

**DRAFT**

**ENVIRONMENTAL ASSESSMENT  
FOR THE  
CONSTRUCTION AND TRAINING USE OF  
A MULTIPURPOSE MACHINE GUN RANGE AND  
A GRENADE LAUNCHER RANGE  
FORT BLISS, TEXAS**

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**US Army Corps  
of Engineers®**



**Prepared for:**

**U.S. Army Corps of Engineers, Tulsa District  
Tulsa, Oklahoma**

**and**

**U.S. Army Directorate of Public Works  
Environmental Division  
Fort Bliss, Texas**

**Prepared by:**

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**June 2012**



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FORT BLISS, TEXAS**

**PREPARED FOR:**

**Team Bliss, G3, FORSCOM, Fort Bliss**



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6 JUN 2012  
Date

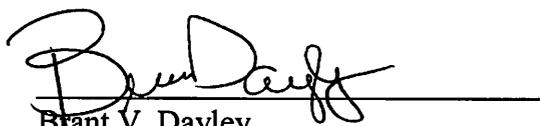
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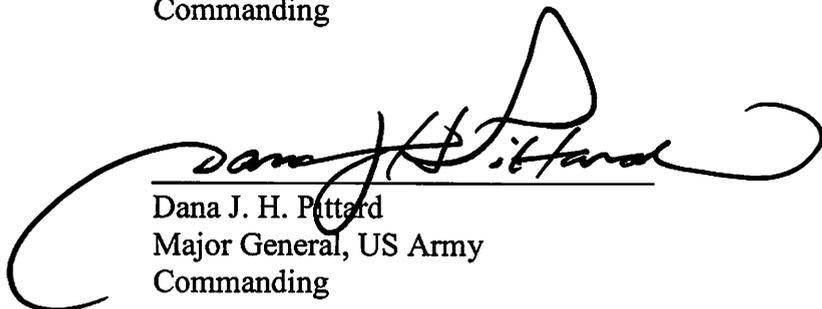
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Major General, US Army  
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7 June 2012  
Date



1                                   **DRAFT FINDING OF NO SIGNIFICANT IMPACT**  
2                                   **FOR THE CONSTRUCTION AND TRAINING USE**  
3                                   **OF A MULTIPURPOSE MACHINE GUN RANGE**  
4                                   **AND A GRENADE LAUNCHER RANGE**  
5

6   **1.0    DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES**  
7

8   **Purpose of and Need for the Proposed Action:** The purpose of the Proposed Action is to  
9 provide close-in, year-round, comprehensive and realistic training and range facilities for  
10 Soldiers in basic marksmanship skills with machine guns up to .50-caliber and grenade launchers  
11 firing non-dud producing rounds. Fort Bliss presently has or is planning to have adequate  
12 numbers of ranges that meet its Army Range Requirement Model (ARRM) guidelines for the  
13 planned number of Active Component Soldiers assigned to Units on the Installation and Reserve  
14 Component Soldiers that habitually train or mobilize at the Installation. All existing and/or  
15 planned ranges are located over 25 miles from the Cantonment Area. These extended distances  
16 do not allow Soldiers to march from their unit barracks, conduct small arms training, and then  
17 march back to their home station. Forces Command (FORSCOM) requires close-in training  
18 capabilities that can provide impromptu, emergency, and marching Units' qualification training  
19 in commonly used combat weapons. Thus, there is a need to augment FORSCOM's training  
20 capabilities at Fort Bliss by constructing two live-fire ranges in close proximity to the  
21 Cantonment Area. The two proposed ranges, while not fully capable ranges per the ARRM and  
22 Training Circulars (TC) 25-1 (Training Land) and 25-8 (Training Ranges), are intended to  
23 augment, but not replace, any of the full ranges planned to complete the ARRM requirements.  
24

25   **Proposed Action:** The U.S. Army proposes to construct, operate, and maintain a multipurpose  
26 machine gun range (Range K) and a grenade launcher range (Range L) on Fort Bliss Military  
27 Range, El Paso, Texas. Both ranges would meet critical live-fire individual marksmanship  
28 training needs for both active and reserve component Units that train on the Installation. The  
29 proposed ranges would be located in South Training Area 1B (TA 1B), adjacent to the Rod and  
30 Gun Club, northeast of Purple Heart Memorial Highway (Loop 375) and the Cantonment Area.  
31

32   **Alternative Action:** The practice ranges have specific requirements for construction, operation,  
33 and safety, including the need to be near the Cantonment Area. An alternative location for Range  
34 K was assessed for an area approximately 3,000 feet east of the proposed Range K location, but  
35 it was determined that it would have conflicts with ground training activities and Biggs Army  
36 Air Field takeoff and landing alignments that could not be resolved.  
37

38   **No Action:** Under the No Action Alternative, the Installation would not construct Ranges K and  
39 L. Consequently, Fort Bliss would not have a Machine Gun Range or a Grenade Launcher  
40 Range within short walking distance from the Cantonment area. The Installation would not have  
41 the additional flexibility in training opportunities or scheduling that these ranges would have  
42 provided. Soldiers would continue to be transported to similar facilities on Doña Ana or  
43 McGregor Range to qualify for machine gun, sniper, and grenade launcher use, which is time-  
44 consuming and expensive. As such, the No Action Alternative would not meet the needs of the  
45 Army to expedite requirements, at times, for short-notice weapons familiarity training.

1   **2.0   SUMMARY OF ENVIRONMENTAL RESOURCES AND IMPACTS**

2  
3   Implementation of the Proposed Action with the incorporated design, construction, operation,  
4   and safety measures will have minimal to moderate impacts on air quality, soils, water resources,  
5   biological resources, cultural resources, land use, airspace, health and safety, noise,  
6   environmental justice, and hazardous materials and waste within Fort Bliss or the surrounding  
7   area. The cumulative impacts from the construction of training facilities and support  
8   infrastructure have been addressed in the *Fort Bliss, Texas and New Mexico Mission and Master*  
9   *Plan Final Supplemental Programmatic Environmental Impact Statement* for which a Record of  
10   Decision (ROD) was signed 30 April 2007 and the *Fort Bliss Army Growth and Force Structure*  
11   *Realignment Final Environmental Impact Statement*, for which a ROD was signed 8 June 2010.  
12   This Environmental Assessment (EA) is tiered to these documents. The Proposed Action will  
13   not materially change the analysis in these documents.

14  
15   **3.0   CONCLUSION**

16  
17   Based on the analysis of the Proposed Action and the design, construction, operation, and safety  
18   measures presented in the EA, I conclude that the impacts of the Proposed Action will not  
19   significantly affect the human or natural environment of Fort Bliss or the surrounding area. I  
20   further conclude that implementation of the Proposed Action will not constitute a major Federal  
21   action requiring the preparation of an Environmental Impact Statement, pursuant to the National  
22   Environmental Policy Act of 1969 (Public Law 91-190). Therefore, a Finding of No Significant  
23   Impact (FNSI) is warranted.

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**EXECUTIVE SUMMARY**

1  
2  
3 **Purpose of and Need for the Proposed Action:** The purpose of the Proposed Action is to  
4 provide close-in, year-round, comprehensive and realistic training and range facilities for  
5 Soldiers in basic marksmanship skills with machine guns up to .50-caliber and grenade launchers  
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9 Component Soldiers that habitually train or mobilize at the Installation. All existing and/or  
10 planned ranges are located over 25 miles from the Cantonment Area. These extended distances  
11 do not allow Soldiers to march from their unit barracks, conduct small arms training, and then  
12 march back to their home station. Forces Command (FORSCOM) requires close-in training  
13 capabilities that can provide impromptu, emergency, and marching Units' qualification training  
14 in commonly used combat weapons. Thus, there is a need to augment FORSCOM's training  
15 capabilities at Fort Bliss by constructing two live-fire ranges in close proximity to the  
16 Cantonment Area. The two proposed ranges, while not fully capable ranges per the ARRM and  
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18 augment, but not replace, any of the full ranges planned to complete the ARRM requirements.

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39 consuming and expensive. As such, the No Action Alternative would not meet the needs of the  
40 Army to expedite requirements, at times, for short-notice weapons familiarity training.

41  
42 **Environmental Consequences**

43 The Proposed Action with specified design, construction, training use, and safety measures  
44 would have minimal to moderate impacts on the environment (Table ES-1). Cumulative impacts  
45 of recent U.S. Army mandated expansion and construction activities at Fort Bliss are discussed  
46 in the *Fort Bliss, Texas and New Mexico Mission and Master Plan Final Supplemental*

**Draft Environmental Assessment for the Construction and Training Use of  
a Multipurpose Machine Gun Range and a Grenade Launcher Range, Fort Bliss, Texas**

1 *Programmatic Environmental Impact Statement*, for which a Record of Decision (ROD) was  
 2 signed 30 April 2007 and the *Fort Bliss Army Growth and Force Structure Realignment Final*  
 3 *Environmental Impact Statement*, for which a ROD was signed 8 June 2010. This  
 4 Environmental Assessment is tiered to those documents.

**Table ES-1. Potential Effects of the Proposed Action**

<b>Resource</b>	<b>No Action Alternative</b>	<b>Proposed Action</b>
Air Quality	The No Action Alternative would have no effect on air quality.	During construction, the Proposed Action would result in slight increases in vehicle emissions from worker commutes, equipment transfer and use, and fugitive dust emissions. Temporary dust emissions would be minimized through best management practices (BMPs) such as dust suppression methods. During construction, proper routine maintenance of all vehicles and other construction equipment would be implemented to ensure that emissions are within design standards for all construction equipment.
Soils	The No Action Alternative would have no effect on soils.	Approximately 125 acres of soils would be disturbed by the Proposed Action. BMPs and a Stormwater Pollution Prevention Plan (SWPPP) would minimize soil loss during and after construction.
Water Resources	The No Action Alternative would have no effect on water resources.	No waters of the U.S. or wetlands would be affected. Impacts on surface drainage and infiltration would be minimal. The depth to groundwater precludes potential for lead contamination.
Biological Resources	The No Action Alternative would have no effect on biological resources.	Approximately 125 acres of a regionally common coppice dune community would be lost. No impact on species listed under the Endangered Species Act (ESA) or other special status species would occur. If construction is planned during the warm nesting season (March-September), potential impacts on birds listed under the Migratory Bird Treaty Act would be avoided through bird nesting surveys.
Cultural Resources	The No Action Alternative would have no effect on cultural resources.	No surface archaeological sites eligible for inclusion in the National Register of Historic Places (NRHP) would be affected by the Proposed Action, and the Proposed Action is not within the viewshed of a historic district. The project footprint has been placed in between eligible sites to avoid adverse effects on those properties. Nearby eligible sites would be marked with Seibert stakes prior to construction to avoid impacts on these sites. The remaining sites are ineligible for the NRHP or have been mitigated through data recovery. However, if cultural resources are discovered during the construction process, all work must stop until the Fort Bliss Cultural Resources Manager can review the discovery and, per the Programmatic Agreement, continue the consultation with the proper regulatory agencies.
Land Use	The No Action Alternative would have no effect on land use.	The training use of proposed ranges would be compatible with surrounding land use and would not require any change in land use designations.
Airspace	The No Action Alternative would have no effect on airspace.	No change in designated airspace would be required. A Small Arms Range Safety Area (SARSA) would be established and measures would be implemented to minimize hazards to aircraft.

**Draft Environmental Assessment for the Construction and Training Use of  
a Multipurpose Machine Gun Range and a Grenade Launcher Range, Fort Bliss, Texas**

**Table ES-1, continued**

<b>Resource</b>	<b>No Action Alternative</b>	<b>Proposed Action</b>
Health and Safety	The No Action Alternative would have no effect on health and safety.	Operation of the proposed ranges would have a minimal to moderate impact on health and safety. A Surface Danger Zone (SDZ) would be established within the SARSA. Both land classifications would require implementation of measures to minimize potential hazards, including signage, fencing, baffles to obstruct vertical gunfire, observation, and visibility restrictions.
Noise	The No Action Alternative would have no effect on noise.	The El Paso neighborhoods adjacent to Fort Bliss and proposed Range K could notice minimal noise from training gunfire depending upon the time of day and weather conditions.
Environmental Justice	The No Action Alternative would have no effect on environmental justice.	There would not be a disproportionate impact on minority and low income populations from the Proposed Action as impacted neighborhoods are similar in nature to the socio-economic make up of El Paso.
Hazardous Materials and Waste	The No Action Alternative would have no effect on hazardous materials.	The potential adverse effects of hazardous materials and waste would be minimal. Construction of the Proposed Action would require machinery and the use of petroleum, oil, and lubricants (POLs). Standard BMPs would be implemented to avoid and minimize potential impacts of POLs. Fort Bliss has a Spill Prevention, Control, and Countermeasures Plan, an Installation Spill Contingency Plan, and an Installation Hazardous Waste Material Management Program in place. Training use of proposed ranges would generate contaminants from bullets, fragments, and brass casings. Although lead bullets would be left in place, brass casings would be collected and recycled. The depth to groundwater and low precipitation rates in the region would preclude contamination of ground water.

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**SECTION 1.0**  
**PURPOSE OF AND NEED FOR THE PROPOSED ACTION**





1   **1.0    PURPOSE OF AND NEED FOR THE PROPOSED ACTION**

2  
3   **1.1    Introduction**

4  
5   Fort Bliss Army Reservation (Fort Bliss) is an active training facility located in El Paso, Texas,  
6   and the south-central area of New Mexico. The Installation is approximately 1.2 million acres in  
7   size and consists of the Cantonment Area, Biggs Army Airfield (AAF), and the Fort Bliss  
8   Training Complex (FBTC). The FBTC is separated into three geographic areas: South Training  
9   Area in El Paso County, Texas; Doña Ana Range-North Training Area in Doña Ana and Otero  
10   counties, New Mexico; and McGregor Range in Otero County, New Mexico. The FBTC is  
11   further divided into numbered training areas (TA) to manage and schedule the different training  
12   missions (Figure 1-1).

13  
14   Fort Bliss was the home of the U.S. Army Air Defense Artillery Center, now relocated to Fort  
15   Sill, Oklahoma. As a result of Base Realignment and Closure (BRAC) mandates and Army  
16   Transformation and Army Growth Initiatives, Fort Bliss is transitioning from supporting the  
17   Army's Air Defense Artillery training to a major mounted training facility that supports Infantry  
18   Brigade Combat Teams (IBCTs) under Forces Command (FORSCOM). Fort Bliss is now the  
19   home of the U.S. Army 1<sup>st</sup> Armored Division. Fort Bliss has become a training platform for  
20   multiple Units deploying to Afghanistan and is a focal point for the U.S. Army as a major  
21   Installation for training Soldiers for combat readiness.

22  
23   As part of its transition to supporting IBCTs under FORSCOM, Fort Bliss proposes to construct,  
24   operate, and maintain a multipurpose machine gun range (Range K) and a grenade launcher  
25   range (Range L) to be used for training Soldiers for deployment. BRAC-mandated expansion  
26   and construction, including the construction and operation of additional live-fire ranges, has been  
27   programmatically assessed in the *Fort Bliss, Texas and New Mexico Mission and Master Plan*  
28   *Final Supplemental Programmatic Environmental Impact Statement* (MMP SEIS, U.S. Army  
29   2007), for which a Record of Decision (ROD) was signed 30 April 2007. Additionally, U.S.  
30   Army transformation and growth directives were assessed in the *Fort Bliss Army Growth and*  
31   *Force Structure Realignment Final Environmental Impact Statement* (GFS EIS, U.S. Army  
32   2010), for which a ROD was signed on 08 June 2010.

33  
34   Fort Bliss presently has limited live-fire ranges that meet FORSCOM requirements for close-in  
35   combat training. As such, Fort Bliss has proposed that two additional live-fire ranges be  
36   constructed close to the Cantonment Area to more readily assist in conducting close-in combat  
37   training. This location has not been assessed in the above-mentioned MMP SEIS and GFS EIS.  
38   Consequently, an Environmental Assessment (EA) is required per 32 Code of Federal  
39   Regulations (CFR) Part 651 Environmental Analysis of Army Actions. The present EA will be  
40   tiered from the two aforementioned documents.

41  
42   **1.2    Purpose of and Need for the Proposed Action**

43  
44   The purpose of the Proposed Action is to provide close-in, year-round, comprehensive and  
45   realistic training and range facilities for Soldiers in basic marksmanship skills with machine guns  
46   up to .50-caliber and grenade launchers firing non-dud producing rounds. Fort Bliss presently

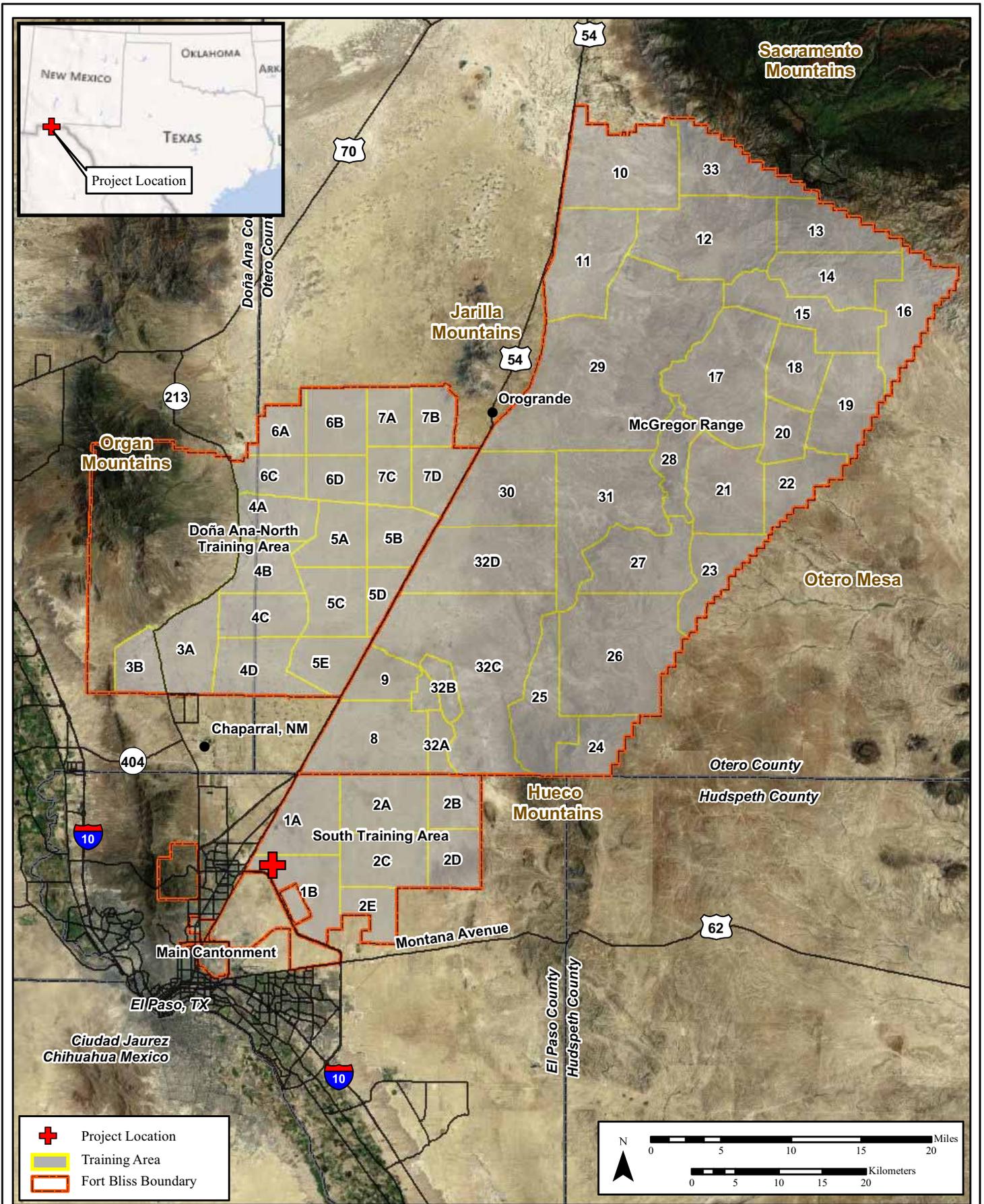


Figure 1-1: Fort Bliss and Location of Proposed Multipurpose Machine Gun Range (Range K) and Grenade Launcher Range (Range L)



March 2012

1 has or is planning to have adequate numbers of ranges that meet its Army Range Requirement  
2 Model (ARRM) guidelines for the planned number of Active Component Soldiers assigned to  
3 Units on the Installation and Reserve Component Soldiers that habitually train or mobilize at the  
4 Installation. All existing and/or planned ranges are located over 25 miles from the Cantonment  
5 Area. These extended distances do not allow Soldiers to march from their unit barracks, conduct  
6 small arms training, and then march back to home station. FORSCOM requires close-in training  
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8 in commonly used combat weapons. Thus, there is a need to augment FORSCOM's training  
9 capabilities at Fort Bliss by constructing two live-fire ranges in close proximity to the  
10 Cantonment Area. These two ranges, while not fully capable ranges per the ARRM and TC 25-1  
11 (Training Land) and 25-8 (Training Ranges), are intended to augment and not replace any of the  
12 full ranges planned to complete the ARRM requirements. The need for enhanced, efficient, and  
13 effective tactical training opportunities is discussed in greater detail below.

### 14 **1.2.1 Enhanced Tactical Training Opportunities**

15 Effective live training, carried out to a high doctrinal standard, is the cornerstone of operational  
16 success. The training of the critical tasks that individual, crew, platoon, and companies have to  
17 accomplish to be combat ready is directly related to the availability and capability of live-fire  
18 ranges and maneuver areas. Soldiers must enter engagements with the best possible assurance of  
19 success and survival. Therefore, the U.S. Army requires Soldiers to be proficient in individual  
20 live-fire marksmanship skills with their assigned weapons. These weapons include machine  
21 guns and grenade launchers.

22  
23  
24 Training and qualifying Soldiers and Units to be proficient with individual and crew-served  
25 weapons requires three types of facilities in the field: individual live-fire ranges, range  
26 complexes that group various ranges, and range base camps. Fort Bliss has built or is building a  
27 number of firing ranges for machine gun, sniper, and grenade launcher qualification as part of  
28 three separate range complexes. Each range complex is associated with one of the three base  
29 camps that support the training of individual Soldiers, teams, and crews of multiple brigades.  
30 Tactically, the three range complexes are intended to support concurrent training of two or three  
31 brigades with the associated support Units. Individual live-fire ranges have been located to  
32 provide concurrent training with some of the ranges replicated on each complex. Live-fire  
33 ranges have been sited to:

- 34
- 35 • Avoid conflicts with other adjacent ranges
- 36 • Allow multiple Units to train simultaneously
- 37 • Cluster small arms ranges around the three base camps to the extent possible
- 38 • Avoid unexploded ordnance (UXO) areas to the extent possible
- 39 • Distribute the locations so independent qualifications can be conducted
- 40 • Provide operational capability 24 hours a day and 7 days a week, if necessary

41  
42 To provide small arms qualification ranges for Soldiers within walking distance of the Main  
43 Cantonment, a small range complex approximately 2.5 miles from the Fort Bliss Cantonment  
44 Area (or one hour's walk) needs to be established. In addition, Soldiers would be able to  
45 practice patrolling skills while in transit to the ranges. The live-fire ranges located in the  
46 designated area would support modified qualification using machine guns up to the M2 .50-

1 caliber machine gun and the M203 grenade launcher. These ranges would support continued  
2 modified qualification, familiarization, and sustainment training for the Units stationing and  
3 mobilizing at Fort Bliss.

#### 4 5 **1.2.2 Flexibility and Efficiency**

6 Units that are training and preparing to deploy may need additional range qualification time to  
7 validate unqualified Soldiers due to unforeseen events. According to U.S. Army Pamphlet 350-  
8 85, *Standards in Training Commission* (the document that outlines qualification standards for the  
9 U.S. Army Soldier), 80 percent of each brigade's infantry Soldiers must qualify both during the  
10 day and at night every six months with the M2 .50-caliber machine gun. A local or close-in  
11 small arms qualification range could provide unit leaders at the squad, platoon, and company  
12 level with the flexibility to train Soldiers who have been unable to qualify during regularly  
13 scheduled times due to illness, leave, schools, or other factors. This challenge is exacerbated by  
14 the fact that many newly assigned Soldiers do not arrive at the brigades until after the brigade  
15 has conducted the majority of its mandatory training, often after the brigade has shipped its  
16 vehicles to theater or a training center. It is therefore necessary to conduct qualification of  
17 limited numbers of individuals in a short amount of time in order to meet the requirements for  
18 deployment. Proposed ranges K and L would meet this need. Both ranges would serve as an  
19 efficient and effective location to train and prepare Soldiers for combat and certify that  
20 equipment is functioning properly.

21  
22 Finally, Fort Bliss continues to have an important mobilization mission and anticipates a return  
23 to execution of missions with little notice. As the war in Afghanistan winds down, it is  
24 imperative that the U.S. Army has the capability to react to contingencies worldwide, both in  
25 terms of deterrence and in terms of quickly providing Combatant Commanders with relevant  
26 land power. These contingency missions require flexibility in range use and location in order to  
27 qualify Soldiers in a timely manner and transport them to contingencies worldwide. Proposed  
28 ranges K and L would fulfill this need by providing a location where Soldiers could qualify on  
29 machine guns and grenade launchers without needing vehicles or losing valuable time due to  
30 travel. In the event of a surge, these ranges could also provide needed training capacity in the  
31 short term. Maintaining a range complex that can quickly prepare Soldiers for operations  
32 worldwide supports the U.S. Army's mission.

#### 33 34 **1.3 Scope of the Analysis**

35  
36 The EA will identify, document, and evaluate the potential environmental effects of the  
37 construction, operation, and maintenance of Ranges K and L near the Cantonment Area. It will  
38 be prepared in accordance with the requirements of the National Environmental Policy Act  
39 (NEPA) of 1969 (Public Law [PL] 91-190) and the President's Council on Environmental  
40 Quality (CEQ) Regulations outlined in 40 CFR parts 1500 – 1508 and 32 CFR Part 651 –  
41 Environmental Analysis of Army Actions. NEPA is a Federal environmental law establishing  
42 procedural requirements for all Federal agency actions, and directs the U.S. Army to disclose the  
43 environmental effects of its proposed activities at Fort Bliss to the public and officials who must  
44 make decisions regarding the proposal.

1 The proposed construction and training use of Ranges K and L on Fort Bliss are the focus of this  
2 EA. This EA provides a discussion of the affected environment and the potential impacts on  
3 physical, natural, and socioeconomic resources. A Valued Environmental Components (VEC)  
4 analysis indicated that the following resources could be affected by the Proposed Action, and  
5 these resources will be the focus of this EA:  
6

- 7 • Air Quality
- 8 • Soils
- 9 • Water Resources
- 10 • Biological Resources
- 11 • Cultural Resources
- 12 • Land Use
- 13 • Airspace
- 14 • Health and Safety
- 15 • Noise
- 16 • Environmental Justice
- 17 • Hazardous Materials and Waste

#### 18 19 **1.4 Decision(s) To Be Made**

20  
21 The proponent for the action is FORSCOM G-3 - Training, Fort Bliss, Texas. The U.S. Army,  
22 FORSCOM G-3, Fort Bliss, and U.S. Army Corps of Engineers, Tulsa District, are the lead  
23 agencies responsible for the completion of the EA. One of the alternatives analyzed in the EA  
24 will be selected as the Proposed Action. If no significant environmental impacts are determined  
25 based on the evaluation of impacts in the EA, a Finding of No Significant Impact (FNSI) will be  
26 signed by the Commanding General. If it is determined that the Proposed Action will have  
27 significant environmental impacts, the action will either not be taken, or a Notice of Intent to  
28 prepare an Environmental Impact Statement will be published.  
29

#### 30 **1.5 Public Participation**

31  
32 Public and agencies will be involved in the preparation of the EA, as per NEPA guidelines.  
33 Scoping letters were sent distributed to the agencies on November 30, 2011. A distribution list  
34 and copies of the scoping letters can be found in Appendix A, Interagency and Public  
35 Coordination. As part of the EA process and to better inform El Paso residents who live in  
36 neighborhoods adjoining the part of Fort Bliss proposed for Ranges K and L, representatives  
37 from Fort Bliss attended a Northern El Paso community breakfast meeting in August 2011. The  
38 purpose of the meeting was to present information on the proposed project and its potential  
39 impacts and to solicit community comments. Verbal responses from the public after the  
40 presentation were positive regarding the project and the overall importance of the Fort Bliss  
41 training mission.  
42

43 The EA and draft FNSI, if applicable, will be made available to the public for comments at least  
44 30 days prior to the signing of the FNSI and initiation of the Proposed Action. The distribution

**Draft Environmental Assessment for the Construction and Training Use of  
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1 of the EA will include local libraries, as well as any agencies, organizations, and individuals who  
2 have expressed interest in the project.

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





1    **2.0    DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES**

2  
3    **2.1    Criteria for Evaluating Range Locations**

4  
5    The following criteria were established for selecting proposed range locations and evaluating  
6    their suitability for the Proposed Action. A suitable location would:

- 7  
8       • Meet mission and safety requirements  
9       • Avoid impacts on airspace safety zones and maneuver areas  
10      • Allow for the design and execution of U.S. Army training requirements (TC 25-1 and 25-  
11       8, respectively)  
12      • Avoid impacts on resources or allow environmentally sound mitigation to be  
13       accomplished within fiscal feasibility  
14      • Avoid the need for design measures exceeding fiscal feasibility  
15      • Be located near the Cantonment Area

16  
17   **2.2    No Action Alternative**

18  
19    Under the No Action Alternative, the Installation would not construct Ranges K and L.  
20    Consequently, Fort Bliss would not have a Machine Gun Range or a Grenade Launcher Range  
21    within short walking distance from the Cantonment area. The Installation would not have the  
22    additional flexibility in training opportunities or scheduling that these ranges would have  
23    provided. Soldiers would continue to be transported to similar facilities on Doña Ana or  
24    McGregor Range to qualify for machine gun, sniper, and grenade launcher use, which is time-  
25    consuming and expensive. As such, the No Action Alternative would not meet the needs of the  
26    Army to expedite requirements, at times, for short-notice weapons familiarity training.

27  
28   **2.3    Proposed Action**

29  
30    Fort Bliss proposes to construct, operate, and maintain a multipurpose machine gun range  
31    (Range K) and a grenade launcher range (Range L) to be used for training of Soldiers for  
32    deployment. The Proposed Action would locate ranges K and L in TA 1B, east of the Rod and  
33    Gun Club, northeast of Purple Heart Memorial Highway (Loop 375) and the Cantonment Area  
34    on Fort Bliss in El Paso, Texas (Figure 2-1).

35  
36    Range K would facilitate the familiarization and qualification of Soldiers on the skills necessary  
37    to identify, engage with a machine gun, and defeat stationary infantry targets. Range K would be  
38    a multipurpose familiarization and qualification range that would accommodate all calibers of  
39    machine gun in the current U.S. Army arsenal up to and including the .50-caliber. Weapons that  
40    would be used on this range include the M249 squad automatic weapon (5.56 mm), the M60  
41    machine gun (7.62 mm), the M240B machine gun (7.62 mm), the MK19 automatic grenade  
42    launcher, the M42 sniper weapon (7.62 mm) and the M2 machine gun (.50-caliber). Range K  
43    would occupy approximately 68 acres of land with six lanes for 5.56 mm and 7.62 mm caliber  
44    machine guns, and two lanes for the M2 machine gun and M21/M24/M110/M107 sniper rifle  
45    use. Non-dud producing ammunition would be used on this range. The estimated use of Range  
46    K would be 336 days (48 weeks, 7 days per week) during daytime hours.

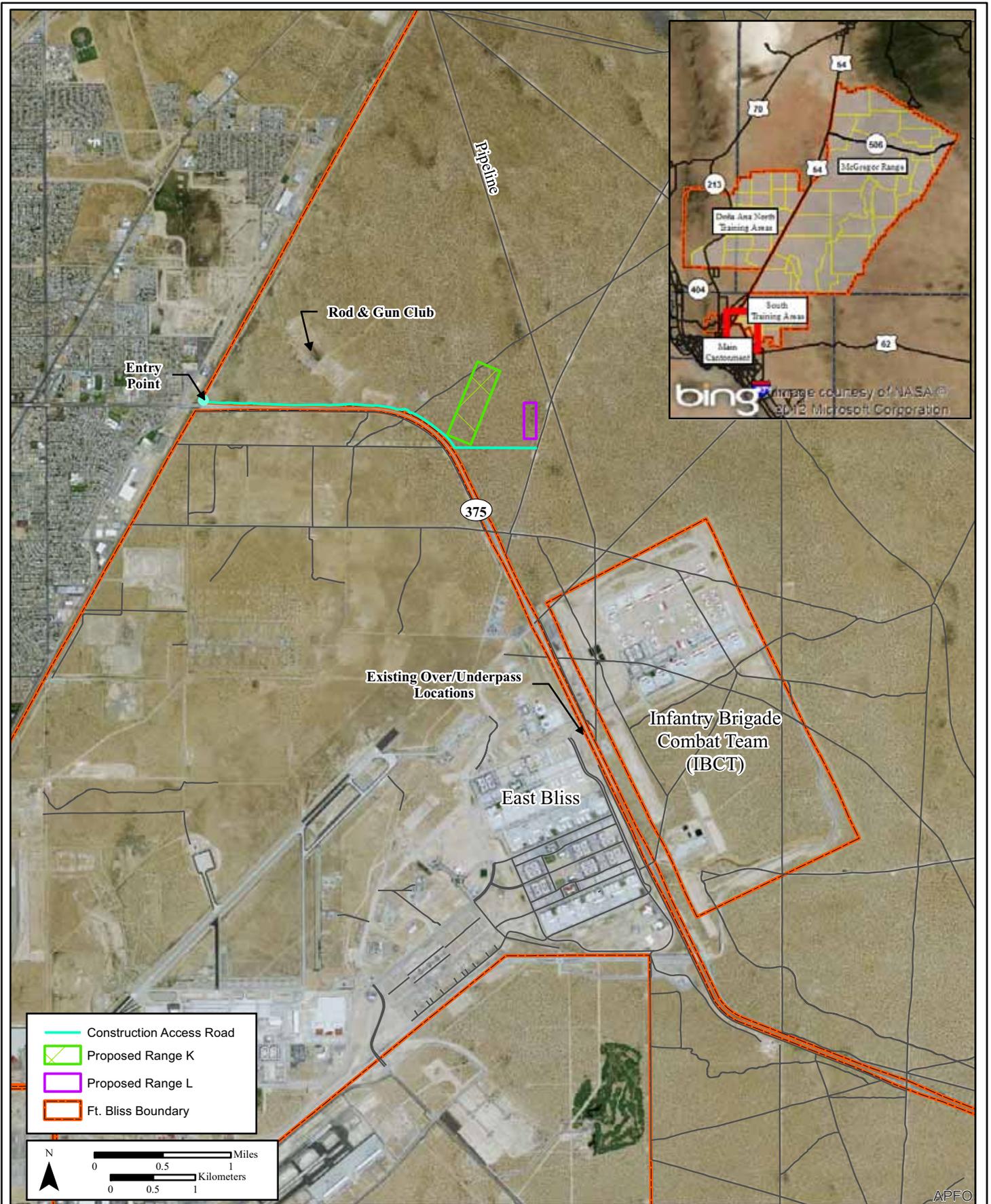


Figure 2-1: Proposed Range K, Range L, and Construction Access.

1 Range L would provide a facility to train and test individual Soldiers on the skills necessary to  
2 engage targets with an M203/320 grenade launcher. M203/320 qualification requires engaging  
3 targets through windows and into bunkers, which are simulated by wooden facades. Range L  
4 would occupy approximately 30 acres. M203/320 qualification is done with non-explosive,  
5 training practice-tracer, non-dud producing rounds. The estimated use for Range L would be 133  
6 days (19 weeks, 7 days per week), and it would only be used during daytime hours.

7  
8 Combined, the ranges would include two 800-square-foot buildings, one ammunition breakdown  
9 building, permanent vault-type latrines, one covered mess facility, one 248-square-foot range  
10 operations tower, and covered bleachers with enclosure. A small Ammunition Issue Point (AIP)  
11 would be constructed for temporary placement and handling of ammunition during use. No  
12 ammunition would be stored on-site while the facility is not in use. Supporting facilities include  
13 a generator, batteries, solar panels, parking, and stormwater drainage. Anti-terrorism/force  
14 protection includes vehicle barriers, appropriate vehicle parking setbacks, security lighting,  
15 security fencing, and gates. Supporting facilities would occupy an additional 25 acres. Solar  
16 power and batteries would be used to operate targets and range lighting, and a small generator  
17 would be located on-site as backup and to power small equipment (e.g., laptops). Although there  
18 is no intent at this time, utilities could be extended to the facilities in the future. Any future  
19 extension of utilities would be subject to a separate NEPA analysis.

20  
21 Ranges K and L would be constructed in-house by the Directorate of Plans, Training,  
22 Mobilization, and Security (DPTMS) Range Branch. A UXO survey would be conducted prior  
23 to range construction. Clearing for both ranges would be limited to approximately 125 acres and  
24 would include clearing for firing berms, target protection berms, supporting structures, and  
25 improvements to the access road. Widening and straightening would be required on up to 0.6  
26 mile of access road and would disturb up to 0.25 acre of land. Firing berms and target protection  
27 berms would be constructed utilizing soils found on-site. If necessary, additional soil would be  
28 obtained from approved borrow pits within Fort Bliss. No soil would be brought in from outside  
29 Fort Bliss boundaries. All site preparation activities would follow Best Management Practices  
30 (BMPs) per Fort Bliss Construction Stormwater Pollution Prevention Plan (SWPPP) guidance.

## 31 32 **2.4 Alternatives Considered and Eliminated from Detailed Study**

### 33 34 **2.4.1 Use of another Department of Defense (DoD) Asset**

35 Although the existing range complexes have been sited to maximize concurrent training of  
36 multiple Units, many of the individual ranges are clustered around base camps on the Doña Ana  
37 and McGregor Ranges in New Mexico and are a considerable distance from the Cantonment  
38 Area. In fact, the closest range that can facilitate machine gun or grenade launcher training is 15  
39 miles (straight line distance) from the East Bliss troop areas. Infantry and light Units, in  
40 particular IBCT such as 3<sup>rd</sup> Brigade, 1<sup>st</sup> Armored Division, require ranges to which they can foot-  
41 march in order to accurately train for combat conditions. Foot-marching adds realism to training  
42 and allows Units to gain valuable patrolling skills. In the current situation, these troops would  
43 require 8 hours or more to walk to training sites prior to conducting training. The long distance  
44 and time required would make walking impractical given range scheduling, weather-related  
45 restrictions, and the need to conduct both day and night qualifications.

1   **2.4.2 Use of an Alternative Site Location**

2   The proposed ranges have specific requirements for construction, operation, and safety. They  
3   also need to be near the Cantonment Area, which is a high-density urban environment, to allow  
4   Units to march to them. An alternative location for Range K (multipurpose machine gun range)  
5   was assessed for an area approximately 3,000 feet east of the proposed Range K location.  
6   However, it was determined that the site would have conflicts with ground training activities and  
7   Biggs AAF air safety zone alignments, which could not be resolved. The Surface Danger Zone  
8   [SDZ] required for the proposed Range K would remove a large amount of land from the training  
9   areas, impact major maneuver routes, and conflict with other mission requirements. Locating  
10   Range K in close proximity to the Rod and Gun Club minimizes the impact to other mission  
11   requirements as the Rod and Gun Club SDZ can be shared. Additionally, both ranges were sited  
12   to avoid numerous cultural resource sites within the area. The proposed location is seen as the  
13   only location that best meets the needs of the Army.

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**SECTION 3.0**  
**AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES**





**3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES**

This section of the EA describes the natural and human environment that exists within the project area and the potential impacts of the Proposed Action and alternatives as outlined in Section 2.0 of this document. Only those resources that have the potential to be affected by any of the alternatives considered are described, as per Council on Environmental Quality (CEQ) guidance (40 CFR 1501.7[3]). Locations and resources with no potential to be affected need not be analyzed. The effects from the Proposed Action include impacts from construction and training use of the proposed ranges K and L. This includes all areas and lands that might be affected and may change depending on how the natural, cultural, and socioeconomic resources they contain or support are affected.

The EA will examine the potential for direct, indirect, adverse, or beneficial impacts. The EA will also assess whether such impacts are likely to be long-term, short-term, permanent, or cumulative. A table of VECs (Table 3-1) was used to determine which resources could potentially be affected by the Proposed Action. These include air quality, soils, water resources, biological resources, cultural resources, land use, airspace, health and safety, noise, environmental justice, and hazardous materials and waste.

**Table 3-1. Summary of Valued Environmental Components (VEC) Analysis**

Resource	No Action Alternative	Proposed Action
Air Quality	The No Action Alternative would have no effect on air quality.	During construction, the Proposed Action would result in slight increases in vehicle emissions from worker commutes, equipment transfer and use, and fugitive dust emissions. Temporary dust emissions would be minimized through BMPs, such as dust suppression methods. During construction, proper routine maintenance of all vehicles and other construction equipment would be implemented to ensure that emissions are within design standards for all construction equipment.
Soils	The No Action Alternative would have no effect on soils.	Approximately 125 acres of soils would be disturbed by the Proposed Action. BMPs and a SWPPP would minimize soil loss during and after construction.
Water Resources	The No Action Alternative would have no effect on water resources.	No waters of the U.S. or wetlands would be affected. Impacts on surface drainage and infiltration would be minimal. The depth to groundwater precludes potential for lead contamination.
Biological Resources	The No Action Alternative would have no effect on biological resources.	Approximately 125 acres of a regionally common coppice dune community would be lost. No impact on species listed under the Endangered Species Act (ESA) or other special status species would occur. If construction is planned during the warm nesting season (March-September), potential impacts on birds listed under the Migratory Bird Treaty Act would be avoided through bird nesting surveys.

**Draft Environmental Assessment for the Construction and Training Use of  
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**Table 3-1, continued**

<b>Resource</b>	<b>No Action Alternative</b>	<b>Proposed Action</b>
Cultural Resources	The No Action Alternative would have no effect on cultural resources.	No surface archaeological sites eligible for inclusion in the National Register of Historic Places (NRHP) would be affected by the Proposed Action and the Proposed Action is not within the viewshed of a historic district. The project footprint has been placed in between eligible sites and would be marked with Seibert stakes prior to construction to avoid adverse effects on those sites. The remaining sites are ineligible for the NRHP or have been mitigated through data recovery. However, if cultural resources are discovered during the construction process, all work must stop until the Fort Bliss Cultural Resources Manager can review the discovery and, per the Programmatic Agreement, continue the consultation with the proper regulatory agencies.
Land Use	The No Action Alternative would have no effect on land use.	The training use of proposed gun ranges would be compatible with surrounding land use and would not require any change in land use designations.
Airspace	The No Action Alternative would have no effect on airspace.	No change in designated airspace would be required. A Small Arms Range Safety Area (SARSA) would be established, and measures would be implemented to minimize hazards to aircraft.
Health and Safety	The No Action Alternative would have no effect on health and safety.	Operation of the proposed ranges would have a minimal to moderate impact on health and safety. A Surface Danger Zone (SDZ) would be established within a SARSA. Both land classifications would require implementation of measures to minimize potential hazards, including signage, fencing, baffles to obstruct vertical gunfire, observation, and visibility restrictions.
Noise	The No Action Alternative would have no effect on noise.	The El Paso neighborhoods adjacent to Fort Bliss and proposed Range K could notice minimal noise from training gunfire depending upon the time of day and weather conditions.
Environmental Justice	The No Action Alternative would have no effect on environmental justice.	There would not be a disproportionate impact on minority and low income populations from the Proposed Action as impacted neighborhoods are similar in nature to the socio-economic make up of El Paso.
Hazardous Materials and Waste	The No Action Alternative would have no effect on hazardous materials.	The potential adverse effects of hazardous materials and waste would be minimal. Construction of the Proposed Action would require machinery and the use of petroleum, oil, and lubricants (POLs). Standard BMPs would be implemented to avoid and minimize potential impacts of POLs. Fort Bliss has a Spill Prevention, Control, and Countermeasures Plan, an Installation Spill Contingency Plan, and an Installation Hazardous Waste Material Management Program in place. Training use of proposed ranges would generate contaminants from bullets, fragments, and brass casings. Although lead bullets would be left in place, brass casings would be collected and recycled. The depth to groundwater and low precipitation rates in the region would preclude contamination of groundwater.

1 **3.1 Air Quality**

2

3 **3.1.1 Affected Environment**

4 The U.S. Environmental Protection Agency (USEPA) established National Ambient Air Quality  
5 Standards (NAAQS) for specific pollutants determined to be of concern with respect to the  
6 health and welfare of the general public (USEPA 2010a). NAAQS are classified as either

1 "primary" or "secondary." The major pollutants of concern, or criteria pollutants, are carbon  
2 monoxide (CO), sulfur dioxide (SO<sub>2</sub>), nitrogen dioxide (NO<sub>2</sub>), ozone (O<sub>3</sub>), particulate matter less  
3 than 10 microns (PM-10), particulate matter less than 2.5 microns (PM-2.5), and lead. NAAQS  
4 represent the maximum levels of background pollution that are considered safe, with an adequate  
5 margin of safety, to protect the public health and welfare.  
6

7 Emissions resulting from the Proposed Action would be within El Paso County. Areas that do  
8 not meet NAAQS are known as non-attainment areas, and areas that meet both primary and  
9 secondary standards are known as attainment areas. El Paso County is a moderate non-  
10 attainment area for PM-10 and is a maintenance area for CO (USEPA 2010b). However, the  
11 non-attainment area for PM-10 area is limited to the city limits of El Paso, and the maintenance  
12 area for CO is limited to the downtown area of El Paso. As mandated by the Federal Conformity  
13 Final Rule (40 CFR Parts 51 and 93), a conformity analysis must be performed when a Federal  
14 action generates air pollutants in a region that has been designated a non-attainment or  
15 maintenance area for one or more NAAQS. A conformity analysis compares project emissions  
16 to established limits, known as *de minimis* thresholds. If project emissions exceed *de minimis*  
17 thresholds, appropriate mitigation measures are required to reduce emissions.  
18

### 19 **3.1.2 Environmental Consequences**

#### 20 **3.1.2.1 No Action Alternative**

21 The No Action Alternative would not result in any impacts on air quality because no  
22 construction activities would occur. El Paso County would continue to be designated a non-  
23 attainment area.  
24

#### 25 **3.1.2.2 Proposed Action**

26 Temporary and minor increases in air pollution would occur from the use of construction  
27 equipment (combustion emissions) and the disturbance of soils (fugitive dust) during  
28 construction and access road improvements. Estimation of construction emissions considered  
29 use of heavy construction equipment (USEPA 2001, USEPA 2005a), construction workers  
30 commuting to and from work, supply trucks delivering materials to construction sites (USEPA  
31 2005b, 2005c and 2005d), and fugitive dust from job site ground disturbances (Midwest  
32 Research Institute 1996, USEPA 2001). During the construction of the proposed ranges and  
33 access road, proper and routine maintenance of all vehicles and other construction equipment  
34 would be implemented to ensure that emissions are within the design standards of all  
35 construction equipment. Dust suppression methods may be implemented to minimize fugitive  
36 dust, including wetting solutions applied to construction areas. Estimates of total air emissions  
37 from construction activities are less than *de minimis* thresholds (Appendix B).  
38

## 39 **3.2 Soils**

### 40 **3.2.1 Affected Environment**

41 Soils in the proposed project site are mapped as McNew-Copia-Foxtrot complex (Natural  
42 Resources Conservation Service [NRCS] 2011). From field observations, the mapping unit  
43 found in the project area is likely the Copia soil, a wind-deposited (eolian) loamy fine sand  
44 formed as shrub-coppice dunes, each dune typically anchored by a mesquite shrub. Dunes in the  
45 area range from approximately 4 to 6 feet in height above a mantle of wind-deposited sand  
46

1 sheets. In general, these soils are found on 1 to 5 percent slopes, and are well drained to  
2 excessively drained (NRCS 2011).

3  
4 Older soils underlie the shrub-coppice dunes, often with calcium carbonate-bearing soil horizons  
5 (calcic or petrocalcic horizons). White carbonate fragments commonly observed on the surface  
6 of the project area are detritus from these eroded soil horizons.

### 8 **3.2.2 Environmental Consequences**

#### 9 **3.2.2.1 No Action Alternative**

10 The No Action Alternative would not result in any impacts on soils because no construction  
11 activities would occur.

#### 13 **3.2.2.2 Proposed Action**

14 The Proposed Action would have permanent and minimal effects on soils at the proposed project  
15 site. Soils at this location are common and of limited value; therefore, disturbance of up to 125  
16 acres of soils would have minimal adverse effects. A SWPPP would be implemented to avoid or  
17 minimize additional soil disturbance as a result of erosion during construction (U.S. Army  
18 2011a). Excavation would generally be limited to clearing and leveling; thus, excavation below  
19 the sandy surface layer would be minimal. Soils left on-site would be used to construct firing  
20 berms and target protection berms. Excess material would be moved to an appropriate location  
21 for storage on Fort Bliss. If additional fill material is required, soils would be obtained from  
22 approved locations on Fort Bliss. Post-construction soil disturbance would be minimal and  
23 would include maintenance of berms and targets.

### 25 **3.3 Water Resources**

#### 27 **3.3.1 Affected Environment**

28 Surface water at Fort Bliss is limited to ephemeral drainage networks and isolated wetlands as  
29 defined by the U.S. Army Corps of Engineers (USACE) (U.S. Army 2001). The proposed  
30 project site is located within the Rio Grande-Fort Quitman watershed (U.S. Geological Survey  
31 2011). There are no surface water features in the vicinity of the project site. Stormwater is  
32 rapidly absorbed by the sandy surface soils and contributes to recharge of the Hueco Bolson.  
33 Depth to groundwater in the Hueco Bolson is approximately 350 feet below the surface of the  
34 proposed gun ranges (Sheng et. al 2001, Walker 2012). Average annual precipitation in the El  
35 Paso area ranges between 9 and 11 inches (National Climate Data Center 2012). The freshwater  
36 aquifer in the Hueco Bolson supplies the Cantonment Area and various range areas (U.S. Army  
37 2011b) and is utilized by the El Paso Water Utilities to supply users in the region (El Paso Water  
38 Utilities 2007).

### 40 **3.3.2 Environmental Consequences**

#### 41 **3.3.2.1 No Action Alternative**

42 The No Action Alternative would not result in any impacts on water resources because no  
43 construction activities would occur.

1    **3.3.2.2 Proposed Action**

2    The Proposed Action would have a minimal effect on surface drainage, infiltration and recharge,  
3    and water quality. A SWPPP would be implemented to avoid or minimize erosion caused by  
4    stormwater runoff during construction (U.S. Army 2011a). Contaminants associated with  
5    construction and operation of the small arms firing ranges would not affect groundwater quality  
6    due to the depth of the aquifer and limited precipitation. Contaminants would be unlikely to  
7    leach through the soils to the depth of groundwater.

8  
9    **3.4 Biological Resources**

10  
11   **3.4.1 Affected Environment**

12    Wildlife and plants with special status include species listed as threatened or endangered under  
13    the ESA, species listed by Texas as threatened or endangered, and other species of concern as  
14    listed by these agencies. These special status species and information on habitat and occurrences  
15    can be found in the MMP SEIS, the GFS EIS, and the *Fort Bliss Integrated Natural Resources*  
16    *Management Plan, November 2001* (INRMP) (U.S. Army 2001). The proposed project site  
17    supports a coppice dune community with moderate density of shrub cover including mesquite  
18    (*Prosopis glandulosa*), fourwing saltbush (*Atriplex canescens*), broom snakeweed (*Gutierrezia*  
19    *sarothrae*), and soaptree yucca (*Yucca elata*). Coppice dunes support a low diversity of plants  
20    and animals and occur on over 31 percent of Fort Bliss.

21  
22    Two Federal Species of Concern, the western burrowing owl (*Athene cunicularia*) and the Texas  
23    horned lizard (*Phrynosoma cornutum*) could occur within coppice dune communities and have  
24    potential to occur at the proposed site. The western burrowing owl occurs in all desert shrubland  
25    communities and grassland vegetative communities on Fort Bliss. The Texas horned lizard, also  
26    a threatened species in Texas, is widespread throughout Fort Bliss in grassland and shrubland  
27    communities. Birds protected under the Migratory Bird Treaty Act of 1918 could occur in the  
28    proposed project site, including the western burrowing owl, loggerhead shrike, and numerous  
29    songbirds.

30  
31   **3.4.2 Environmental Consequences**

32    **3.4.2.1 No Action Alternative**

33    The No Action Alternative would not result in any impacts on biological resources because no  
34    construction activities would occur. The proposed project site would continue to support a low-  
35    diversity, coppice dune community.

36  
37    **3.4.2.2 Proposed Action**

38    Approximately 125 acres of a regionally common coppice dune community would be lost, which  
39    would result in minimal impacts on regionally common vegetation and wildlife species. No  
40    impact on species listed under the ESA or other special status species would occur. Although the  
41    Proposed Action would remove potential habitat for three Federal Species of Concern, impacts  
42    on individuals and habitat availability would be minimal relative to the abundance of these  
43    species and coppice dune communities throughout the region. If construction is planned during  
44    the warm nesting season (March-September), potential impacts on birds listed under the  
45    Migratory Bird Treaty Act would be avoided through bird nesting surveys. Security fencing  
46    installed at the proposed project site would incorporate wildlife-friendly features (i.e., features

1 that allow wildlife to pass safely underneath or through the fencing). Anti-perching devices  
2 would be placed on structures associated with the ranges to minimize harm to migratory birds.

### 3 4 **3.5 Cultural Resources**

#### 5 6 **3.5.1 Affected Environment**

7 Cultural resources are regulated at Fort Bliss per the National Historic Preservation Act of 1966,  
8 the Native American Graves Protection and Repatriation Act of 1990, the Archaeological  
9 Resources Protection Act of 1979, and other statutes. Cultural resources are important because  
10 of their association or linkage to past events, historically important persons, design and  
11 construction values, and for their ability to yield important information about history. Fort Bliss  
12 manages cultural resources as associated with prehistoric and historic periods recognized in  
13 Texas. The MMP EIS (U.S. Army 2000) describes in detail the cultural history of Native  
14 Americans and post-contact inhabitants in the region. The *Integrated Cultural Resources*  
15 *Management Plan* (ICRMP) for Fort Bliss (U.S. Army 2008) also contains detailed information  
16 about the history of Fort Bliss. Pursuant to Army Regulation (AR) 200-1, the Garrison  
17 Commander at Fort Bliss is responsible for managing the cultural resources on the Installation in  
18 compliance with all Federal laws, regulations, and standards. Compliance with Section 106 of  
19 the NHPA is achieved through implementation of a Programmatic Agreement between Fort Bliss  
20 and the Texas Historical Commission. The Programmatic Agreement stipulates conditions for  
21 avoidance, minimization, and mitigation of impacts on cultural resources.

22  
23 The Area of Potential Effect (APE) for the current Proposed Action includes the footprint of the  
24 proposed ranges and the temporary construction access road. The APE has been substantially  
25 degraded by historic and current land use. Historically, the area was dominated by grassland  
26 communities; however, historic and current land uses have resulted in conversion of grasslands  
27 to coppice dunes. The area was previously surveyed (Williams et al. 2010) and resulted in 99  
28 sites, 44 of which were previously recorded and 55 of which were newly defined. Of the 99  
29 sites, 19 are recommended as eligible for listing in the NRHP, all under Criterion *d*. These sites  
30 are among the largest sites in the area and typically have numerous features preserved in the  
31 buried Holocene soils in some interdunal areas. The remaining 80 sites are not eligible for  
32 listing in the NRHP. All of the sites date entirely or primarily to the prehistoric period and were  
33 composed of prehistoric campsites, prehistoric habitation sites, and artifact scatters. Thirty-eight  
34 previously recorded sites have been tested, two sites have been partially mitigated, and one site  
35 has been fully mitigated. These sites have been consulted on with the Texas State Historic  
36 Preservation Officer, and Fort Bliss has received concurrence on the eligibility determinations.  
37 Ongoing government-to-government consultations with federally recognized tribes that have  
38 shown interest in the resources at Fort Bliss have not identified any resources of concern to the  
39 tribes within the APE.

#### 40 41 **3.5.2 Environmental Consequences**

##### 42 **3.5.2.1 No Action Alternative**

43 The No Action Alternative would not result in any impacts on cultural resources because no  
44 construction activities would occur and because no cultural resources are known to occur within  
45 the APE.

1    **3.5.2.2 Proposed Action**

2    No surface archaeological sites eligible for inclusion in the NRHP would be affected by the  
3    Proposed Action, and the Proposed Action is not within the viewshed of a historic district. The  
4    project footprint has been placed in between eligible sites to avoid adverse effects on those  
5    properties. The eligible sites would be demarcated with Seibert stakes to avoid impacts on the  
6    sites. The remaining sites are ineligible for the NRHP or have been mitigated through data  
7    recovery. Final siting of proposed access roads would be reviewed by Fort Bliss Department of  
8    Public Works – Environmental archaeologists prior to construction.  
9

10   If cultural resources are discovered during the construction process, all work must stop until the  
11   Fort Bliss Cultural Resources Manager can review the discovery and, as per the Programmatic  
12   Agreement, continue the consultation with the proper regulatory agencies. Consultation between  
13   Fort Bliss Cultural Resources Manager, Texas State Historic Preservation Officer, and Advisory  
14   Council on Historic Preservation through an existing Programmatic Agreement will determine if  
15   further action is required on behalf of the Fort Bliss Garrison Commander. Any discovery of  
16   possible human remains would be treated in accordance with the Native American Graves  
17   Protection and Repatriation Act and the standard operating procedures set out in the ICRMP.  
18

19    **3.6 Land Use**

20  
21    **3.6.1 Affected Environment**

22    The proposed project site is located in an area of relatively undisturbed land immediately  
23    northeast of Purple Heart Memorial Highway (Loop 375) within TA 1B. TA 1B is designated  
24    for both military and recreational use. The specific location of the proposed ranges is classified  
25    by Fort Bliss as Land Use Category A (Figure 3-1). Land Use Category A allows on-road  
26    vehicle maneuvering for wheeled or tracked vehicles on existing roads; off-road vehicle  
27    maneuvering; dismounted (foot traffic) maneuvering and training; aircraft operations; mission  
28    support facilities; live fire; safety danger zone/safety footprint; and environmental management  
29    (U.S. Army 2010).  
30

31    TA 1B is utilized for on- and off-road vehicle maneuvers and use of military training ranges  
32    similar in purpose to the proposed sites. Non-military use includes public recreation such as  
33    hunting, hiking, picnicking, and bird watching. Public recreation use is controlled through  
34    access permits by Fort Bliss Range Operations to ensure safety and use compatibility with  
35    military activities. Both proposed range sites are located in a designated recreational use area  
36    and a portion of the Land Navigation Course traverses the proposed footprint of Range K. The  
37    Fort Bliss Rod and Gun Club, open to the public, is located less than 1 mile west of the proposed  
38    project site.  
39

40    **3.6.2 Environmental Consequences**

41    **3.6.2.1 No Action Alternative**

42    The No Action Alternative would not result in any impacts on land use resources because no  
43    change in land use would occur. The proposed project site would continue to support military  
44    training and recreational use.

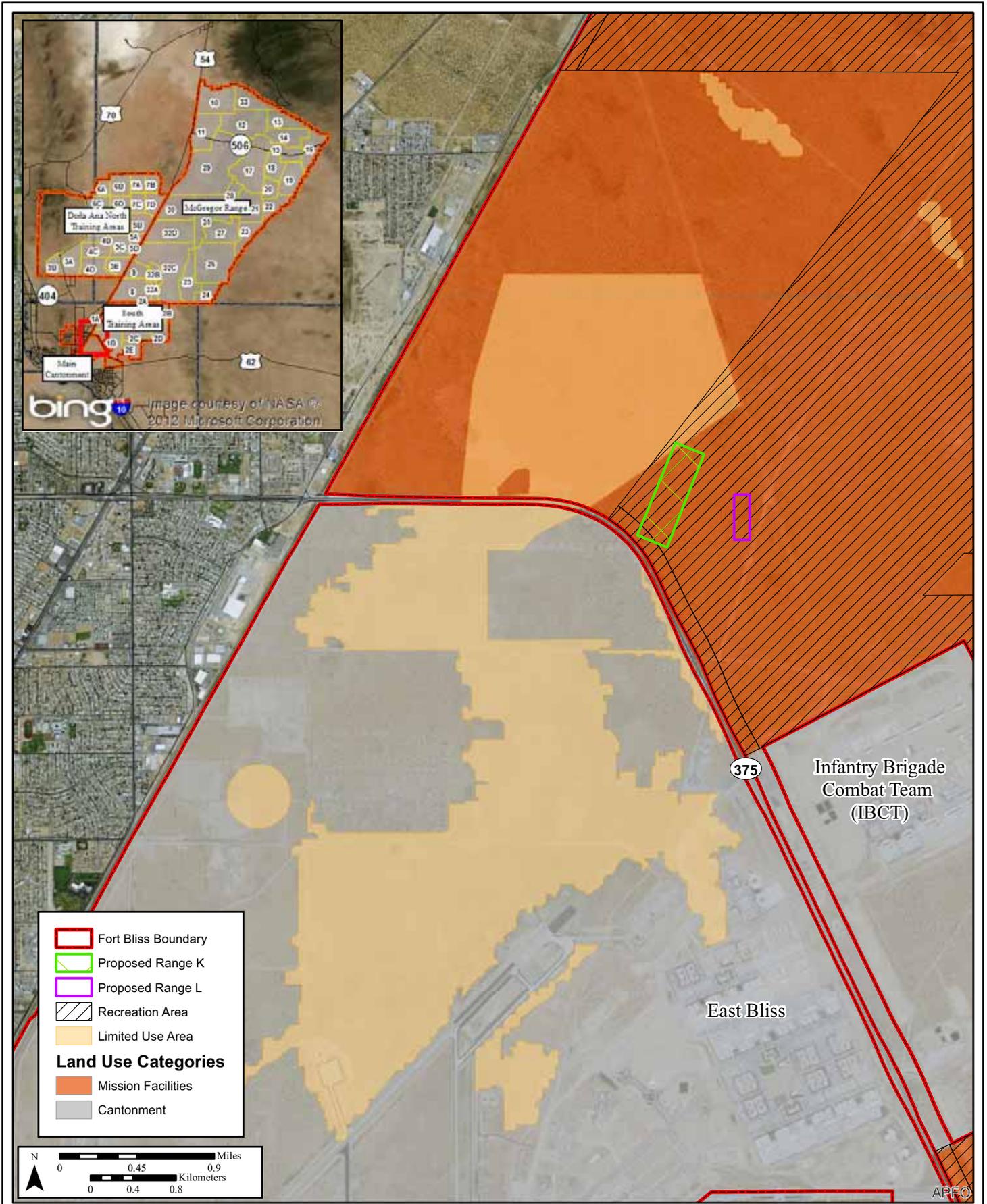


Figure 3-1: Designated Land Use Associated with Proposed Ranges

1    **3.6.2.2 Proposed Action**

2 Live-fire ranges are Mission Support Facilities (U.S. Army 2010) and are allowable military uses  
3 for Land Use Category A; thus, the training use of proposed ranges K and L would be  
4 compatible with surrounding land use and would not necessitate a change of the existing land use  
5 category. Designated recreational use would be minimally impacted. The Land Navigation  
6 Course would be reduced and appropriate signage and security fencing would prevent  
7 recreational users from entering potentially hazardous areas. A Small Arms Safety Area  
8 (SARSA) has been approved for the proposed ranges (see Figure 3-3). The Surface Danger Zone  
9 (SDZ) for the proposed ranges would largely overlap the existing Rod and Gun Club SDZ and  
10 would not affect land use in the area (see Figure 3-3).

11  
12    **3.7 Airspace**

13  
14    **3.7.1 Affected Environment**

15 The U.S. Army manages airspace in accordance with DoD Directive 5030.19, *Responsibilities on*  
16 *Federal Aviation and National Airspace System Matters*. The U.S. Army implements these  
17 requirements through AR 95-2, *Air Traffic Control, Airspace, Airfields, Flight Activities, and*  
18 *Navigational Aids*. Airspace has defined designations assigned by the Federal Aviation  
19 Administration (FAA) and adopted from international norms to control flights of all aircraft,  
20 especially around airports. The controlled airspace is designed to provide aircraft separation for  
21 approach, landing, and takeoff from the airports in the El Paso area. Airspace in the vicinity of  
22 Fort Bliss consists of a combination of Class C and Class E airspace around the El Paso  
23 International Airport, and Class D airspace around Biggs AAF (Figure 3-2). Entering Class C or  
24 Class D airspace requires radio contact with the controlling Air Traffic Control (ATC) authority,  
25 and an ATC clearance is ultimately required for landing. Operations in Class E airspace  
26 conducted under visual flight rules are not subject to ATC clearance.

27  
28    **3.7.2 Environmental Consequences**

29    **3.7.2.1 No Action Alternative**

30 The No Action Alternative would not result in any impacts on airspace because no construction  
31 activities would occur.

32  
33    **3.7.2.2 Proposed Action**

34 The proposed training use of ranges K and L would not require any change in designated  
35 airspace. Implementation of the measures included in the SARSA and Fort Bliss Regulation  
36 385-63, *Safety: Fort Bliss Training Complex Range Operations* would minimize the potential  
37 impacts on low-flying aircraft. Safety precautions to be followed include horizontal visibility  
38 requirements (4,000 feet), vertical ceiling (cloud height) requirements (3,967 feet), safety  
39 observers, communication links, and other factors identified in the SARSA documentation that  
40 enhance range safety. Biggs AAF and the El Paso International Airport would be notified of the  
41 SARSA prior to training use of the proposed ranges. All use of Range K would temporarily  
42 cease upon notification or observation of aircraft entering the SARSA.

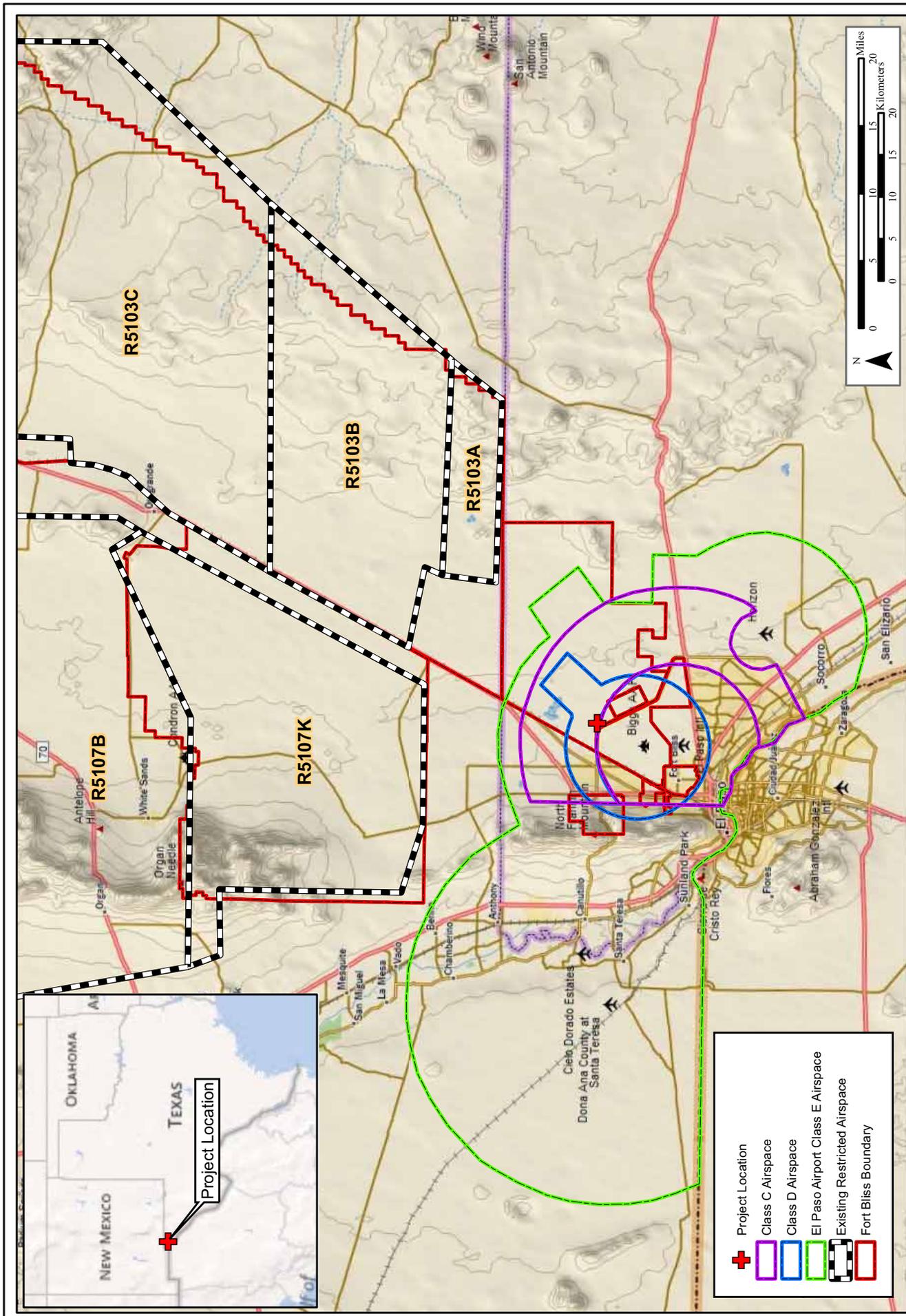


Figure 3-2: Airspace Designations Associated with the Proposed Ranges

1   **3.8    Health and Safety**

2  
3   **3.8.1   Affected Environment**

4   Federal, state, and Fort Bliss guidelines, rules, and regulations are in place to protect personnel  
5   throughout the Installation. Health programs are promoted through U.S. Army Public Health  
6   Command (USAPHC) and Medical Command. Various Fort Bliss standard operating  
7   procedures have also been established to meet health and safety requirements. Health hazards in  
8   the area could include dehydration and heat illness and contact with venomous animals and spiny  
9   vegetation. Safety information and analysis is found in the MMP EIS (U.S. Army 2000) and  
10   follow-up SEIS (U.S. Army 2007), and Fort Bliss Regulation 385-63, *Safety: Fort Bliss Training*  
11   *Complex Range Operations*. A SARSA and SDZ have been established for the Rod and Gun  
12   Club, and the proposed ranges would share a large portion of this existing designation (Figure 3-  
13   3).

14  
15   **3.8.2   Environmental Consequences**

16   **3.8.2.1   No Action Alternative**

17   The No Action Alternative would not result in any impacts on health or safety. Training and  
18   recreational use in the area would continue to be subject to the hazards of the environment and  
19   the SDZ established for the Rod and Gun Club.

20  
21   **3.8.2.2   Proposed Action**

22   Health impacts would be minimal. Measures would be taken to ensure proper hydration and  
23   avoidance of dangerous animals and plants. Impacts on safety would be moderate and would  
24   include hazards to low-flying aircraft, as well as the public and Soldiers on the ground. Training  
25   use of the proposed ranges would require expansion of the horizontal and vertical hazard zones  
26   associated with the existing Rod and Gun Club SARSA (Figure 3-3). The SDZ would include  
27   the eastern margins of the Fred Hervey water treatment plant treatment pond, but not the  
28   inhabited facility to the west. In order to avoid potential impacts on safety at the water treatment  
29   plant, only the eastern firing lanes would be used for .50-caliber weapons training, and the water  
30   treatment plant would be notified prior to each use of Range K. Measures to minimize adverse  
31   effects on safety are outlined in the SARSA documentation and Fort Bliss Regulation 385-63,  
32   *Safety: Fort Bliss Training Complex Range Operations*. These measures include horizontal  
33   visibility requirements (4,000 feet), vertical ceiling (cloud height) requirements (3,967 feet),  
34   safety observers, communication links, and other measures identified in the SARSA  
35   documentation that enhance range safety. The SDZ would be demarcated at the nearest existing  
36   boundary extending beyond the limits of the horizontal hazards, and a fence with signage would  
37   be constructed around the ranges to deter entry. The live-fire military activities would occur  
38   under controlled conditions and only in the specified areas. The live-fire military activities  
39   would be scheduled and would temporarily restrict non-military access to the site and the SDZ.

40  
41   **3.9    Noise**

42  
43   **3.9.1   Affected Environment**

44   Ambient or background noise level is the all-encompassing noise level associated with a given  
45   environment. It is a composite of sounds from all sources. Ambient noise in the area  
46   surrounding the proposed ranges includes traffic noise from Purple Heart Highway (Loop 375),

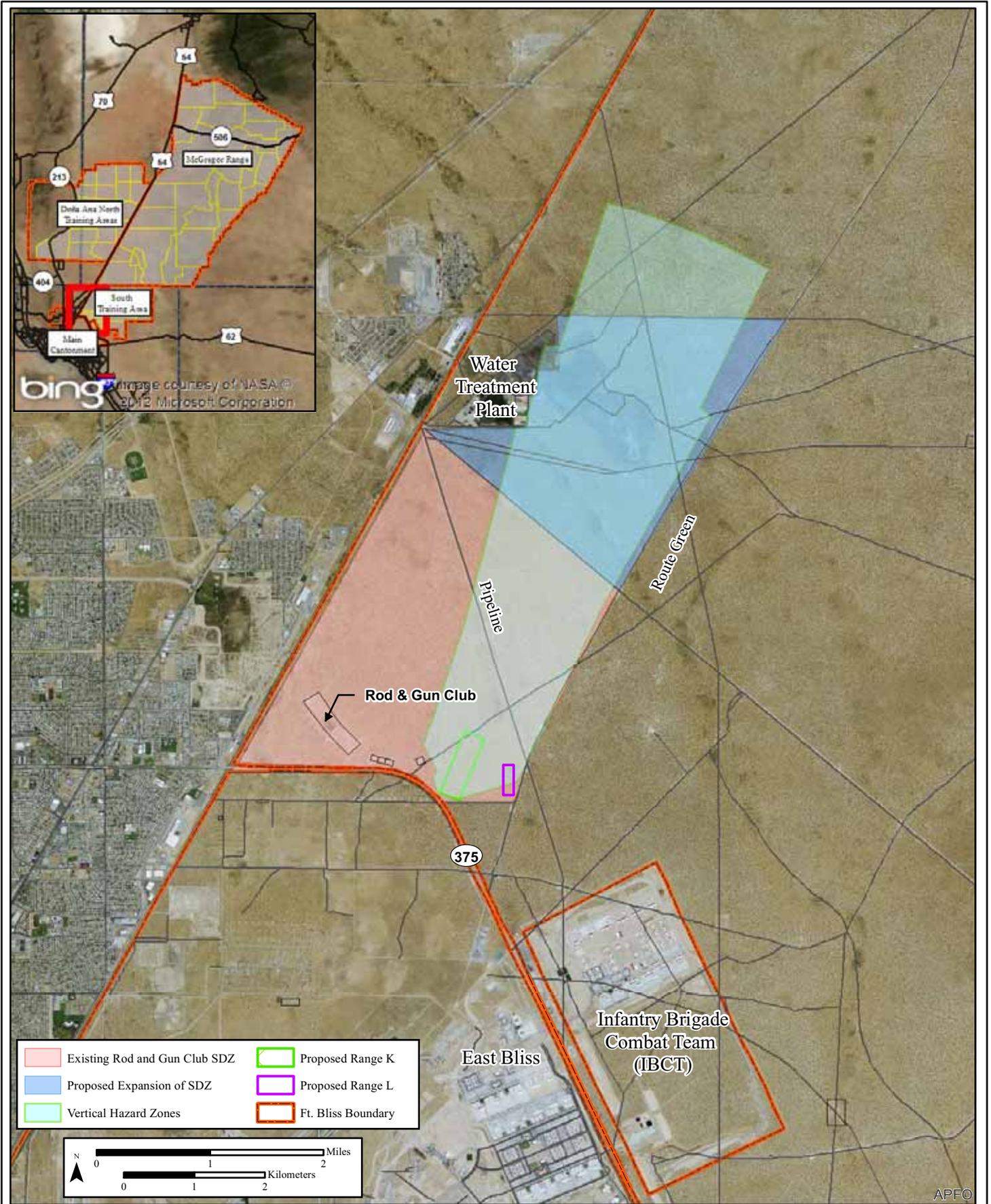


Figure 3-3: Proposed Small Arms Safety Area (SARSA) and Surface Danger Zone (SDZ) for the Proposed Range K

1 Railroad Drive, and residential streets within the Shearman neighborhood. Ambient noise is  
2 also contributed to by a Union Pacific railroad main line which runs parallel to the Installation  
3 boundary, local parks and recreational areas, residential construction activities, and gunfire from  
4 the Fort Bliss Rod and Gun Club. Peak or maximum sound levels are typically obtained to  
5 measure single noise events. Noise levels are measured in two ways: A-weighted noise (higher  
6 frequencies), which reflects what people actually hear and C-weighted noise (lower frequencies),  
7 which tend to reflect people actually feel (as well as hear). The latter is typically considered to  
8 be “blast” noise whereas noise from small caliber weapons such as machine guns and rifles is  
9 measured as peak A-weighted noise. A-weighted sound level (expressed as dBA) is a sound level  
10 that has been weighted to correspond with the non-linear sensitivity of the human ear. It  
11 discriminates against the lower frequencies.

12  
13 The U.S. Army categorizes noise impacts into three zones as determined by the expected peak  
14 noise level measured in decibels (dB) (Table 3-2). The zones are associated with land uses that  
15 are considered to be compatible with specific noise decibel levels or ranges. The noise levels for  
16 each zone (I, II, and III) attempt to estimate annoyance to the affected population and relative  
17 numbers of complaints that may be expected. Zone I is the “normal” noise environment (for  
18 examples, normal conversation is approximately 60 dB; noise from traffic or a busy restaurant  
19 approaches 87 dB). Noise-sensitive land uses, such as residences, schools, and medical facilities,  
20 are acceptable within the Zone I, but are not normally recommended in Noise Zone II, and not  
21 recommended at all in Zone III (U.S. Army 2007).

22  
23 **Table 3-2. Land Use Noise Limits for Impulsive Sources and Small Arms**

<b>Zone</b>	<b>Small Arms Noise Limits</b>	<b>Noise Sensitive Land Uses</b>
I	Less than 87 dB	Acceptable
II	Greater than 87 but less than 104 dB	Normally not recommended
III	Greater than 104 dB	Not recommended

24 Source: AR 200-1.

25  
26 Fort Bliss has identified noise zones that correspond to Table 3-2 in its Installation Operational  
27 Noise Management Plan (IONMP) based on noise analyses performed by the Operational Noise  
28 Office of the U.S. Army Public Health Command (USAPHC). The IONMP establishes  
29 procedures to respond to public complaints and to monitor both the noise environment and any  
30 proposed land use changes surrounding the installation. Analyses indicate that Zone III peak  
31 noise levels from existing small arms ranges would not extend beyond the Installation (U.S.  
32 Army 2007). Ambient noise in the communities closest to the proposed ranges is also relatively  
33 high (refer to further discussion in Sec 3.9.2.2).

34  
35 The City of El Paso has enacted a city ordinance (Chapter 9.40 NOISE), which adopted  
36 standards for allowable exterior noise levels to protect the health of citizens (Table 3-3). Each  
37 noise limit specified is increased by 5 dBA (A-weighted decibels, expressed on a logarithmic  
38 scale) for impulse (e.g., gunfire) or simple tone noises. If the ambient noise level exceeds the  
39 resulting standard, the ambient noise level is the standard.

**Table 3-3. Allowable Exterior Noise Level as Established by City of El Paso Noise Zones**

<b>El Paso Noise Zone</b>	<b>Time Interval</b>	<b>Allowable Exterior Noise Level</b>
I - All single-, double-, and multiple-family residential structures or property	10:00 p.m. to 7:00 a.m.	50 dBA
	7:00 a.m. to 10:00 p.m.	55 dBA
II - All commercial properties	10:00 p.m. to 7:00 a.m.	60 dBA
	7:00 a.m. to 10:00 p.m.	65 dBA
III - All manufacturing or industrial properties	10:00 p.m. to 7:00 a.m.	65 dBA
	7:00 a.m. to 10:00 p.m.	70 dBA

### **3.9.2 Environmental Consequences**

#### **3.9.2.1 No Action Alternative**

Under the No Action Alternative, noise associated with the Fort Bliss Rod and Gun Club, Union Pacific Railroad, and traffic on Railroad Drive would continue to have minimal to moderate impacts on residential and public areas west of Fort Bliss.

#### **3.9.2.2 Proposed Action**

Noise from proposed Range K could affect nearby El Paso communities adjoining Fort Bliss, and noise analysis studies were undertaken to better understand any potential impacts of the Proposed Action. In March 2011, at the request of Fort Bliss, USAPHC generated a computer model of expected noise zone contour lines in the project area using available information on weapon types, topography, range layout, and conservative atmospheric conditions favoring noise propagation (Figure 3-4). The noise contours generated are based on peak levels rather than a cumulative or average level, thus the size of the contours will not change with number of (simulated) rounds fired. Peak noise data shown in Figure 3-4 are expressed as “PK15 (met)” meaning that the maximum un-weighted sound level of a single noise-producing event is likely to be exceeded only 15 percent of the time due to weather conditions or other variables.

Noise contours from the computer model for the proposed Range K .50-caliber gunfire (Figure 3-4, blue lines) are shown with contours modeled for the existing Fort Bliss Rod and Gun Club (Figure 3-4, green lines) using primarily .30-caliber weapons and smaller. Results show that peak Zone II noise contours (87 and 104 dB PK15 [met]) from proposed Range K would extend beyond the western boundary of the Installation approaching 1 mile. It also extends beyond the existing Zone II noise contour for the Rod and Gun Club. The increased area of Zone II would be approximately 707 acres and encompasses an additional 645 residences, Desertaire Elementary School, and Shearman Park. Proposed Range L (grenade launcher range) would not generate adverse noise contours beyond those created by Range K.

Fort Bliss Rod and Gun Club, however, has received no noise complaints to date from the local community. Noise models for the club show a Zone II noise contour that extends beyond the Installation’s western boundary (approximately 2,700 feet) towards Dryer Street, encompassing 559 acres, Parkland Elementary School, and 392 single-family and 38 multifamily residential homes (Figure 3-4, dark green line). The Zone III contour encompasses a portion of Purple Heart Highway (Loop 375). There are no sensitive noise receptors (residents) in the Purple Heart Highway corridor, and motorists have traveled through the Zone III-modeled area of the Rod and Gun Club for years without incident.

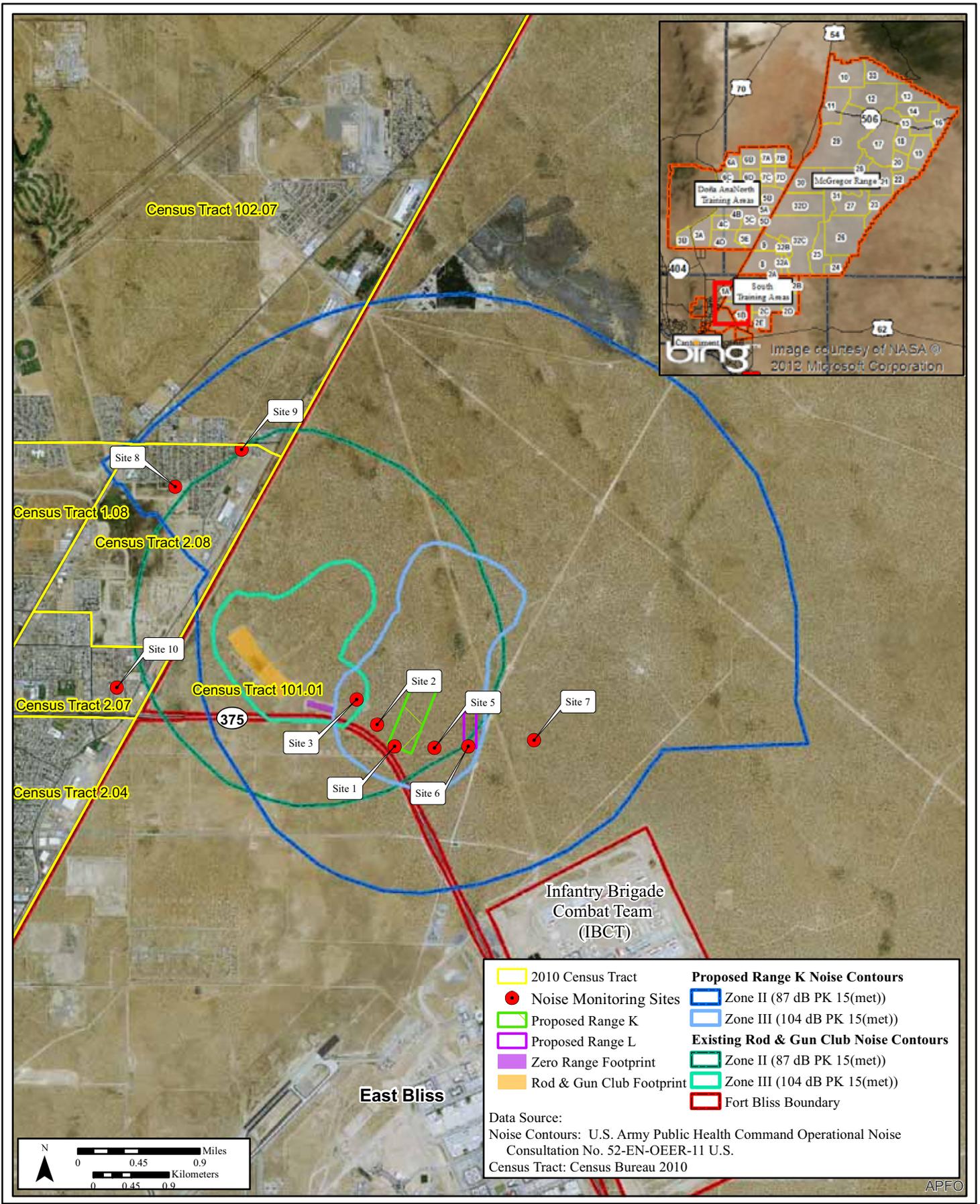


Figure 3-4: Existing and Proposed Noise Contours Generated by the Rod and Gun Club and Proposed Range K



**Draft Environmental Assessment for the Construction and Training Use of  
a Multipurpose Machine Gun Range and a Grenade Launcher Range, Fort Bliss, Texas**

In August 2011, a USAPHC Operational Noise Consultation and test (2<sup>nd</sup> Addendum to No. 52-EN-0EER-11) was conducted to validate and test the computer modeling results. Ground-based noise monitors were placed in various locations both inside and outside Fort Bliss (Figure 3-4) to measure actual noise generated by .50-caliber and .30-caliber machine guns firing single shots and bursts from the proposed Range K location. Monitoring equipment collected data over a period of two days at pre-determined firing times both day and night.

The test corroborated that the use of .50-caliber machine guns on proposed Range K would result in Zone II-level noise extending west of Fort Bliss, but only sporadically (13 percent of the time). Noise from .30-caliber firing was not detected at all. Results indicated that .50-caliber gunfire in adjacent El Paso neighborhoods (see Figure 3-4, sites 8, 9, and 10) was mostly indistinguishable from ambient noise levels. The majority of events (87 percent) were either inaudible or below the threshold of 87 dB for Zone II noise. Site 8 (see Figure 3-4) in a residential park recorded only 2 out of 20 (10 percent) gunfire noise events in the Zone II range (Table 3-4). Site 9 in a new residential housing area resulted in 6 out of 20 or 30 percent gunfire noise emissions in the Zone II range (Table 3-4). A third location in an established residential neighborhood (Site 10) recorded all 20 noise events at less than ambient level in the area. Thus, the Zone II noise model contours appear overly conservative in that actual noise levels recorded during the test were predominantly lower (in the range of Zone I). The risk of impacts to the public from noise is, therefore, predicted to be low. There would be no risk to public health or damage to structures.

**Table 3-4. Maximum Peak Levels Recorded at Noise Monitoring Sites**

Site	Distance (miles)	Angle from weapon (degrees)	Measured Maximum Peak* (dBP)
8	2.55	320	87, 82, 92, 86, AL, AL, AL, AL, AL, AL, AL, 82, 80, 82, 85, AL, AL, AL, AL
9	2.49	333	AL, 97, 95, 94, AL, AL, 84, 83, 85, 87, AL, AL, 84, 83, 88, 96, AL, AL, AL, 84
10	2.17	282	AL

\* Un-weighted. Sound levels represent single firing events at different times of the day.  
AL = less than ambient level, gunfire not recorded.

Analysis of the test data indicates that the average noise levels from .50-caliber weapons on Range K did not exceed the city’s allowable exterior noise levels per the noise ordinance. The noise metric that averages sounds over time is the Equivalent Continuous Sound Level (LEQ). The LEQ is a weighted measure for which the decibel levels of noise that is varying over a period of time are equated to a steady noise having the same acoustical energy over the same period of time. Using the data for the off-post meter locations, USAPHC determined that the sound level of 55 LEQ was not exceeded. The highest LEQ reading was 53.9. Furthermore, the on-the-ground test conducted by USAPHC indicates that the ambient noise level in the community would often exceed the LEQ from weapons firing on Range K (Stewart 2012).

Although the proposed Range K would generate a Zone III noise contour potentially encompassing a portion of Purple Heart Highway (Loop 375), it is not expected to adversely impact traffic or public health. According to the USAPHC, the threshold for damage to unprotected human ears is 137 dB. The direction of weapons fire would be directly away from

1 the highway. The direction of fire should preclude that level of noise reaching the highway  
2 behind the baseline of the range.

### 3 4 **3.10 Environmental Justice and Socioeconomics**

#### 5 6 **3.10.1 Affected Environment**

7 Executive Order (EO) 12898, Environmental Justice, was issued by President Clinton on  
8 February 11, 1994. Objectives of the EO include development of Federal agency  
9 implementation strategies, identification of minority and low-income populations where  
10 proposed Federal actions have disproportionately high and adverse human health and  
11 environmental effects, and participation of minority and low-income populations.

12  
13 A minority population exists where the percentage of minorities in an affected area is 50 percent  
14 of the community and is meaningfully greater than the percentage of minorities in the next larger  
15 geographic area surrounding the affected population. Low-income populations are those whose  
16 income is \$22,050 or less for a family of four as identified using the U.S. Census Bureau's  
17 (USCB) statistical poverty threshold. USCB defines a "poverty area" as a census tract with 20  
18 percent or more of its residents below the poverty threshold, and an "extreme poverty area" as  
19 one with 40 percent or more below the poverty level.

20  
21 The Zone II noise contour generated by the proposed ranges encompasses approximately 1,000  
22 acres and a portion of Census Tracts 2.08 and 102.07. The populations in this affected area are  
23 essentially the same racial composition and income level as surrounding the City of El Paso and  
24 El Paso County (Table 3-5) (USCB 2010). The affected area is primarily residential and  
25 currently includes approximately 1,000 homes, Desertaire Elementary School, a church, and  
26 Shearman Park. However, development in this area is occurring rapidly, and the number of  
27 affected residences could double in the future.

28  
29 **Table 3-5. Minority Population and Poverty Data**

<b>Location</b>	<b>Minority Population (percent)</b>	<b>All Ages in Poverty (percent)</b>
El Paso County	86.9	25.6
City of El Paso	85.8	24.1
Census Tract 2.08	81.2	37.3
Census Tract 102.07	76.2	10.2

30 Source: USCB 2010 and American Community Survey 5-Year Estimates, 2006-2010 for county and city, 2005-2009 for census  
31 tract data.

#### 32 33 **3.10.2 Environmental Consequences**

##### 34 **3.10.2.1 No Action Alternative**

35 The No Action Alternative would not result in any impacts on minority populations and poverty  
36 areas. Ambient noise levels would continue to be affected by public infrastructure (including the  
37 Rod and Gun Club) and continued military activities on Fort Bliss.

1 **3.10.2.2 Proposed Action**

2 The El Paso civilian community adjacent to Fort Bliss near proposed ranges K and L could hear  
3 noise from training gunfire depending upon the time of day and weather conditions. Generally,  
4 noise would be more noticeable when wind conditions are from the east, and at night when the  
5 Rod and Gun Club is closed and the traffic on Railroad Drive is light. The Union Pacific trains,  
6 however, operate day and night near the neighborhood, and wind is predominantly from the  
7 west. The affected community is comprised of minority and low-income populations essentially  
8 similar to the larger El Paso socio-economic community as a whole, with one exception. Census  
9 Tract 2.08 is an area that has 37.3 percent of residents below poverty level, compared to the City  
10 of El Paso average of 24.1 percent (see Table 3-4). However, this area is part of a larger area  
11 where a USAPHC computer model projected noise levels incompatible with residences based  
12 upon the proposed Range K location. The Census Tract 2.08 population would not receive a  
13 disproportionate effect from an increase in noise levels that would almost certainly be inaudible  
14 or barely audible most of the time. It should be noted that the ambient noise levels at Census  
15 tract 2.08 and surrounding neighborhoods, because of traffic on Railroad Drive, the Union  
16 Pacific trains, the Rod and Gun Club, made noise from the Range K test firing almost  
17 indistinguishable from background noise. This was verified by the USAPHC's results using  
18 average noise levels which were below city ordinance limits.

19  
20 Property values could be adversely affected by construction of nearby Army ranges. The EA  
21 looked at the potential for this to occur at the neighborhoods located near the ranges. However,  
22 due to the ambient noise levels from traffic, railroad, and gun club activities, it was determined  
23 that any increased effects of the proposed range on property values would be minimal. Property  
24 values would more likely be affected by the fact that the neighborhoods are fast growing and  
25 popular, and El Paso is experiencing substantial growth in that portion of the city.

26  
27 **3.11 Hazardous Materials and Waste**

28  
29 **3.11.1 Affected Environment**

30 Hazardous materials are substances that cause human physical or health hazards (29 CFR  
31 1910.1200). Materials that are physically hazardous include combustible and flammable  
32 substances, compressed gases, and oxidizers. Health hazards are associated with materials that  
33 cause acute or chronic reactions, such as toxic agents, carcinogens, and irritants.

34  
35 Hazardous waste is produced from various equipment maintenance processes and is composed of  
36 any material listed in 40 CFR 261 Subpart D or those that exhibit characteristics of toxicity,  
37 corrosiveness, ignitability, or reactivity. Hazardous wastes are managed under the Installation  
38 Hazardous Waste Management Plan, which provides detailed information on training; hazardous  
39 waste management roles and responsibilities; and hazardous waste identification, storage,  
40 transportation, and spill control, consistent with Federal and state regulations.

41  
42 Typical contaminants associated with small arms firing ranges are lead, antimony, copper, zinc,  
43 arsenic, and polycyclic aromatic hydrocarbons (USEPA 2005 and Interstate Technology and  
44 Regulatory Council 2003). These contaminants may leach from bullets and fragments, brass  
45 casings, and related sporting material (e.g., clay targets), and potentially impact soils, surface  
46 waters, and groundwater in the vicinity of the firing range. Lead is generally considered to be

1 the primary contaminant in soils at small arms firing ranges, with detectable concentrations in  
2 the soil behind and adjacent to targets and impact berms. Elevated lead levels may also be found  
3 in vegetation growing near impact berms. Lead particles can migrate off-site from the firing  
4 range through various mechanisms, such as airborne particulates, stormwater runoff, berm  
5 erosion, and dissolved lead in groundwater and surface water (Pollution Prevention Resource  
6 Exchange 1998).

### 7 **3.11.2 Environmental Consequences**

#### 8 **3.11.2.1 No Action Alternative**

9 Under the No Action Alternative, hazardous materials and waste would not have adverse effects  
10 on the environment because no construction or use of munitions would occur.  
11

#### 12 **3.11.2.2 Proposed Action**

13 Construction of the proposed range sites and improvements to access roads would require  
14 machinery and the use of POL. A limited amount of hazardous materials and solid waste would  
15 be used or generated during routine maintenance and operation of the facilities and associated  
16 equipment, including brass casings, batteries, bullets, tracers, gunpowder, and POL. Recyclable  
17 and non-recyclable materials would be collected on-site in appropriate containers and disposed  
18 of at an approved disposal facility for the type of waste. All hazardous wastes would be disposed  
19 of according to the Installation Hazardous Waste Management Plan.  
20

21 Fuel for the generators would be transported and stored on-site in designated trucks. Secondary  
22 containment for parking and fuel trucks would be utilized. Drip pans would be provided for  
23 stationary equipment to capture any POL accidentally spilled during construction and operation  
24 activities or leaks from the equipment. Fort Bliss has a Spill Prevention, Control, and  
25 Countermeasures Plan, an Installation Spill Contingency Plan, and an Installation Hazardous  
26 Waste Management Plan in place. These plans establish responsibilities, duties, procedures, and  
27 resources to be employed to contain, mitigate, and clean up POL spills.  
28

29 Minimal hazardous materials and solid waste impacts would occur as a result of spent munitions  
30 generated during training use of the proposed ranges. Training use of proposed ranges would  
31 generate contaminants from bullets, fragments, and brass casings. Although bullets would be left  
32 in place, brass casings would be collected and recycled, thereby minimizing the potential for soil  
33 contamination. The depth to groundwater and low precipitation rates in the region would  
34 preclude contamination of groundwater. If the site is reutilized in the future, it would be cleaned  
35 up to appropriate standards.  
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**SECTION 4.0**  
**CUMULATIVE IMPACTS**





1   **4.0   CUMULATIVE IMPACTS**

2  
3   Cumulative impacts are defined as the impacts on the environment that result from the  
4   incremental impact of the action when added to other past, present, and reasonably foreseeable  
5   future actions. Although the Proposed Action is not specifically addressed in the MMP SEIS,  
6   GFS EIS, or the follow-up SEIS, the cumulative impact on the natural and human environment  
7   from construction of firing ranges and support infrastructure on Fort Bliss is covered by these  
8   documents. The cumulative effects of the Proposed Action would not differ substantially from  
9   those identified in that analysis. The primary cumulative effects identified include those  
10   associated with increased urbanization of the landscape and associated degradation of the human  
11   and biological environment.

12  
13   The continued development of infrastructure on the Installation and in surrounding areas could  
14   have cumulative impacts on nearby non-military land uses. The MMP SEIS identified several  
15   projects that would result in continued development and use of lands on and surrounding Fort  
16   Bliss. Development of infrastructure on the Installation and in surrounding areas would continue  
17   to result in increased noise, loss and degradation of soils, vegetative communities, and wildlife  
18   habitat, and increased surface water runoff with accelerated erosion and sedimentation, and could  
19   allow for the introduction and expansion of invasive species. Although the construction and  
20   operation of Range K and L would contribute to these adverse effects, the cumulative effects of  
21   these actions would be minimal. Much of the undeveloped land on the Installation and  
22   surrounding areas is already partially degraded as a result of past and current uses (e.g., grazing,  
23   urban development, military training activities). Much of the land on the Installation and in  
24   surrounding areas is characterized by development associated with the City of El Paso and Fort  
25   Bliss Cantonment Area, by undeveloped areas generally associated with mountain ranges, or by  
26   degraded vegetation communities.

27  
28   In general, opportunities for avoiding, minimizing, or mitigating cumulative impacts related to  
29   the Proposed Actions have been incorporated by design or through the management processes to  
30   address the direct and indirect impacts identified in the MMP SEIS. They include such measures  
31   as siting and consolidating facilities and live-fire ranges to reduce the area affected; ensuring  
32   land use compatibility in the Real Property Master Plan; energy-efficient facility design;  
33   executing a Programmatic Agreement for historic properties; implementing projects in the  
34   Integrated Natural Resources Management Plan; promoting a sustainable range and training base  
35   through the Integrated Training Area Management program; and maintaining Solid Waste  
36   Management (including an aggressive recycling program), Stormwater Management, Spill  
37   Prevention, Control, and Countermeasures, Asbestos Management, Lead Hazard Management,  
38   and Pollution Prevention plans. Fort Bliss has an Environmental Management System to  
39   monitor environmental compliance and waste reduction metrics and to provide data for adaptive  
40   management programs in the future. In addition, an adaptive noise management program would  
41   be used to limit the cumulative impacts of noise associated with the Proposed Action.

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**SECTION 5.0**  
**REFERENCES**





1   **5.0   REFERENCES**

- 2
- 3   El Paso Water Utilities. 2007. Water: Past and Present Water Supplies. Internet URL:  
4       <http://www.epwu.org/water/water-resources.html>.
- 5
- 6   Environmental Working Group. 2011. Lead Pollution at Outdoor Firing Ranges. Washington,  
7       D.C.
- 8
- 9   Interstate Technology and Regulatory Council. 2003. Characterization and Remediation of Soils  
10       at Closed Small Arms Firing Ranges.
- 11
- 12   Midwest Research Institute. 1996. Improvement of Specific Emission Factors (BACM Project  
13       No. 1) Prepared for South Coast Air Quality Management District. SCAQMD Contract  
14       95040, Diamond Bar, CA. March 1996.
- 15
- 16   National Climate Data Center. 2012. Climate Data Online. Available at:  
17       <http://www.ncdc.noaa.gov/cdo-web/search>
- 18
- 19   Natural Resources Conservation Service (NRCS). 2011. *Online Soil Survey of Fort Bliss Military*  
20       *Reservation, New Mexico and Texas*. <http://soils.usda.gov/survey>.
- 21
- 22   Pollution Prevention Resource Exchange. 1998. Pro-Act Fact Sheet. Lead Contamination in Soils  
23       at Military Small Arms Firing Ranges, June 1998, TI# 17472.
- 24
- 25   Sheng, Z. R.E. Mace, M.P. Fahy. 2001. The Hueco Bolson: An Aquifer at the Crossroads.  
26       *Report 356 Aquifers of West Texas*. Ed. R.E. Mace, W.F. Mullican III, and E.S. Angle.  
27       Austin, Texas. Texas Water Development Board. Pages 66-75.
- 28
- 29   Stewart, C. 2012. Personal communication e-mail from C. Stewart, USAPHC and E. Wolters,  
30       AEC, Fort Bliss, 27 March 2012
- 31
- 32   U.S. Army. 2000. *Fort Bliss Texas and New Mexico, Mission and Master Plan, Programmatic*  
33       *Environmental Impact Statement*. <https://www.bliss.army.mil>.
- 34
- 35   U.S. Army. 2001. *Fort Bliss Integrated Natural Resources Management Plan*.  
36       <https://www.bliss.army.mil>.
- 37
- 38   U.S. Army. 2007. *Fort Bliss Texas and New Mexico Mission and Master Plan Final*  
39       *Supplemental Programmatic Environmental Impact Statement*, March 2007.  
40       <https://www.bliss.army.mil>.
- 41
- 42   U.S. Army. 2008. *Integrated Cultural Resources Management Plan 2008-2012, Fort Bliss*.  
43       <https://www.bliss.army.mil>.
- 44
- 45   U.S. Army. 2010. *Fort Bliss Army Growth and Force Structure Realignment Final*  
46       *Environmental Impact Statement*. March 2010. <https://www.bliss.army.mil>

**Draft Environmental Assessment for the Construction and Training Use of  
a Multipurpose Machine Gun Range and a Grenade Launcher Range, Fort Bliss, Texas**

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- 1 U.S. Army. 2011a. *Fort Bliss Directorate of Public Works, Environmental Division - Guidance*  
2 *for Construction Storm Water Pollution Prevention (SPW3's) & Permits*, Revised 31 Mar  
3 11.  
4
- 5 U.S. Army. 2011b. Fort Bliss, TX – Fact Sheet.  
6 Internet URL: <http://usarmy.vo.llnwd.net/e2/c/downloads/216568.pdf>.  
7
- 8 U.S. Census Bureau (USCB). 2010. 2010 Census of the U.S.  
9 Accessed through <http://factfinder2.census.gov/>.  
10
- 11 U.S. Environmental Protection Agency (USEPA). 2001. Procedures Document for National  
12 Emission Inventory, Criteria Air Pollutants 1985-1999. EPA-454/R-01-006. Office of Air  
13 Quality Planning and Standards Research Triangle Park NC 27711.  
14
- 15 USEPA. 2005a. User's Guide for the Final NONROAD2005 Model. EPA420-R-05-013  
16 December 2005.  
17
- 18 USEPA. 2005b. Emission Facts: Average In-Use Emissions from Heavy Duty Trucks. EPA 420-  
19 F-05-0yy, May 2005.  
20
- 21 USEPA. 2005c. Emission Facts: Average Annual Emissions and Fuel Consumption for  
22 Gasoline-Fueled Passenger Cars and Light Trucks. EPA 420-F-05-022.  
23
- 24 USEPA. 2005d. EPA Emission Facts: Average In-Use Emission Factors for Urban Buses and  
25 School Buses. Office of Transportation and Air Quality EPA420-F-05-024 August 2005.  
26
- 27 USEPA. 2005e. Best Management Practices for Lead at Outdoor Shooting Ranges. EPA 902-B-  
28 01-001.  
29
- 30 USEPA. 2010a. National Ambient Air Quality Standards (NAAQS). Available online:  
31 <http://www.epa.gov/air/criteria.html>. Last Accessed. 4/11/2010.  
32
- 33 USEPA. 2010b. Welcome to the Green Book Nonattainment Areas for Criteria Pollutants  
34 [www.epa.gov/oar/oaqps/greenbk](http://www.epa.gov/oar/oaqps/greenbk).  
35
- 36 U.S. Geological Survey. 2011. Science in Your Watershed: Locate Your Watershed.  
37 [http://water.usgs.gov/wsc/map\\_index.html](http://water.usgs.gov/wsc/map_index.html).  
38
- 39 Walker, M. 2012. Groundwater Depth at Proposed Range K and L. Personal communication  
40 between Bob Lenhart, DPW-E Compliance and Mark Walker, GSRC NEPA Analyst  
41 DPW-E. 1 May 2012.  
42
- 43 Williams AC, BJ Vierra, and KM Schmidt (ed). 2010. Results of a 5,000-Acre Cultural  
44 Resource Survey in the Southern Maneuver Areas, Fort Bliss Military Reservation, El  
45 Paso County, Texas. Technical Report 09-58, Statistical Research Inc., June 2010.

**SECTION 6.0**  
**LIST OF PREPARERS**





**6.0 LIST OF PREPARERS**

The following people were primarily responsible for preparing this Environmental Assessment.

<b>Name</b>	<b>Agency/Organization</b>	<b>Discipline/ Expertise</b>	<b>Experience</b>	<b>Role in Preparing EA</b>
Eric Webb	Gulf South Research Corporation	NEPA/Coastal Ecology	20 years NEPA and natural resources studies	EA review
Mark Walker	Gulf South Research Corporation	Forestry and Natural Resources Management	30 years NEPA and natural resources management	Fort Bliss Project Manager and EA review
John Kipp	Fort Bliss Environmental Division, NEPA Planner	Soil science, Geomorphology	25 years NEPA and earth science	EA review
Michael Hodson	Gulf South Research Corporation	Community Ecology	10 years NEPA and natural resources studies	Project Manager and EA preparation
Steve Oivanki	Gulf South Research Corporation	Geology	20 years NEPA and natural resources studies	EA review
Lucinda Freeman	Gulf South Research Corporation	Archaeology	9 years cultural resources experience	Cultural resources
Liz Ayarbe-Perez	Gulf South Research Corporation	GIS/Graphics	3 years GIS/graphics	GIS analysis and graphics
Steve Kolian	Gulf South Research Corporation	Environmental Engineering	15 years NEPA and environmental engineering	Air quality and noise
Ann Guissing	Gulf South Research Corporation	Socioeconomics	25 years NEPA and economic analysis	Environmental Justice, health and safety, airspace
Ben Tomson	Gulf South Research Corporation	Ecology	3 years NEPA and natural resources	Biological resources
David Gates	Gulf South Research Corporation	Plant Ecology	2 years NEPA and natural resources	Hazardous materials and soils

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**SECTION 7.0**  
**ACRONYMS AND ABBREVIATIONS**





1	<b>7.0</b>	<b>ACRONYMS AND ABBREVIATIONS</b>
2		
3	AAF	Biggs Army Airfield
4	AIP	Ammunition Issue Point
5	APE	Area of Potential Effects
6	AR	Army Regulation
7	ARRM	Army Range Requirement Model
8	ATC	Air Traffic Control
9	BMPs	Best Management Practices
10	BRAC	Base Realignment and Closure
11	CEQ	Council on Environmental Quality
12	CERCLA	Comprehensive Environmental Response, Compensation, and Liability
13		Act
14	CFR	Code of Federal Regulations
15	CO	Carbon Monoxide
16	CWA	Clean Water Act
17	dB	Decibels
18	dBA	Decibels Expressed on a Logarithmic Scale
19	dBp	Peak Decibels
20	DoD	Department of Defense
21	DPTMS	Directorate of Plants, Training, Mobilization, and Security
22	EA	Environmental Assessment
23	EIS	Environmental Impact Statement
24	EO	Executive Order
25	ESA	Endangered Species Act
26	FAA	Federal Aviation Administration
27	FBTC	Fort Bliss Training Complex
28	FNSI	Finding of No Significant Impact
29	FORSCOM	Forces Command
30	Fort Bliss	Fort Bliss Army Reservation
31	GFS EIS	Growth and Force Structure Realignment FEIS
32	IBCT	Infantry Brigade Combat Team
33	ICRMP	Integrated Cultural Resources Management Plan
34	INRMP	Integrated Natural Resources Management Plan
35	IONMP	Installation Operational Noise Management Plan
36	LEQ	Equivalent Continuous Sound Level
37	MMP SEIS	Fort Bliss, Texas and New Mexico Mission and Master Plan Final
38		Supplemental Programmatic Environmental Impact Statement
39	NAAQS	National Ambient Air Quality Standards
40	NEPA	National Environmental Policy Act
41	NO <sub>2</sub>	Nitrogen Dioxide
42	NPDES	National Pollution Discharge Elimination System
43	NRCS	Natural Resources Conservation Service
44	NRHP	Nation Register of Historic Places
45	O <sub>3</sub>	Ozone
46	PK15(met)	Peak Noise Level Exceeded by 15 Percent of events

**Draft Environmental Assessment for the Construction and Training Use of  
a Multipurpose Machine Gun Range and a Grenade Launcher Range, Fort Bliss, Texas**

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1	PL	Public Law
2	PM-2.5	Particulate Matter less than 2.5 microns
3	PM-10	Particulate Matter less than 10 microns
4	POLs	Petroleum, Oil, and Lubricants
5	RCRA	Resource Conservation and Recovery Act
6	ROD	Record of Decision
7	ROI	Region of Influence
8	SARSA	Small Arms Range Safety Area
9	SDZ	Surface Danger Zone
10	SEIS	Supplemental Environmental Impact Statement
11	SO <sub>2</sub>	Sulfur dioxide
12	SWPPP	Stormwater Pollution Prevention Plan
13	TA	Training Area
14	USACE	U.S. Army Corps of Engineers
15	USAPHC	U.S. Army Public Health Command
16	USCB	U.S. Census Bureau
17	USEPA	U. S. Environmental Protection Agency
18	UXO	Unexploded Ordnance
19	VEC	Valued Environmental Component

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**APPENDIX A**  
**INTERAGENCY AND PUBLIC CORRESPONDENCE**





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**El Paso County**

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**City of El Paso**

Ms. Ellen A. Smyth  
Environmental Services and Code Enforcement  
7968 San Paulo  
El Paso, TX 79901

Mr. Carl. L. Robison  
City Representative  
2 Civic Center Plaza  
El Paso, Texas 79901



REPLY TO  
ATTENTION OF:

**DEPARTMENT OF THE ARMY**  
US ARMY INSTALLATION MANAGEMENT COMMAND  
HEADQUARTERS, UNITED STATES ARMY GARRISON, FORT BLISS  
1 PERSHING ROAD  
FORT BLISS, TEXAS 79916-3803

November 30, 2011

Environmental Division

Ms. Ellen A. Smyth  
Environmental Services and Code Enforcement  
City of El Paso  
7968 San Paulo  
El Paso, TX 79901

Dear Ms. Smyth:

Department of the Army – Installation Management Command (IMCOM) is preparing the Environmental Assessment (EA) for Construction and Training Use of a Multi-purpose Machine Gun Range (Range K) and a Grenade Launcher Range (Range L), Fort Bliss, Texas. The proposed ranges would be located in South Training Area 1B, adjacent to the Rod and Gun Club, northeast of Loop 375 and Cantonment Area 9 (See Attachment A). Range K would facilitate the familiarization and qualification of Soldiers on the skills necessary to identify and engage with a machine gun, and defeat stationary infantry targets. Range K would be a multi-purpose familiarization and qualification range that would accommodate all calibers of machine gun in the current Army arsenal up to and including the .50 caliber. Range L would provide a facility to train and test individual Soldiers on the skills necessary to engage targets with an M203/320 grenade launcher. M203/320 qualification requires engaging targets through windows and into bunkers, which are simulated by wooden facades. M203/320 qualification is done with training practice-tracer (TP-T) rounds, which are non-explosive and not dud-producing.

Specifically, the proposed action would involve: 1) improvement of an existing access road for construction; 2) clearing of approximately 75 acres of mesquite (*Prosopis glandulosa*) dominated dunes; 3) placement of supporting buildings and targets; 4) construction of perimeter fencing and security lighting; 5) having range availability for up to 365 days a year and 24 hours a day.

The purpose of the proposed action is to provide close-in, year-round, comprehensive and realistic training and range facilities for Soldiers in basic marksmanship skills with the machine gun and grenade launcher. These training facilities will be used by the Active Component Soldiers assigned to units on the installation and Reserve Component Soldiers that habitually train or are mobilizing at the installation. Both ranges would meet critical live-fire individual marksmanship training needs for both Active and Reserve Component Units that train on the installation.

We are requesting input regarding potential effects on the environment regarding this Proposed Action. If you have any questions or would like to discuss the project in more detail during the preparation of the EA, please contact Dr. John Kipp, NEPA Planner, phone number (915) 568-5162.

Sincerely,

A handwritten signature in black ink, appearing to read "Vicki G. Hamilton". The signature is fluid and cursive, with the first name "Vicki" being the most prominent.

Vicki G. Hamilton, R.A.  
Chief, Environmental Division  
Directorate of Public Works







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FORT BLISS, TEXAS 79916-3803

November 30, 2011

Environmental Division

Mr. Carl L. Robinson  
City Representative  
City of El Paso  
2 Civic Center Plaza  
El Paso, TX 79901

Dear Mr. Robinson:

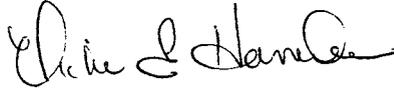
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Specifically, the proposed action would involve: 1) improvement of an existing access road for construction; 2) clearing of approximately 75 acres of mesquite (*Prosopis glandulosa*) dominated dunes; 3) placement of supporting buildings and targets; 4) construction of perimeter fencing and security lighting; 5) having range availability for up to 365 days a year and 24 hours a day.

The purpose of the proposed action is to provide close-in, year-round, comprehensive and realistic training and range facilities for Soldiers in basic marksmanship skills with the machine gun and grenade launcher. These training facilities will be used by the Active Component Soldiers assigned to units on the installation and Reserve Component Soldiers that habitually train or are mobilizing at the installation. Both ranges would meet critical live-fire individual marksmanship training needs for both Active and Reserve Component Units that train on the installation.

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FORT BLISS, TEXAS 79916-3803

November 30, 2011

Environmental Division

Mr. Sergio Lewis  
County Commissioner  
El Paso - Precinct 2  
500 E. San Antonio  
El Paso, TX 79901

Dear Mr. Lewis

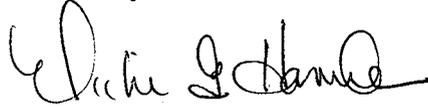
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Specifically, the proposed action would involve: 1) improvement of an existing access road for construction; 2) clearing of approximately 75 acres of mesquite (*Prosopis glandulosa*) dominated dunes; 3) placement of supporting buildings and targets; 4) construction of perimeter fencing and security lighting; 5) having range availability for up to 365 days a year and 24 hours a day.

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November 30, 2011

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Ms. Lorinda Gardner  
Regional Director  
Region 6, El Paso  
Texas Commission on Environmental Quality  
401 E. Franklin Avenue, Suite 560  
El Paso, TX 79901-1212

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Vicki G. Hamilton, R.A.  
Chief, Environmental Division  
Directorate of Public Works



REPLY TO  
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US ARMY INSTALLATION MANAGEMENT COMMAND  
HEADQUARTERS, UNITED STATES ARMY GARRISON, FORT BLISS  
1 PERSHING ROAD  
FORT BLISS, TEXAS 79916-3803

November 30, 2011

Environmental Division

Mr. Timothy F. Twomey  
Area Engineer  
El Paso District – West El Paso Area Office  
Texas Department of Transportation  
4201 Hondo Pass Drive  
El Paso, TX 79904

Dear Mr. Twomey:

Department of the Army – Installation Management Command (IMCOM) is preparing the Environmental Assessment (EA) for Construction and Training Use of a Multi-purpose Machine Gun Range (Range K) and a Grenade Launcher Range (Range L), Fort Bliss, Texas. The proposed ranges would be located in South Training Area 1B, adjacent to the Rod and Gun Club, northeast of Loop 375 and Cantonment Area 9 (See Attachment A). Range K would facilitate the familiarization and qualification of Soldiers on the skills necessary to identify and engage with a machine gun, and defeat stationary infantry targets. Range K would be a multi-purpose familiarization and qualification range that would accommodate all calibers of machine gun in the current Army arsenal up to and including the .50 caliber. Range L would provide a facility to train and test individual Soldiers on the skills necessary to engage targets with an M203/320 grenade launcher. M203/320 qualification requires engaging targets through windows and into bunkers, which are simulated by wooden facades. M203/320 qualification is done with training practice-tracer (TP-T) rounds, which are non-explosive and not dud-producing.

Specifically, the proposed action would involve: 1) improvement of an existing access road for construction; 2) clearing of approximately 75 acres of mesquite (*Prosopis glandulosa*) dominated dunes; 3) placement of supporting buildings and targets; 4) construction of perimeter fencing and security lighting; 5) having range availability for up to 365 days a year and 24 hours a day.

The purpose of the proposed action is to provide close-in, year-round, comprehensive and realistic training and range facilities for Soldiers in basic marksmanship skills with the machine gun and grenade launcher. These training facilities will be used by the Active Component Soldiers assigned to units on the installation and Reserve Component Soldiers that habitually train or are mobilizing at the installation. Both ranges would meet critical live-fire individual marksmanship training needs for both Active and Reserve Component Units that train on the installation.

We are requesting input regarding potential effects on the environment regarding this Proposed Action. If you have any questions or would like to discuss the project in more detail during the preparation of the EA, please contact Dr. John Kipp, NEPA Planner, phone number (915) 568-5162.

Sincerely,

A handwritten signature in black ink, appearing to read "Vicki G. Hamilton". The signature is fluid and cursive, with a large initial "V" and a long, sweeping tail.

Vicki G. Hamilton, R.A.  
Chief, Environmental Division  
Directorate of Public Works



REPLY TO  
ATTENTION OF:

**DEPARTMENT OF THE ARMY**  
US ARMY INSTALLATION MANAGEMENT COMMAND  
HEADQUARTERS, UNITED STATES ARMY GARRISON, FORT BLISS  
1 PERSHING ROAD  
FORT BLISS, TEXAS 79916-3803

November 30, 2011

Environmental Division

Mr. Mark Wolfe  
State Historic Preservation Officer  
Texas Historical Commission  
108 W. 16<sup>th</sup> Street  
Austin, TX 78701

Dear Mr. Wolfe:

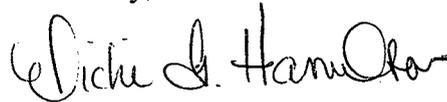
Department of the Army – Installation Management Command (IMCOM) is preparing the Environmental Assessment (EA) for Construction and Training Use of a Multi-purpose Machine Gun Range (Range K) and a Grenade Launcher Range (Range L), Fort Bliss, Texas. The proposed ranges would be located in South Training Area 1B, adjacent to the Rod and Gun Club, northeast of Loop 375 and Cantonment Area 9 (See Attachment A). Range K would facilitate the familiarization and qualification of Soldiers on the skills necessary to identify and engage with a machine gun, and defeat stationary infantry targets. Range K would be a multi-purpose familiarization and qualification range that would accommodate all calibers of machine gun in the current Army arsenal up to and including the .50 caliber. Range L would provide a facility to train and test individual Soldiers on the skills necessary to engage targets with an M203/320 grenade launcher. M203/320 qualification requires engaging targets through windows and into bunkers, which are simulated by wooden facades. M203/320 qualification is done with training practice-tracer (TP-T) rounds, which are non-explosive and not dud-producing.

Specifically, the proposed action would involve: 1) improvement of an existing access road for construction; 2) clearing of approximately 75 acres of mesquite (*Prosopis glandulosa*) dominated dunes; 3) placement of supporting buildings and targets; 4) construction of perimeter fencing and security lighting; 5) having range availability for up to 365 days a year and 24 hours a day.

The purpose of the proposed action is to provide close-in, year-round, comprehensive and realistic training and range facilities for Soldiers in basic marksmanship skills with the machine gun and grenade launcher. These training facilities will be used by the Active Component Soldiers assigned to units on the installation and Reserve Component Soldiers that habitually train or are mobilizing at the installation. Both ranges would meet critical live-fire individual marksmanship training needs for both Active and Reserve Component Units that train on the installation.

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Vicki G. Hamilton, R.A.  
Chief, Environmental Division  
Directorate of Public Works



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FORT BLISS, TEXAS 79916-3803

November 30, 2011

Environmental Division

Ms. Kathy Boydson  
Wildlife Diversity Program  
Texas Parks and Wildlife Department  
4200 Smith School Road  
Austin, TX 78744

Dear Ms. Boydson:

Department of the Army – Installation Management Command (IMCOM) is preparing the Environmental Assessment (EA) for Construction and Training Use of a Multi-purpose Machine Gun Range (Range K) and a Grenade Launcher Range (Range L), Fort Bliss, Texas. The proposed ranges would be located in South Training Area 1B, adjacent to the Rod and Gun Club, northeast of Loop 375 and Cantonment Area 9 (See Attachment A). Range K would facilitate the familiarization and qualification of Soldiers on the skills necessary to identify and engage with a machine gun, and defeat stationary infantry targets. Range K would be a multi-purpose familiarization and qualification range that would accommodate all calibers of machine gun in the current Army arsenal up to and including the .50 caliber. Range L would provide a facility to train and test individual Soldiers on the skills necessary to engage targets with an M203/320 grenade launcher. M203/320 qualification requires engaging targets through windows and into bunkers, which are simulated by wooden facades. M203/320 qualification is done with training practice-tracer (TP-T) rounds, which are non-explosive and not dud-producing.

Specifically, the proposed action would involve: 1) improvement of an existing access road for construction; 2) clearing of approximately 75 acres of mesquite (*Prosopis glandulosa*) dominated dunes; 3) placement of supporting buildings and targets; 4) construction of perimeter fencing and security lighting; 5) having range availability for up to 365 days a year and 24 hours a day.

The purpose of the proposed action is to provide close-in, year-round, comprehensive and realistic training and range facilities for Soldiers in basic marksmanship skills with the machine gun and grenade launcher. These training facilities will be used by the Active Component Soldiers assigned to units on the installation and Reserve Component Soldiers that habitually train or are mobilizing at the installation. Both ranges would meet critical live-fire individual marksmanship training needs for both Active and Reserve Component Units that train on the installation.

We are requesting input regarding potential effects on the environment regarding this Proposed Action. If you have any questions or would like to discuss the project in more detail during the preparation of the EA, please contact Dr. John Kipp, NEPA Planner, phone number (915) 568-5162.

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Vicki G. Hamilton, R.A.  
Chief, Environmental Division  
Directorate of Public Works



REPLY TO  
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**DEPARTMENT OF THE ARMY**  
US ARMY INSTALLATION MANAGEMENT COMMAND  
HEADQUARTERS, UNITED STATES ARMY GARRISON, FORT BLISS  
1 PERSHING ROAD  
FORT BLISS, TEXAS 79916-3803

November 30, 2011

Environmental Division

Mr. Al Armendariz  
Regional Administrator, Region 6  
US Environmental Protection Agency  
1445 Ross Avenue, Suite 1200  
Dallas, TX 75202-2733

Dear Mr. Armendariz:

Department of the Army – Installation Management Command (IMCOM) is preparing the Environmental Assessment (EA) for Construction and Training Use of a Multi-purpose Machine Gun Range (Range K) and a Grenade Launcher Range (Range L), Fort Bliss, Texas. The proposed ranges would be located in South Training Area 1B, adjacent to the Rod and Gun Club, northeast of Loop 375 and Cantonment Area 9 (See Attachment A). Range K would facilitate the familiarization and qualification of Soldiers on the skills necessary to identify and engage with a machine gun, and defeat stationary infantry targets. Range K would be a multi-purpose familiarization and qualification range that would accommodate all calibers of machine gun in the current Army arsenal up to and including the .50 caliber. Range L would provide a facility to train and test individual Soldiers on the skills necessary to engage targets with an M203/320 grenade launcher. M203/320 qualification requires engaging targets through windows and into bunkers, which are simulated by wooden facades. M203/320 qualification is done with training practice-tracer (TP-T) rounds, which are non-explosive and not dud-producing.

Specifically, the proposed action would involve: 1) improvement of an existing access road for construction; 2) clearing of approximately 75 acres of mesquite (*Prosopis glandulosa*) dominated dunes; 3) placement of supporting buildings and targets; 4) construction of perimeter fencing and security lighting; 5) having range availability for up to 365 days a year and 24 hours a day.

The purpose of the proposed action is to provide close-in, year-round, comprehensive and realistic training and range facilities for Soldiers in basic marksmanship skills with the machine gun and grenade launcher. These training facilities will be used by the Active Component Soldiers assigned to units on the installation and Reserve Component Soldiers that habitually train or are mobilizing at the installation. Both ranges would meet critical live-fire individual marksmanship training needs for both Active and Reserve Component Units that train on the installation.

We are requesting input regarding potential effects on the environment regarding this Proposed Action. If you have any questions or would like to discuss the project in more detail during the preparation of the EA, please contact Dr. John Kipp, NEPA Planner, phone number (915) 568-5162.

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Vicki G. Hamilton, R.A.  
Chief, Environmental Division  
Directorate of Public Works



REPLY TO  
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US ARMY INSTALLATION MANAGEMENT COMMAND  
HEADQUARTERS, UNITED STATES ARMY GARRISON, FORT BLISS  
1 PERSHING ROAD  
FORT BLISS, TEXAS 79916-3803

November 30, 2011

Environmental Division

Mr. Adam Zerrenner  
Supervisor  
Austin Ecological Services Field Office  
U.S. Fish and Wildlife Service  
10711 Burnet Road, Suite 200  
Austin, TX 78758

Dear Mr. Zerrenner:

Department of the Army – Installation Management Command (IMCOM) is preparing the Environmental Assessment (EA) for Construction and Training Use of a Multi-purpose Machine Gun Range (Range K) and a Grenade Launcher Range (Range L), Fort Bliss, Texas. The proposed ranges would be located in South Training Area 1B, adjacent to the Rod and Gun Club, northeast of Loop 375 and Cantonment Area 9 (See Attachment A). Range K would facilitate the familiarization and qualification of Soldiers on the skills necessary to identify and engage with a machine gun, and defeat stationary infantry targets. Range K would be a multi-purpose familiarization and qualification range that would accommodate all calibers of machine gun in the current Army arsenal up to and including the .50 caliber. Range L would provide a facility to train and test individual Soldiers on the skills necessary to engage targets with an M203/320 grenade launcher. M203/320 qualification requires engaging targets through windows and into bunkers, which are simulated by wooden facades. M203/320 qualification is done with training practice-tracer (TP-T) rounds, which are non-explosive and not dud-producing.

Specifically, the proposed action would involve: 1) improvement of an existing access road for construction; 2) clearing of approximately 75 acres of mesquite (*Prosopis glandulosa*) dominated dunes; 3) placement of supporting buildings and targets; 4) construction of perimeter fencing and security lighting; 5) having range availability for up to 365 days a year and 24 hours a day.

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We are requesting input regarding potential effects on the environment regarding this Proposed Action. If you have any questions or would like to discuss the project in more detail during the preparation of the EA, please contact Dr. John Kipp, NEPA Planner, phone number (915) 568-5162.

Sincerely,

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Vicki G. Hamilton, R.A.  
Chief, Environmental Division  
Directorate of Public Works

**APPENDIX B**  
**AIR EMISSIONS CALCULATIONS**

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CALCULATION SHEET-COMBUSTION EMISSIONS-CONSTRUCTION

Assumptions for Combustion Emissions						
Type of Construction Equipment	Num. of Units	HP Rated	Hrs/day	Days/yr	Total hp-hrs	
Water Truck	1	300	8	130	312000	
Diesel Road Compactors	1	100	8	15	12000	
Diesel Dump Truck	3	300	8	60	432000	
Diesel Excavator	1	300	8	15	36000	
Diesel Hole Trenchers	0	175	8	0	0	
Diesel Bore/Drill Rigs	0	300	8	0	0	
Diesel Cement & Mortar Mixers	1	300	8	60	144000	
Diesel Cranes	0	175	8	0	0	
Diesel Graders	1	300	8	60	144000	
Diesel Tractors/Loaders/Backhoes	1	100	8	60	48000	
Diesel Bulldozers	1	300	8	60	144000	
Diesel Front-End Loaders	1	300	8	60	144000	
Diesel Forklifts	1	100	8	130	104000	
Diesel Generator Set	1	40	8	130	41600	

Emission Factors							
Type of Construction Equipment	VOC g/hp-hr	CO g/hp-hr	NOx g/hp-hr	PM-10 g/hp-hr	PM-2.5 g/hp-hr	SO2 g/hp-hr	CO2 g/hp-hr
Water Truck	0.440	2.070	5.490	0.410	0.400	0.740	536.000
Diesel Road Compactors	0.370	1.480	4.900	0.340	0.330	0.740	536.200
Diesel Dump Truck	0.440	2.070	5.490	0.410	0.400	0.740	536.000
Diesel Excavator	0.340	1.300	4.600	0.320	0.310	0.740	536.300
Diesel Trenchers	0.510	2.440	5.810	0.460	0.440	0.740	535.800
Diesel Bore/Drill Rigs	0.600	2.290	7.150	0.500	0.490	0.730	529.700
Diesel Cement & Mortar Mixers	0.610	2.320	7.280	0.480	0.470	0.730	529.700
Diesel Cranes	0.440	1.300	5.720	0.340	0.330	0.730	530.200
Diesel Graders	0.350	1.360	4.730	0.330	0.320	0.740	536.300
Diesel Tractors/Loaders/Backhoes	1.850	8.210	7.220	1.370	1.330	0.950	691.100
Diesel Bulldozers	0.360	1.380	4.760	0.330	0.320	0.740	536.300
Diesel Front-End Loaders	0.380	1.550	5.000	0.350	0.340	0.740	536.200
Diesel Forklifts	1.980	7.760	8.560	1.390	1.350	0.950	690.800
Diesel Generator Set	1.210	3.760	5.970	0.730	0.710	0.810	587.300

CALCULATION SHEET-COMBUSTION EMISSIONS-CONSTRUCTION

Emission factors (EF) were generated from the NONROAD2005 model for the 2006 calendar year. The VOC EFs includes exhaust and evaporative emissions. The VOC evaporative components included in the NONROAD2005 model are diurnal, hotsoak, running loss, tank permeation, hose permeation, displacement, and spillage. The construction equipment age distribution in the NONROAD2005 model is based on the population in U.S. for the 2006 calendar year.

Emission Calculations									
Type of Construction Equipment	VOC tons/yr	CO tons/yr	NOx tons/yr	PM-10 tons/yr	PM-2.5 tons/yr	SO2 tons/yr	CO2 tons/yr		
Water Truck	0.151	0.712	1.888	0.141	0.138	0.254	184.290		
Diesel Road Paver	0.005	0.020	0.065	0.004	0.004	0.010	7.091		
Diesel Dump Truck	0.209	0.985	2.614	0.195	0.190	0.352	255.170		
Diesel Excavator	0.013	0.052	0.182	0.013	0.012	0.029	21.276		
Diesel Hole Cleaners/Trenchers	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
Diesel Bore/Drill Rigs	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
Diesel Cement & Mortar Mixers	0.097	0.368	1.155	0.076	0.075	0.116	84.057		
Diesel Cranes	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
Diesel Graders	0.056	0.216	0.751	0.052	0.051	0.117	85.104		
Diesel Tractors/Loaders/Backhoes	0.098	0.434	0.382	0.072	0.070	0.050	36.556		
Diesel Bulldozers	0.057	0.219	0.755	0.052	0.051	0.117	85.104		
Diesel Front-End Loaders	0.060	0.246	0.793	0.056	0.054	0.117	85.089		
Diesel Aerial Lifts	0.227	0.889	0.981	0.159	0.155	0.109	79.171		
Diesel Generator Set	0.055	0.172	0.274	0.033	0.033	0.037	26.924		
<b>Total Emissions</b>	<b>1.029</b>	<b>4.313</b>	<b>9.840</b>	<b>0.855</b>	<b>0.832</b>	<b>1.310</b>	<b>949.832</b>		

Conversion factors	
Grams to tons	1.102E-06

CALCULATION SHEET-TRANSPORTATION COMBUSTION EMISSIONS-CONSTRUCTION

Construction Worker Personal Vehicle Commuting to Construction Site-Passenger and Light Duty Trucks									
Pollutants	Emission Factors			Assumptions			Results by Pollutant		
	Passenger Cars g/mile	Pick-up Trucks, SUVs g/mile	Mile/day	Day/yr	Number of cars	Number of trucks	Total Emissions Cars tns/yr	Total Emissions Trucks tns/yr	Total tns/yr
VOCs	1	1.61	130	130	15	15	0.28	0.45	0.73
CO	3	15.7	130	130	15	15	0.84	4.39	5.22
NOx	0.95	1.22	130	130	15	15	0.27	0.34	0.61
PM-10	0	0.0065	130	130	15	15	-	0.00	0.00
PM 2.5	0	0.006	130	130	15	15	-	0.00	0.00
CO2	369	511	130	130	15	15	103.08	142.75	245.83

0

Heavy Duty Trucks Delivery Supply Trucks to Construction Site									
Pollutants	Emission Factors			Assumptions			Results by Pollutant		
	10,000-19,500 lb Delivery Truck (g/m)	33,000-60,000 lb semi trailer rig (g/m)	Mile/day	Mile/day	Number of trucks	Number of trucks	Total Emissions Cars tns/yr	Total Emissions Trucks tns/yr	Total tns/yr
VOCs	0.29	0.55	130	130	2	2	0.01	0.02	0.03
CO	1	3.21	130	130	2	2	0.04	0.12	0.16
NOx	1	12.6	130	130	2	2	0.04	0.47	0.51
PM-10	0.12	0.33	130	130	2	2	0.00	0.01	0.02
PM 2.5	0.13	0.36	130	130	2	2	0.00	0.01	0.02
CO2	536	536	130	130	2	2	19.96	19.96	39.93

Daily Commute New Staff Associated with Proposed Action

Pollutants	Emission Factors			Assumptions			Results by Pollutant		
	Passenger Cars g/mile	Pick-up Trucks, SUVs g/mile	Mile/day	Day/yr	Number of Cars	Number of trucks	Total Emissions cars tns/yr	Total Emissions Trucks tns/yr	Total tns/yr
VOCs	1.36	1.61	300	20	0	0	-	0.00	-
CO	12.4	15.7	300	20	0	0	-	0.00	-
NOx	0.95	1.22	300	20	0	0	-	0.00	-
PM-10	0.0052	0.0065	300	20	0	0	-	0.00	-
PM 2.5	0.0049	0.006	300	20	0	0	-	0.00	-
CO2	369	511	300	20	0	0	-	0.00	-

Truck Emission Factor Source: MOBILE6.2 USEPA 2005 Emission Facts: Average annual emissions and fuel consumption for gasoline-fueled passenger cars and light trucks. EPA 420-F-05-022 August 2005. Emission rates were generated using MOBILE.6 highway.

CALCULATION SHEET-TRANSPORTATION COMBUSTION EMISSIONS-CONSTRUCTION

Conversion factor: gms to tons	
	0.000001102

Carbon Equivalents	Conversion Factor
N2O or NOx	311
Methane or VOCs	25

Source: EPA 2010 Reference, Tables and Conversions, Inventory of U.S. Greenhouse Gas Emissions and Sinks; <http://www.epa.gov/climatechange/emissions/usinventoryreport.html>

**CARBON EQUIVALENTS**

Construction Commuters	Conversion	Emissions CO2 tons/yr	Total CO2
VOCs	25	18.23	
NOx	311	0.61	
Total		18.83	264.67

Delivery Trucks	Conversion	Emissions CO2 tons/yr	Total CO2
VOCs	25	0.78	
NOx	311	157.54	
Total		158.32	198.25

Kirtland AFB staff and Students	Conversion	Emissions CO2 tons/yr	Total CO2
VOCs	25	-	
NOx	311	-	
Total		-	-

CALCULATION SHEET-FUGITIVE DUST-CONSTRUCTION

**Construction Fugitive Dust Emissions**

Construction Fugitive Dust Emission Factors		Units	Source
General Construction Activities	1	3 ton PM10/acre-month	MRI 1996; EPA 2001; E
New Road Construction	0	0.42 ton PM10/acre-month	MRI 1996; EPA 2001; EPA 2006
<b>PM2.5 Emissions</b>	0		
PM2.5 Multiplier	0	0.10 (10% of PM10 emissions assumed to be PM2.5)	EPA 2001; EPA 2006
<b>Control Efficiency</b>	0	0.50 (assume 50% control efficiency for PM10 and PM2.5 emissions)	EPA 2001; EPA 2006

Construction Area (0.19 ton PM10/acre)		Conversion Factors
Duration of Soil Disturbance in Project	1 months	0.000022957 acres per feet
Length	0 miles	5280 feet per mile
Length (converted)	0 feet	
Width	0 feet	
Area	25.00 acres	

Staging Areas		Project Assumptions
Duration of Construction Project	6 months	60
Length	0 miles	
Length (converted)	0 feet	
Width	0 feet	
Area	2.00 acres	

	Project Emissions (tons/year)		
	PM10 uncontrolled	PM10 controlled	PM2.5 controlled
Construction Area (0.19 ton PM10/acre)	75.00	37.50	7.50
Staging Areas	6.00	3.00	0.60
<b>Total</b>	<b>81.00</b>	<b>40.50</b>	<b>8.10</b>
			<b>4.05</b>

**References:**  
 EPA 2001. *Procedures Document for National Emissions Inventory, Criteria Air Pollutants, 1985-1999*. EPA-454/R-01-006. Office of Air Quality Planning and Standards, United States Environmental Protection Agency. March 2001.  
 EPA 2006. *Documentation for the Final 2002 Nonpoint Sector (Feb 06 version) National Emission Inventory for Criteria and Hazardous Air Pollutants*. Prepared for: Emissions Inventory and Analysis Group (C339-02) Air Quality Assessment Division Office of Air Quality Planning and Standards, United States Environmental Protection Agency. July 2006.  
 MRI 1996. *Improvement of Specific Emission Factors (BACM Project No. 1)*. Midwest Research Institute (MRI). Prepared for the California South Coast Air Quality Management District, March 29, 1996.

## Construction Fugitive Dust Emission Factors

### General Construction Activities Emission Factor

#### 1 ton PM10/acre-month Source: MRI 1996; USEPA 2001; USEPA 2006

The area-based emission factor for construction activities is based on a study completed by the Midwest Research Institute (MRI) Improvement of Specific Emission Factors (BACM Project No. 1), March 29, 1996. The MRI study evaluated seven construction projects in Nevada and California (Las Vegas, Coachella Valley, South Coast Air Basin, and the San Joaquin Valley). The study determined an average emission factor of 0.11 ton PM10/acre-month for sites without large-scale cut/fill operations. A worst-case emission factor of 0.42 ton PM10/acre-month was calculated for sites with active large-scale earth moving operations. The monthly emission factors are based on 168 work-hours per month (MRI 1996). A subsequent MRI Report in 1999, Estimating Particulate Matter Emissions from Construction Operations, calculated the 0.19 ton PM10/acre-month emission factor by applying 25% of the large-scale earthmoving emission factor (0.42 ton PM10/acre-month) and 75% of the average emission factor (0.11 ton PM10/acre-month).

The 0.19 ton PM10/acre-month emission factor is referenced by the USEPA for non-residential construction activities in recent procedures documents for the National Emission Inventory (USEPA 2001; USEPA 2006). The 0.19 ton PM10/acre-month emission factor represents a refinement of USEPA's original AP-42 area-based total suspended particle (TSP) emission factor in Section 13.2.3 Heavy Construction Operations. In addition to the USEPA, this methodology is also supported by the South Coast Air Quality Management District and the Western Regional Air Partnership (WRAP) which is funded by the USEPA and is administered jointly by the Western Governor's Association and the National Tribal Environmental Council. The emission factor is assumed to encompass a variety of non-residential construction activities including building construction (commercial, industrial, institutional, governmental), public works, and travel on un paved roads. The USEPA National Emission Inventory documentation assumes that the emission factors are uncontrolled and recommends a control efficiency of 50% for PM10 and PM2.5 in PM nonattainment areas.

#### New Road Construction Emission Factor 0

0

#### 0 ton PM10/acre-month Source: MRI 1996; USE

The emission factor for new road construction is based on the worst-case conditions emission factor from the MRI 1996 study described above (0.42 tons PM10/acre-month). It is assumed that road construction involves extensive earthmoving and heavy construction vehicle travel resulting in emissions that are higher than other general construction projects. The 0.42 ton PM10/acre-month emission factor for road construction is referenced in recent procedures documents for the USEPA National Emission Inventory (USEPA 2001; USEPA 2006).

0

#### PM2.5 Multiplier

0.10

60

PM2.5 emissions are estimated by applying a particle size multiplier of 0.10 to PM10 emissions. This methodology is consistent with the procedures documents for the National Emission Inventory (USEPA 2006).

#### Control Efficiency for PM10 and PM2.5 0.50

60

The USEPA National Emission Inventory documentation recommends a control efficiency of 50% for PM10 and PM2.5 in PM nonattainment areas. Wetting controls will be applied during project construction (USEPA 2006).

1

#### References:

USEPA 2001. *Procedures Document for National Emissions Inventory, Criteria Air Pollutants, 1985-1999*. USEPA-454/R-01-006. Office of Air Quality Planning and Standards, United States Environmental Protection Agency. March 2001.  
USEPA 2006. *Documentation for the Final 2002 Nonpoint Sector (Feb 06 version) National Emission Inventory for Criteria and Hazardous Air Pollutants*. Prepared for: Emissions Inventory and Analysis Group (C339-02) Air Quality Assessment Division Office of Air Quality Planning and Standards, United States Environmental Protection Agency. July 2006.  
MRI 1996. *Improvement of Specific Emission Factors (BACM Project No. 1)*. Midwest Research Institute (MRI). Prepared for the California South Coast Air Quality Management District, March 29, 1996.

CALCULATION SHEET-SUMMARY OF EMISSIONS

Construction Emissions for Criteria Pollutants (tons per year)										
Emission Source	VOC	CO	NOx	PM-10	PM-2.5	SO2	CO2	CO2 Equivalents	Total CO2	
Combustion Emissions	1.03	4.31	9.84	0.86	0.83	1.31	949.83	3085.89	4035.72	
Construction Site-Fugitive PM-10	1.00	NA	NA	40.50	4.05	NA	NA	NA	NA	
Construction Workers Commuter & Trucking	3.00	5.38	1.11	0.02	0.02	NA	245.83	421.07	666.91	
<b>Total emissions-CONSTRUCTION</b>	<b>5.03</b>	<b>9.69</b>	<b>10.95</b>	<b>41.37</b>	<b>4.90</b>	<b>1.31</b>	<b>1196</b>	<b>3507</b>	<b>4,702.63</b>	
De minimis Threshold (1)	100	100	100	60	100	100	NA	NA	25,000	

1. El Paso County is in attainment for all NAQQS

Carbon Equivalents	Conversion Factor
N2O or NOx	311
Methane or VOCs	25

Source: USEPA 2010 Reference, Tables and Conversions, Inventory of U.S. Greenhouse Gas Emissions and Sinks; <http://www.epa.gov/climatechange/emissions/usinventoryreport.html>

