issues, establishing the relevant geographic and temporal (time frame) extent of the cumulative effects analysis, identifying other actions affecting the resources of concern, establishing the cause and effect relationship between the proposed actions and the cumulative impacts, determining the magnitude and significance of the cumulative effects, and identifying ways in which the agency's proposal might be modified to avoid, minimize, or mitigate significant cumulative impacts.

4.2 Scope of Cumulative Impacts Analysis

The scope of the cumulative impacts analysis involves both the geographic extent of the effects and the time frame in which the effects could be expected to occur. For this EA, the action area delimits the geographic extent of the cumulative impacts analysis. In general, the action area would include those areas previously identified in Chapter 3 for the respective resource areas. The time frame for cumulative impacts centers on the timing of the Proposed Action.

Another factor influencing the scope of cumulative impacts analysis involves identifying other actions to consider. Beyond determining that the geographic scope and time frame for the actions interrelate to the Proposed Action, the analysis employs the measure of "reasonably foreseeable" to include or exclude other actions. For the purposes of this analysis, public documents prepared by federal, state, and local government agencies form the primary sources of information regarding reasonably foreseeable actions. Documents used to identify other actions include notices of intent for EISs and EAs, management plans, land use plans, and other planning related studies.

4.3 Past, Present, and Reasonably Foreseeable Actions

This section focuses on past, present, and reasonably foreseeable future projects at and near the Proposed Action locale. In determining which projects to include in the cumulative impacts analysis, a preliminary determination was made regarding the past, present, or reasonably

foreseeable action. Specifically, it was determined if a relationship exists such that the affected resource areas of the Proposed Action (included in this EA) might interact with the affected resource area of a past, present, or reasonably foreseeable action. If no such potential relationship exists, the project was not carried forward into the cumulative impacts analysis. In accordance with CEQ guidance (CEQ, 2005), these actions considered but excluded from further cumulative effects analysis are not catalogued here as the intent is to focus the analysis on the meaningful actions relevant to informed decision-making. Projects included in this cumulative impacts analysis are listed in Table 4-1 and briefly described in the following subsections.

Table 4-1: Cumulative Action Evaluation

Action	Level of NEPA Analysis Completed
Past Actions	
McGregor Range, New Mexico Land Withdrawal Renewal Legislative EIS	EIS completed in 1999
JLTV Family of Vehicles, Programmatic EA	EA completed 2015
EA for the Unmanned Aerial Systems Training Complex at Fort Bliss, Texas and New Mexico	EA completed 2013
Present and Reasonably Foreseeable Future Actions	
White Phosphorous Boxes EA	Conceptual stage
2019 Army Modernization Strategy: Investing in the Future Programmatic EAs and EISs (multiple documents Multi-Domain Task Force Programmatic EA, M-Shorad Programmatic EA, Iron Dome Defense System - Army Programmatic EA, ERCA	Development stage
EA for the renewal of McGregor Range land withdrawal	Development stage

4.4 Cumulative Impact analysis

Where feasible, the cumulative impacts were assessed using quantifiable data; however, for many of the resources included for analysis, quantifiable data is not available and a qualitative analysis was undertaken. In addition, where an analysis of potential environmental effects for future actions has not been completed, assumptions were made regarding cumulative impacts related to this EA/EIS where possible. The analytical methodology presented in Chapter 3, which was used to determine potential impacts to the various resources analyzed in this document, was also used to determine cumulative impacts.

4.4.1 Land Use

Existing land use designations would not change as a result of the Proposed Action, and the existing land uses within the action area would continue with their existing purposes. Operations of the JLTV would occur on existing test courses, ranges, roads, and installations designated for the type of activities performed. Similar non-tracked vehicles operate in FBTC Land Use Category B areas utilizing established and existing plans, training SOPs, environmental

management procedures, BMPs, and mitigations measures. Compatible public recreation activities would continue to occur in accordance with existing agreements. Therefore, implementation of the Proposed Action in conjunction with other past, present, and foreseeable actions would not result in cumulative impacts to land use.

4.4.2 Cultural Resources

For cumulative impacts, the region of influence includes the training areas identified for JLTV training north and south of Highway 506. Actions in the past, present, and future that may affect cultural resources, cumulatively, are increases and changes in training operations and potential off-post population increase.

JTLV training, when taken together with on-post training operations and off-post population growth, may have cumulative adverse effects on cultural resources on and off post. As a result, archaeological sites may be lost over time due to not only maneuvers but also construction of new businesses and subdivisions on previously undeveloped land within the region. At Fort Bliss, the PA and its SOPs ensure that a process is in place to avoid, reduce, or mitigate adverse cumulative effects to historic properties. However, cultural resources are not always protected by Federal or state law, during development on private property. From a cumulative aspect, private development has a potential for adversely affecting cultural resources that may be eligible for the National Register.

While Tribes are not party to the Fort Bliss PA, Fort Bliss conducts consultation with interested Tribes to address potential impacts from Army training and range area development to Traditional Cultural Properties and sacred sites in accordance with the ICRMP (U.S. Army, 2016). Fort Bliss would continue to work with Tribes to avoid, reduce, or mitigate adverse effects so that cumulative effects are considered less than significant. However, when considered cumulatively, there is a potential for adversely affecting Traditional Cultural Properties and sacred sites because consultation with Tribes are not always prescribed for private development. Therefore, implementation of the Proposed Action in conjunction with other past, present, and foreseeable actions would not result in cumulative adverse impact to cultural resources.

4.4.3 Biological Resources

Implementation of the Proposed Action would have small-scale impacts on vegetation communities but would not impact the ability to maintain existing vegetation communities. There are chances of individual mortalities during JLTV operational activities; however, no population-level impacts are anticipated. The action area contains no known critical habitat. In addition, Fort Bliss implements various management strategies to conserve and protect biological resources on Fort Bliss lands (U.S. Army, 2021). When combined with the effects of other past, present, and foreseeable project activities, implementation of the Proposed Action is unlikely to have any additional cumulative effect on regional plant and animal populations, including threatened and endangered species.

4.4.4 Geology and Soils

The Proposed Action would have localized, short-term effects on soil erosion. Effects would primarily be limited to unpaved roads during training operations with impacts including rutting and erosional issues. BMPs and mitigation measures would continue to be implemented to limit the overall scope of potential impacts associated with training and construction activities. Adding the JLTV FoV to the FBTC Land Use Category B areas would not measurably add to the effects of other activities. Therefore, there would be no cumulative impact on geology and soils.

5 SUMMARY OF POTENTIAL IMPACTS AND MEASURES TO AVOID, MINIMIZE, OR MITIGATE IMPACTS

This chapter summarizes the potential impacts for the resource areas analyzed in detail. For each resource area, Table 5-1 identifies applicable BMPs that Fort Bliss would implement to avoid or minimize impacts of the Proposed Action.

BMPs are standard practices that are implemented as part of the Proposed Action to minimize or avoid adverse impacts. Mitigation measures are specific actions that would rectify or compensate for unavoidable adverse environmental effects that could be significant without mitigation. No mitigation measures have been currently identified.

The No Action Alternative would represent no change in the current operational environment of the action area. Therefore, no impacts to the resource areas analyzed would be expected.

As specified in AR 200-2, the project proponent is responsible for ensuring that all BMPs or mitigation measures are implemented (U.S. Army, 2002). The following BMPs and mitigation measures would be applied to reduce any potential impacts:

Table 5-1: Summary of Impacts and BMPs Under the Proposed Action

Impact Summary	BMP(s)
Land Use	
No significant impact anticipated	• Schedule operations outside hunting seasons. When operations must be performed during hunting seasons, Fort Bliss would coordinate with BLM and NMDGF to properly communicate the relevant operation details to hunters and nearby residents. • Road signs would be posted on roads used for operations to ensure recreational land users are aware of ongoing operations and evacuation orders.
Cultural Resources	
Less than adverse effects to cultural resources	• Ensure to continue to implement the PA and its SOPs to avoid, reduce, or mitigate adverse cumulative effects to historic properties. • Continue consultation with Tribes to avoid, reduce, or mitigate adverse cumulative effects to Traditional Cultural Properties and sacred sites.
Biological Resources	
No significant impact anticipated	• Contact the Fort Bliss Environmental Division regarding wildlife concerns and report any nuisance issues, injury or death of an animal, active nests or nestlings, or determination of any seasonal wildlife restrictions per the Grow the Force BMPs. • Take measures to prevent wildlife damages to property or negative human/wildlife interactions, including personnel not feeding, watering, harassing, collecting, possessing, harming, disturbing, or destroying wildlife or their parts including but not limited to snakes, bats, birds, nests, eggs, or nestlings. • Implement vehicle cleaning procedures for reducing invasive species and noxious weeds.

Impact Summary	BMP(s)
	• Ensure human and vehicle activity remain outside of the 0.5-mile (800-meter) buffer area of any active eagle nest, throughout the nesting season of mid-January through July. • Test personnel would immediately provide the locations to the Fort Bliss Environmental Division of any injured or dead birds (including eagles) discovered in an operation area or through site-to-site transportation of vehicles per the Grow the Force EIS. • Maintain and promote partnerships with agencies and groups involved in migratory bird conservation.
Geological and Soil Resources	
No significant impact anticipated	• Implement appropriate surface water and erosion control measures. • Set aside maintenance funds to improve problem segments incrementally. • Avoid off-road operations during wet weather when possible. • Always maintain drainage features to a functional condition and remove blockages as they occur. • Fix the easiest road segments first to keep them functioning properly at the least expense. • Monitor, maintain, or improve access roads as needed. Design road maintenance and improvements to prevent water down or off the road in a concentrated flow that would create ruts or erosion. • Implement erosion control measures in accordance with a U.S. Army Corps of Engineer-approved Stormwater Pollution Prevention Plan. • Monitor areas identified for poor trafficability after operations for soil compaction.

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7 LIST OF PREPARERS

Chloeta and Scout Environmental prepared this EA under the direction of the U.S. Army Corps of Engineers Tulsa District and in partnership with Fort Bliss. The following contractor staff contributed to the preparation of this document:

Melanie Hernandez, JD, CEP, Scout Environmental, NEPA Project Manager, J.D., specializing in Environmental Law, 22 years' experience

Ryan Pingree, AICP, CEP, PMP, Scout Environmental, Senior NEPA Planner/Quality Assurance Review, M.S., Environmental Science and Management, 22 years' experience

Kari McCollum, Scout Environmental, Junior NEPA Planner, B.A., Sustainability, 2 years' experience

Jacob Richards, Chloeta, Natural Resource Specialist, M.S., Geography - Forest Dynamics, 12 years' experience

Kathy Rose, Scout Environmental, Senior NEPA Analyst, M.S., Natural Resources, 25 years' experience

APPENDIX A – Public Participation

This appendix provides a summary of the public participation activities associated with this EA.

The Draft EA and Draft FONSI were made available to federal, state, and local agencies, Native American tribes, and the public for review and comment for 30 days, September 17 – October 17, 2022. Fort Bliss published a Notice of Availability for the Draft EA in the following newspapers:

- El Paso Times;
- Las Cruces Sun-News (only available digitally on Saturdays);
- Alamogordo Daily News; and
- El Diario.

Fort Bliss also made the Draft EA available for online viewing at https://home.army.mil/bliss/index.php/about/Garrison/directorate-public-works/environmental and at the following libraries:

- Las Cruces: Thomas Branigan Memorial Library, 200 E. Picacho Avenue, Las Cruces, New Mexico 88001;
- El Paso: El Paso Public Library Richard Burges Branch, 9600 Dyer St C, El Paso, TX 79924; and
- Alamogordo: Alamogordo Public Library, 920 Oregon Avenue, Alamogordo, NM 88310.

The following pages include the distribution list of agencies that were e-mailed the Notice of Availability and an electronic copy of the Draft EA.

Appendix A includes the following:

1. Distribution list of agencies that were e-mailed the Notice of Availability and an electronic copy of the Draft EA;
2. A Stakeholder/Agency letter;
3. A Tribal letter;
4. Affidavits of Publications for the public notice published in area newspapers; and
5. Public/Agency comments.

1. DISTRIBUTION LIST

No.	Organization	Contact	Title	Address	Email	Type
1	U.S. Department of Agriculture		Forest Supervisor	Lincoln National Forest 3463 Las Palomas Rd. Alamogordo, NM 88310		Federal
2	White Sands Missile Range		Environmental Division Chief			Federal
3	U.S. Fish and Wildlife Service		Regional Director	500 Gold Ave. SW Albuquerque, NM 87102		Federal
4	US Environmental Protection Agency, Region 6		Acting Regional Administrator	1201 Elm Street Dallas, Texas 75270		Federal
5	Advisory Council on Historic Preservation		Program Analyst/Liaison	401 F Street NW, Suite 308 Washington DC 20001		Federal
6	Doña Ana County	Fernando R. Macias	County Manager	845 N Motel Blvd Las Cruces, NM 88007	fernandom@donaanacounty.org	Local

No.	Organization	Contact	Title	Address	Email	Type
7	Otero County	Pamela Heltner	County Manager	1101 New York Avenue Room106 Alamogordo, NM 88310	pheltner@co.otero.nm.us	Local
8	City of El Paso	Oscar Leeser	Mayor	300 N. Campbell El Paso, TX 79901	mayor@elpasotexas.gov	Local
9	City of El Paso	Tommy Gonzalez	City Manager	300 N. Campbell El Paso, TX 79901		Local
10	City of Las Cruces	Ken Miyagishima	Mayor	700 North Main Las Cruces, NM 88001	Kmiyagishima@las-cruces.org	Local
11	New Mexico Historic Preservation Division	Jeff Pappas	State Historic Preservation Officer	Bataan Memorial Building, 407 Galisteo Street, Suite 236, Santa Fe, NM 87501	jeff.pappas@state.nm.us	State
12	New Mexico Game and Fish	Mike Matthews	SW Area Captain	2715 Northrise Dr.	michiel.matthews@state.nm.us	State

No.	Organization	Contact	Title	Address	Email	Type
				Las Cruces, NM 88011		
13	BLM Las Cruces District Office	Bill Childress	District Manager	1800 Marquess Street, Las Cruces, NM 88005	wchildre@blm.gov	State
14	New Mexico Environmental Department	Michael Kesler	District Manager	2301 Entrada Del Sol Las Cruces, NM 88001	Alamogordo.ehb@state.nm.us	State
15	Comanche Nation of Oklahoma	Mark Woommavovah	Chairman	PO Box 908 Lawton, OK 73502		Tribe
16	Fort Sill Apache Tribe of Oklahoma	Lori Gooday-Ware	Chairman	43187 US Highway 281 Apache, OK 73006	lori.g.ware@fortsillapache-nsn.gov	Tribe
17	Kiowa Tribe of Oklahoma	Matthew Komalty	Chairman	PO Box 369 Carnegie, OK 73015	mkomalty@kiowatribe.org	Tribe
18	Mescalero Apache Tribe	Eddie Martinez	Tribal President	P.O. Box 227 108 Central Avenue Mescalero, NM 88340		Tribe

No.	Organization	Contact	Title	Address	Email	Type
19	White Mountain Apache Tribe	Kasey Velasquez	Chairman	PO Box 700 Whiteriver, AZ 85941	KaseyVelasquez@wmat.us	Tribe
20	Ysleta del Sur Pueblo (Tigua)	E. Michael Silvas	Governor	PO Box 17579 – Ysleta Station El Paso, TX 79917	michael.silvas@ydsp-nsn.gov	Tribe
21	Pueblo of Isleta	Vernon B. Abeita	Governor	P.O. Box 1290 Isleta, NM 87022		Tribe

2. STAKEHOLDER/AGENCY LETTERS

The following letter was emailed to recipients listed in the table above.

DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, UNITED STATES ARMY GARRISON, FORT BLISS
1741 MARSHALL ROAD
FORT BLISS, TX 79916

September 17, 2022

SUBJECT: Designated Opportunity to Comment on the Environmental Assessment For Renewal of the Joint Light Tactical Vehicle at Training Areas not Previously Analyzed at Fort Bliss Army Reservation

Bill Childress
District Manager
BLM Las Cruces District Office
1800 Marquess Street
Las Cruces, NM 88005

Dear Bill Childress:

In accordance with AR 200-1 and the National Environmental Policy Act (NEPA), U.S. Army Garrison, Fort Bliss, Texas, is preparing an Environmental Assessment (EA) to evaluate potential environmental effects associated with the operation of the Joint Light Tactical Vehicle (JLTV) Family of Vehicles (FoV) in established training areas at Fort Bliss. This letter serves to provide an opportunity to comment on the Draft EA as part of the NEPA process (40 CFR Subchapter A). The purpose of public commenting is to provide an opportunity for the public to submit meaningful comments on the proposed action prior to a final decision by the responsible official. Public comments received in response to this solicitation will help the responsible official identify issues for inclusion in the environmental analysis for this proposal.

The Army previously analyzed JLTVs in a Programmatic EA prepared in 2015 (U.S. Army, 2015) and analyzed other light vehicle operations within the Off-Road Light Vehicle Maneuver areas in the Grow the Force Environmental Impact Statement (EIS) (U.S. Army, 2010). The Army currently operates the JLTV FoV at Fort Bliss but is unable to do so on any Fort Bliss training complex (FBTC) light tactical maneuver areas. The Proposed Action would facilitate the use of the JLTV FoV within light tactical maneuver areas. The use of the JLTV FoV is part of the Army's modernization efforts, which require that Soldiers and units are operationally trained at Fort Bliss.

Specific written comments including attachments may be submitted by email to usarmy.bliss.id-readiness.mbx.dpw-nepa-support@mail.mil or in person (Monday through Friday, 8:00 a.m. to 4:30 p.m., excluding holidays). Written comments can also be mailed to Myra Guerrero, NEPA Program Manager, Environmental Division, Directorate of Public Works, U.S. Army Garrison Fort Bliss, 624 Pleasonton, Fort Bliss, TX 79916. We respectfully request that comments be submitted no later than 30 days

after receipt of this letter so they can be included in the Final EA. Commenters should clearly articulate their concerns and contentions related to the project proposal. Comments should be as specific as possible (40 CFR 1500.4(n)).

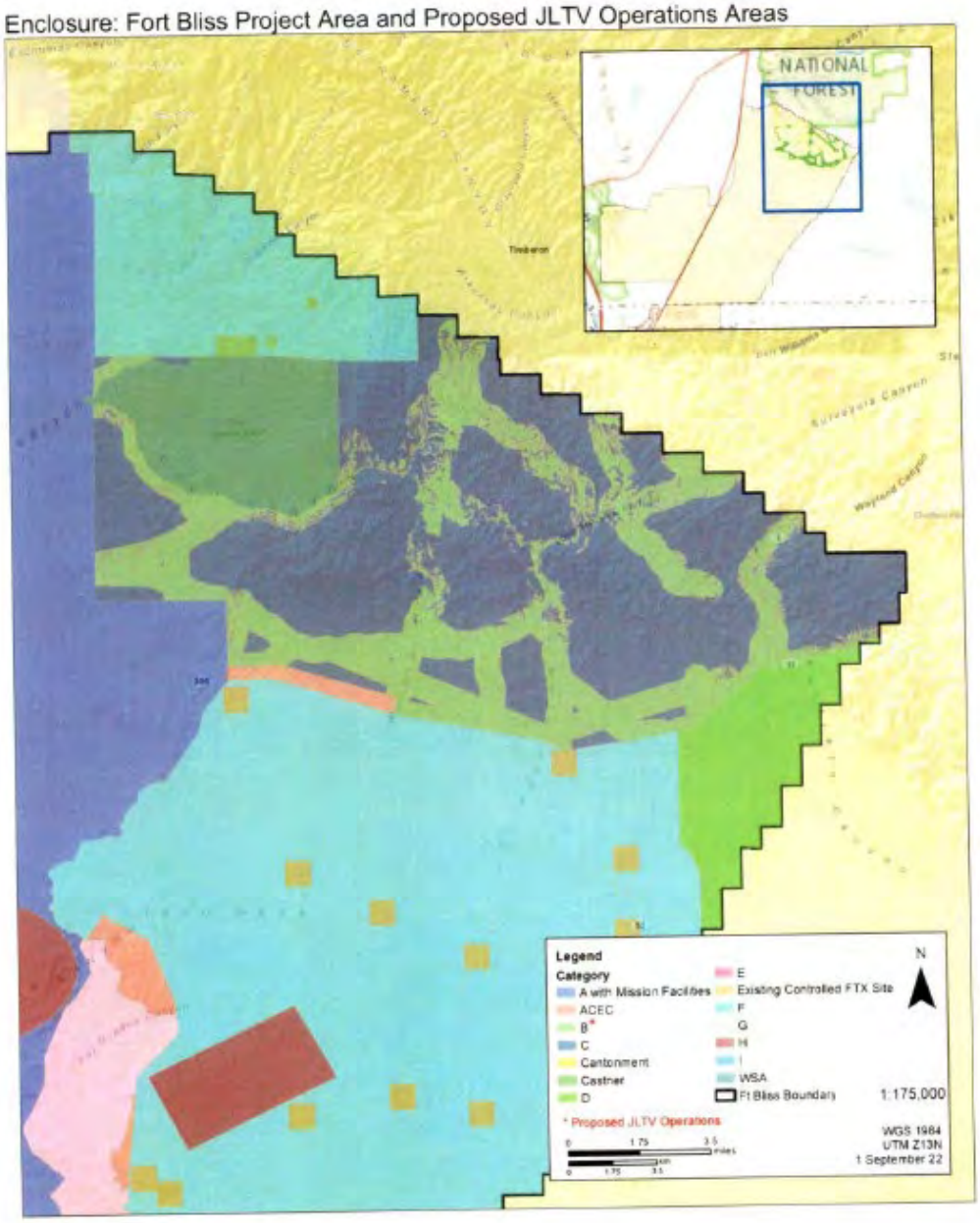
Please direct any questions regarding the action or the scoping process to Ms. Myra Guerrero, NEPA Program Manager, Environmental Division, Directorate of Public Works, at (915) 568-1455 or by email: Myra.guerrero2.civ@army.mil.

Sincerely,

Joseph A. Ranson
Chief, Environmental Division
Directorate of Public Works

Enclosure: Map of the project area

Enclosure: Fort Bliss Project Area and Proposed JLTV Operations Areas



3. TRIBAL LETTERS

The following letter was emailed to tribes listed in the table above.

DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, UNITED STATES ARMY GARRISON, FORT BLISS
1741 MARSHALL ROAD
FORT BLISS, TX 79916

September 17, 2022

SUBJECT: Designated Opportunity to Comment on the Environmental Assessment For Renewal of the Joint Light Tactical Vehicle at Training Areas not Previously Analyzed at Fort Bliss Army Reservation

Mr. Vernon B. Abeita
Governor
Pueblo of Isleta
P.O. Box 1270
Isleta, NM 87022

Dear Governor Abeita:

In accordance with AR 200-1 and the National Environmental Policy Act (NEPA), U.S. Army Garrison, Fort Bliss, Texas, is preparing an Environmental Assessment (EA) to evaluate potential environmental effects associated with the operation of the Joint Light Tactical Vehicle (JLTV) Family of Vehicles (FoV) in established training areas at Fort Bliss. This letter serves to provide an opportunity to comment on the Draft EA as part of the NEPA process (40 CFR Subchapter A). The purpose of public commenting is to provide an opportunity for the public to submit meaningful comments on the proposed action prior to a final decision by the responsible official. Public comments received in response to this solicitation will help the responsible official identify issues for inclusion in the environmental analysis for this proposal.

The Army previously analyzed JLTVs in a Programmatic EA prepared in 2015 (U.S. Army, 2015) and analyzed other light vehicle operations within the Off-Road Light Vehicle Maneuver areas in the Grow the Force Environmental Impact Statement (EIS) (U.S. Army, 2010). The Army currently operates the JLTV FoV at Fort Bliss but is unable to do so on any Fort Bliss training complex (FBTC) light tactical maneuver areas. The Proposed Action would facilitate the use of the JLTV FoV within light tactical maneuver areas. The use of the JLTV FoV is part of the Army's modernization efforts, which require that Soldiers and units are operationally trained at Fort Bliss.

Specific written comments including attachments may be submitted by email to usarmy.bliss.id-readiness.mbx.dpw-nepa-support@mail.mil or in person (Monday through Friday, 8:00 a.m. to 4:30 p.m., excluding holidays). Written comments can also be mailed to Myra Guerrero, NEPA Program Manager, Environmental Division, Directorate of Public Works, U.S. Army Garrison Fort Bliss, 624 Pleasonton, Fort Bliss, TX 79916. We respectfully request that comments be submitted no later than 30 days

after receipt of this letter so they can be included in the Final EA. Commenters should clearly articulate their concerns and contentions related to the project proposal. Comments should be as specific as possible (40 CFR 1500.4(n)).

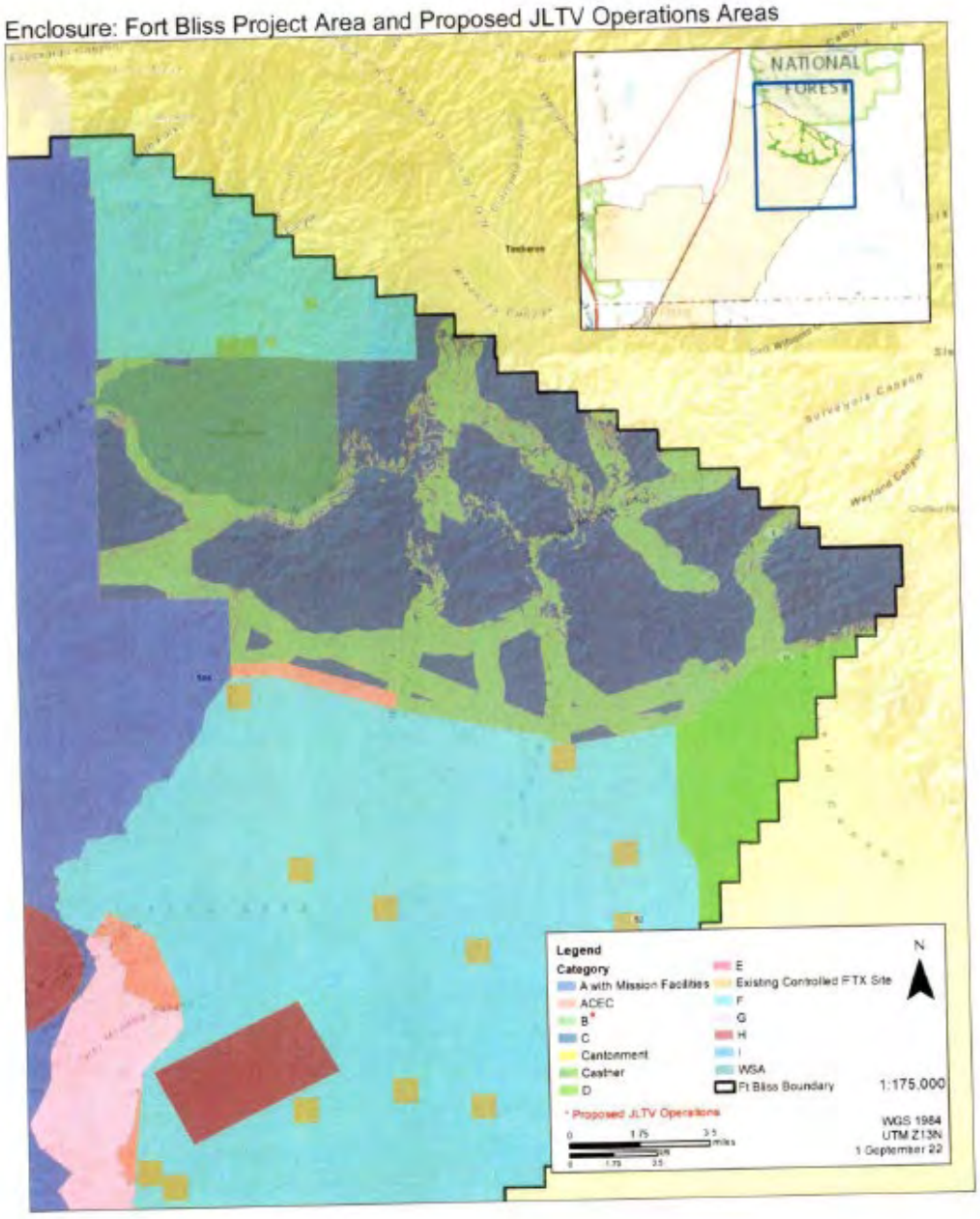
Please direct any questions regarding the action or the scoping process to Ms. Myra Guerrero, NEPA Program Manager, Environmental Division, Directorate of Public Works, at (915) 568-1455 or by email: Myra.guerrero2.civ@army.mil.

Sincerely,

Fabiola Silva
Cultural Resource Manager
Environmental Division

Enclosure: Map of the project area

Enclosure: Fort Bliss Project Area and Proposed JLTV Operations Areas



4. AFFIDAVITS OF PUBLICATIONS

Alamogordo Daily News

PART OF THE USA TODAY NETWORK

Affidavit of Publication
Ad # 0005411351
This is not an invoice

CHLOETA FIRE, LLC
2501 LIBERTY PKWY STE 176

MIDWEST CITY, OK 73110

I, being duly sworn, on my oath say that I am the Legal Coordinator of the **Alamogordo Daily News**, a newspaper of daily circulation,published and printed in the English language at the City of Alamogordo, Otero County, and State of New Mexico. That the Alamogordo Daily News has been regularly published and issued for more than nine months prior to the date of the first publication hereinafter mentioned.

09/18/2022

D. Roberts
Legal Clerk

Subscribed and sworn before me this September 21, 2022:

Nicole Jacobs
State of WI, County of Brown
NOTARY PUBLIC

8-21-26
My commission expires

NICOLE JACOBS
Notary Public
State of Wisconsin

Ad # 0005411351
PO #: public notice
# of Affidavits: 1

This is not an invoice

Fort Bliss Army Reservation has prepared an Environmental Assessment (EA) to evaluate the potential environmental effects associated with the operation of the Joint Light Tactical Vehicle (JLTV) Family of Vehicles (FoV) in established training areas at Fort Bliss. The Proposed Action would facilitate the use of the JLTV FoV within light tactical maneuver areas, specifically Land Use Category B areas. Use of the JLTV FoV is part of the Army's modernization efforts, which require that Soldiers and units are operationally trained at Fort Bliss. Analysis of the Proposed Action under this EA has identified no significant impacts on natural or human resources. The Draft EA and Draft FONSI are available for public review and comment at the following libraries: Las Cruces: Thomas Branigan Memorial Library, 200 E. Picacho Avenue, Las Cruces, New Mexico 88001; El Paso: El Paso Public Library Richard Burges Branch, 9600 Dyer St C, El Paso, TX 79924; and Alamogordo: Alamogordo Public Library, 920 Oregon Avenue, Alamogordo, NM 88310. The Draft EA and Draft FONSI can be viewed on the Fort Bliss website at https://home.army.mil/bliss/index.php/about/Garrison/directorate-public-works/environmental.
The public is encouraged to review and comment on these documents. Submitted public comments must be received no later than October 17, 2022, and can be submitted by email at usarmy.bliss.id-readiness.mbx.dpw-nepa-support@army.mil or mailed to 624 Pleasonton, Fort Bliss, TX 79916.
#5411351,Sun-News, Sept 18,2022

ALTERNATIVE LANGUAGE AFFIDAVIT OF PUBLICATION

STATE OF TEXAS §

COUNTY OF EL PASO §

Before me, the undersigned authority, on this day personally appeared

Jacklyn Alvarado, who being by me duly sworn,
(name of newspaper or publication representative)

deposes and says that (s)he is the ACCOUNT EXECUTIVE
(title of newspaper or publication representative)

of the El Diario de El Paso; that said newspaper or publication is generally
(name of newspaper or publication)

circulated in EL PASO TX; that the attached notice
(municipally or same county as the location of the facility or the proposed facility)

was published in said newspaper or publication on the following date(s):

Saturday, September 17, 2022

(Newspaper or publication representative's signature)

Subscribed and sworn to before me this the 19 day of September, 2022.

to certify which witness my hand and seal of office.

Notary Public in and for the
State of Texas
(Seal)

Elida Martinez
Print or Type Name of Notary Public

Elida Martinez
My Commission Expires
08/10/2024
ID No 132612653

08-10-2024
My Commission Expiress

Sábado 17
Septiembre de 2022, El Paso, Tx

El Diario de El Paso

AVISO CLASIFICADO

¡La solución para emplear, comprar o vender!

HORARIO de lunes a viernes de 8 a.m. a 5 p.m.

1801 Texas Av. El Paso, Tx. 79901
(915) 838-1602

ATENCIÓN: Es responsabilidad del cliente revisar su anuncio el primer día de su publicación para detectar errores. Favor de reportarlos de inmediato al departamento de clasificado. No nos hacemos responsables por más de una inserción incorrecta.

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TE COMPRAMOS TU CARRO, FUNCIONANDO O NO. PAGAMOS HASTA $5,000.00 DLLS. JAVIER (915)472-8224

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LIMPIEZA DE ALFOMBRAS Y TAPICERIA. $5.95 POR CUARTO $29.95 POR SOFA / SILLON. GARANTIZADO (915)256-9465

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REPARACION Y TRABAJOS NUEVOS, TODO TIPO DE TECHOS, STEEL SHINGLES PRESUPUESTO GRATIS!!! Bond&Insurance (915)502-5182

Otros Servicios

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Shingles, Metal Rolls, danos, fanes, concreto, remodelacion, pintura, skylights, adiciones, baños, cocinas canales. A+ BBB member bonded insured
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J. HERNANDEZ REMODELING
CEMENTO, Estampado, Sprinklers, Bardas, Pintura, Ceramica Remodelaciones en General (915)422-0958

PUERTAS DE GARAGE
Reparaciones, Mantenimientos, E instalaciones. Reparaciones de Motores. Herreria. Mejoramos Precio. Inf (915)253-5384

BAZAR 6

Animales

Vendo perritos PASTO ALEMAN 8 semanas, 3 machos, 2 hembras, (915)504-1259

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Ropa de Hombre de marca nueva/semi-nueva, pantalon, camisas, chamarra FR, cajon de herramienta PARFITHER (915)588-9480

PERSONALES 7

Personales

GARAGE SALE LLANTAS DE CARRO, VENTANAS NUEVAS, 6924 OVEJA DR 79912 (915)256-0243

EMPLEOS 8

Diversos

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CON EXPERIENCIA EN MOTORES CUMMINS ISX, DETROIT Y CAPERPILLAR. SUELDO BASE SEMANAL $800 DLLS
INFORMES (915) 603-6169 O (915) 356-5920

SE Solicita Handyman 5 horas /1 dia a la semana en El Oeste de El Paso, interesados llamar al (915)309-4070

Solicito Ayudante de Herrero
para pulir, pintar e instalar. trabajo en El Paso TX. Area Central. Sueldo $9 a $11 x/hr segun habilidades + over time, vacaciones y dias festivos pagados
Llamar (915)740-3348 con Ernesto

SOLICITO MECANICO INDUSTRIAL
HORARIO LUNES - VIERNES DE 8AM - 5PM
AREA MONTANA VISTA EN EL PASO TX COMUNICARSE AL (915)887-8858

Solicito persona para limpieza de oficinas, + Bonos!! 2124 Montana (915)533-7107

WE ARE LOOKING FOR EXPERIANCE ROOFERS AND WELDERS APPLY 1600 E FOURTH AND COTTON ST EL PASO TX 79901 (915)544-1210 BUSCAMOS TECHEROS Y SOLDADORES CON EXPERIENCIA

Domesticos a Particulares

SOLICITO EMPLEO CUIDANDO PERSONA DE MAYOR EDAD, 24/7 PATTY (915)351-0322

OFICINAS

SE SOLICITA TECNICO HERRAMENTISTA CON EXPERIENCIA EN RECTIFICADORA, COMUNICARSE AL (915) 590-6670

Restaurantes

L&J Cafe, Inc.
SOLICITA: DISHWASHER, LINECOOKS, PREP COOKS, HOSTESS, RUNNER, EXPO, ACCOUNTING CLERK, CON EXPERIENCIA DISPONIBILIDAD DE HORARIO APLICAR 3622 E. MISSOURI AVE. LUNES - SABADO 10AM-11:30AM

Choferes

SOLICITO CHOFERES CDL
VIAJES A AZ/TX/CA 2 AÑOS MINIMO DE EXPERIENCIA, fines de semana en casa
INF. (915)727-3477

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CABALLERO CRISTIANO VIUDO DE 77 AÑOS, de perfecta salud, trabajador, busca dama compatible para relacion seria, de 50 y mas. Jaime (915)887-1195

AVISO DEL EDITOR
Todas las Agencias de Bienes Raíces aquí publicadas están sujetas a la Ley Federal Habitacional Federal Fair Housing Act que convierte en ilegal el hecho de anunciar cualquier preferencia, limitación o discriminación por causa de raza, color, religión, sexo, incapacidad, estado familiar u origen nacional, o su intención de ejercer tal preferencia, limitación o discriminación. En lo futuro, no se aceptará ninguna clase de publicidad en el ramo de bienes raíces que con nuestro conocimiento, viole la ley. A todas las personas se les informa por este medio de que todas las viviendas aquí anunciadas se encuentran disponibles con base de igualdad de oportunidades para todos.

EQUAL HOUSING OPPORTUNITY

JLTV EA NOTICE OF AVAILABILITY

Fort Bliss Army Reservation has prepared an Environmental Assessment (EA) to evaluate the potential environmental effects associated with the operation of the Joint Light Tactical Vehicle (JLTV) Family of Vehicles (FoV) in established areas at Fort Bliss . The Proposed Action would facilitate the use of the JLTV FoV within light tactical maneuver areas, specifically Land Use Category B areas. Use of the JLTV FoV is part of the Army's modernization efforts, which require's that soldiers and units are operationally trained at Fort Bliss. Analysis of the Proposed Action under this EA has identified no significant impacts on natural or human resources. The Draft EA and Draft Fonsi are available for public review and comment at the following libraries Las Cruces: Thomas Branigan Memorial Library, 200 E. Picacho Avenue, Las Cruces, New Mexico 88001; EL PASO :EL PASO Public Library Richard Burges Branch, 9600 Dyer St C, El Paso, TX 79924 and Alamogordo: Alamogordo Public Library, 920 Oregon Avenue, Alamogordo, NM 88310. The Draft EA and Draft FONSI can be viewed on-the Fort Bliss website at https://home.army.mil/bliss/index.php/about/Garrison/directorate-public-works/environmental.

The public is encouraged to review and comment on theses documents. Submitted public comments must be received no later than October 17, 2022 and can be submitted by email at usarmy.bliss.id-readiness.mbx.dpw-nepa-support@army.mil or mailed to U.S. Army Garrison Fort Bliss (USAG), Directorate of public Works, Enviromental Division, Attn: Myra Guerrero, 624 Pleasonton Road, USAG Fort Bliss, Texas 79916

El Paso Times

PART OF THE USA TODAY NETWORK

Affidavit of Publication

Ad # 0005424777

This is not an invoice

CHLOETA FIRE, LLC
2501 LIBERTY PKWY STE 176

MIDWEST CITY, OK 73110

I, being duly sworn say: **El Paso Times**, a daily newspaper of general circulation published in the City and County El Paso, State of Texas, which is a newspaper of general circulation and which has been continuously and regularly published for the period of not less than one year in the said County of El Paso, and that he/she was upon the dates herein mentioned in the EL PASO TIMES.

That the LEGAL copy was published in the EL PASO TIMES for the date(s) of such follows DAY(s) to wit

09/26/2022

D. Roberts

Legal Clerk

Subscribed and sworn before me this October 11, 2022:

Kathleen Allen

State of WI, County of Brown
NOTARY PUBLIC

1-7-25

My commission expires

KATHLEEN ALLEN
Notary Public
State of Wisconsin

Ad # 0005424777
PO #:
# of Affidavits: 1

This is not an invoice

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9/26, 2022 (5424777)

Las Cruces Sun News.

PART OF THE USA TODAY NETWORK

Affidavit of Publication

Ad # 0005411988

This is not an invoice

CHLOETA FIRE, LLC
2501 LIBERTY PKWY STE 176

MIDWEST CITY, OK 73110

I, a legal clerk of the **Las Cruces Sun News**, a newspaper published daily at the county of Dona Ana, state of New Mexico and of general paid circulation in said county; that the same is a duly qualified newspaper under the laws of the State wherein legal notices and advertisements may be published; that the printed notice attached hereto was published in the regular and entire edition of said newspaper and not in supplement thereof in editions dated as follows:

09/18/2022

Despondent further states this newspaper is duly qualified to publish legal notice or advertisements within the meaning of Sec. Chapter 167, Laws of 1937.

Legal Clerk

Subscribed and sworn before me this September 18, 2022:

State of WI, County of Brown
NOTARY PUBLIC

1-7-25
My commission expires

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#5411988, Daily News, Sept 18, 2022

KATHLEEN ALLEN
Notary Public
State of Wisconsin

Ad # 0005411988
PO #:
# of Affidavits1

This is not an invoice

5. PUBLIC/AGENCY COMMENTS

No substantive public or agency comments were received.