El Paso Community College
East Fort Bliss Campus
Draft Environmental Assessment

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Prepared for:

El Paso Community College
P.O. Box 20500
El Paso, TX 79998

Consultant:

CEA Group
Castner Center @ Transmountain
4712 Woodrow Bean, Suite F, El Paso, TX 79924

Prepared by:

Potomac-Hudson Engineering, Inc.
7830 Old Georgetown Road, Suite 220
Bethesda, MD 20814

EL PASO COMMUNITY COLLEGE EAST FORT BLISS CAMPUS ENVIRONMENTAL ASSESSMENT

FORT BLISS, TEXAS

APPROVED BY:

Joseph A. Simonelli, Jr.
Colonel, U.S. Army
Commanding
Fort Bliss, Texas

7 Sep 10
Date

Dr. Richard M. Rhodes
President
El Paso Community College

AUG 2 0 2010
Date

REVIEWED BY:

Vicki Hamilton, R.A.
Chief, DPW–Environmental Division
Fort Bliss, Texas

23 August 2010
Date

REVIEWED BY:

Alfredo J. Riera, P.E.
Director of Public Works
Fort Bliss, TX

8/26/10
Date

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LIST OF ACRONYMS

AAF	Army Air Field
ACHP	Advisory Council on Historic Preservation
ACM	asbestos containing material
ADNL	A-weighted day-night average sound levels
AQCR	Air-Quality Control Region
AST	aboveground storage tank
BCT	Brigade Combat Teams
BMP	best management practice
BRAC	Base Realignment and Closure
CAA	Clean Air Act
CAB	Combat Aviation Brigade
CDNL	C-weighted day-night average sound levels
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CO	Carbon monoxide
dB	decibel
dBA	A-weighted decibel scale
dBC	C-weighted decibel scale
dBP	Peak Level decibel
DCA	Directorate of Community Activities
DNL	Day-Night Sound Level
DOC	Directorate of Contracting
DPW	Directorate of Public Works
DRM	Directorate of Resource Management
DRMO	Defense Reutilization and Marketing Office
EA	Environmental Assessment
ECP	Environmental Condition of Property
EIS	Environmental Impact Statement
EO	Executive Order
EPA	Environmental Protection Agency
EPCC	El Paso Community College
EPCRA	Emergency Planning and Community Right-to-Know Act
EPEC	El Paso Electric Company
EPNG	El Paso Natural Gas Company
EPWU	El Paso Water Utilities
ESA	Endangered Species Act of 1973
ITE	Institute of Transportation Engineers
FAA	Federal Aviation Administration
FNSI	Finding of No Significant Impact

GIS	geographic information system
GTA	Grow the Army
HAP	hazardous air pollution
HWMP	Hazardous Waste Management Plan
HWSF	hazardous waste storage facility
I	Interstate Highway
IAP	Installation Action Plan
ICRMP	Integrated Cultural Resources Management Plan
ICT	Integrated Concept Team
ICUZ	Installation Compatible Use Zone
INRMP	Integrated Natural Resources Management Plan
ISWM	Integrated Solid Waste Management
Kv	kilovolt
LBP	Lead-based paint
L_{eq}	equivalent sound level
LOS	level of service
LQG	Large Quantity Generator
MBTA	Migratory Bird Treaty Act
MCL	maximum contaminant level
MEC	munitions and explosives of concern
MGD	million gallons per day
MMRP	Military Munitions Response Program
MSDS	Material Safety Data Sheets
MSAT	Mobile Source Air Toxics
MW	megawatt
MWh	megawatt hour
NAAQS	National Ambient Air Quality Standards
NEIC	National Earthquake Information Center
NEPA	National Environmental Policy Act of 1969
NESHAP	National Emission Standards for Hazardous Air Pollutants
NHPA	National Historic Preservation Act
NOI	Notice of Intent
NO_x	Nitrogen oxide
NRCS	Natural Resource Conservation Service
NRHP	National Register of Historic Places
NSPS	New Source Performance Standards
NSR	new source review
O_3	ozone
OSHA	Occupational Safety and Health Administration
P2	Pollution Prevention
PA	Programmatic Agreement
Pb	lead

PCB	polychlorinated biphenyl
PM_{10}	particulate matter of diameter 10 microns or less
$PM_{2.5}$	particulate matter of diameter 2.5 microns or less
ppm	parts per million
POL	petroleum, oils and lubricants
PSD	prevention of significant deterioration
QSD	Quantity Safety Distance
RCI	Residential Community Initiative
RCRA	Resource Conservation and Recovery Act
RGMP	Regional Growth Management Plan
ROI	region of influence
RONA	Record of Nonapplicability
RPMP	Real Property Master Plan
SBE	Sustainment Brigade Equivalent
SEIS	Supplemental Environmental Impact Statement
SHPO	State Historic Preservation Officers
SO_2	sulfur dioxide
SPL	sound pressure levels
SWMP	Stormwater Management Plan
SWMU	solid waste management unit
TA	training area
TAC	Texas Administrative Code
TCEQ	Texas Commission on Environmental Quality
tpd	tons per day
TPWD	Texas Parks & Wildlife Department
tpy	tons per year
TRB	Transportation Research Board
TSCA	Toxic Substances Control Act
TSD	Treatment, Storage, and Disposal
U.S.	United States
USC	United States Code
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UST	underground storage tank
UXO	unexploded ordnance
VEC	valued environmental concern
VOC	volatile organic compound
WBAMC	William Beaumont Army Medical Center
WRPA	Texas Waste Reduction Policy Act
µg/m3	micrograms per cubic meter (µg/m3)

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1.0 PURPOSE AND NEED FOR THE PROPOSED ACTION

1.1 Introduction

This Environmental Assessment (EA) describes and analyzes the potential environmental consequences associated with the Proposed Action, which involves the construction of an East Fort Bliss Campus for El Paso Community College (EPCC) on an approximate 200-acre parcel of undeveloped land on U.S. Army Garrison Fort Bliss (Fort Bliss) property, in El Paso, Texas. The Proposed Action within this EA is referred to as the "proposed East Fort Bliss Campus." This EA has been prepared in accordance with the National Environmental Policy Act of 1969 (NEPA) (42 United States [U.S.] Code 4321 et seq.), Council on Environmental Quality (CEQ) Regulations 40 Code of Federal Regulations (CFR) Parts 1500-1508, 32 CFR Part 651, *Environmental Analysis of Army Actions*, and the *NEPA Analysis Guidance Manual*. Land use changes to accommodate the development of facilities in the area of the proposed alternative (formerly training areas) were analyzed in the *Fort Bliss, Texas and New Mexico Mission and Master Plan Final Supplemental Programmatic Environmental Impact Statement* (SEIS), for which a Record of Decision (ROD) was signed on 30 April 2007. This EA therefore incorporates the SEIS by reference, which can be reviewed at https://www.bliss.army.mil/.

EPCC has a long and honored history with the military in El Paso and currently enrolls over 1,000 Veterans and dependents every semester. The EPCC opened its doors to the public in 1971, enrolling 901 students in September of that year. By Fall 1972, day classes started in buildings leased from the U.S. Army at Logan Heights on Fort Bliss. This first "campus" allowed for the standardization of instruction at one location and the consolidation of administrative facilities to support the expanding enrollment, which had grown to 5,041 students by Fall 1973. The Rio Grande Campus, located in downtown El Paso, was added in 1974, followed by the addition of the Valle Verde Campus in 1978 and the Transmountain Campus in 1979. By 1981, enrollment had reached 10,341 students, which further increased to more than 19,000 credit and 7,500 non-credit students by 1993. In 1994, EPCC finished the construction of a new Northwest Campus located in the upper valley of El Paso County and the Mission del Paso campus serving the Eastside/Lower Valley area of El Paso County opened in the Spring of 1998. These campuses reflected the need for educational opportunities on the expanding populations on the westside and eastside of El Paso County. Currently, EPCC serves over 20,000 credit students and 8,000 continuing education students each semester (EPCC, 2010).

The approximate 200 acre parcel would be conveyed via a long-term lease between Fort Bliss and EPCC for the construction and operation of a new EPCC East Fort Bliss Campus. The addition of the proposed new East Fort Bliss Campus would support continued growth of the college and would strengthen services offered to Fort Bliss military, dependants, and the general public living to the east of El Paso. Figure 1-1 presents a map of the Fort Bliss installation and the proposed campus sites in relation to the surrounding El Paso region. Figure 1-2 highlights the proposed approximate 200-acre parcel of land east of the Fort Bliss Main Post area and El Paso International Airport.

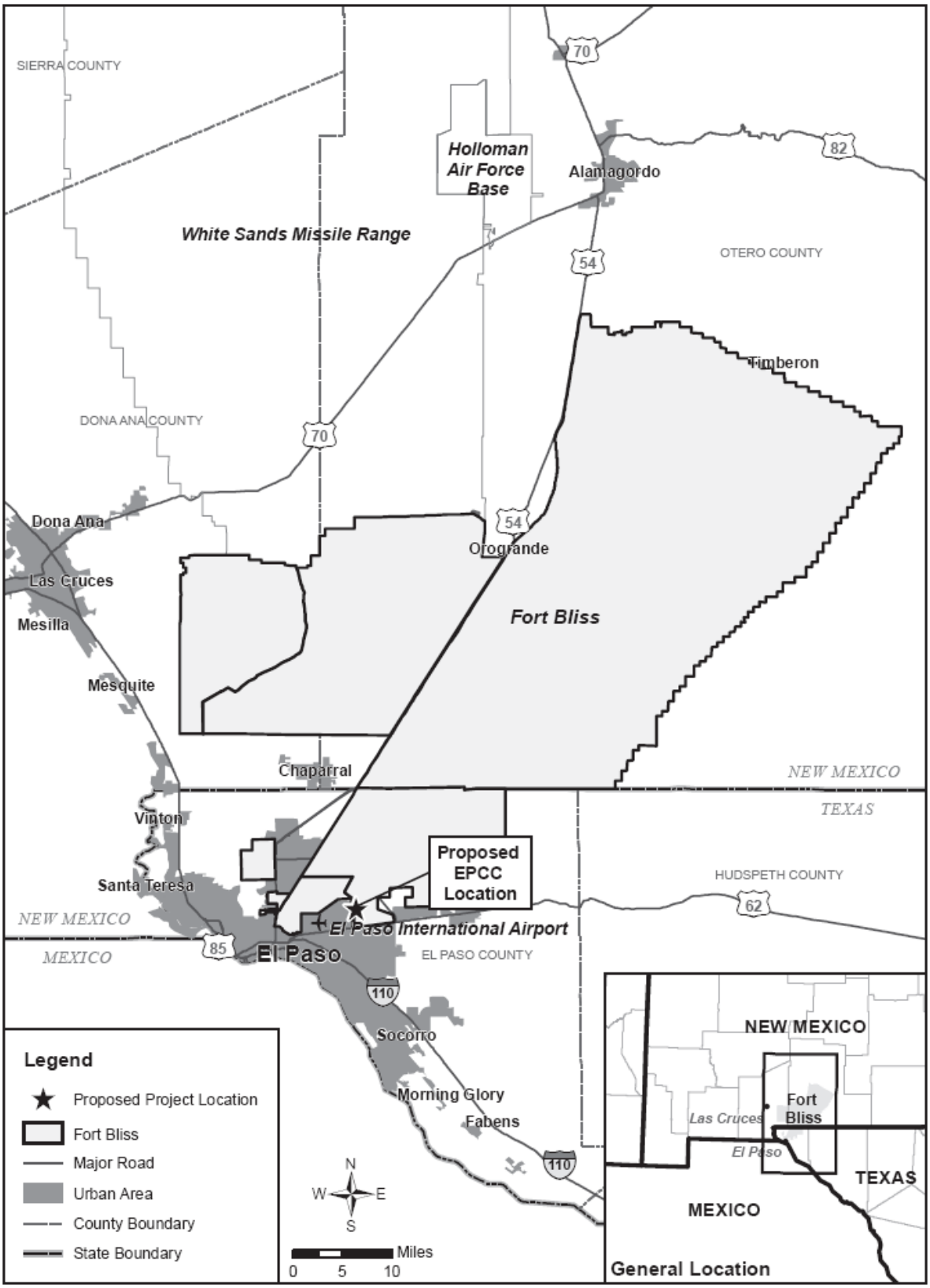

Figure 1-1. Regional Location

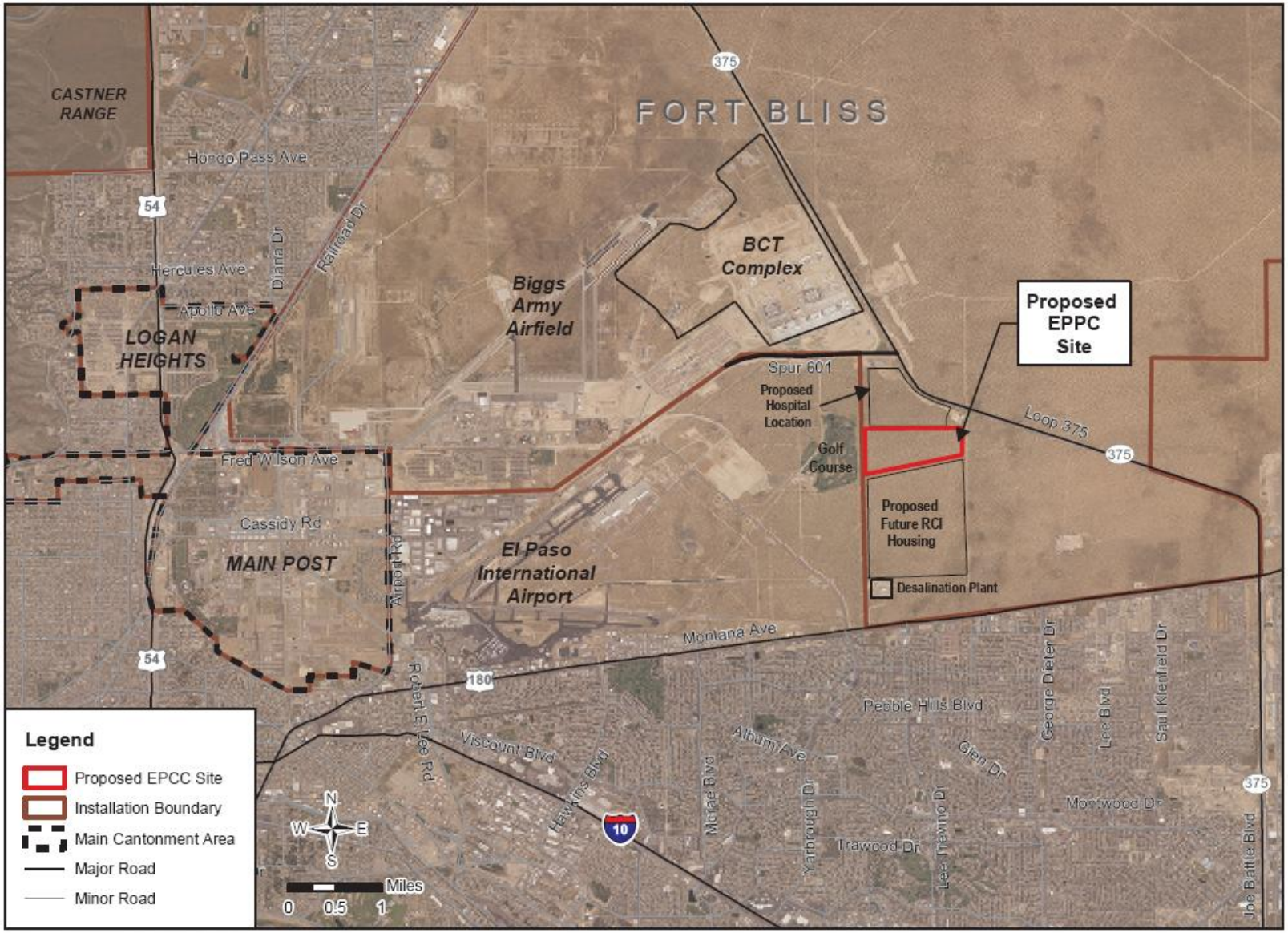

Figure 1-2. Project Location

1.2 Purpose and Need

The purpose of the Proposed Action is to provide higher educational opportunities for active duty military and their dependents by building a new campus on Fort Bliss property. The campus would serve the need for educational opportunities for the growing Fort Bliss population of approximately 30,300 military personnel and 3,800 civilian personnel, resulting from Army stationing, Base Realignment and Closure (BRAC), and Grow the Army (GTA) initiatives (U.S. Army, 2009). The campus would provide convenient access for active duty military and their dependents and provide capacity to better serve the additional troops expected to come to Ft. Bliss. The new campus would also serve the general public, which would provide convenient access for EPCC students located on the eastside of El Paso. The location of the proposed campus on Fort Bliss land would make the proposed campus economically feasible as the land would be leased to EPCC through a long-term lease.

1.3 Decisions to be Supported

At the conclusion of the NEPA process, the Commander of U.S. Army Garrison Fort Bliss would make a decision whether to proceed with the Proposed Action. Technical, economic, environmental, and social issues, and the Proposed Action's ability to meet the purpose and need for the project, will be taken into consideration. The decision will be documented either in a Finding of No Significant Impact (FNSI) or in a Notice of Intent (NOI) to prepare an Environmental Impact Statement. If the decision is reached to issue a FNSI, the Army may construct the Proposed Action consistent with the EA. If specific future project components change and it is determined that they cannot be appropriately tiered from this document, a separate environmental analysis would be conducted for those components.

1.4 Related Environmental Documentation

The following documents guide the management of environmental resources at Fort Bliss. These documents were reviewed for guidance and information relevant to the EPCC East Fort Bliss Campus EA.

1.4.1 Draft Fort Bliss Army Growth and Force Structure Realignment Environmental Impact Statement

Fort Bliss is currently preparing an Environmental Impact Statement (EIS) that analyzes implementation of Fort Bliss land use changes and training infrastructure improvements to support the GTA stationing decision. Units considered in the stationing decision include three types of brigade combat teams (BCTs),Heavy BCTs, Infantry BCTs, and Stryker BCTs along with the required support from Artillery (Fires) Brigades, Sustainment Brigade Equivalents (SBEs), and Combat Aviation Brigades (CABs) (U.S. Army, 2009). As the EIS document has not been finalized, this action is still waiting on a ROD, which will select an alternative for implementation.

1.4.2 Draft William Beaumont Army Medical Center Replacement Environmental Assessment

U.S. Army Medical Command is currently preparing a Draft EA for the William Beaumont Army Medical Center (WBAMC) Replacement. The proposed facility would replace the existing WBAMC and is planned for an approximate 200-acre parcel located directly north of the proposed location for the EPCC East Fort Bliss Campus.

1.4.3 Real Property Master Plan

In 2006, several components of the *Fort Bliss Real Property Master Plan* (RPMP) were released (USACE, 2006a). In an effort to direct future construction at Fort Bliss, the RPMP included a Long Range Component, a Capital Investment Strategy/Short Range Component, and an Installation Design Guide. Guiding principles of the RPMP were considered where relevant to the Proposed Action in this EA.

1.4.4 Integrated Natural Resources Management Plan

The *Integrated Natural Resources Management Plan* (INRMP) guides the implementation of a natural resources program at Fort Bliss to ensure that the installation complies with applicable environmental laws and regulations (U.S. Army, 2001a). The INRMP describes the procedures and best management practices (BMPs) used at Fort Bliss to ensure that impacts to the environment from construction, training and operational activities are reduced. EPCC would adhere to measures to protect the natural environment outlined within the INRMP during construction and operations of the campus.

1.4.5 Integrated Cultural Resources Management Plan

The *Integrated Cultural Resources Management Plan* (ICRMP) provides an overview of the archaeological and architectural history of Fort Bliss, and presents the management procedures for archaeological sites, traditional cultural properties, and structures eligible for the National Register of Historic Places (NRHP). The ICRMP (U.S. Army, 2008c) assists Fort Bliss in its efforts to comply with Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended. EPCC would adhere to measures to protect the cultural environment outlined within the ICRMP during construction and operations of the campus.

1.4.6 Stormwater Management Plan

The *Stormwater Management Plan* (SWMP) was created to satisfy the regulatory requirements for a Texas stormwater permit (U.S. Army, 2007b). The SWMP identifies several storm drainage system areas at Fort Bliss, and outlines the BMPs used at the installation to prevent excessive runoff into the storm sewer system. EPCC would adhere to measures to satisfy the regulatory requirements for a Texas stormwater permit as outlined in the SWMP.

1.5 Interagency Coordination

Coordination with the State Historic Preservation Officers (SHPO) of Texas and New Mexico regarding the proposed campus on Fort Bliss was conducted in accordance with the ICRMP and a Programmatic Agreement (PA) executed by these parties, the Advisory Council on Historic Preservation (ACHP), and the Army. This Draft EA has been submitted to the Texas SHPO to comply with Section 106 in accordance with the PA. The potential for cultural resource impacts is discussed in Section 3.10.

This Draft EA was also provided to the U.S. Fish and Wildlife Service (USFWS) and the Texas Department of Parks and Wildlife (TDPW) to comply with Section 7 of the Endangered Species Act (ESA). The potential for sensitive species is discussed in Section 3.6.1.3.

Due to the proximity of the proposed East Fort Bliss Campus site to El Paso International Airport, EPCC will also coordinate with the Federal Aviation Administration (FAA) regarding the design of the campus, including the design of stormwater management and any onsite permanent water features (see Chapter 4).

1.6 Public Review Process

A 30-day public review period will be conducted on the Draft EA. EPCC published announcements in the El Paso Times (September 19, 2010) and in the Fort Bliss Monitor (September 23, 2010) regarding the availability of the Draft EA, the duration of the public comment period, and how to obtain information about the Draft EA and provide comments. Copies of the Draft EA have been placed at the following libraries in El Paso: Richard Burges Regional Library, 9600 Dyer Street; the Irving Schwartz Branch Library, 1865 Dean Martin Drive; the Clardy Fox Branch Library, 5515 Robert Alva Avenue; and the Doris van Doren Regional Branch Library, 551 Redd Road, UTEP Library 500 W. University Avenue. It can also be reviewed from Fort Bliss's web page at the following URL address: https://www.bliss.army.mil.

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2.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

Chapter 2 describes the alternatives for meeting the purpose and need of the Proposed Action. This chapter also discusses the site selection and alternatives screening process.

2.1 Description of the No Action Alternative

The No Action Alternative provides the baseline environmental conditions for comparison with the impacts of the Proposed Action in satisfaction of CEQ NEPA regulations. Under the No Action Alternative, the proposed East Fort Bliss Campus would not be constructed and active duty military and their dependents as well as the general public would continue to attend the existing five campuses located throughout El Paso. This status quo alternative would not support the expected increase in demand on higher education, because the existing campuses are not capable of handling the increased capacity. Nor would this alternative provide a more centralized campus location to serve the anticipated growth of military population and the continuing growth of El Paso population in areas to the east of El Paso.

2.2 Description of the Proposed Action Alternative

As described in Section 1.1, the Proposed Action under consideration is the construction of the EPCC East Fort Bliss Campus within Fort Bliss. One parcel of land (approximately 200 acres) within Fort Bliss has been identified for the proposed campus. The parcel is located on undeveloped Fort Bliss land slated for development into Army Residential Community Initiative (RCI) housing (to the south) and the new WBAMC (which will replace the existing WBAMC) (to the north), located to the east of the public Butterfield Trail Golf Club, and to the west of Purple Heart Boulevard (Loop 375) and additional undeveloped Fort Bliss lands.

Under the Proposed Action, Fort Bliss would provide the approximate 200-acre site to EPCC, to build a new campus inside Fort Bliss property (see Figure 1-2). This location would meet the purpose and need (Section 1.2) through providing higher educational opportunities for active duty military and their dependents within the growing Fort Bliss population and would provide convenient access for EPCC students located on the eastside of El Paso.

Construction of the proposed campus would involve the following six stages: 1) Clearing and grubbing, which involves the removal of vegetation to prepare the site for grading; 2) Grading, which involves the use of equipment such as bulldozers for site preparation of facilities, and use of dump trucks for transporting excess earth within or from the site; 3) Placement of utility infrastructure such as water and wastewater lines, and electrical and communication lines; 4) Placement of pavement for building foundations, roads, and parking lots; 5) Construction of facilities, which involves the use of cranes and other heavy machinery for constructing multi-story instructional facilities; and 6) The removal of construction equipment and debris, and final site landscaping.

The proposed East Fort Bliss Campus would consist of an 80,000 square foot campus. The site layout has not yet been defined, nor have the buildings and structures been designed. Therefore, for the purposes of this EA, it is assumed that the entire site acreage would be disturbed in the process of constructing the campus and, when finally completed, the campus with associated infrastructure and landscaping would occupy the entire proposed East Fort Bliss Campus site. The construction of the EPCC is scheduled to commence in late 2010/early 2011 and be completed by Spring of 2012. Facilities planned within the site would include a landscaped campus with parking lots connected by new internal roadways. The campus would consist of classroom and training facilities and joint use (EPCC/Army) athletic fields. The City of El Paso has also contacted EPCC with an interest in constructing a fire and safety training facility as part of the proposed East Fort Bliss Campus, which would occupy approximately 35 to 50 acres of the approximate 200-acre site.

Maximum anticipated student enrollment within the proposed East Fort Bliss Campus would be approximately 3,500 students and the campus would employ approximately 80 faculty and 15 staff personnel. The hours of operation for the campus would be from 6:00 a.m. through 10:00 p.m., Monday through Friday. The Proposed Action would provide high quality educational opportunities to active duty military and their dependants in support of the Fort Bliss Mission while offering additional opportunities to the general public. The new campus would also better serve the ever growing population on the eastside of El Paso by providing a campus closer to their homes and work.

2.2.1 Alternative Site 1

Alternative 1 involves the construction of the EPCC East Fort Bliss Campus on the approximate 200-acre parcel of undeveloped land located within Fort Bliss (Figure 1-2). Figure 2-1 shows an image of the typical terrain and vegetative cover within the site. This alternative was determined to be the Preferred Alternative and is carried forward for further analysis within Chapter 3 of this EA as it met the purpose and need requirements described in Section 1.2. This site location would allow for convenient access for military duty and their dependents and would provide convenient access for EPCC students located on the eastside of El Paso.

Figure 2-1. Proposed Project Site for the East Fort Bliss Campus (viewed from the northwest corner of the site looking east)

2.3 Alternatives Considered and Dismissed

2.3.1 Alternative Site 2

Alternative 2 examined a site located on a 70-acre parcel of land on the northwest quadrant of the intersection of Montana Avenue and Lee Trevino Drive. Traffic on Montana Avenue is currently saturated and any additional traffic would impact the Level of Service (LOS) as shown in Table 2-1 (refer to Section 3.14 regarding LOS definitions). This intersection would not meet the City of El Paso's Subdivision Regulations because the LOS would be reduced and would increase roadway/intersection delay. One of the goals of the proposed East Fort Bliss Campus is to provide quick and easy access for students and faculty during their hours of operation, which is not possible with this location.

Table 2-1. 2009 AM and PM Peak Hour Level of Service

Direction	AM Peak		PM Peak	
	LOS	Delay (seconds)	LOS	Delay (seconds)
Eastbound	D	55	F	107
Northbound	F	96	D	45
Westbound	F	174	D	39
Southbound	C	34	C	30

Source: WHPacific, Inc., 2009

2.3.2 Alternative Site 3

Alternative 3 involved consideration of purchasing and constructing the proposed campus on a parcel of private land on the east side of El Paso. This alternative, however, would not accomplish the purpose and need of obtaining a lease to construct the proposed campus and, was therefore, dropped from further consideration.

2.3.3 Alternative Site 4

Alternative 4 considered expansion of the existing Valle Verde Campus, which is located approximately 6 miles from the proposed East Fort Bliss Campus. This alternative was dropped from further consideration as no available additional land area within the existing campus is large enough to accommodate the 80,000 square feet of proposed facilities and athletic fields that are part of the Proposed Action. Furthermore, the campus is surrounded by existing development and could not be expanded in footprint.

2.4 Summary of Environmental Consequences

This section summarizes the anticipated impacts to the Valued Environmental Components (VECs) on and surrounding Fort Bliss. Table 2-2 compares the potential for environmental consequences of the Proposed Action and No Action Alternative by VEC based on the analyses in Chapter 3. The qualitative terms used in the matrix are generally defined as:

- **None/Negligible** – No measurable impacts are expected to occur.
- **Minor** – Short-term but measurable adverse impacts are expected. Impacts may have slight impact on the resource.
- **Moderate** – Noticeable adverse impacts that would have a measurable effect on a resource and are not short term.
- **Severe** – Adverse impacts would be obvious; both short-term and long-term, and would have serious consequences on a resource. These impacts would be considered significant unless mitigable to a less-than-significant level.
- **Beneficial** – Impacts would benefit the resource/issue.

Table 2-2. Summary of Potential Environmental Effects for the Proposed Action and No Action Alternative

Resource/Issue	Alternatives	
	Proposed Action	No Action
Land Use	Negligible	None
Noise	Minor	None
Air Quality	Minor	None
Geology and Soils	Minor	None
Biological Resources		
Vegetation	Minor	None
Wildlife	Minor	None
Sensitive Species	Minor	None
Water Resources		
Surface Water	Minor	None
Groundwater	Minor	None
Federal Wetlands and Floodplains	None	None
Utilities		
Potable Water	Minor	None
Wastewater	Minor	None
Stormwater	Minor	None
Energy	Minor	None
Socioeconomics and Environmental Justice	Beneficial	None
Cultural Resources	Minor	None
Visual Quality/Aesthetics	Minor	None
Hazardous Materials and Waste	Minor	None
Human Health and Safety	Minor	None
Traffic and Transportation	Moderate[1]	None

[1]Note: The Proposed Action is anticipated to cause minor adverse impacts to traffic and transportation; however, cumulative impacts are anticipated to be moderate.

3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

This Chapter describes the impact assessment methodology, the affected environment (existing conditions), and the environmental consequences for the No Action Alternative and Proposed Action. The affected environment and associated environmental impacts have been determined using the criteria in the *Army NEPA Guidance Manual* 2007 (USAEC, 2007). Several resources were determined not to be affected by the Proposed Action; therefore, a detailed analysis of these topics is not presented in this Chapter (see Section 3.1.2).

3.1 Impact Assessment Methodology

3.1.1 Introduction and Description of Baseline Data and Sources

The following types of data were used to characterize the affected environment of the proposed East Fort Bliss Campus site:

- Geographical Information System (GIS): Utility and Ecoclasses data provided by Fort Bliss; Landcover data obtained from the U.S. Department of Agriculture (USDA).
- Aerial photography: 2008, USDA, National Agriculture Imagery Program.
- Regional and local studies: including Natural Resource Conservation Service (NRCS) Soil Surveys, environmental baseline surveys, previous NEPA documentation, noise studies, and traffic impact studies.
- Fort Bliss management plans including the INRMP, ICRMP, and SWMP.

A region of influence (ROI) was determined for each resource area and was based on the potential impacts to the affected resource. The ROI was generally limited to the specific proposed East Fort Bliss Campus site (the approximate 200-acre parcel) for the following VECs: geology and soils, biological resources, cultural resources, hazardous materials, and human health and safety, as these VECs are directly connected to specific existing conditions at the site and proposed uses at the site. For the remaining VECs, the ROI was generally expanded to include areas within and between the main cantonment area and South Training Areas, and the City of El Paso, Texas.

3.1.2 Approach for Analyzing Impacts

Context and intensity are taken into consideration in determining a potential impact's significance, as defined in 40 CFR Part 1508.27. The intensity of a potential impact refers to the impact's severity and includes consideration of beneficial and adverse impacts, the level of controversy associated with a project's impacts on human health, whether the action establishes a precedent for future actions with significant effects, the level of uncertainty about project impacts, or whether the action threatens to violate Federal, State, or local law requirements imposed for protection of the environment. In general, the following five categories were used to determine levels of impacts to resources analyzed within this EA:

- **None/Negligible** – No measurable impacts are expected to occur.
- **Minor** – Short-term but measurable adverse impacts are expected. Impacts may have slight impact on the resource.
- **Moderate** – Noticeable adverse impacts that would have a measurable effect on a resource and are not short-term.
- **Severe** – Adverse impacts would be obvious, both short-term and long-term, and would have serious consequences on a resource. These impacts would be considered significant.
- **Beneficial –** Impacts would benefit the resource/issue.

Impacts that range from none to moderate are considered insignificant. Significant adverse impacts would result from those impacts categorized as severe.

3.2 Land Use

3.2.1 Affected Environment

The land on the Fort Bliss installation consists primarily of undeveloped training areas (TAs) extending from just outside the cantonment in El Paso, Texas, up into New Mexico. The TAs are mostly surrounded by publicly-owned and undeveloped lands. The TAs are comprised of the McGregor Range (695,355 acres), the Dona Ana Range – North TA (295,538 acres), the South TA (92,170 acres), and the Castner Range (6,672 acres) (Fort Bliss, 2009). The developed main cantonment area is located next to the largely urban/suburban areas of the City and County of El Paso, Texas. The cantonment has a land area of 23,722 acres or less than 2 percent of the entire installation land area, and is divided into the following four planning areas: Main Post, proposed WBAMC, Logan Heights, and Biggs Army Air Field (AAF).

Fort Bliss is primarily surrounded by arid desert and mountains intermixed with intensively developed urban areas. To the southwest, urban development is concentrated around El Paso, Texas, and Ciudad Juárez, Mexico. To the northwest, urban development congregates along Interstate Highway 10 (I-10) and U.S. Highway 54, Patriot Freeway, which runs from El Paso northward to Alamogordo, New Mexico. The only other major urban area in the region is Las Cruces, New Mexico, located 44 miles northwest of El Paso.

Directly west and north of the cantonment, land use is a mix of residential and commercial, most of which is within the city limits of El Paso. The area consists principally of single- and multi-family housing units, along with a substantial amount of commercial activity along the western portions of U.S. Highway 54. The commercial development thins out on the northern portions of U.S. Highway 54. Small shops and stores catering to area residents are scattered throughout the vicinity. To the east of the Main Post lie El Paso International Airport and Butterfield Industrial Park. Most other land surrounding the airport is part of Fort Bliss, thereby limiting future civilian commercial development.

The proposed East Fort Bliss Campus site is located in the southern part of what is identified in the Fort Bliss RPMP as Area 1B of the South Training Area (USACE, 2006a). The site is a part of a parcel of land proposed for development into RCI housing to the south and a new WBAMC to the north. The Fort Bliss RPMP categorizes Area 1B as "Residential/Commercial" and an area of projected future expansion of the main cantonment area.

A public Golf Club, Butterfield Trail Golf Club, is located just west of the proposed East Fort Bliss Campus site. Purple Heart Boulevard (Loop 375) and additional undeveloped Fort Bliss lands are located east of the site. Loop 375 is a limited-access expressway that connects the eastern part of the City of El Paso with the northeastern areas and is intended to relieve traffic congestion in the Fort Bliss area. An El Paso Water Utilities (EPWU) water booster pump station is located adjacent to the northeast corner of the site.

Other land uses in the vicinity of the proposed East Fort Bliss Campus site include an EPWU desalination plant near Montana Avenue and Global Reach Drive (south of the project site) and a planned Texas Army National Guard facility near Montana Avenue and Loop 375 (southeast of the project site). Groundwater wells for the desalination plant are located on El Paso land northwest of the site boundary. Loop 375 is currently undergoing expansion and enhancement, which, when complete, will alleviate traffic congestion in the area. Future development along the Loop in the vicinity of El Paso International Airport and Biggs

AAF is limited because the adjacent land is part of Fort Bliss and the Army controls development in the area (USACE, 2006).

The following is a list of several of the plans implemented at Fort Bliss to ensure land use compatibility with other existing management plans relevant to the proposed East Fort Bliss Campus site:

- *Fort Bliss RPMP* –plans for the economical and prudent use of land, facilities, and resources, and for ensuring comfortable living and working conditions for personnel at Fort Bliss. (USACE, 2006a);
- *Fort Bliss INRMP* – provides the basis and criteria for protecting and enhancing natural resources using ecosystem management principles that are consistent with the military mission (U.S. Army, 2001a); and
- *Fort Bliss ICRMP* – provides the basis and criteria for protecting and managing the installation's cultural resources in compliance with various Federal laws and regulations that govern cultural resources and in support of the overall Fort Bliss mission of military training and readiness (U.S. Army, 2008c).

3.2.2 Proposed Action Alternative Environmental Consequences

3.2.2.1 Construction

Construction of the proposed East Fort Bliss Campus would occur in land categorized in the Fort Bliss RPMP for future Residential/Commercial use, and therefore, would not conflict with land use planning contained within the Fort Bliss RPMP. Furthermore, construction of the campus would not conflict with proposed and existing uses adjacent to the site. Construction of the Proposed Action, therefore, would have a negligible impact on land use at Fort Bliss and to surrounding land uses.

3.2.2.2 Operations

Under the Proposed Action, EPCC would operate the newly constructed East Fort Bliss Campus on leased land from Fort Bliss. Operation of the proposed East Fort Bliss Campus would be in accordance with the projected use of South Area 1B as "Residential/Commercial" in the Fort Bliss RPMP. Leasing the site to EPCC and EPCC operation of a new East Fort Bliss Campus is also in accordance with the Fort Bliss Strategic Goals and Objectives listed in Table 3.2-1 (USACE, 2006a):

Table 3.2-1. Fort Bliss Strategic Goals and Objectives in Support of Proposed Action

Goal	Objective
Goal 6: Increase quality of life and community support assets to meet projected population increases.	Objective 1: Develop new facilities near new major development areas to serve major on-post population centers (i.e., new Division campus) and reduce cross-post travel.
	Objective 2: Assist in siting new school facilities to adequately serve projected populations.
	Objective 3: Expand coordination with City of El Paso and other local and State bodies on issues supporting quality of life initiatives.

Operation of the proposed East Fort Bliss Campus would, therefore, not conflict with proposed or existing uses adjacent to the site and negligible adverse impacts on land use at Fort Bliss would be anticipated.

3.2.3 No Action Alternative Environmental Consequences

Under the No Action Alternative, the Proposed Action would not be implemented and no construction or operational activities would occur on the proposed site. The site would remain undeveloped until a future

development opportunity for the site according to the RPMP has been identified. No impacts to land use would be anticipated.

3.3 Noise

Sound is a physical phenomenon consisting of minute vibrations that travel through a medium, such as air, and are sensed by the human ear. Noise is defined as any sound that is undesirable because it interferes with communication, is intense enough to damage hearing, or is otherwise intrusive. Human response to noise varies depending on the type and characteristics of the noise, the distance between the noise source and the receptor, receptor sensitivity, and time of day. Noise is often generated by activities essential to a community's quality of life, such as construction and vehicular traffic.

Sound varies in intensity and frequency. Sound pressure levels (SPL), described in decibels (dB), are used to quantify sound intensity. The dB is a logarithmic unit that expresses the ratio of a SPL to a standard reference level. *A-weighting*, described in A-weighted dBs (dBA), approximates human response to different frequencies to express better the perception of sound by humans. A scale relating sounds encountered in daily life to their approximate dBA values is provided in Table 3.3-1. C-weighting is predominately used to describe noise from aircraft. *C-weighting*, described in C-weighted dBs (dBC), is similar to A-weighting, except it incorporates more low-frequency noise. C-weighting is predominately used to describe noise that has a component of rumble, and used to describe impulse-type sounds, such as the sounds from large-caliber weaponry and demolitions of ordnance used during training (FICUN, 1980).

Table 3.3-1. Common Sound and Their Levels

Outdoor	Sound level (dBA)	Indoor
Snowmobile while operating	100	Subway train
Tractor while operating	90	Garbage disposal while operating
Noisy restaurant	85	Blender while operating
Downtown (large city)	80	Ringing telephone
Freeway traffic	70	TV audio
Normal conversation	60	Sewing machine while operating
Rainfall	50	Refrigerator
Quiet residential area	40	Library

Source: Harris 1998.

3.3.1 Affected Environment

3.3.1.1 Military Noise Environment and Land Use Compatibility

The military noise environment consists primarily of three types of noise: transportation noise from aircraft and vehicles, noise from firing at small-arms ranges, and impulsive noise from large-caliber weapons firing and demolition operations. Army Regulation 200-1, *Environmental Protection and Enhancement* defines recommended use of land concerning environmental noise for Army activities. Three noise zones are defined in the regulation:

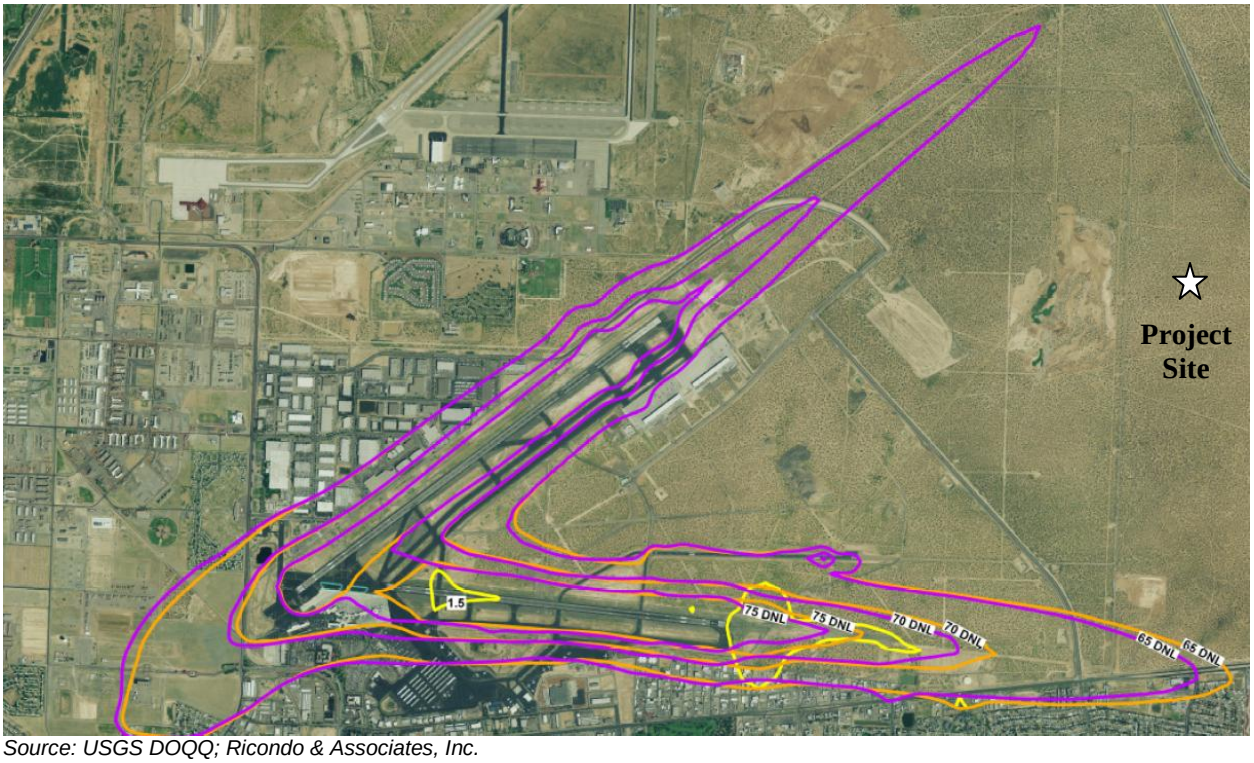
- Zone I (recommended): Housing, schools, medical facilities, and other noise-sensitive land uses are recommended as compatible with noise levels in the zone.
- Zone II (normally not recommended): Noise-sensitive land uses (e.g., housing, schools, and medical facilities) are normally not recommended in this zone.
- Zone III (not recommend): Noise-sensitive land uses (e.g., housing, schools, and medical facilities) are not recommended in this zone.

Metrics used by the Army to quantify aircraft noise at Army installations is A-weighted day-night average sound levels (ADNL). *Day-night average sound level* (DNL) is defined as the time-weighted energy average sound level over a 24-hour period; a 10-dB penalty is added to the nighttime levels (10 p.m. to 7 a.m.). DNL is a useful descriptor for noise because (1) it averages continuous noise, and (2) it measures total sound energy over a 24-hour period. DNL is used to assess more continuous noise sources, such as aircraft noise and the ongoing components of repetitious blast noise. Table 3.3-2 outlines noise limits for land use planning for aircraft. Figure 3.3-1 depicts existing zones for land use planning for aircraft for the El Paso International Airport.

Table 3.3-2. Noise Limits and Zones for Land Use Planning

Noise Zone	Aircraft (ADNL)
I	< 65 dBA
II	65–75 dBA
III	> 75 dBA

Source: U.S. Army 2008.



Source: USGS DOQQ; Ricondo & Associates, Inc.

Figure 3.3-1. El Paso International Airport Noise Contours

3.3.1.2 Large-Caliber Weapons and Demolition

The use of explosives and large-caliber weapons are common causes of complaint among people near military installations. As previously mentioned, annoyance due to steady-state noise is typically assessed by averaging noise levels over a protracted period. This approach can be misleading because it does not assess noise effects due to relatively infrequent, yet loud, impulsive noise events. For example, for a demolition range at which several hundred charges are detonated each year, peak pressure levels can exceed 140 dB in regions where annual DNL values indicate that noise is recommended for noise

sensitive land use. The peak noise provides the absolute maximum sound level for an individual acoustical event, not an average over several events or over a period of time like the DNL.

3.3.1.3 Regulatory Overview

The Noise Control Act of 1972 (Public Law 92-574) directs Federal agencies to comply with applicable Federal, State, interstate, and local noise control regulations. In 1974, the Environmental Protection Agency (EPA) provided information suggesting that continuous and long-term noise levels in excess of DNL 65 dBA are normally unacceptable for noise-sensitive land uses such as residences, schools, churches, and hospitals. This is consistent with the Army guidance. The State of Texas has no statewide, and El Paso County has no countywide noise regulation.

3.3.1.4 Existing Noise

Existing sources of noise near the proposed site include aircraft overflights, military training, local road traffic, and natural noises such as leaves rustling and bird vocalizations. The site is located within Fort Bliss, which supports ongoing training activities for the Army that includes the use of demolitions, small arms, and military jetcraft. El Paso International Airport is located approximately 1.5 miles southwest of the proposed site. Aircraft from the airport are regular occurrences and are clearly audible at the site. There are no rail corridors or interstates within several miles of the site.

Existing noise levels (DNL and equivalent sound level [L_{eq}]) were estimated for the proposed East Fort Bliss Campus site and surrounding areas using the techniques specified in the *American National Standard Quantities and Procedures for Description and Measurement of Environmental Sound Part 3: Short-term measurements with an observer present* (ANSI, 2003). The region is primarily industrial/commercial, and there are currently no noise-sensitive areas (such as residences, churches, schools, or hospitals) within a mile of the proposed site. The closest noise-sensitive area is the residential community south of Montana Avenue, located approximately 1.6 miles (8,500 feet) to the south of the proposed site. Table 3.3-4 outlines the estimated existing noise levels at this location. Figure 3.3-3 displays areas of elevated concern for impulsive noise in relation to the proposed East Fort Bliss Campus site.

Table 3.3-4. Estimated Existing Noise levels at Closest Noise-Sensitive Area

Closest Noise-Sensitive Area			Estimated Existing Sound Levels (dBA)		
Distance	Direction	Type	DNL	L_{eq} (Daytime)a	L_{eq} (Nighttime)
8,500 feet	South	Suburban Residential	50	48	42

Source: ANSI, 2003.

[a] L_{eq} = equivalent sound level which is the average SPL on an energy basis.

3.3.2 Proposed Action Alternative Environmental Consequences

Short-term minor and long-term negligible adverse effects on the noise environment would be expected. Noise levels in the project area would not exceed ambient noise level standards as determined by the Federal, State, and/or local government. The proposed East Fort Bliss Campus site is completely compatible with all nearby aircraft and military training activities. Minor increases in noise would be primarily from using heavy equipment during construction. Noise from operation of the EPCC and additional vehicle traffic would be negligible.

3.3.2.1 Construction

The Proposed Action would require the construction of new buildings and associated structures. Individual pieces of construction equipment typically generate noise levels of 80 to 90 dBA at a distance of 50 feet (Table 3.3-5). With multiple items of equipment operating concurrently, noise levels can be relatively high at locations within several hundred feet of active construction sites. The zone of relatively high noise typically extends to distances up to 800 feet from the site of major equipment operations. There are no residences closer than 800 feet to the site that would experience appreciable amounts of construction noise. Given the temporary nature of the construction, and the distance to the nearest sensitive receptor, these effects would be minor.

Table 3.3-5. Noise Levels Associated with Outdoor Construction

Construction Phase	dBA L_{eq} at 50 Feet from Source
Ground Clearing	84
Excavation, Grading	89
Foundations	78
Structural	85
Finishing	89

Source: EPA, 1974.

Although construction-related noise effects would be minor, contractors would limit construction to occur primarily during normal weekday business hours, and properly maintaining construction equipment mufflers. Noise effects on construction personnel would be limited by ensuring all personnel wear adequate personal hearing protection to limit exposure and ensure compliance with Federal health and safety regulations.

3.3.2.2 Operations

No use of weaponry, demolitions, or aircraft operations would occur with the implementation of the Proposed Action. Therefore, no changes in the noise environment associated with these sources would be expected. The Proposed Action would increase traffic noise slightly on the surrounding roads. Increases would be localized, concentrated predominantly on the main roads near the proposed East Fort Bliss Campus and would not constitute a perceptible change in the overall noise environment when compared to existing conditions. These effects would be negligible. Furthermore, operations of the proposed East Fort Bliss Campus is not anticipated to cause adverse impacts to the proposed WBAMC north of the site.

The proposed site would be located outside the existing and future incompatible noise zones for the El Paso International Airport (Marmolejo, 2010) (Figure 3.3-1). In addition, the proposed campus would be located far south of the incompatible land use for demolition noise and the areas of elevated concern and complaint for Fort Bliss. Depending on the precise aircraft operations and local wind conditions, it is possible that some aircraft and/or demolition activities may be audible at the proposed East Fort Bliss Campus. Even the loudest demolition training activities, however, would not raise concerns or solicit complaints, and the operation of the proposed East Fort Bliss Campus would be completely compatible with the existing noise environment. No noise reduction architectural components (e.g. upgraded window, doors, walls, or roof assemblies) would be required during construction.

3.3.3 No Action Alternative Environmental Consequences

Under the No Action Alternative, the Proposed Action would not be implemented and no construction or operational activities would occur on the proposed site. Therefore, the changes in ambient noise conditions otherwise expected from the proposed East Fort Bliss Campus would not occur.

3.4 Air Quality

3.4.1 Affected Environment

3.4.1.1 National Ambient Air Quality Standards and Ambient Air Quality

The EPA Region 6 and the Texas Commission on Environmental Quality (TCEQ), regulate air quality in Texas. The Clean Air Act (CAA) (42 *U.S. Code* (USC) 7401-7671q), as amended, gives EPA the responsibility to establish the primary and secondary National Ambient Air Quality Standards (NAAQS) (40 CFR Part 50) that set acceptable concentration levels for seven criteria pollutants: particulate matter (PM) (particulate matter 10 microns or less [PM_{10}], particulate matter 2.5 microns or less [$PM_{2.5}$]), sulfur dioxide (SO_2), carbon monoxide (CO), nitrous oxides (NO_x), ozone (O_3), and lead (Pb). Short-term standards (1-, 8-, and 24-hour periods) have been established for pollutants that contribute to acute health effects, while long-term standards (annual averages) have been established for pollutants that contribute to chronic health effects. Each state has the authority to adopt standards stricter than those established under the Federal program; however, the State of Texas accepts the Federal standards.

Federal regulations designate Air-Quality Control Regions (AQCRs) that are in violation of the NAAQS as nonattainment areas and those in accordance with the NAAQS as attainment areas. The Texas portions of Fort Bliss are within the El Paso-Las Cruces-Alamogordo Interstate AQCR (AQCR 153) (40 CFR 81.82). Currently all of Fort Bliss, including the proposed East Fort Bliss Campus site, has been designated an attainment area for all criteria pollutants, and the general conformity rules do not apply (EPA, 2010a; 40 CFR 81.344). A Record of Nonapplicability (RONA) is in Appendix A.

Although all of Fort Bliss has been designated as attainment, the EPA has designated the nearby City of El Paso as moderate nonattainment for PM_{10} and a maintenance area for CO. In addition, on June 20, 2007, EPA proposed to strengthen the 8-hour O_3 NAAQS. The most recent data indicate that El Paso County (including the proposed site) would be a nonattainment area under the newly proposed 8-hour NAAQS. By the end of 2010, EPA expects to make final designations of attainment and nonattainment areas. Because of the nonattainment status of the City of El Paso, and the strengthening of the 8-hour NAAQS that threatens the attainment status of the El Paso County, the project's emissions and the *de minimis* (of minimal importance) thresholds were carried forward to determine the level of impact under NEPA

Existing air quality conditions can be estimated from measurements conducted at nearby air monitoring stations (Table 3.4-1). With the exception of O_3 and PM_{10}, the maximum measure concentrations are below the NAAQS (EPA, 2010a). The maximum 8-hour O_3 was greater than the NAAQS. The 3-year average of the fourth highest daily maximum concentrations, however, does not exceed the NAAQS level of 0.08 parts per million (ppm). The level of 24-hour maximum PM_{10} exceeds the NAAQS. These elevated levels are expected considering the [pending] nonattainment status of the region.

Table 3.4-1. 2008 Local Ambient Air Quality Monitoring

Pollutant and Averaging Time	Primary NAAQS[a]	Secondary NAAQS[a]	Monitored Data[b]	Location
CO				
8-hour maximum[c] (ppm)	9	(None)	4.9	El Paso
1-hour maximum[c] (ppm)	35	(None)	6.7	
NO_X				
Annual arithmetic mean (ppm)	0.053	0.053	0.016	El Paso

Table 3.4-1. 2008 Local Ambient Air Quality Monitoring

Pollutant and Averaging Time	Primary NAAQS[a]	Secondary NAAQS[a]	Monitored Data[b]	Location
O_3				
8-hour maximum[d] (ppm)	0.08	0.08	0.094	City of El Paso
$PM_{2.5}$				
Annual arithmetic mean[e] micrograms per cubic meter (µg/m3)	15	15	14.67	El Paso
24-hour maximum[f] (µg/m3)	65	65	40.6	
PM_{10}				
Annual arithmetic mean[g] (µg/m3)	50	50	42	El Paso
24-hour maximum[c] (µg/m3)	150	150	243	Socorro
SO_2				
Annual arithmetic mean (ppm)	0.03	(None)	0.002	El Paso
24-hour maximum[c] (ppm)	0.14	(None)	0.006	
3-hour maximum[c] (ppm)		0.5	0.023	

[a] Source: 40 CFR 50.1-50.12.
[b] Source: EPA, 2010a.
[c] Not to be exceeded more than once per year.
[d] The 3-year average of the fourth highest daily maximum 8-hour average O_3 concentrations over each year must not exceed 0.08 ppm.
[e] The 3-year average of the weighted annual mean $PM_{2.5}$ concentrations from must not exceed 15.0 µg/m^3.
[f] The 3-year average of the 98th percentile of 24-hour concentrations at each population-oriented monitor must not exceed 65 µg/m^3.
[g] The 3-year average of the weighted annual mean PM_{10} concentration at each monitor within an area must not exceed 50 µg/m^3.
µg/m^3 = micrograms per cubic meter; NO_2 = Nitrogen dioxide

3.4.1.2 Existing Installation Emissions

Based on the installation's potential to emit greater than 100 tons per year (tpy) of NO_x, Fort Bliss is considered a major source of air emissions in Texas. TCEQ issued a Federal Title V operating permit to Fort Bliss in January 2007 (permit number 2865). As part of its permit requirements, Fort Bliss tracks air emissions from many stationary emission sources on the installation. These include boilers, generators, surface coating operations, underground storage tanks, and sanitary landfills. The 2007 total emissions for major stationary sources at Fort Bliss in Texas is summarized in Table 3.4-2 (Fort Bliss, 2009).

Table 3.4-2. 2008 Air Emission for the Portions of Fort Bliss in Texas

Emission Estimates (tpy)							
Emission Source	**SO_2**	**CO**	**NO_x**	**VOC**	**PM_{10}**	**$PM_{2.5}$**	**HAPs**
Fort Bliss, Texas	1.97	26.87	40.77	39.61	5.87	4.13	5.78

Source: Fort Bliss, 2009 HAPs = hazardous air pollution; VOC = volatile organic compound

3.4.2 Proposed Action Alternative Environmental Consequences

Short- and long-term minor adverse effects on air quality would be expected. The effects would be from air emissions during construction and from new stationary sources of air emissions at the proposed East Fort Bliss Campus site. Increases in emissions would not exceed applicability thresholds, be regionally severe, or contribute to a violation of any Federal, State, or local air regulation.

3.4.2.1 Construction and Operations

Estimated Emissions and General Conformity

The general conformity rules require Federal agencies to determine whether their action(s) would increase emissions of criteria pollutants above preset threshold levels (40 CFR 93.153(b)). These *de minimis* rates vary depending on the severity of the nonattainment and geographic location. Because the region is in attainment, the air conformity regulations do not apply. All direct and indirect emissions of criteria pollutants for the Proposed Action have been estimated and compared to applicability threshold levels of 100 tpy to determine the Proposed Action's impact under NEPA. The total direct and indirect emissions associated with the following activities were accounted for:

- Constructing the new facilities
- Operating vehicles for construction workers
- Paving parking areas
- Operating personal vehicles for employees
- Operating new stationary sources of air emissions (i.e. boilers)

The total direct and indirect emissions associated with the Proposed Action would not exceed applicability threshold levels (Table 3.4-3). Because the region is an attainment area, there is no existing emission budget. Because of the limited size and scope of the Proposed Action, however, it is not expected that the estimated emissions from the development and operation of the proposed East Fort Bliss Campus would make up 10 percent or more of regional emissions for any criteria pollutant, and they would, therefore, not be regionally severe, and would be locally minor. A detailed breakdown of construction and operational emissions are in Appendix A.

Table 3.4-3. Proposed Action Emissions Compared to Applicability Thresholds

	Annual emissions (tpy)						*De minimis* threshold (tpy)	Would emissions exceed applicability thresholds? [Yes/No]
Activity	CO	NO_x	VOC	SO_x	PM_{10}	$PM_{2.5}$		
Construction	6.1	7.8	1.4	<0.1	4.4	0.7	100	No
Operational	61.1	6.6	6.2	0.1	0.5	0.3		

For the purposes of calculating emissions, it was assumed that approximately 95 permanent personnel and 3,500 students would be at the proposed East Fort Bliss Campus site. Moderate changes in the size or type of equipment ultimately selected or the number of personnel would not substantially change the total direct or indirect emissions or the level of impact under NEPA.

Regulatory Review

The proposed building facilities associated with the EPCC would be equipped with boilers for heating. These stationary sources of air emissions may be subject to Federal and State air permitting regulations, including new source review (NSR), prevention of significant deterioration (PSD), National Emission Standards for Hazardous Air Pollutants (NESHAP), or New Source Performance Standards (NSPS). All proposed boilers would be rated to operate the proposed East Fort Bliss Campus under design conditions. Manufacturer specifications for the boilers have not been finalized. Equipment ultimately selected may differ in specific features from the ones described in this EA. Moderate changes in the size or type of equipment ultimately selected would not change the level of impact under NEPA; overall impacts to air quality due to operations of the associated boilers would be minor. In the final design stage, extra care would be taken to ensure all equipment selected would be in full compliance with Federal, State, and local air regulations.

The facilities would be owned, operated, and maintained by EPCC on property provided by Fort Bliss. In general, leased activities would not be considered under the direct control of the installation. These activities would normally be considered "tenants" and EPCC would need to perform an air quality regulatory analysis to determine whether any CAA permitting would be required for the operation of any sources of air emissions associated with the proposed project. These activities, however, may be considered under common control when they also have a contract-for-service relationship to provide goods or services to a military controlling entity at that military installation. Given the variety and complexity of leased and contract-for-service activities at Fort Bliss, case-by-case determinations would be necessary to determine whether the existing sources of emissions would remain on, or new sources would be added to, Fort Bliss's Title V permit.

Other non-permitting requirements may be required through the use of compliant practices and/or products. These regulations are outlined in TCEQ, Texas Administrative Codes (TAC). They include, but are not limited to:

- 30 TAC, Title 30, Chapter 1.101: General Air Quality Rules
- 30 TAC, Title 30, Chapter 1.101: Air pollution from Volatile Organic Compounds
- 30 TAC, Title 30, Chapter 1.111- Subchapter A: Visible Emissions and Particulate Matter
- 30 TAC, Title 30, Chapter 1.111- Subchapter B: Outdoor Burning

This listing is not all-inclusive; the EPCC and any contractors would comply with all applicable air pollution control regulations. In addition to those outlined above, no person shall handle, transport, or store any material in a manner that may allow unnecessary amounts of air contaminants to become airborne. During construction, reasonable measures may be required to prevent unnecessary amounts of PM from becoming airborne (TAC Title 30, Chapter 111). Such precautions may include:

- Use of water for control of dust during construction operations, the grading of roads, or the clearing of land;
- Paving of roadways and maintaining them in a clean condition;
- Covering open equipment for conveying or transporting material likely to create objectionable air pollution when airborne; and,
- Promptly removing spilled or tracked dirt or other materials from paved streets.

Mobile Emissions

Mobile emissions of concern include primarily automobiles and vehicular traffic. The primary air pollutants from mobile-sources are CO, NO_x, and VOCs. Pb emissions from mobile sources have declined in recent years through the increased use of unleaded gasoline and are extremely small. Potential SO_2 and particulate emissions from mobile sources are small compared to emissions from point sources, such as power plants and industrial facilities. Air quality impacts from traffic are generally evaluated on two scales: *mesoscale* and *microscale*.

Mesoscale analysis is performed at the regional level. Changes in traffic patterns resulting from the Proposed Action would introduce minute changes in regional O_3 and $PM_{2.5}$ levels. Regional analysis is not generally conducted on a project-specific basis and is not necessary for this EA. Microscale analysis is performed to identify localized hot spots of criteria pollutants. CO is a site-specific pollutant with higher concentrations found adjacent to roadways and signalized intersections. Microscale analysis is often conducted on a project-specific basis in regions where CO is of particular concern. Fort Bliss is in neither a nonattainment, nor a maintenance area for CO; therefore, micro-scale analysis is not necessary for this EA.

The traffic associated with the Proposed Action is not anticipated to be an air quality concern for PM because it does not involve any new highways or expressways, and the intersections affected are primarily secondary arterial roads (EPA, 2006). Mobile Source Air Toxics (MSATs) are a subset of the 188 air toxics emitted from highway vehicles and non-road equipment. As with PM, traffic is not anticipated to be an air quality concern for MSATs because the intersections affected are primarily secondary arterial roads, and new traffic is expected to be below the threshold that would have potential for meaningful MSAT effects. Quantitative procedures to address PM and MSATs are not standard practice for nontransportation projects on secondary arterials; therefore, they are not included in this EA (FHWA, 2006).

3.4.2.2 No Action Alternative Environmental Consequences

Under the No Action Alternative, the Proposed Action would not be implemented and no construction or operational activities would occur on the proposed site. Therefore, the changes in ambient air quality conditions otherwise expected from the action would not occur.

3.5 Geology and Soils

3.5.1 Affected Environment

3.5.1.1 Geology

The proposed East Fort Bliss Campus site lies within the greater Physiographic Province of the Basin and Range. The Basin and Range topography is characterized by normal fault-block mountain ranges oriented in a north/south direction, surrounding basins or valleys of relatively flat terrain (USGS, 2010).

Specifically within the Basin and Range, the site lies in the southern portion of Hueco Bolson, an approximately 200 miles long by 25 miles wide plain. This plain, along with other plains in the area, have been named "bolsons," a term derived from the Spanish bolsón, a purse. These are broad, almost level, constructional plains built up by wash derived from the adjacent highlands. Bolsons generally slope toward a central axis; some of them are entirely surrounded by a rim and constitute closed basins, but the greater number have outlets, although in this arid climate they are free from surface drainage except where crossed by the few perennial streams of the region within the Rio Grande rift. The Hueco Bolson is bordered on the west by the narrow north-south Franklin Range and on the east by the Hueco Mountains. On a large scale, the Hueco Bolson lowland is a unit, however, it is subdivided into two distinct parts by a low transverse divide a few miles north of the Texas/New Mexico boundary. The northern part, also known as the Tularosa basin, trends north and south, and is a closed basin with no drainage outlet. Salt marshes and dunes of gypsiferous white sands derived from sedimentary rocks from the adjacent ranges characterize a large part of its surface. The southern part of the Hueco Bolson, where the proposed East Fort Bliss Campus site is located, trends northwest and southeast, contains no salt or gypsum, and is traversed by the Rio Grande. The Rio Grande, located approximately 7 miles to the southwest of the project site, constitutes the western and southern boundary of the Hueco Bolson and flows through a gorge near El Paso with a broad valley.

Fort Bliss is located in an area containing seismic features. These include the Hueco fault zone, The East Franklin Mountains fault, and the Artillery Range and Organ Mountains faults. Faults in the surrounding area include the Alamogordo fault, San Andres Mountains fault, and other smaller unnamed faults, as well as unnamed faults in Mexico (USGS, 2002). Earthquake events have historically been minor, although the possibility for major quakes does exist. In the period between 1849 and 1975, around 1,100 light earthquakes with magnitudes below 4.0 were recorded in the Rio Grande Rift. Larger recorded earthquakes in surrounding areas include a 6.5 magnitude earthquake in 1906 near Socorro, New Mexico (about 200 miles north of El Paso, Texas), and a 6.0 magnitude earthquake in 1931 near Valentine, Texas (approximately 160 miles southeast of El Paso) (U.S. Army, 2007a). A search of the U.S. Geological

Survey (USGS)/National Earthquake Information Center (NEIC) database of earthquakes recorded within a 200-mile radius of Fort Bliss between 1973 and March 2010, found a record of more than 700 earthquakes up to 5.8 in magnitude, including a 5.0 magnitude earthquake as recently as March 2010 (USGS, 2010).

3.5.1.2 Soils

The soils at the proposed site are mapped as one soil map unit, the Mcnew-Copia-Foxtrot complex. A complex consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas (NRCS, 2010). The Mcnew series consists of very deep, well drained, moderately permeable soils formed in eolian (wind-blown) sands over alluvium. These nearly level to gently sloping soils are on the alluvial flat of basin floors. Slope ranges from 1 to 5 percent. The Copia series consists of very deep, excessively drained, and moderately rapidly permeable soils. The Copia series was formed in alluvium and eolian sediments derived dominantly from mixed sources. Soils within the Copia series are on dunes and shrub-coppice dunes with slopes of 2 to 15 percent. The Foxtrot series consists of moderately deep and well drained soils. Permeability is moderately slow above, and very slow below, the petrocalcic horizon[1]. The Foxtrot series soil was formed in eolian sands over alluvium. These nearly level to gently sloping soils are on basin floors. Slope ranges from 0 to 5 percent. The Mcnew, Copia, and Foxtrot soils differ primarily in that Foxtrot soils have a diagnostic petrocalcic horizon, Copia soils are sandy and do not have any diagnostic horizons, and Mcnew soils have argillic horizons. Soil properties are summarized in Table 3.5-1.

Table 3.5-1. Properties of Soils on Proposed East Fort Bliss Campus Site

Soil Series	Mcnew	Copia	Foxtrot
Taxonomic Class	Fine-loamy, mixed, superactive, thermic Typic Calciargids	Mixed, thermic Typic Torripsamments	Fine-loamy, mixed, superactive, thermic Argic Petrocalcids
Typical Pedon	Mcnew sandy loam -- rangeland	Copia loamy fine sand -- rangeland	Foxtrot sand -- rangeland
Slope	Nearly level to gently sloping soils. 1-5 percent slope.	2-15 percent slope	Nearly level to gently sloping soils. 0-5 percent slope.
Geographic Setting	Eolian sands over alluvium	Dunes and shrub-coppice dunes	Eolian sands over alluvium
Drainage Class	Well drained	Excessively drained	Well drained
Diagnostic B horizon	Petrocalcic	None	Argillic

The Mcnew, Copia, and Foxtrot soils all belong to land capability group VII-c. Land capability classification is a system of grouping soils primarily on the basis of their capability to produce common cultivated crops and pasture plants without deteriorating over a long period of time. Class VII soils have very severe limitations that make them unsuited to cultivation and that restrict their use mainly to grazing, forestland, or wildlife. Subclass C is made up of soils for which the climate (the temperature or lack of moisture) is the major hazard or limitation affecting their use (NRCS, 2010). The texture of the soils on the proposed East Fort Bliss Campus site range from sandy loam to sand, and do not flood or pond. The soils are typically used for grazing livestock or wildlife habitat. Vegetation is of the desert shrub type

[1] A petrocalcic horizon is a diagnostic horizon in USDA soil taxonomy. They are formed when secondary calcium carbonate or other carbonates accumulate in the subsoil to the extent that the soil becomes cemented into a hardpan.

(see Section 3.6 regarding specific vegetation and habitat within the proposed East Fort Bliss Campus site).

Signs of moderate to severe wind erosion are visible throughout the site (Figure 3.5-1). Areas not protected by vegetation or topsoil have eroded up to several feet from the original surface. As a result the landscape has a characteristic hummocked surface, and in places, the soil has been completely eroded to the parent material. Due to the thick nature of the parent material, bedrock is not exposed on the site, however, where the eolian deposits have been eroded, coarser alluvial materials are exposed on the surface.

Figure 3.5-1. Hummocking Resulting from Wind Erosion

Prime Farmland

Prime farmland soils are protected under the Farmland Protection Policy Act of 1981. There are no areas of prime farmland soils within the proposed East Fort Bliss Campus site boundaries. A Farmland Conversion Impact Rating (Form AD-1006) of the project area is not warranted, and therefore no further action is required under the Farmland Protection Policy Act.

3.5.2 Proposed Action Alternative Environmental Consequences

3.5.2.1 Construction

Minor adverse impacts to alluvial and eolian materials would be expected from the construction of the proposed East Fort Bliss Campus. Permanent impacts would be expected from grading and compacting strata during construction activities, and from increased wind erosion from disturbed strata. No other effects on geology would be expected from the Proposed Action.

The Proposed Action would result in converting approximately 200 acres of undeveloped land into the proposed East Fort Bliss Campus. Specific site planning has not been developed for the site, however, this analysis assumes that the entire site would be disturbed during the construction process. The construction activities would cause removal of vegetation, grading, and compacting of the soils. Impermeable surfaces such as roads, parking lots, and buildings would be constructed on top of many of the soils. Removing vegetation and grading the soils would greatly increase soil exposure to wind and water erosion, possibly

resulting in increased runoff and erosion during site preparation. Due to the semi-arid climate and fine textured sands, the soils on the proposed site would be especially susceptible to wind erosion when the otherwise sparse vegetative cover would be removed. Soils are also more likely to erode by wind in the months of March and April due to stronger winds and a lack of precipitation during this time. Water erosion would most likely occur in July, August, or September when the rain averages about 1.5 inches/month or more, and the precipitation events tend to be more intense (U.S. Army, 2006). Although up to approximately 200 acres of soil could be disturbed from the Proposed Action, the construction would likely be conducted by phases over the course of 12 to 16 months; different sections of the site would, therefore, be disturbed at different times. This phasing of disturbance over the approximate 200 acres would likely reduce the potential for widespread erosion and would result in minor adverse impacts due to localized erosion. Furthermore, only those areas necessary to accommodate the planned construction would be graded to reduce the potential for wind erosion and dust.

The probability of soil erosion would be further reduced by the implementation of BMPs by EPCC during construction which include:

- Development and implementation of an erosion and sediment control plan, where appropriate. This includes the identification of adjacent water resources and use of suitable erosion control devices to prevent offsite erosion into these resources.
- Maintenance of vegetative cover to prevent wind and rain induced soil erosion. In locations where it is not possible to maintain vegetative cover, other materials may be used including gravel, fabrics, riprap, and recycled concrete and pavement that are environmentally safe and compatible with the site.

Other erosion BMPs that could be implemented during construction to further minimize impacts to soils include using silt fencing, straw bale dikes, diversion ditches, riprap channels, water bars, terracing, seeding and mulching, sediment traps and basins, cover vegetation, and natural or man-made fibrous mats or other stabilizing materials, as well as limiting vehicular traffic in specific areas or for specified periods when erosion hazards are high. Periodic watering of disturbed surfaces and the use of soil stabilizers would further reduce the likelihood of wind erosion. Although up to approximately 200 acres of soils within the proposed East Fort Bliss Campus site would be disturbed, consideration of erosion potential during the project planning stage and control of erosion during construction would result in overall minor adverse impacts to soils from construction of the proposed East Fort Bliss Campus.

3.5.2.2 Operations

No effects on geology would be expected from operations of the proposed East Fort Bliss Campus. After construction of the proposed campus, landscaping would incorporate native plants in areas not covered by impervious surfaces. Native plants are adapted to the local climate and soil conditions, and require less maintenance and watering once established. Pathways and signs would be constructed to discourage foot traffic on unpaved areas, thus protecting the vegetation from disturbance and the soils from erosion. Overall, operations of the proposed East Fort Bliss Campus would have negligible impacts to soil resources.

3.5.3 No Action Alternative Environmental Consequences

Under the No Action Alternative, the Proposed Action would not be implemented and no construction or operational activities would occur on the proposed site. Erosion of soils not protected by vegetation would continue at the current rate. Current management practices outlined in the INRMP would continue. Therefore, no impacts to geology and soil resources would be anticipated.

3.6 Biological Resources

3.6.1 Affected Environment

Biological resources consist of native or naturalized plants and animals and their habitats. This section focuses on plant and animal species and vegetation types that typify or are important to the function of the ecosystem, are of special societal importance, or are protected under Federal or State law or statute. For the purposes of this evaluation, sensitive biological resources are defined as those plants and animal species listed by the USFWS, under different levels of concern by the State of Texas, or considered sensitive by Fort Bliss.

3.6.1.1 Vegetation

The proposed East Fort Bliss Campus site is characterized as mesquite coppice dunes and sandscrub. This type of plant community is dominated by a honey mesquite shrub (*Prosopis glandulosa*) and Sandsage (*Artemisia filifolia*). Historic land use has transformed regional grassland communities to shrub-dominated landscapes (U.S. Army, 2001a). Once established, coppice dunes persist with little conversion back to less desertified communities. Figure 3.6-1 contains a view of the typical mesquite coppice dune and sandscrub landscape located within the proposed site.

Figure 3.6-1. Typical Mesquite Coppice Dunes and Sandscrub Characteristic of the Proposed East Fort Bliss Campus Site

Invasive plant species have become established within the ROI (see Table 3.6-1) and have the potential to occur or become established within the site. To help control the growth and spread of these exotic plant species, Fort Bliss completes annual monitoring and does targeted weed control (U.S. Army, 2001a).

Table 3.6-1. Common Invasive Species within the ROI

Common Name	Latin Name	Habitat	Dispersion
African Rue1	*Peganum harmala*	Disturbed environments such as roadsides and fields in desert to semi-desert areas.	Produces primarily by seed, but severed roots can produce new shoots.
Russian Thistle2	*Salsola kali*	Disturbed soils such as agricultural fields, irrigation canals and roadside shoulders and ditches.	Produces by seed. As it rolls, it disperses seeds, which typically number 250,000 per plant. Dispersed easiest in flat and open environments where plant can roll through the landscape.
Salt Cedar3	*Tamarix ramosissma*	Disturbed and undisturbed streams, waterways, bottomlands, banks and drainage washes of natural or artificial waterbodies, moist rangelands and pastures.	Salt Cedar spreads vegetatively by adventitious roots or submerged stems, and sexually. The plant can also be dispersed by seeds, however, seedlings require extended periods of soil saturation for establishment.
Malta Thistle4	*Centaurea melitensis*	Disturbed habitats along washes and riparian streams.	Seed dispersal by wind.
Johnsongrass5	*Sorghum halepense*	Open areas throughout the U.S.	Spreads aggressively by rhizome and seed.

Source: 1, 5Invasive.org, 2010; 2Williams, 2010; 3NPS, 2009; 4Arizonensis.org, 2010

3.6.1.2 Wildlife

The ROI supports a relatively high faunal diversity. As an example, the INRMP documents 334 species of birds, 58 species of mammals, 39 species of reptiles, and 8 species of amphibians known to occur on Fort Bliss lands (U.S. Army, 2001a). Reptile and amphibians are common throughout desert and riparian habitats within the ROI, and would likely occur in similar abundance within the proposed East Fort Bliss Campus site. Mammal and avian diversity within the project site, however, would likely be lower. The mesquite coppice dune vegetative habitat generally supports little biological diversity and low species abundance compared to the native grassland and other habitats located within Fort Bliss (and ROI) as described in the INRMP.

Previous studies examining the diversity of small mammals within vegetative communities on Fort Bliss verified that the smallest number of species (7) was recorded in the mesquite dunes, compared to 14 different species recorded in sandy arroyo scrub. In addition, species abundance within mesquite coppice dune vegetative habitat was considerably lower (based on capture rates) at 5 to 17 percent, compared to 48 to 75 percent capture rates in swales and acacia scrub habitat (U.S. Army, 2001a).

Observations of avian populations also found a greater diversity and abundance of avian species along riparian areas compared to desert shrubland (U.S. Army, 2001a). The proximity of the site to developed areas, including the El Paso International Airport and industrial uses would further reduce the diversity of species to those that have adjusted to human activity. El Paso County is located within the Central Flyway for migratory birds. Fall and spring migrants use the region for temporary stops during travel between the northern and southern hemispheres.

3.6.1.3 Sensitive Species

At the Federal level, rare species are protected under the ESA of 1973, which prohibits unauthorized taking, possession, sale, and transport of endangered species. Section 7 of the ESA requires all Federal agencies to ensure that any action authorized, funded, or carried out by them is not likely to jeopardize the

continued existence of listed species or modify their critical habitat. Informal consultation letters have been sent to both the USFWS and the Texas Parks & Wildlife Department (TPWD) regarding records of any known Federal or State rare species occurring within the proposed East Fort Bliss Campus site. In an e-mail dated May 3, 2010, the USFWS recommended viewing the El Paso County listing of Federally-listed threatened and endangered species. Table 3.6-2 contains species listed as Federally-listed threatened or endangered, their potential habitat, and the likelihood of the species occurring within the project site. According to Table 3.6-2, no suitable habitat exists for these species within the project site, therefore, the occurrence of these Federally-protected species within the project site is unlikely.

Table 3.6-2. Federally-protected Species within El Paso County

Common Name	Scientific Name	Species Group	Listing Status	Typical Habitat	Likelihood of Occurrence
Least Tern	*Sterna antillarum*	Bird	E	Nesting habitat includes bare or sparsely vegetated sand, shell, and gravel beaches, sandbars, islands, and salt flats associated with rivers and reservoirs.	As discussed in Section 3.7, no riparian areas or reservoirs occur within the project site. Therefore, this species would be unlikely to occur within the project site
Mexican Spotted Owl	*Strix occidentalis lucida*	Bird	T	Mature, old-growth forests of white pine, Douglas fir, and ponderosa pine; steep slopes and canyons with rocky cliffs for their habitat.	As discussed in Section 3.6.1.1, the project site is composed of mesquite coppice dunes and sandscrub; no forest areas exists. Therefore, this species would be unlikely to occur within the project site.
Northern Aplomado Falcon	*Falco femoralis septentrionalis*	Bird	E	Open grassland or savannah habitat with scattered trees or shrubs.	As discussed in Section 3.6.1.1, the project site is composed of mesquite coppice dunes and sandscrub; no grassland or savannah habitat exists. Therefore, this species would be unlikely to occur within the project site.
Sneed Pincushion Cactus	*Coryphantha sneedii var. sneedii*	Flowering Plant	E	Grasslands or lechuguilla-sotol shrublands on limestone outcrops and rocky slopes of mountains within the Chihuahuan Desert.	As discussed in Section 3.6.1.1, the project site is composed of mesquite coppice dunes and sandscrub; and the project site is not located along mountain slopes. Therefore, this species would be unlikely to occur within the project site.
Southwestern Willow Flycatcher	*Empidonax traillii extimus*	Bird	E	Dense riparian habitats along rivers and streams.	As discussed in Section 3.7, no riparian areas occur within the project site. Therefore, this species would be unlikely to occur within the project site.
Yellow-billed Cuckoo	*Coccyzus americanus*	Bird	C	Open woodlands with dense undergrowth, overgrown orchards and pastures, moist thickets and willow groves along stream banks.	As discussed in Section 3.6.1.1, the project site is composed of mesquite coppice dunes and sandscrub; no woodlands, orchards or pastures grassland or stream/riparian areas exists within the project site. Therefore, this species would be unlikely to occur within the project site.

Source: http://www.fws.gov/southwest/es/EndangeredSpecies/lists/ListSpecies.cfm

In a letter dated June 4, 2010, the TPWD provided information regarding known records for State-protected species and rare species within 10 miles of the project site (see Appendix A). Table 3.6-3 contains TPWD species records, their State listing status, potential habitat, and the likelihood of the

species occurring within the project site. Rare status designation does not indicate protection by law, however, TPWD considers them to be at risk for endangerment.

Table 3.6-3. State-protected Species and Rare Species Within 10 Miles of the Project Site

Common Name	Scientific Name	Species Group	Listing Status	Typical Habitat[1]	Likelihood of Occurrence
Mountain short-horned lizard	*Phrynosoma hernandesi*	Reptile	T	Semiarid plains to high mountains in open, shrubby, or openly wooded areas with sparse vegetation at ground level.	On Fort Bliss this species occurs on McGregor Range and Otero Mesa; surveys in South Training areas have not detected this species2. Therefore, this species would be unlikely to occur within the project site.
Texas horned lizard	*Phrynosoma cornutum*	Reptile	T	Common throughout the grassland and desert shrubland.	As discussed in Section 3.6.1.1, the project site is composed of mesquite coppice dunes and sandscrub, therefore, this species may occur within the project site.
Franklin Mountain Talus Snail	*Sonorella metcalfi*	Invertebrate	Rare	Rock talus slopes in the Franklin Mountains and possible in the Organ Mountains.	The project site is not located within the rock talus slopes of these mountains. Therefore, this species would be unlikely to occur within the project site.
Pecos River Muskrat	*Ondatra zibethicus ripensis*	Mammal	Rare	Riparian habitats along rivers and streams.	As discussed in Section 3.7, no riparian areas or reservoirs occur within the project site. Therefore, this species would be unlikely to occur within the project site.
Western Burrowing Owl	*Athene cunicularia hypugaea*	Bird	Rare	Open grasslands, especially prairie, plains, and savanna.	Occurs throughout Fort Bliss except the mountain areas; occurs in all desert shrubland and grassland vegetative communities on Fort Bliss2. As this species has a wide range of occurrence within Fort Bliss, it has the potential to occur within the project site.
Desert night-blooming cereus	*Peniocereus greggii var. greggii*	Plant	Rare	Desert shrublands.	Observation records of this species on Fort Bliss are within the Doña Ana Range– North Training Areas2. Therefore, this species would be unlikely to occur within the project site.
Resin-leaf brickellbush	*Brickellia baccharidea*	Plant	Rare	Mixed desert shrublands on bajada slopes and in arroyos on sandy or gravelly soils derived primarily from limestone.	The project site is not located within bajada slopes. Therefore, this species would be unlikely to occur within the project site.
Sand prickly-pear	*Opuntia arenaria*	Plant	Rare	Sandy areas, particularly semi-stabilized sand dunes among open Chihuahuan desert scrub, often with honey mesquite and a sparse cover of grasses.	This species is thought to have a low potential to occur on Fort Bliss2. Therefore, this species would be unlikely to occur within the project site.
Wheeler's spurge	*Chamaesyce geyeri var. wheeleriana*	Plant	Rare	Sparingly vegetated, loose eolian quartz sand dunes and coppice mounds.	As discussed in Section 3.6.1.1, the project site is composed of mesquite coppice dunes and sandscrub, therefore, this species may occur within the project site.

[1]Source: TPWD Annotated County Lists of Rare Species
[2]Source: U.S. Army, 2009

The Texas horned lizard (*Phrynosoma cornutum*), State-listed as threatened, may occur on the project site due to the dominance of mesquite coppice dune communities within the project site (see Table 3.6-3). Texas horned lizards are always found on the ground within hot, sandy habitats. The species is common throughout the grassland and desert shrubland on post as Fort Bliss provides thousands of acres of habitat. In addition, the State-rare western burrowing owl and wheeler's spurge have the potential to occur on the project site (see Table 3.6-3).

3.6.2 Proposed Action Alternative Environmental Consequences

3.6.2.1 Construction

Vegetation

Construction of the EPCC East Fort Bliss Campus would result in overall localized and minor adverse impacts to vegetation, primarily due to vegetation loss and conversion throughout the approximate 200-acre site. Construction of new roads and buildings would result in the permanent loss of vegetation. The temporary disturbance to vegetation communities during clearing activities and the transport of dirt and fill material could present opportunities for the introduction and spread of invasive species. If fill materials are necessary, they would be obtained from nearby sites to reduce unwanted invasive weed dispersal. Borrow pits would be inspected for exotic weeds before use. Planting of native species to the extent practical in disturbed areas and implementation of invasive species management would help reduce establishment and proliferation of invasive plant species. A mixture of grasses and forbs appropriate to address potential erosion problems and long-term cover would be planted when seed is reasonably available. In an e-mail dated May 3, 2010, the USFWS recommends avoiding introduced species such as Bermuda grass in seed mixtures. USFWS also recommends the use of native trees, shrubs and herbaceous species that are adaptable, drought tolerant and conserve water (see Appendix A).

Wildlife

Impacts from habitat loss would be anticipated and would include either displacement or direct mortality of individual species. Overall impacts, however, would be minor and localized to the site as vegetation and habitat quality on the site is low and suitable habitat for any displaced wildlife is plentiful on Fort Bliss and within the ROI.

All native migratory birds in Texas are protected under the Migratory Bird Treaty Act (MBTA, USC Title 16 Section 703) that prohibits the taking, killing, or possessing of migratory birds unless permitted by regulations promulgated by the Secretary of the Interior. In addition, the Bald and Golden Eagle Protection Act (USC Title16 Section 668) prohibits anyone, without a permit issued by the Secretary of the Interior, from "taking" bald eagles, including their parts, nests, or eggs. Direct impacts to these species could occur if vegetation removal associated with construction activities occur within the breeding season (typically spring to early summer). As the relative quality of habitat within the proposed East Fort Bliss Campus site is low quality for avian species, overall direct impact to these species (mortality) and indirect impacts (loss of habitat) would be minor. Indirect impacts could also occur to these species from construction noise that could harass nesting birds. Impacts to these species could be avoided if construction occurs outside of the peak nesting period (March 15 through September 14) to avoid destruction of individuals, nests or eggs or harassment of nesting species from construction equipment noise. If construction occurs during peak nesting periods, nesting surveys conducted prior to vegetation removal and ground disturbance, and establishment of a vegetative buffer around the nest until young have fledged or the nest is abandoned, would avoid impacts to these species during construction (also see USFWS letter, Appendix A).

Furthermore, only those areas necessary to accommodate the planned construction would be graded to reduce overall impacts to vegetation and wildlife habitat.

Sensitive Species
As shown in Table 3.6-2, the habitat for the Federally-listed threatened or endangered species listed in El Paso County does not occur within the project site. Therefore, these species are unlikely to be present at the project site and construction activities associated with the Proposed Action would have no effect on these species.

As shown in Table 3.6-3, the State-threatened Texas horned lizard may occur within the project site. If Texas horned lizards do exist in areas proposed for construction, direct individual impacts could occur to this species within the construction area. Indirect impacts may also occur from a loss of habitat resulting from the establishment of built-up areas. As stated in Section 1.1, the Final SEIS evaluated the potential impacts to land use changes from training to cantonment in the South Training Area, which included the project site. The proposed campus would be a compatible type of development activity tiered off the proposed land use changes analyzed in the Final SEIS. The Final SEIS determined development within this area may reduce local populations of the Texas horned lizard, but regional populations (county or state level) would not be jeopardized. Planned construction of the proposed campus would affect approximately 200 acres; however, by comparison there are approximately 95,000 acres of Texas horned lizard habitat in the Texas portion of Fort Bliss alone (U.S. Army, 2007a). The proposed East Fort Bliss Campus would not lead to a potential for endangerment to the local population of the horned lizard.

The proposed project has the potential to disturb the western burrowing owl, a State-rare bird species; however, conducting construction activities outside peak nesting periods as previously discussed would minimize impacts to this species. The project also has the potential to impact wheeler's spurge, a State-rare bird species; however, as the habitat within the project site is not of unique value or importance to this species, it is unlikely the Proposed Action would lead to endangerment of the overall regional population of this species. Furthermore, only those areas necessary to accommodate the planned construction would be graded to reduce overall impacts to these rare species.

3.6.2.2 Operations

Vegetation
No direct impacts to vegetation would be anticipated from operations of the proposed East Fort Bliss Campus. The entire site, approximately 200 acres, would be either developed or managed landscape including athletic fields and open space. Annual monitoring and targeted weed control, as necessary, would be performed by EPCC if invasive species were identified within the campus to avoid the establishment and spread of invasive species.

Wildlife
Increased traffic during operation of the EPCC would likely result in a small increase in species vehicle mortality; however, impacts are not expected to be severe. In addition, the EPCC would be designed to avoid attracting hazardous wildlife. Due to the proposed site's proximity to El Paso International Airport and Biggs AAF, bird air strike hazard (BASH) could increase if features of the proposed East Fort Bliss Campus attracted bird species to the area. Landscape design would be compatible with the BASH program and would include measures to avoid attracting avian species such as minimizing outside trees to discourage nesting habitat; designing buildings with no shady spots under cooling systems, vent systems, or ducting so as not to provide nesting habitat; and discouraging permanent water on the site. In the event of onsite permanent water, bird balls would be installed to camouflage the liquid surface from the air and deter birds and waterfowl from leach ponds. Provided the proposed East Fort Bliss Campus design meets the requirements of the FAA Advisory Circular 150/5200-33B - *Hazardous Wildlife Attractants On or Near Airports*, the Proposed Action is not anticipated to have an adverse effect on BASH considerations at either airfield.

Sensitive Species
No impacts would be anticipated to Federally-listed species during operations. A small increase in species vehicle mortality could occur to the Texas horned lizard from increased traffic in the area. This impact, however, would not affect regional populations and would be considered minor. In addition, development of the site and maintained athletic fields and open areas would reduce the potential habitat of this species within the campus, further reducing the potential for vehicle mortality on this species.

3.6.3 No Action Alternative Environmental Consequences

Under the No Action Alternative, the Proposed Action would not be implemented and no construction or operational activities would occur on the proposed site. Current management practices outlined in the INRMP would continue. Therefore, no impacts to biological resources would be anticipated.

3.7 Water Resources

3.7.1 Affected Environment

3.7.1.1 Surface Water

The proposed East Fort Bliss Campus site lies within the Hueco Bolson drainage basin described in more detail in Section 3.5.1.1. The nearest natural surface water body is the Rio Grande River, which runs approximately 7 miles southwest of the site at its nearest point. Sections of the Rio Grande River have been classified as impaired as defined by Section 303(d) of the Clean Water Act. The Draft 2010 Texas 303(d) List designates the Rio Grande River as impaired for bacteria, chloride, and total dissolved solids from the confluence of the Rio Conchos (Mexico) in Presidio County to Riverside Diversion Dam in El Paso County (TCEQ, 2010). The EPA lists the potential source of impairment from nonpoint sources (e.g. agricultural and stormwater runoff (EPA, 2010b)).

There are no perennial or intermittent drainage ways, floodplains, or jurisdictional wetlands identified within the site. Rain typically infiltrates during precipitation events. Most of the precipitation is contained in soil moisture and is eventually lost to evapotranspiration due to the semi-arid nature of the site (USACE, 2000).

3.7.1.2 Groundwater

Fort Bliss gets its potable water supply entirely from well water. The well water is pumped from the underlying Hueco Bolson Aquifer that is composed of Tertiary and Quaternary basin-fill sedimentary deposits bounded by less permeable carbonate, igneous, and consolidated rocks. The aquifer is primarily recharged from surface water runoff from the surrounding mountain ranges on the east and west. An estimated 3.1 percent of the precipitation falling in the mountains reaches the saturated zone in the basin-fill deposits, with about 8,560 acre-feet of annual recharge to the aquifer. The groundwater moves in a southwest direction towards the Rio Grande Valley, with the aquifer's thickest freshwater-containing area (up to 900 feet thick) underlying the Fort Bliss cantonment area and northeast El Paso. The depth to groundwater varies, but is generally greater than 200 feet. Within the Hueco Bolson Aquifer, a freshwater lens overlies brackish water, and is the main source of freshwater from the aquifer. Freshwater in the aquifer is of very high quality, and requires only chlorination (Fort Bliss, 2001; U.S. Army, 2007a).

Groundwater is primarily extracted from the Hueco Bolson Aquifer to supply the City of El Paso and Ciudad Juarez, but groundwater is also extracted from the Tularosa Basin to meet water consumption demands (see Section 3.8.1.1 regarding drinking water).

Due to groundwater extraction, water levels in the Hueco Bolson Aquifer have declined by about 1 foot per year and up to 150 feet in some areas due to withdrawal rates exceeding recharge rates. This has resulted in infiltration of salt water into the upper freshwater zones, and total dissolved solids (TDS) or

chloride levels that exceed maximum contaminant levels (MCLs) in wells around the El Paso area, including the El Paso International Airport well field adjacent to Fort Bliss. To address this problem, Fort Bliss in partnership with the City of El Paso constructed a groundwater desalination plant on Fort Bliss land. The purpose of the plant is to treat brackish (salty) water pumped from the lower regions of the Hueco Bolson Aquifer to provide potable water for use by the City of El Paso and Fort Bliss. Supplementing the potable water supply with treated brackish water is expected to prolong the useful life of freshwater resources in the Hueco Bolson Aquifer and slow the intrusion of brackish water on existing Fort Bliss water wells (USACE, 2004). In addition, Fort Bliss and the City of El Paso are participating in both a water conservation program with a goal of water use at or below 140 gallons per capita per day, and a program to implement the reuse of reclaimed water (U.S. Army, 2007; USACE, 2006a). The installation's water conservation policy reduces water consumption through restrictions on lawn water hours and days; water-efficient design on all new construction projects including low-flush toilets, low-flow shower heads, low-flow faucets; and xeriscape landscaping (USACE, 2006a).

3.7.2 Proposed Action Alternative Environmental Consequences

3.7.2.1 Construction

Surface Water

Impacts to surface water from construction of the proposed East Fort Bliss Campus would be minor. Since there are no jurisdictional surface water features within the project site, there would be no direct effects on surface waters resulting from construction activities. Stormwater runoff, however, would have the potential to impact offsite receiving waters. As stated in Section 3.5.2, construction activities would result in the potential for soil erosion, which during storm events, stormwater runoff could carry sediments off site into receiving waterbodies. This would ultimately include the Rio Grande River, which is listed as impaired for TDS. Due to the distance of the project site (7 miles) and high permeability of soils, the overall likelihood of sediment transport from the construction site into the Rio Grande River would be low. Furthermore, EPCC would manage stormwater runoff on the site (see Section 3.8.2.1), including implementing BMPs to reduce adverse effects on water quality, including measures such as using hay bales and silt fencing to trap waterborne sediments, and eventual reseeding and revegetation following construction.

A possibility exists for a spill of contaminants (e.g., fuel, oils, antifreeze, etc.) from equipment during construction, which could impact surface waters. Seepage of contaminants from construction equipment could find a pathway to an unconfined, surficial watertable that could drain to the Rio Grande River. To prevent the contaminants in reaching the watertable, spill BMPs would be implemented and the spill cleaned quickly and efficiently (see Section 3.12.2.1).

Groundwater

Impacts to groundwater from construction at the proposed East Fort Bliss Campus site would be minor. The site is not within the recharge area of the Hueco Bolson Aquifer, and any infiltration of contaminated runoff from the construction site is most likely to be contained within the soil strata, as most precipitation is eventually lost as evapotranspiration. Groundwater use may increase during the construction process due to soil stabilization BMPs involving water application for dust suppression and prevention of wind erosion. Water required for this process would likely come from groundwater pumped from the Hueco Bolson Aquifer or would be transported on site by trucks.

3.7.2.2 Operations

Surface Water

Impacts to surface water from the operation of the proposed East Fort Bliss Campus would be minor. Since there are no surface water features within the project site, there would be no direct adverse impacts to onsite surface waters.

The increase of impervious surface associated with the campus facilities and parking lots would increase the potential of flash flooding and runoff of stormwater into receiving waterbodies and ultimately the Rio Grande River. Runoff associated with parking areas and roadways is likely to contain sediments and minor amounts of contaminants associated with vehicles (e.g., fuel, oils, antifreeze, etc.). These impacts, however, would be avoided through onsite stormwater management (see Section 3.8.2).

Groundwater

Long-term minor adverse effects on groundwater would be expected due to the increased use of potable water from the Hueco Bolson Aquifer groundwater to meet demands of the daily operations of the proposed East Fort Bliss Campus. Operations are likely to somewhat contribute to the continued draw down of the Hueco Bolson Aquifer watertable. The EPCC, however, would implement water conservation practices that reduce water consumption, such as the use of water efficient technology like low-flush toilets and low-flow faucets. In addition the implementation of xeriscape landscaping using native plants and raingardens would help reduce the need for irrigation.

3.7.3 No Action Alternative Environmental Consequences

Under the No Action Alternative, the Proposed Action would not be implemented and no construction or operational activities would occur on the proposed site. The levels of stormwater runoff, erosion and sedimentation at Fort Bliss would not increase. The undeveloped land would remain at its current state until the installation decides on a new construction project for the site. Therefore, no impacts to surface water would occur. In addition, no impacts to groundwater would occur at the site.

3.8 Utilities

3.8.1 Affected Environment

3.8.1.1 Potable Water

Potable water is currently provided to Fort Bliss from three sources: on-post wells; interconnection with the existing EPWU system; and the Kay Bailey Hutchison Desalination Plant. The majority of water consumed by Fort Bliss is obtained from the two on-post well fields: Tobin Well and the Pike Well Fields. The Tobin Well Field contains seven wells and is located approximately 3 miles northeast of the main cantonment area. The Pike Well Field contains four wells and is located on the Main Post. The well fields can produce a combined flow of 15.8 million gallons per day (MGD) and EPWU can currently provide Fort Bliss with 4.24 MGD, totaling approximately 20 MGD. Water produced by well fields for Fort Bliss averaged approximately 4.6 MGD in 2004 (U.S. Army, 2007a). According to the most recent EPWU posted data, the average daily water consumption from the EPWU system in 2008 was 96.4 MGD (EPWU, 2010a). The existing EPWU system has a treatment capacity of 305 MGD (U.S. Army, 2007a). A new desalination plant has been constructed on Fort Bliss land (approximately 1.5 miles south of the project site) to treat brackish water from the Hueco Bolson aquifer and minimize freshwater use. The new facility produces 27.5 MGD of fresh water daily (EPWU, 2010b). Based on current water demand, the desalination facilities increase the EPWU's fresh water production by approximately 25 percent (EPWU, 2010b).

A 48-inch water line runs along the northeast side of Loop 375, supplying water to a large part of the new Fort Bliss area as well as surrounding development. This line feeds a 36-inch main that parallels an existing 48-inch line on the opposite side of the road, adjacent to the proposed site. Water is pumped from the 48-inch main into the water storage tanks northeast of the project site. The purpose for this is to contribute to the static pressure in water distribution system in the eastern part of Fort Bliss.

3.8.1.2 Wastewater

Wastewater generated at Fort Bliss flows through five connections to the EPWU sanitary sewer system and is treated at the Haskell Street Wastewater Treatment Plant. The Haskell Street Wastewater Treatment Plant has a treatment capacity of 27.7 MGD (EPWU, 2010c) and is located approximately 3 miles from Fort Bliss. In 2004, approximately 2.9 MGD of sewage was generated from Fort Bliss. The installation typically uses approximately 10.5 percent of this plant's treatment capacity. EPWU has a total of four wastewater treatment facilities, and currently has a total treatment capacity of 94.2 MGD with a total excess capacity of 44.7 MGD (U.S. Army, 2007a). A major gravity sewer system near the project site was recently constructed to serve the new BCT complexes north of Spur 601, and a vehicle wash facility east of Loop 375.

3.8.1.3 Stormwater

The majority of stormwater runoff flows through a series of storm drainage channels, pipes, and stormwater pump stations to various stormwater retention ponds. The water collected in the retention ponds is lost through evaporation and infiltration. Several small connections for storm sewers with EPWU exist. These are mainly located at the post boundaries, and along access roads located within the main cantonment area. These discharges are currently covered by the small stormwater discharges from municipal separate storm sewer system (MS4) Permit (TXR040128) which was issued to Fort Bliss on March 11, 2009. Stormwater on the new BCT and Integrated Concept Team (ICT) areas is handled by a combination of surface flow, new storm sewer systems, and new stormwater retention basins.

Due to low precipitation, undulating topography, and low vegetated state, most of the precipitation becomes stormwater runoff, which ends up ponding in localized areas throughout the project site (also see Section 3.5.1). The stormwater runoff filters slowly either back into the Hueco Bolson, or is lost to evaporation. Flash flooding, high alluvial erosion, and deposition are problems associated with the terrain during high intensity storms. Currently there are no existing retention ponding areas located on the project site.

3.8.1.4 Energy

Electrical Power

Electrical power is supplied to Fort Bliss by El Paso Electric Company (EPEC), which generates electricity from two interconnected plants. An EPEC high-voltage overhead electrical line runs south of the proposed East Fort Bliss Campus site. EPEC has recently undertaken a project to provide redundant power through an additional circuit in this transmission line's ROW. EPEC has a total generating capacity of 840 megawatts (MW) and can purchase an additional 110 MW from the Four Corners Plant. Current peak electricity usage within the EPEC service area is estimated to be approximately 75 percent of available power. Average power consumption, based on standard rates in Army Technical Manual TM-5-811, is approximately 0.3 kilowatts per person, or 10 MW (U.S. Army, 2007a). The main cantonment area thus consumes approximately 1 percent of power available from EPEC. There are two electric lines to the east of the proposed site that are located within the same ROW corridor. The Newman Vista line is 115 kilovolts (kV) and the Newman Caliente line just east of the Newman Vista line is 345 kV.

Natural Gas

The El Paso Natural Gas Company (EPNG) supplies natural gas to Fort Bliss, which is the primary heating fuel at Fort Bliss (USACE, 2006a). The average annual gas consumption of the Main Post is estimated at approximately 0.88 million cubic feet per hour. The Texas Gas Service provides 25.9 billion cubic feet of natural gas per year to 28 cities in Texas, including El Paso (U.S. Army, 2007a). Therefore, the main cantonment area consumes 0.003 percent of the natural gas available from Texas Gas Service. A number of distribution points, with an estimated total capacity of 2.5 million cubic feet per hour, are

dispersed on a looped gas distribution network that is owned and maintained by Texas Gas Service. The nearest gas line to the proposed site is a 12-inch high pressure line currently running through the airport, which is approximately 1.5 miles to the southwest of the site.

3.8.2 Proposed Action Alternative Environmental Consequences

3.8.2.1 Construction

Potable Water
Construction activities associated with the proposed East Fort Bliss Campus would have minor impacts to potable water, primarily resulting from the tie-in required to the existing water distribution system. Potable water is available for the EPCC from two sources. The first source is via three water tanks located to the northeast of the proposed site. The tanks, belonging to Fort Bliss, have a 4 MGD capacity, with water being provided via an EPWU 48-inch main running along Loop 375. The second source may be through EPWU existing infrastructure located on Montana Avenue, Butterfield Trail Golf Course, Global Reach Drive, or on Spur 601. Once site plans are complete, and the exact access points are known, sizes and tie-in points can be coordinated with EPWU and construction activities would be planned accordingly to minimize overall impacts to potable water during construction. Easements may be necessary for the extension of the existing infrastructure.

Wastewater
Construction activities associated with the proposed East Fort Bliss Campus would have minor impacts to the wastewater system, primarily resulting from the tie-in required to the existing wastewater collection system. Wastewater treatment for this project would be directed to EPWU facilities. Once site plans are complete, and the exact access points are known, sizes and tie-in points can be coordinated with EPWU. Easements may be necessary for the extension of the wastewater line and construction activities would be planned accordingly to minimize overall impacts to wastewater during construction.

The sanitary sewer would need to be tied into existing EPWU infrastructure located on Montana Avenue. This system has an 18 inch interceptor located at Montana Avenue and Saul Kleinfeld Drive known as the Saul Kleinfeld System Interceptor. This system ultimately discharges to the Roberto Bustamante Waste Treatment Plant. Once design plans are complete, coordination would be conducted with EPWU to determine the exact tie in point located on Montana Avenue, which would best serve the proposed site, minimizing adverse impacts.

Stormwater
Due to the lack of storm sewer systems located on this portion of Fort Bliss, stormwater runoff would be directed to and captured in onsite retention basins. Stormwater runoff for the proposed site would be carried by a combination of surface flow and storm sewer systems to retention basins located on site. The total retention basin capacity required shall be for a 100-year storm. The location of the retention basins within the site would need to be coordinated closely with Fort Bliss and El Paso International Airport. FAA Circular 150/5200-33B *"Hazardous Wildlife Attractions on or near Airports"* shall be used in planning and building any retention pond. Any stormwater runoff discharged both during and after construction would need to meet all of TCEQ's stormwater requirements. It is expected that overall water quality impacts from stormwater runoff would be minor during construction.

Energy
Electrical connections would be required for the proposed facilities resulting in a minor impact. EPCC would connect into a 13.8 kV distribution line that runs south to north along the east project boundary. EPEC has high voltage 115 and 345 kV overhead lines directly east of this distribution line. Policy dictates that electrical distribution at Fort Bliss would be underground so excavation would be required to bury internal lines.

Natural gas would be delivered to the proposed site from the closest point in the high-pressure gas distribution system that currently exists within the Fort Bliss cantonment area. This point is located approximately 1 mile from the project site; a 12-inch high pressure line which currently runs through the airport. The proposed connecting line would be sized to serve the proposed East Fort Bliss Campus.

3.8.2.2 Operations

Potable Water

The anticipated daily average consumption rate for the proposed East Fort Bliss Campus is 0.10 MGD of potable water. The anticipated consumption rate represents approximately 2 percent of the 4 MGD capacity that is available from the three tanks owned by Fort Bliss, and approximately 2 percent of the 4.24 MGD provided for Fort Bliss by EPWU. Impacts to potable water resulting from operations would, therefore, be negligible.

Wastewater

The wastewater would ultimately end up at the Roberto Bustamante Wastewater Treatment Plant. The daily average anticipated is approximately 0.05 MGD of wastewater generated from the proposed East Fort Bliss Campus. This is approximately 0.1 percent of the Roberto Bustamante Waste Treatment Plant total capacity of 39 MGD. Currently the Roberto Bustamante Wastewater Treatment Plant is treating 28 MGD, which leaves an available capacity of 11 MGD. Impacts to wastewater resulting from operations of the proposed East Fort Bliss Campus would, therefore, be negligible.

Stormwater

Operations of the proposed East Fort Bliss Campus would have minor adverse impacts to stormwater, primarily due to increased impervious surface associated with the proposed facilities, parking lots, and roadways. As previously stated, stormwater runoff for the proposed East Fort Bliss Campus would be carried by a combination of surface flow and storm sewer systems to retention basins located on site designed for the 100-year storm and would meet all of TCEQ's stormwater requirements. Furthermore, operations and maintenance of stormwater management infrastructure would comply with FAA Circular 150/5200-33B "Hazardous Wildlife Attractions on or near Airports" and EPWU Storm Water Division.

Energy

It is expected that the demand for electricity by the proposed campus would be met by the existing supplies and would result in minor impacts. Anticipated electrical load for the EPCC is estimated to be 1,750 megawatt hours (MWh) per year. EPEC confirmed that they have capacity within their current system to handle the projected EPCC usage, along with other projects existing or proposed within the ROI.

Natural gas would be required for the proposed facilities and it is expected that the demand for natural gas would be met by the existing supplies and would result in minor impacts. The anticipated natural gas load for the EPCC is 50,000 cubic feet per year.

Overall impacts to energy consumption would be further reduced as EPCC intends to include the installation of energy-efficient interior and exterior lighting fixtures, and interior appliances. EPCC intends to have the building designed to make use of "green" building techniques, which would therefore reduce demand for energy and gas.

3.8.3 No Action Alternative Environmental Consequences

Under the No Action Alternative, the Proposed Action would not be implemented and no construction or operational activities would occur on the proposed site. Therefore, no impacts to existing infrastructure would occur as new connections to and additional demand on existing utilities would not be required.

3.9 Socioeconomics and Environmental Justice

3.9.1 Affected Environment

The Fort Bliss Army Growth and Force Structure Realignment Draft EIS (DEIS; U.S. Army, 2009) reported that the overall Fort Bliss-related population, in 2008, was almost 92,000 people. Retirees, annuitants, and their dependents comprised another 79,600 people, increasing the overall population of Fort Bliss to 147,876. The total population directly supported by Fort Bliss showed a yearly increase of 9.5 percent from 2000 to 2008 and comprised about 6.9 percent and 9.2 percent of the total population of the ROI and El Paso County, respectively. When retirees, annuitants, and their dependents are included, this increases to almost 15 percent of the ROI population (U.S. Army, 2009).

The population of El Paso County was estimated at 742,062 in mid-2008, while the population of the three-county area was estimated at 1,006,441 (U.S. Census, 2009). For comparison, the population of El Paso County was 479,899 in 1980, while the three-county population was 620,904 (U.S. Army, 2007a). The Army Growth and Force Structure Realignment DEIS projected that the population in El Paso County would increase annually by 1.75 percent from 2010 to 2020. These projected rates compare to an average annual growth rate of 1.66 percent from 1980 to 2004. The DEIS also projected that population growth in the three-county region would average 1.64 percent for the 2010-2020, slowing to about 1 percent between 2030 and 2040 (U.S. Army, 2009). These projections do not include Fort Bliss growth from the BRAC/Global Defense Posture Realignment expansion, but the El Paso Metropolitan Planning Organization has estimated population growth by planning region considering base expansion. They estimate an annual growth rate of about 1.9 percent with most growth expected to occur in the east, west, and northeast areas of El Paso and the New Mexico portion of their planning area (U.S. Army, 2009).

The Army Growth and Force Structure Realignment DEIS also provides the projected demographic and socioeconomic conditions relevant to this EA based on future Army Growth and Force Structure Realignment decisioning. The DEIS analyzes four stationing and training decisioning alternatives, all of which would result in an increase in Fort Bliss population. As the preferred or selected alternative has not been identified at this time, this EA describes potential maximum and minimum population levels resulting from the Alternatives. The maximum population increase would result as part of the No Action Alternative, Stationing and Training Alternative 1, which includes the 2005 Fort Bliss population plus the predicted total increase resulting from the implementation of Alternative 4 of the *Fort Bliss, Texas and New Mexico Mission and Master Plan; Final SEIS* (the Proposed Action of the Final SEIS adopted in the ROD). Under this scenario, the total direct Fort Bliss-related population (including military, civilians, and their dependents) would increase by 87,715 above the 2005 baseline, and also induce regional population growth by 90,396. The total direct and induced population increase over the 2005 baseline would be 178,083, of which an estimated 159,315 (89 percent) would be off-post residents. The total Fort Bliss-related population (direct and induced), including the 2005 baseline, was projected to reach 260,879, of which an estimated 224,956 (86 percent) would be off-post residents (U.S. Army, 2009). In comparison, Stationing and Training Alternative 3, if selected, would result in the lowest level of population increase. Under this scenario, the total direct Fort Bliss-related population (including military, civilians, and their dependents) would increase by 15,185 above the 2005 baseline, and also induce regional population growth by 12,218. The total direct and induced population increase over the 2005 baseline would be 27,403, of which an estimated 22,196 (81 percent) would be off-post residents. The total Fort Bliss-related population (direct and induced), including the 2005 baseline, was projected to reach 110,199, of which an estimated 87,837 (80 percent) would be off-post residents (U.S. Army, 2009).

As reported in the DEIS, studies commissioned by Fort Bliss in 1989 and 2002 evidenced the significance of the installation to the regional economy as a principal employer and business stimulator (U.S. Army, 2009). It was estimated that, in 2002, Fort Bliss was responsible for $1.6 billion in increased sales volume and $112 million in government outlays. In 2005, using an average military salary of $43,500,

payroll for active duty personnel is estimated at $944 million. Likewise, payroll to civilian employees is estimated to be $332 million using an average civilian salary of $45,000. In 2002, it was estimated that Fort Bliss was responsible for $1.7 billion in increased sales in the City of El Paso Area (U.S. Army, 2009).

The DEIS addressed environmental justice considerations in accordance with Executive Order 12898. The evaluation determined that El Paso County (in 2000) had a minority population representing 83 percent of the total population with nearly 24 percent of individuals living below the poverty level. The SEIS also determined that 89 percent of the census tracts in the three-county region had minority populations comprising 50 percent or more of the total population, while 97 percent of the census tracts had minority populations at higher percentages than the average for the region. Also, nearly half of the census tracts had higher percentages of individuals living below the poverty level than the average for the region.

The proposed East Fort Bliss Campus site is located within Census Tract 101.1, which is almost entirely within the boundaries of Fort Bliss. The closest residential neighborhoods to the project site are located in census tracts 103.11 and 103.13, south of Montana Avenue, more than 2 miles away. Both tracts are characterized as having minority populations at higher percentages than the three-county average, but neither was characterized as having higher percentages of individuals living below the poverty level (U.S. Army, 2007a).

3.9.2 Proposed Action Alternative Environmental Consequences

3.9.2.1 Construction

The construction of the proposed East Fort Bliss Campus would provide additional economic stimulus and may attract construction workers to the region temporarily depending upon local availability in the labor pool. EPCC estimates a total of 200 construction workers would be required for the entire project, with an estimated peak of 40 workers for a 2 month period. This increased demand for construction services would temporarily provide an increased benefit for local economics and employment over a 12 to 16 month construction period. Other impacts associated with construction of the Proposed Action would be negligible to socioeconomic resources. Furthermore, construction of the Proposed Action would not be anticipated to cause an adverse and disproportionate impact on environmental justice populations.

3.9.2.2 Operations

Operation of the proposed East Fort Bliss Campus would provide long-term socioeconomic benefits through the creation of 80 permanent faculty positions and 15 permanent staff positions. The EPCC would also benefit the local populations within the eastside of El Paso who are currently enrolled or plan on enrolling in continuing education programs and training through providing a convenient location east of their current operations. The EPCC would also provide educational opportunities and provide athletic fields for recreational opportunities for the proposed military and dependent populations of the proposed RCI housing currently planned to be located directly south of the site (also see Section 3.15 for cumulative impacts). Furthermore, operations of the Proposed Action would not be anticipated to cause an adverse and disproportionate impact on environmental justice populations.

3.9.3 No Action Alternative Environmental Consequences

The No Action Alternative would remain consistent with the demographic and planning assumptions for Fort Bliss as approved in the ROD for the SEIS. This alternative, however, would not support the potential increase in demand for continued education for military and civilian populations living on the eastside of El Paso and would result in a minor adverse impact to socioeconomics.

3.10 Cultural Resources

3.10.1 Affected Environment

Cultural resources include prehistoric and historic archaeological sites, buildings, structures, districts, artifacts, objects, or any other physical evidence of human activity considered important to a culture, subculture, or community for scientific, traditional, or religious purposes. The area encompassing the proposed East Fort Bliss Campus site and Fort Bliss has a rich history between the Native American population, and through the beginning of the Fort. Cultural resources on Fort Bliss include Native American or Euroamerican districts, sites, buildings, structures, artifacts, and other evidence of human use. A more detailed summary of the history of the installation and area's cultural history can be found in the ICRMP.

The goal of cultural resources management at Fort Bliss is to protect and manage the installation's cultural resources in compliance with various Federal laws and regulations that govern cultural resources and in support of the overall Fort Bliss mission of military training and readiness. Management of Fort Bliss' historic properties as required by the NHPA of 1966 as amended is governed by a PA executed between the Fort Bliss Garrison Command, the ACHP, and the New Mexico and Texas SHPOs. Actions on Fort Bliss lands affecting historical and archaeological resources are required to comply with a variety of Federal and Army regulations, including the NHPA, Army Regulation 200-1, *Environmental Protection and Enhancement*, and the Native American Graves Protection and Repatriation Act (NAGPRA) of 1990 as amended.

The proposed East Fort Bliss Campus site is not within the viewshed of a historic district, nor are any structures located within the site. Previous archaeological investigations of the site identified eight prehistoric sites. An archeological investigation conducted in 2006 identified seven of those sites and recommended all "Not Eligible" for the NRHP. The report was accepted by the Texas State SHPO on January 12, 2007. A second investigation identified one site in the footprint and also recommended it "Not Eligible" (Burt, 2008). The Texas SHPO concurred with that recommendation on March 10, 2010.

One historical trail of regional importance occurs along the southern boundary of the proposed East Fort Bliss Campus site, which dates back to 1857 with the establishment of the first large-scale continental mail service known as the Butterfield Overland Mail Route. The trail was a stagecoach route in the U.S. carrying mail and passengers cross country from Missouri to San Francisco and operated from 1857 to 1861. More than 700 miles of the almost 2,800-mile mail route ran across the State of Texas. Fragments of this trail exist within Fort Bliss and the region, including a 10-mile segment of the Butterfield route, which is recognized as a historical site on Fort Bliss (FB15319), outside of the proposed East Fort Bliss Campus site (U.S. Army, 2007a).

3.10.2 Proposed Action Alternative Environmental Consequences

An action results in an adverse effect to a historic property or prehistoric site when it alters qualities of the resource, including relevant features of its environment or use, that make it eligible for inclusion in the NRHP (36 CFR 800.9[b]). Potential adverse effects could include the following:

- Physical destruction, damage, or alteration of all or part of the property;
- Isolation of the property from, or alteration of the character of, the property's setting, when that character contributes to the property's qualification for the NRHP;
- Introduction of visual, audible, or atmospheric elements that are out of character with the property or alter its setting, if its setting is integral to the property's significance;

- Neglect of a property resulting in its deterioration or destruction; and
- Transfer, lease, or sale of the property if the sale removes the property from Federal protection.

3.10.2.1 Construction

Construction of the approximate 200-acre site proposed East Fort Bliss Campus would result in the direct impact to the eight prehistoric sites located within the proposed site. Grading activities would result in the permanent loss of these sites. As previously stated, the previous evaluations recommended these sites as "Not Eligible" for the NRHP and the Texas SHPO concurred with those findings. Therefore, any proposed impacts to those sites would result in a finding of "No Historic Properties Affected" under the NHPA, Section 800.4(d)(1) and no treatment would be required. In addition, no impacts would affect the one Historic Property, the Butterfield Trail, as no disturbance would be allowed within 50 feet of the Trail, east to west, all along the footprint of the proposed campus.

Although the proposed site has been surveyed for cultural resources, there is still the potential to uncover unknown archaeological resources during construction. Any inadvertent discoveries of sub-surface cultural materials discovered during construction would be treated in accordance with Standard Operating Procedure 10 of the Fort Bliss PA. Any discovery of possible human remains would be managed by the procedures set out in the ICRMP. As part of the cultural resources analysis and in accordance with 36 CFR Part 800, Subpart B, the Section 106 Process, Fort Bliss would consult with Native American tribes on the proposed undertaking to identify any potential effect on resources of interest to those tribes. If any adverse effects are identified by the tribes, Fort Bliss would continue consultation to find a strategy to mitigate those effects.

3.10.2.2 Operations

EPCC operations would not be anticipated to impact cultural resources. The existing segment of the historical Butterfield Overland Mail Route along the southern boundary of the proposed East Fort Bliss Campus site would serve as a buffer between the proposed RCI development, south of the proposed East Fort Bliss Campus site. EPCC is currently planning on developing an interpretive trail within the Butterfield Overland Mail Route buffer area. The interpretive trail would examine the historical significance of the Butterfield Overland Mail Route and may facilitate recreational activities such as bike riding, running and physical training and would be maintained by EPCC. This effort would be coordinated with The Fort Bliss Directorate of Public Works (DPW)-Environment Historic personnel.

3.10.2.3 No Action Alternative Environmental Consequences

Under the No Action Alternative, the Proposed Action would not be implemented and no construction or operational activities would occur on the proposed site. Cultural resources within the project site would not be disturbed. Current activities, programs, and management practices established by the ICRMP and PA would continue. Therefore, no impacts would occur to cultural resources.

3.11 Visual Resources

3.11.1 Affected Environment

The proposed East Fort Bliss Campus site is located on a relatively flat landscape. The City of El Paso borders along the installation to the south and west. The area is further constrained by the Rio Grande River, and the Franklin Mountain Range. The northwest northern and eastern installation border joins to the alluvial fans and foothills. The rugged mountains in view add to the overall aesthetics of the desert vista, and the relative flatness of the Main Post means that tall structures are visible for a long distance. The proposed WBAMC, along with other new BCT buildings are currently being built or are planned for construction directly north of the proposed site. These structures consist of multistory buildings.

Figure 3.11-1 shows a representative image from the project site. The water tower is located to the east of the project site, approximately 1.5 miles away from where the photo was taken.

Figure 3.11-1. View of Proposed East Fort Bliss Campus Site Looking East

3.11.2 Proposed Action Alternative Environmental Consequences

3.11.2.1 Construction

Fort Bliss has determined that visual resources are an important resource to the installation, both as an aesthetic and a safety measure. The *Army Installation Design Guide for Fort Bliss* outlines visual themes at the post, and describes planning design standards for buildings, landscape, transportation and site elements (USACE, 2006b). EPCC would coordinate the proposed campus design standards with Fort Bliss to ensure that the overall proposed campus complies with regional visual themes.

Temporary impacts would occur from construction, which would impose heavy vehicles, noise, and traffic on a previously undisturbed landscape. In addition, unfinished buildings and unvegetated areas would impose temporary aesthetic impacts to the area. These impacts, however, would be temporary and limited to the construction period. Construction would involve clearing brush from the project site, and installing utilities, building structures, roads, and parking lots. Because this particular area is still undeveloped, it would be imposing physical structures on a previously undisturbed area. The newly constructed buildings would likely be visible from the proposed WBAMC, from Route 375, and depending on the location and views, potentially Montana Avenue. The buildings would not be visible from the main cantonment area, however, would likely be visible from the golf course located directly east of the site. The addition of these buildings to the landscape would cause an adverse impact on visual resources within the localized area, however, as development has already occurred within the region, overall impacts to visual resources resulting from the Proposed Action would be minor.

3.11.2.2 Operations

Once construction is complete, there would be a long-term, localized impact to the area visual resources, as new buildings would replace previously open space. Incorporation of vegetative screens and buffers into the site design, however, would limit the impact to the visual resources. Traditional college campus landscaping would mediate the look of the new structures, while ensuring that the new buildings blend

into the installation's campus, minimizing visual impacts. As stated in Section 3.6, landscaping would include the use of plant species native to the region.

The proposed East Fort Bliss Campus would most likely require security lighting around parking lots and near the building entrances. Depending on the location and the type of lighting required, lights could be visible from the roadways, adjacent golf course and TAs directly north of the project site. Measures to reduce these impacts could include using well-shielded lighting (e.g., hooded lights). Shielding consists of lighting fixture designs that direct light to where it is needed while minimizing the amount of light trespassing into areas where it becomes a nuisance. These measures would help to reduce light pollution around the project site and outdoor lighting fixtures would be compliant with the shielding standards of the El Paso Outdoor Lighting Code, Section 18.18.070. Overall, the aesthetics impact would be indirect and minor.

3.11.3 No Action Alternative Environmental Consequences

Under the No Action Alternative, the Proposed Action would not be implemented and no construction or operational activities would occur on the proposed site. Therefore, the aesthetics would not be affected by the No Action Alternative. However, the area around the project site is currently under new construction, with new projects being planned. It is anticipated that the construction of the WBAMC and RCI would be constructed on the undisturbed landscape.

3.12 Hazardous Materials and Waste

3.12.1 Affected Environment

Specific environmental statutes and regulations govern hazardous material and hazardous waste management activities at Fort Bliss. For the purpose of this analysis, the terms *hazardous waste*, *hazardous materials,* and *toxic substances* include those substances defined as hazardous by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), the Resource Conservation and Recovery Act (RCRA), or the Toxic Substances Control Act (TSCA). In general, they include substances that, because of their quantity, concentration, or physical, chemical, or toxic characteristics, might present substantial danger to public health or welfare or the environment when released into the environment or improperly managed. This section describes current waste generation and management activities at Fort Bliss.

3.12.1.1 Hazardous Materials Use and Waste Generation

Fort Bliss stores and uses hazardous chemicals for training activities and installation maintenance, including a variety of flammable and combustible liquids. Types of hazardous chemicals used by the installation include acids, corrosives, caustics, glycols, compressed gases, aerosols, batteries, hydraulic fluids, solvents, paints, cleaning agents, pesticides, herbicides, lubricants, fire retardants, photographic chemicals, alcohols, insecticides, sealants, and ordnance. In accordance with the Emergency Planning and Community Right-to-Know Act (EPCRA), Section 312, an annual inventory report (Tier II report) for chemicals stored in quantities above the chemicals' threshold quantity must be submitted to the State Emergency Response Commission, Local Emergency Planning Committee, and local fire department. The Tier II report identifies the hazardous chemicals stored on Fort Bliss in excess of 10,000 pounds and generally includes the chemical name, physical state of the chemical, associated hazards, type of storage container, amounts stored, and storage locations. Fort Bliss submits Tier II reports for gasoline and JP-8 jet fuel (U.S. Army, 2009).

In accordance with Army Regulation-200-1, Fort Bliss has a *Hazardous Waste Management Plan* (HWMP) for the handling and storage of hazardous waste. The HWMP provides detailed information on training, hazardous waste management roles and responsibilities, and hazardous waste identification,

storage, transportation, and spill control, consistent with Federal and State regulations. Fort Bliss is categorized as a Large Quantity Generator (LQG) of hazardous waste (EPA Identification number TX4213720101) as defined by 40 CFR Parts 262 and 264, which means the facility generates more than 2,200 pounds (1,000 kilograms) or more of hazardous waste or more than 2.2 pounds (1 kilogram) of acute hazardous waste per calendar month. Fort Bliss is permitted by TCEQ to operate a hazardous waste storage facility (HWSF) (permit #50296). The operating permit was renewed on March 11, 2002 and is valid for 10 years. The permit allows Fort Bliss to store hazardous waste at the HWSF for up to one year. Wastes generated throughout Fort Bliss are brought to one of the five 90-day storage areas or the HWSF (Building 11614) for classification, labeling, and storage. Waste processing at the HWSF is continual, resulting in a turnaround time of approximately 90 days. Several times a month, or more often if necessary, wastes are transported to an offsite Treatment, Storage, and Disposal (TSD) facility (U.S. Army, 2008a).

Fort Bliss submits an Annual Waste Summary to TCEQ detailing the management of each hazardous waste generated on site during the previous calendar year. A waste minimization report is also submitted to TCEQ in accordance with the installation's hazardous waste permit. The *Fort Bliss Waste Analysis Plan (2009)* documents procedures for classification and identification of hazardous wastes to ensure compliant management of all waste streams generated at Fort Bliss. The *Waste Analysis Plan* is updated annually or more frequently if there is a change in the waste stream (U.S. Army, 2009).

3.12.1.2 Pollution Prevention

The objective of the Fort Bliss Pollution Prevention (P2) Program is to reduce or eliminate use of hazardous materials, generation of wastes, and emissions of pollutants to the environment, and to conserve resources. The *Fort Bliss P2 Plan* complies with current Army regulations and TCEQ requirements. The success of Fort Bliss's P2 Program is measured against the Army's P2 Program reduction goals. In accordance with the Texas Waste Reduction Policy Act (WRPA) and Army Pamphlet 200-1, the P2 Plan is revised either every five years or upon any occurrence of change to a function or process at Fort Bliss. Mandatory workplace recycling was implemented in November 1996 and a Fort Bliss Recycling Policy, U.S. Army Garrison Regulation 200-2, was signed on 8 March 2005, making recycling mandatory. The recycling center currently recycles about 163 tons of material a month.

3.12.1.3 Site Contamination Potential

DoD policy requires that the environmental condition of property be determined before any real property may be sold, leased, transferred, or acquired. An Environmental Condition of Property (ECP) report was completed for an undeveloped 1,000-acre parcel of land located outside of the cantonment area of Fort Bliss. The 1,000-acre parcel of land was proposed for lease to Fort Bliss/White Sands Missile Range Housing as part of the Military Housing Privatization Initiative. The proposed East Fort Bliss Campus site is located within the 1,000-acre study area included in the ECP investigation.

The ECP report documents the physical and environmental condition of the subject property resulting from the past storage, use, release, and disposal of hazardous substances and petroleum products within or directly adjacent to the site. The findings of the ECP report are based on historical research of the property; the results of personnel interviews; the findings of a visual site inspection; a regulatory database search; and the review of environmental reports, surveys, and other pertinent documentation available at the time. In the report, the "property," "subject property," or "site" refers to the 1,000-acre parcel, which in turn, includes the approximate 200-acre East Fort Bliss Campus site. The following summarizes relevant background information as well as the findings of the ECP study.

Munitions and Explosives of Concern

The term munitions and explosives of concern (MEC) means military munitions that might pose unique explosives safety risks, including unexploded ordnance (UXO), discarded military munitions; or munitions constituents present in concentrations high enough to pose an explosive hazard. The subject property is located in Maneuver Area 1B, a former TA dating back to 1939. The property, however, is not located in an active Military Munitions Response Program (MMRP) site or in a designated target range. The area has not been used for maneuvers since construction of Loop 375 (U.S. Army, 2007c).

According to the ECP report, interviews conducted by the USACE for an Archive Search Report in 1999 indicated that either a 2.75 or 3.5 inch rocket was discovered on Maneuver Area 1 during construction of Loop 375. During site inspection conducted for the ECP, evidence of recreational target shooting was observed at several locations within the 1,000-acre property, but these sites were not concentrated in one general location and bullet fragments were relatively low in number (U.S. Army, 2007).

The ECP investigation concluded that the site was not known or suspected to contain MEC. Given the subject property's past use as an active military installation, however, there was a potential for MEC to be encountered. It was recommended in the report that construction personnel involved in any redevelopment activities be provided MEC training by Fort Bliss. In the event that the EPCC, its contractors, or any person would encounter or suspect they have encountered MEC on the project, they would not attempt to disturb, remove, or destroy it, but would cease any intrusive or ground-disturbing activities being conducted at the site and immediately notify the installation's military police so that appropriate personnel can be dispatched to address such MEC.

Storage Tanks and Oil/Water Separators

Fort Bliss has completed a four-phase project to upgrade existing underground storage tanks (USTs) to meet Federal and State requirements and reduce total number of USTs on the installation. Records indicate that 69 USTs and 238 aboveground storage tanks (ASTs) are currently in use for storing diesel fuel, unleaded gasoline, used oil, antifreeze, JP-8 jet fuel, and heating oil. One UST and three ASTs are located at the Doña Ana Range–North Training Areas; three USTs and one AST are located at Orogrande Range; and five USTs and 18 ASTs are located on McGregor Range. Fort Bliss has identified 36 sites that formerly had leaking petroleum storage tanks, of which four were ASTs. All have been remediated and closed except for a gasoline pipeline release that occurred in 2005 and is currently under remediation by the company that owns the pipeline (U.S. Army, 2009).

The ECP study of the subject property revealed no evidence of ASTs, USTs, or oil/water separators in the area. Also, the review of database records did not identify any potential impacts from adjacent properties.

Polychlorinated Biphenyls

Polychlorinated biphenyls (PCBs) are industrial compounds used in electrical equipment, primarily capacitors and transformers, because they are electrically nonconductive and stable at high temperatures. Because of their chemical stability, PCBs persist in the environment, bio-accumulate in organisms, and become concentrated in the food chain. TSCA regulates the removal and disposal of contaminated equipment containing PCBs at concentrations greater than 50 ppm.

Fort Bliss has completed three PCB survey, testing, and labeling projects since 1990. The identified PCB transformers, capacitors, and other PCB items have been removed from service and disposed of properly through Defense Reutilization and Marketing Office-Fort Bliss. No PCB-containing equipment is in service within the cantonment area (U.S. Army, 2004).

According to the site inspection and interviews conducted during the ECP study, no PCB-containing transformers were reported within the property limits.

Pesticides and Herbicides

Pesticides are listed commercial products that become a hazardous waste when discarded in a manner not consistent with their intended use. The normal application of pesticides is not regulated by the state, and pesticides are not considered a waste as defined by the Solid Waste Disposal Act, Texas Health and Safety Code § 361.

Pesticides and herbicides are stored in small quantities at several locations at Fort Bliss, including Building 3008 (golf maintenance building), Building 2509 (the pesticide mixing/storage facility), and the Veterinary Clinic. No releases have been reported at any of the pesticide storage facilities (U.S. Army, 2004).

Fort Bliss has a *Pest Management Plan* that details the DoD requirement for the use of pesticides on the installation. As outlined in the plan, only Certified Pest Controllers licensed by the States of Texas and New Mexico are permitted to apply pesticides and herbicides at Fort Bliss.

According to interviews conducted during the ECP investigation, no pesticides/herbicides have been applied on the subject property.

Installation Restoration Program

In Texas, Fort Bliss currently possesses a RCRA permit for the hazardous waste management and storage facility and several SWMUs (Solid Waste management Units). In *Fort Bliss 2004 Installation Action Plan* (IAP) and subsequent investigations, 79 contaminated sites were identified and tracked through the Defense Environmental Restoration Tracking System. Since the tracking was initiated, some of the sites have been found to have been erroneously identified while others were eliminated because they were duplicates (U.S. Army, 2004).

No evidence suggests that sites undergoing remediation under the direction of the Fort Bliss IAP exist within the subject property.

Illegal Dumping

According to interviews conducted during the ECP study, illegal dumping was considered to be the primary environmental issue identified for the subject property. Measures have been taken to block access to the site including the introduction of ditches, berms, and fencing along Montana Avenue, and the installation of a gate along the EPEC and EPWU easement service road.

Dumping observed during the site inspection includes concrete, asphalt, and brick rubble, shingles, carpets, appliances, and household debris. In addition, an abandoned vehicle that appeared to be burned was also observed 75 feet off the southern side of the Butterfield Trail. No visual signs of dumping have been observed within the proposed East Fort Bliss Campus site.

Radon

Radon gas is a naturally occurring, colorless, and odorless radioactive gas that is produced by the decay of naturally occurring radioactive material (e.g., potassium, uranium, etc.). Atmospheric radon under normal conditions is diluted to insignificant levels, however, when radon is emitted in enclosed areas such as homes, human health risks can be present.

The Fort Bliss radon monitoring program was discontinued in 1995 at the direction of the Director of Health Services, Preventative Medicine Departments. The program was cancelled based on the geological location of the Fort Bliss Community and the results of more than 500 completed radon tests that demonstrated radon was not a public health threat (U.S. Army, 2004).

Site Classification
The environmental condition of property definitions are derived from the *DoD BRAC Cleanup Plan Guidebook (1994) and EPA Directives*. Based on the findings of the ECP investigation, an ECP classification was established for the study area. The subject 1,000-acre site was classified as follows: White – indicating that no release or disposal of hazardous substances or petroleum projects has occurred (including no migration of these substances from adjacent areas).

3.12.1.4 Non-hazardous Materials and Solid Waste

Army solid waste policy is based on the concept of *Integrated Solid Waste Management* (ISWM) planning. ISWM is designed to minimize the initial input into the waste stream. The Fort Bliss ISWM Plan was most recently updated in December 2003. The Fort Bliss DPW-Environment coordinates solid waste management and planning with the (DPW), Directorate of Community Activities (DCA), Defense Reutilization and Marketing Office (DRMO), Directorate of Contracting (DOC), Directorate of Resource Management (DRM), RCI, and other installation organizations, tenants, and activities as required. Since 2000, recycling, selling, and diverting of solid wastes has increased at Fort Bliss. Recyclable materials are sold or reused. Fort Bliss has an aggressive waste recycling program for all paper, plastic, aluminum containers, and metal scraps (from artillery use).

Domestic solid waste generated at Fort Bliss that cannot be recycled is collected and disposed of by a private contractor at a government-owned, 102-acre landfill (MSW ID No. 1422) located 3 miles north of the intersection of Fred Wilson and Chaffee Roads (U.S. Army, 2007a). Landfill cells handle Type I waste (refuse) and Type IV waste (construction and demolition wastes). The Fort Bliss recycling program has substantially reduced the post's reliance on the onsite landfill. Since July 1, 2005, residential waste from Fort Bliss is disposed of in the City of El Paso's Clint Landfill, a Type I landfill. It is designed with a 30-year life expectancy at the current daily solid waste accumulation rate of 800 tons per day (tpd) (estimated closure time is around 2013). Several actions may be taken that could increase the life of the landfill, but it is not currently known how long these actions would extend operations (U.S. Army, 2007a).

3.12.2 Proposed Action Alternative Environmental Consequences

3.12.2.1 Construction

Hazardous Materials and Waste
While site contamination would not be expected based on the ECP, environmental sampling of the proposed site would be conducted if signs of potential soil contaminants were observed during site preparation activities. Any soil discoloration, odors, rubbish and/or any environmental concerns uncovered during construction would be notified by the contractor to the appropriate authority (e.g., Contracting Officer, Contracting Officer's Representative, Project Manager, Project Engineer, and the DPW Environmental Compliance) immediately of the findings. Included in the notification shall be a brief statement to the Contracting Officer stating the exact location, extent of the work affected and a description of the findings. The contractor would suspend work on the site of the discovery and would continue construction operations in all other areas. These measures would serve to reduce or avoid environmental impacts from ground disturbing activities at the site during construction activities.

During construction, equipment and vehicles on the property could leak small amounts of petroleum products. The construction contractors would be responsible for preventing spills of paint, fuels, motor oils, and other materials. Spills would be prevented by proper storage and handling, attention to the task at hand, and responsible driving. Any leaks, however, would be small, temporary, and managed in accordance with the applicable Federal and State regulations.

Some materials, though essentially inert under normal conditions, can be potentially hazardous under specific circumstances. Wood and dry concrete, for example, can generate airborne particulates as they are cut or sanded. To protect against adverse effects, workers should wear face masks and safety glasses when performing these tasks. Wood and other construction materials are also flammable. Establishing smoking areas and prohibiting open flames near flammable materials would greatly reduce the risk of fire.

Non-hazardous Materials and Solid Waste

Development of the proposed East Fort Bliss Campus site would require construction of a new buildings on a currently vacant site; thus, demolition of an existing structure and removal of demolition debris would not be required. Nonetheless, construction activities would generate non-hazardous and solid wastes requiring proper management and disposal. Solid waste generated during construction activities would be limited to common construction-related waste streams (e.g. wood products, piping materials, paper products) and sanitary waste. Materials would be recycled for beneficial reuse whenever possible. If earthwork for construction of the proposed East Fort Bliss Campus generates extra fill material, the soil would be used elsewhere on the site or sent off site for re-use.

Demolition debris would be disposed of by EPCC in accordance with all applicable Federal, State, and local solid waste management regulations. Landfills currently being used by Fort Bliss to accept non-hazardous waste could accept construction wastes for materials that cannot be recycled; therefore, there would be minor impacts associated with the disposal of these materials. In addition, BMPs would be implemented to minimize the quantity of non-hazardous solid waste generated during construction and to ensure proper handling of all materials. All non-hazardous solid wastes would be transported off site by a licensed contractor to an approved facility.

3.12.2.2 Operations

Hazardous Materials and Waste

Operation of the proposed East Fort Bliss Campus would potentially generate small quantities of hazardous, bio-hazardous, and medical wastes. The campus would include the use of laboratory facilities to support the various disciplines, including science, biology, and medical science. Common chemicals used in the laboratories would include solids (i.e. calcium chloride, chromium, oxide, and iodine), liquids (i.e. acetone, ethyl alcohol, methylene chloride, and hexanes), and acids (i.e. formaldehyde, hydrochloric acid, and sulfuric acid). For the biology lab, common procedures would include the use of Petri dishes with medium and bacterial growth from experiments, and animals for dissection. For health-related laboratories, medical wastes would include syringes, IV fluid and tubing, some blood contaminated materials such as needles and dressings, blood collection tubes, and other such wastes. Should a health clinic for actual patient treatment be included in the campus, an insignificant increase in medical waste would be anticipated.

If approved by Army Installation Management Command Headquarters the Fort Bliss hazardous waste management program should not be affected since the EPCC waste stream would be managed separately. The EPCC maintains College Safety Manual which outlines procedures for the handling of hazardous materials and the disposal of any hazardous wastes generated from operations in accordance with Federal and State regulations. BMPs would be implemented to minimize the quantity of wastes generated and to ensure proper handling of all materials. All chemical, biological, and medical materials would be stored and managed in accordance with all applicable Federal and State regulations and guidelines and in compliance with all applicable local building codes. Hazardous and medical wastes generated by the proposed East Fort Bliss Campus would be collected, consolidated, or separated (as appropriate), and packaged for disposal in accordance with Texas regulations. Manifests would be prepared for hazardous waste, which would be shipped by a licensed hazardous waste hauler for offsite disposal.

Operation of the proposed East Fort Bliss Campus would also include small amounts of cleaning chemicals that would be used by the employees. The substances would be managed in accordance with the manufacturer's recommendations and with all applicable guidelines and regulations. In the event of a spill, the spill control measures would also be implemented in accordance with applicable guidelines and regulations.

Overall, operations of the proposed East Fort Bliss Campus would result in minor adverse impacts from small increases of hazardous materials handled and hazardous wastes produced on the campus.

Non-hazardous Materials and Solid Waste

Operation of the proposed East Fort Bliss Campus would generate non-hazardous materials and solid waste. These materials would be recycled for beneficial reuse, whenever possible. As utilized on other campuses, EPCC would implement a recycling program at the subject site. Types of materials recycled would include paper, newspaper, cardboard, plastic, aluminum cans, and bottles. The program would be started by placing recycling bins at prominent places such as the Campus Life Department offices. The program would be tracked and developed and additional recycling bins would be placed at other locations as needed. Partnership with a recycling company with a single source collection program would save EPCC the need and the cost of storing and sorting recycling materials. Recycling would considerably reduce the quantity of solid waste generated at the proposed East Fort Bliss Campus.

General waste not suitable for recycling would be placed in receptacles and transported to collection areas on a regular basis. A licensed hauler would transport the general waste for disposal to a permitted offsite landfill. No impacts to the current waste disposal activities at Fort Bliss would be expected since the proposed East Fort Bliss Campus would be responsible for proper management and disposal of its own waste streams.

The regional landfill use and capacity would need to be negotiated. Since the regional landfills have adequate capacity to accept the increased volume of wastes, no severe impacts would be anticipated from the proposed East Fort Bliss Campus. Overall, the implementation of a recycling program would reduce overall impacts of solid waste generation to minor levels.

3.12.3 No Action Alternative Environmental Consequences

Under the No Action Alternative, the Proposed Action would not be implemented and no construction or operational activities would occur on the proposed site. Therefore, no impacts would occur to use of hazardous materials or hazardous or solid waste generation.

3.13 Human Health and Safety

3.13.1 Affected Environment

Fort Bliss is an active Army post that houses Soldiers and their Families and operates military maneuvers in the air and on the ground. Biggs Army Airfield is located directly west of the proposed East Fort Bliss Campus site. Detailed safety processes and procedures for ramp access, aircraft movement, and fueling and defueling are in place. Two parking areas are designated for loading and unloading of hazardous cargo, which includes munitions.

The Army has an Installation Compatible Use Zone (ICUZ) program to recommend land use compatibility guidelines for areas exposed to increased safety risk in the vicinity of airfields. The proposed East Fort Bliss Campus site is located approximately 2 miles away from the Biggs AAF and 1.5 miles away from the El Paso International Airport. Three zones are delineated at both ends of the runway and safety zones have been established around the airfield. The proposed East Fort Bliss Campus site is not located within any of these zones.

All day-to-day operations and maintenance activities on Fort Bliss are performed by trained, qualified personnel in accordance with applicable equipment technical directives, approved occupational safety and health standards, and sound maintenance practices. The handling, processing, storage, and disposal of hazardous by-products resulting from demolition, construction, operations, or maintenance are accomplished in accordance with all Federal and State requirements applicable to each substance.

Fire suppression on Fort Bliss is the responsibility of the Fort Bliss Fire Department, which is party to a Mutual Support Agreement with the City of El Paso. If required, augmented support for fire suppression would be available from the city.

According to the ECP report, the site is not known or suspected to contain MEC. However, given the subject property's past use as an active military installation, there exists a potential for MEC to be encountered (U.S. Army, 2007a).

3.13.2 Proposed Action Alternative Environmental Consequences

3.13.2.1 Construction and Operation

Potential occupational health and safety risks during construction of the proposed East Fort Bliss Campus are expected to be typical of risks for any other construction sites of comparable size. These include, but are not limited to, the movement of heavy objects, including construction equipment; the risk of fire or explosion from general construction activities (e.g., welding); and spills and exposures related to the storage and handling of chemicals and disposal of hazardous waste. The health and safety of construction workers would be protected by adherence to accepted work standards and regulations set forth by OSHA (29 CFR Parts 1910 and 1926).

Hazardous materials that may be used during construction include fuels and lubricants. EPCC would comply with all local, Federal and State regulations regarding the use, transport, storage, and disposal of hazardous materials and wastes. Spills would be managed in accordance applicable Federal and State guidelines and regulations. All personnel involved with construction activities would be properly trained and required to comply with OSHA regulations and industrial material handling. Thus, it is expected that minor adverse safety impacts would occur during construction since adherence to OSHA procedures would minimize the risk of injuries during the construction phase.

Because there is no evidence to suggest that the proposed site has ever been used as a firing range and it is not near any active MMRP ranges, no safety concerns exist relative to explosive Quantity Safety Distance (QSD) or UXO. Since the property is located within Maneuver Area 1B, a former TA, contractors would have appropriate awareness training at a minimum which would include MEC awareness training. Prior to start of project, contractors would receive a UXO Safety briefing given by Fort Bliss Range Safety office. In the event that the EPCC, its contractors, or any person would encounter or suspect they have encountered MEC, on the project, they would not attempt to disturb, remove, or destroy it, but would cease any intrusive or ground-disturbing activities being conducted at the site and immediately notify the installation's military police so that appropriate personnel can be dispatched to address such MEC.

As the proposed EPCC East Fort Bliss Campus is not an Army facility, fire suppression would be handled by the El Paso Fire Department and if needed, with support from the Fort Bliss Fire Department. Coordination with the El Paso Fire and Fort Bliss fire departments would commence in the design phase and continue after the project is completed. Access for emergency vehicles would be considered in the design phase of the project. Fire suppression systems and fire hydrants would be specified in the design stage.

The EPCC maintains College Safety Manual (Section V) which outlines safety procedures followed by all area/departments utilizing any of the following tools, machines, or vehicles. This includes all College sites including automotive and general shop and maintenance areas and applies to all employees and, where applicable, the students of the EPCC. In addition, Section VII of the College Safety Manual contains measures on instructional classroom/laboratory safety. Where hazardous chemicals are utilized, Material Safety Data Sheets (MSDS) are to be reviewed and made available to the students and personal protective equipment must be worn. Section X of the College Safety Manual contains EPCC's Hazardous Communication Program which outlines measures for maintaining chemical lists, MSDS, labels, employee training and use of outside contractors, and compliance with Texas Health & Safety Code Sections 502 (Hazard Communication Act) and 506 (Public Employer Community Right-To-Know Act) and Texas Executive Order GWB 95-8 (Relating to Workspace Safety and Health of State Employees, Citizens Served, and Preservation of State Property).

3.13.3 No Action Alternative Environmental Consequences

Under the No Action Alternative, the Proposed Action would not be implemented and no construction or operational activities would occur on the proposed site. Therefore, no changes would occur to existing safety rules or regulations and no impacts would be anticipated.

3.14 Traffic and Transportation

3.14.1 Affected Environment

The ROI for transportation consists of all intersections within 1.5 mile of the proposed East Fort Bliss Campus site (Figure 3.14-1). Intersections within the ROI include:

- State Loop 375 Southbound Off-Ramp at Spur 601 (Intersection 1)
- State Loop 375 Northbound Off-Ramp at Spur 601 (Intersection 2)
- Spur 601 Westbound Off-Ramp at Constitution Drive (Intersection 3)
- Spur 601 Eastbound Off-Ramp at Constitution Drive (Intersection 4), and
- Constitution Drive at Hospital Road (Intersection 5).

TheLOS is a qualitative measure of the operating conditions of an intersection or other transportation facility. There are six LOS (A through F) defined; LOS A represents the best operating conditions with no congestion, and LOS F is the worst with heavy congestion. Intersections with LOS A through D would have short to moderate delays, whereas intersections with LOS E and F would have long delays and traffic conditions at or above capacity. Traffic patterns would be congested, unstable, and normally unacceptable to individuals attempting to use roadways and intersections with LOS E or F (TRB, 1999).

Traffic in the immediate area is relatively sparse. All of the intersections within the ROI currently operate with an acceptable LOS (Table 3.14-1). Traffic conditions range from LOS A through C, and all turning movements operate in an uncongested manner. These traffic conditions are completely acceptable even though Spur 601, Constitution Drive, State Loop 375, and Hospital Road are under construction, and not all lanes are currently available.

Table 3.14-1. Intersection Level of Service for the Existing Conditions

Number	Intersection	Existing LOS (2010)	
		A.M. Peak Period	P.M. Peak Period
1	State Loop 375 Southbound Off-Ramp at Spur 601	B	C
2	State Loop 375 Northbound Off-Ramp at Spur 601	B	A
3	Spur 601 Westbound Off-Ramp at Constitution Drive	B	A
4	Spur 601 Eastbound Off-Ramp at Constitution Drive	B	A
5	Constitution Drive at Hospital Road	A	A

Source: Martinez Engineering Group, 2010.

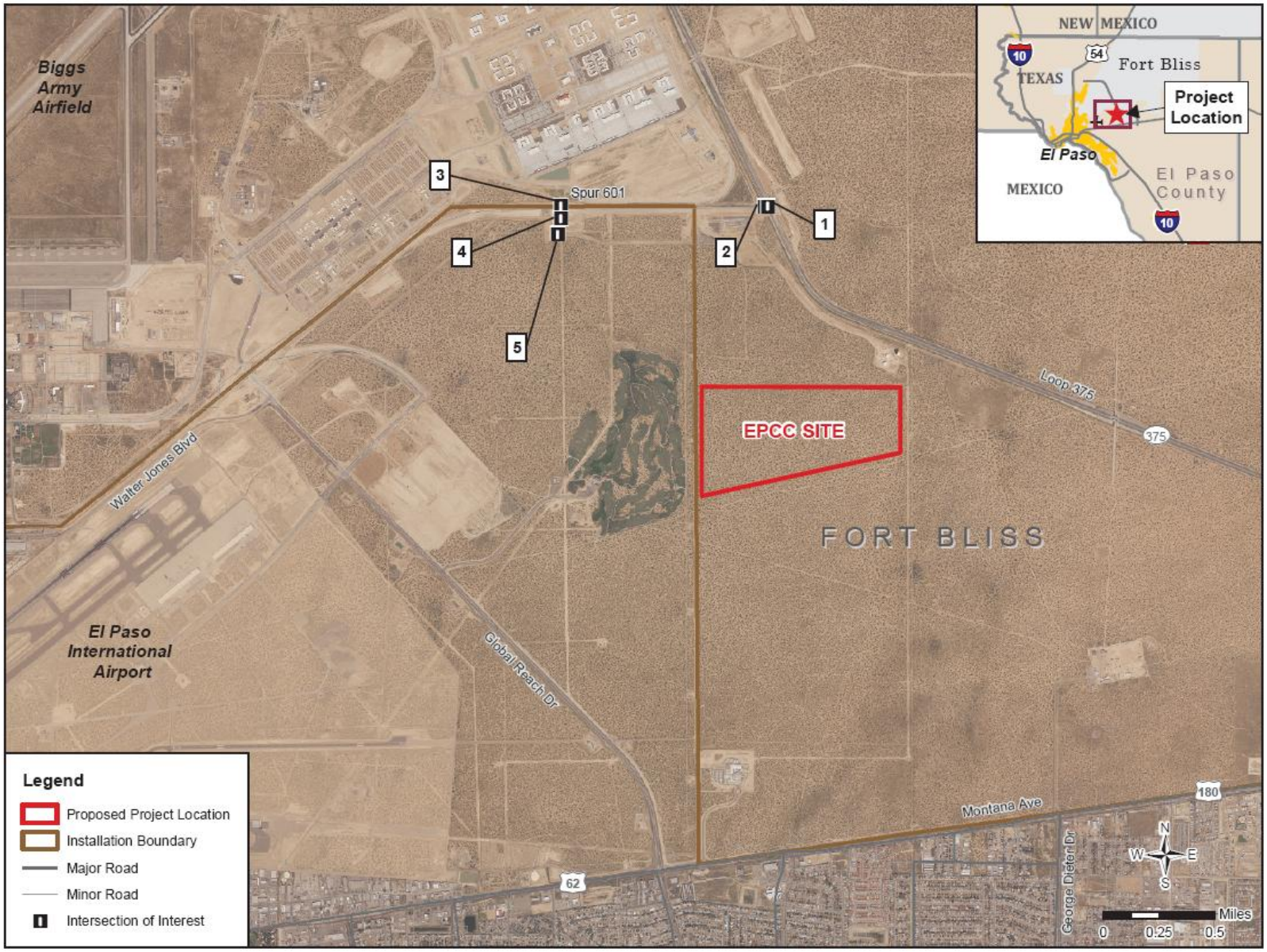


Figure 3.14-1. Transportation Network Near the Proposed East Fort Bliss Campus Site.

3.14.2 Proposed Action Alternative Environmental Consequences

Short- and long-term minor adverse effects on traffic would be expected. Short-term effects would be from the use of vehicles during construction. Long-term effects would be from additional students, faculty, and staff at the propose EPCC. Specifically, this section documents effects of construction activities, and changes in the LOS for intersections within the ROI (i.e. within 1.5 miles of the proposed East Fort Bliss Campus site).

3.14.2.1 Construction

Traffic would increase due to additional construction vehicles and traffic delays near construction sites. These effects would be temporary in nature and would end with the construction phase. The local roadway infrastructure would be sufficient to support construction vehicle traffic. In addition, road closures or detours to accommodate utility work would be expected, creating short-term traffic delays. All construction vehicles would be equipped with backing alarms, two-way radios, and Slow Moving Vehicle signs when appropriate. Although the effects would be minor, contractors would route and schedule construction vehicles to avoid conflicts with other traffic, and strategically locate staging areas to minimize traffic impacts.

3.14.2.2 Operations

The maximum student enrollment at the proposed East Fort Bliss Campus would be 3,500 students, and the college would employ approximately 80 faculty and 15 staff. This would constitute 400-500 additional vehicle trips in both the a.m. and p.m. peak traffic periods (ITE, 2003). Some additional traffic would be expected during off-peak hours. The proposed East Fort Bliss Campus would be served by roadways within the ROI including State Loop-375, State Road 601, Constitution Drive and Hospital Road. Notably, Constitution Drive and Hospital Road are located on post.

All of the intersections within the ROI would operate at an acceptable LOS with the implementation of the Proposed Action (Table 3.14-2), and there would be no change in the LOS when compared to the No Action Alternative (see Table 3.14-3). These 2015 conditions include naturally occurring increases in traffic, increases from the proposed East Fort Bliss Campus, and completion of the construction of Spur 601, Constitution Drive, State Loop 375, and Hospital Road. Future conditions at the intersections within the ROI are LOS A or B, and all turning movements would operate in an uncongested manner. These effects would be minor.

Table 3.14-2. Intersection Level of Service for the Proposed East Fort Bliss Campus

Number	Intersection	LOS without the EPCC or WBAMC (No Action)		LOS with the EPCC (Proposed Action)	
		A.M. Peak Period	P.M. Peak Period	A.M. Peak Period	P.M. Peak Period
1	State Loop 375 Southbound Off-Ramp at Spur 601	B	A	B	A
2	State Loop 375 Northbound Off-Ramp at Spur 601	A	A	A	A
3	Spur 601 Westbound Off-Ramp at Constitution Drive	A	A	A	A
4	Spur 601 Eastbound Off-Ramp at Constitution Drive	A	A	A	A
5	Constitution Drive at Hospital Road	A	A	A	A

Source: Martinez Engineering Group, 2010.

Because the students, faculty, and staff would be within driving distance to the proposed East Fort Bliss Campus, the Proposed Action would have negligible impact on public transit, rail, bus, or air traffic in the

area. The proposed East Fort Bliss Campus would be designed to provide parking that would be adequate for the students, faculty, and staff.

3.14.3 No Action Alternative Environmental Consequences

All of the intersections would operate with an acceptable LOS under the future No Action Alternative (Table 3.14-3) and overall impacts would be negligible. These 2015 traffic conditions include naturally occurring increases in traffic (not including the EPCC or the proposed WBAMC), and completion of the construction of Spur 601, Constitution Drive, State Loop 375, and Hospital Road. Future traffic conditions at the intersections within the ROI are LOS A or B, and all turning movements would operate in an uncongested manner. Although these conditions may ultimately vary, they are representative of future conditions without the Proposed Action, and are used in this EA as a comparative baseline to gauge the level of impact under NEPA.

Table 3.14-3. Intersection Level of Service for the No-Action Alternative

Number	Intersection	LOS without the EPCC (No-Action)	
		A.M. Peak Period	P.M. Peak Period
1	State Loop 375 Southbound Off-Ramp at Spur 601	B	A
2	State Loop 375 Northbound Off-Ramp at Spur 601	A	A
3	Spur 601 Westbound Off-Ramp at Constitution Drive	A	A
4	Spur 601 Eastbound Off-Ramp at Constitution Drive	A	A
5	Constitution Drive at Hospital Road	A	A

Source: Martinez Engineering Group, 2010.

3.15 Cumulative Effects

CEQ regulations implementing NEPA define a "cumulative impact" as follows:

> Cumulative impact is the impact on the environment that results from the incremental impact of the action when added to other past, present, and reasonably foreseeable actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (40 CFR §1508.7).

EPA guidance to reviewers of cumulative impacts analyses further adds:

> …the concept of cumulative impacts takes into account all disturbances since cumulative impacts result in the compounding of the effects of all actions over time. Thus, the cumulative impacts of an action can be viewed as the total effects on a resource, ecosystem, or human community of that action and all other activities affecting that resource no matter what entity (Federal, non-Federal or private) is taking the action (EPA, 1999).

For the purposes of this EA, severe cumulative impacts would occur if incremental impacts of the Proposed Action, added to the environmental impacts of past, present, and reasonably foreseeable actions, would result in severe adverse impacts to resources for Fort Bliss and the surrounding regions. For the purpose of this cumulative impacts analysis, the ROI includes the portion of Fort Bliss encompassing El Paso County, Texas, (main cantonment area and South Training Areas) and the City of El Paso, Texas. The Army considered a wide range of past, present, and reasonably foreseeable future actions within the ROI by researching existing literature and contacting local area planners and State and Federal agencies to identify other projects in the region that could contribute to cumulative environmental impacts. The

Army considered other past, present, or foreseeable future actions regardless of whether the actions are similar in nature to the Proposed Action or outside the jurisdiction of the Army.

This cumulative impacts analysis offers a fuller understanding of resource conditions that implementation of the Proposed Action might magnify, amplify, or otherwise exacerbate or cause beneficial or adverse impacts to resources on a regional or temporal scale. Table 3.15-1 lists past, present, and reasonably foreseeable Army actions, other than the Proposed Action, that were reviewed to complete the cumulative impact analysis.

Table 3.15-1. Past, Present, and Reasonably Foreseeable Army and Regional Actions

Potentially Contributing Project or Activity	Timeframe	Spatial Extent
Military Activity		
1. Fort Bliss, development of facilities and infrastructure.	1957 – present	Approximately 133,440 acres within El Paso County, Texas.
2. Fort Bliss BRAC (2005) resulted in further population growth and development within Fort Bliss and the surrounding El Paso Community.	2008 – 2011	20,000 Soldiers/27,000 Family members at Fort Bliss.
3. GTA Fort Bliss Stationing resulted in further population growth and development within Fort Bliss and the surrounding El Paso Community.	2008-2012	9,200 additional Soldier and civilian population at Fort Bliss.
4. Kay Bailey Hutchison Desalination Plant. A desalination plant operated by the EPWU to treat brackish water from the Hueco Bolson and decrease freshwater withdrawals. The facility augments existing supplies to make sure El Paso and Ft. Bliss have sufficient water for growth and development for 50 years and beyond.	2007 – Future	Approximately 31acres of land currently located in the South Training Area.
5. Walter Beaumont Army Medical Center (WBAMC). A proposed new hospital/medical center to replace the existing WBAMC.	2010-future	Approximately 200 acres of land currently located in the South Training Area.
6. Solar Facility. A planned solar facility for providing energy to the Kay Bailey Hutchison Desalination Plant desalination plant and potentially other development occurring within the southeastern portion of Fort Bliss.	Future	Land currently located in the South Training Area.
7. RCI Soldier Housing. A planned housing community for Soldiers and their Families. Community would likely include an elementary school.	Future	Land currently located in the South Training Area.
8. National Guard Armory. A proposed new National Guard Armory	Future	Land currently located in the South Training Area.
9. Spur-601 and other highway improvements	Ongoing	Local roadways.
Regional Activity		
1. Grazing. Lands formerly supporting livestock grazing have caused desertification and the transition from historic grasslands to shrub lands and mesquite coppice dunes.	Past – Future	Fort Bliss and El Paso County.
2. El Paso International Airport. The airport serves approximately 3,000,000 passengers annually, and in 2009 had 98,786 aircraft operations. Passenger levels at the airport have been relatively consistent over the past 10 years.	1928 - Future	Approximately 7,100 acres of land currently located between the South Training Area and Fort Bliss cantonment area.
3. Regional Population Growth. The region projects a population growth of approximately 1.64 percent between 2010 and 2020 and continued growth forward from 2020. Within the City of El Paso, population growth is expected to continue at an average rate of 2.9 percent per year; independent of Fort Bliss expansion.	Present – Future	El Paso County.

Table 3.15-1. Past, Present, and Reasonably Foreseeable Army and Regional Actions

Potentially Contributing Project or Activity	Timeframe	Spatial Extent
4. *Regional Growth Management Plan (RGMP).* The City of El Paso with assistance from the DoD Office of Economic Adjustment is developing a RGMP under a collaborative planning effort with the City of El Paso, El Paso County, Fort Bliss, and City of Las Cruces and Doña Ana County. The RGMP indicates that by 2025, the City of El Paso's current land base of 161,000 acres with development on 50 percent of the land is expected to increase to 171,000 acres with development of 63 percent of the land.	Present – Future	Fort Bliss and El Paso County.
5. Stormwater Management. Since 2006, the City of El Paso has passed legislation authorizing the EPWU to study, plan, and where necessary, construct to mitigate stormwater capacity and drainage issues. These mandates include planning for increases in stormwater run-off due to the increased construction associated in part with the expansion of Fort Bliss.	2006 - Present	Fort Bliss and El Paso County.

3.15.1 Land Use

As shown in Table 3.15-1, regional development is anticipated to continue. Cumulative increases in development increases the potential for land use compatibility conflicts occurring within the ROI. Adverse cumulative impacts, however, would be reduced through implementation of the *Regional Growth Management Plan* (see Table 3.15-1), which would also include the Proposed Action. Under this plan, future development within the area would be planned to site compatible land uses and buffers would be used between incompatible land uses. Proposed future projects identified in the area including the new WBAMC and the RCI Soldier Housing would be compatible land uses. Overall cumulative adverse impacts to land use would be minor.

3.15.2 Noise

Numerous construction activities on the installation are planned over the next several years in addition to the EPCC, including the proposed new WBAMC, RCI housing, solar facility to power the existing desalination plant, National Guard Armory, and Spur 601 and other highway improvements (see future actions discussed in Table 3.15-1). During this period there would be short-term minor adverse cumulative effects on the noise environment for construction projects outside the Proposed Action if they were to occur concurrently. Construction noise would also coincide with training noise that would occur regularly on Fort Bliss. Cumulative long-term minor impacts would also occur to noise in the ROI due to increased traffic resulting from operations of the projects presented in Table 3.15-1.

3.15.3 Air Quality

Impacts on air quality from the EPCC would primarily be due to the use of heavy construction equipment, the proposed boiler, and additional traffic. Future actions discussed in Table 3.15-1 would cumulatively contribute to these emissions as they would produce some measurable amounts of air pollutants during construction and operation, as well as generate additional vehicular emissions in the region from increased traffic. The State of Texas takes into account the effects of all past, present, and reasonably foreseeable projects in the region and associated emissions during the development of the State Implementation Plan. Estimated cumulative impacts to air quality generated by the Proposed Action would be minor.

3.15.4 Geology and Soils

The magnitude of cumulative impacts to geology and soil resources would be primarily determined by the amount of ground disturbance from the future actions discussed in Table 3.15-1. In addition, through BRAC and GTA initiatives, the Soldier population at Fort Bliss is increasing, which, in association with new economic development at El Paso, means additional construction in the surrounding communities. Some construction would replace already existing structures that are located in previously disturbed locations. Construction of new buildings within the ROI would increase the total amount of soils disturbed, and their potential for increased erosion. This would be an incremental change to previously undisturbed soils and to soils that were previously disturbed from training, recreational, and grazing activities. BMPs and erosion prevention measures, however, would reduce the increased potential for soil loss through erosion. Overall impact to geology and soils within the ROI, however, would be insignificant.

3.15.5 Biological Resources

Much of the undeveloped land on Fort Bliss and within El Paso is already partially degraded as a result of past and current uses (see Table 3.15-1) and weather conditions. Incremental cumulative loss to habitat would occur within the ROI as the area continues to develop as discussed in Table 3.15-1. This loss, however, would occur over time and within ecosystems/habitat already stressed by human disturbances. Overall cumulative impacts to habitat and sensitive species would be minor as the diversity of species and quality of habitat within the ROI is low.

As stated in Table 3.15-1, grazing and past human activities have considerably altered the historical ecosystems within the ROI. Due to past regional disturbances such as grazing and off-road recreation use, much of the historical grasslands have been converted to shrub communities, mesquite coppice dunes, and bare soils. Future actions discussed in Table 3.15-1, along with the proposed project would contribute a minor adverse impact to vegetation as these projects would be located within areas already disturbed by past activities that have altered the historical vegetation.

3.15.6 Water Resources

Cumulative adverse impacts to groundwater resources could occur from the regional development and adjacent proposed projects. The growing population of the City of El Paso and the planned expansion of Fort Bliss would overall increase water demand for the ROI, and would contribute to drawdown of the aquifer volume (see Table 3.15-1). EPCC, however, would implement water conservation practices agreed upon by the City of El Paso and Fort Bliss to continue to reduce overall water usage and the potential for aquifer drawdown. In addition, the new desalination plant would further minimize adverse cumulative impacts to groundwater resources to minor. Cumulative adverse impacts to surface water would be minor as the Proposed Action would negligibly contribute to surface water impacts.

3.15.7 Utilities

Utilities within the project area include potable water, wastewater, stormwater, and energy (natural gas and electricity). The proposed project would cumulatively contribute to an increased demand for these utilities services through the introduction of new development. Fort Bliss, the City of El Paso, and County of El Paso are expected to continue to experience growth and development as shown in Table 3.15-1. Past projects have contributed and future projects would contribute to minor cumulative impacts to utilities as a result of increased demand. Where utilities must be rebuilt or where new construction is warranted, coordination with utility companies and government agencies would take place in order to ensure design conformance, environmental compliance, and reduce potential severe cumulative impacts. Proposed solar projects along with other forms of improved technologies reducing energy usage would further minimize adverse impacts to energy and gas. Adverse cumulative impacts from increased

regional development and increase of impervious surfaces (i.e., increased stormwater runoff and flash-flooding) would be minimized by stormwater mandates issued by the City of El Paso (see Table 3.15-1).

3.15.8 Socioeconomics and Environmental Justice

Overall development within the ROI as indicated by Table 3.15-1 would benefit socioeconomic conditions and minority and low income populations. Both the increase in regional population and development would provide a cumulative benefit of job creation and economic spending.

3.15.9 Cultural Resources

Severe adverse cumulative impacts would not be anticipated. A large portion of the land within the ROI is Federally-owned and development within the area (see Table 3.15-1) would continue to comply with Section 106 requirements, minimizing the potential for cumulative adverse impacts to cultural resources.

3.15.10 Visual Quality and Aesthetics

New projects currently being planned within the ROI (see Table 3.15-1) would contribute to the amount of imposition from man-made buildings on a previously flat landscape. If construction from all the proposed projects at Fort Bliss were to occur, views from Montana Avenue looking north would include buildings associated with the proposed new WBAMC, a housing subdivision for Soldiers and their Families, and the proposed East Fort Bliss Campus. This would create a long-term visual impact that could be managed with appropriate use of location-specific vegetation.

3.15.11 Hazardous Materials and Wastes

Other projects in the ROI would contribute to the cumulative impacts on the amount of hazardous and non-hazardous waste generated. The Fort Bliss onsite landfill cell that accepts general refuse is projected to be filled to capacity by 2013. Therefore, offsite disposal of non-hazardous solid waste would have to be transported to an offsite commercial landfill. Construction and operation of proposed projects would contribute to the amount of waste being landfilled and could affect the expected life of a landfill if capacity is reached before it is expected. However, non-hazardous and hazardous waste that would be generated from proposed projects could be accepted by regional landfills (non-hazardous waste) or by treatment and disposal facilities (hazardous waste) with adequate capacity to accept the increase in volume of waste. Therefore, no severe impact would be expected from the increase in the quantity of hazardous and non-hazardous waste generated from proposed projects in the ROI.

3.15.12 Human Health and Safety

Fort Bliss is an active Army post with detailed safety processes and procedures in place for the safety of all personnel and visitors to Fort Bliss. Fort Bliss has trained qualified personnel how to operate in accordance with approved occupational safety and health standards in accordance with all Federal and State regulations. Fire suppression could be handled by the Fort Bliss Fire Department and if needed, with support from the city fire department. Therefore, the EPCC and other proposed projects at Fort Bliss and in the ROI would not be expected to have an adverse impact on human health and safety.

3.15.13 Traffic and Transportation

Numerous construction activities are planned over the next several years in addition to the proposed East Fort Bliss Campus, including the proposed new WBAMC, RCI housing, solar facility to power the existing desalination plant, and a National Guard Armory (see Table 3.15-1). During this period there could be short-term minor adverse cumulative effects on transportation resources environment for construction projects that occur concurrently.

The proposed WBAMC is slated to be built on an adjacent property and during a similar timeframe as the proposed East Fort Bliss Campus. Therefore, traffic from these two activities has been combined to determine their cumulative effects on the intersections within the ROI. Future traffic conditions with the proposed East Fort Bliss Campus and the WBAMC would range from LOS A or LOS D (Table 3.15-2). These 2015 traffic conditions include naturally occurring increases in traffic, increases in traffic from both the proposed East Fort Bliss Campus and the WBAMC, and completion of the construction of Spur 601, Constitution Drive, State Loop 375, and Hospital Road. These traffic conditions would constitute an appreciable deterioration when compared to both the No Action and the Proposed Action Alternatives. Traffic conditions would be just within the limits of the capacity of the existing roadway network, and freedom to maneuver within the traffic stream would be limited. Although these overall effects would be moderate, traffic conditions under the Proposed Action alone would be LOS A or B for all turning movements for both a.m. and p.m. peak periods, and ample roadway capacity would be available for growth. Therefore, the deterioration in overall traffic conditions would be primarily attributable to the proposed WBAMC, and the cumulative effect on transportation resources from the Proposed Action would be moderate.

Table 3.15-2. Cumulative Level of Service

		LOS without the EPCC or WBAMC (No Action)		LOS with the EPCC (Proposed Action)		LOS with the EPCC and the WBAMC (Cumulative)	
Number	Intersection	A.M. Peak Period	P.M. Peak Period	A.M. Peak Period	P.M. Peak Period	A.M. Peak Period	P.M. Peak Period
1	State Loop 375 Southbound Off-Ramp at Spur 601	B	A	B	A	D	A
2	State Loop 375 Northbound Off-Ramp at Spur 601	A	A	A	A	C	A
3	Spur 601 Westbound Off-Ramp at Constitution Drive	A	A	A	A	D	A
4	Spur 601 Eastbound Off-Ramp at Constitution Drive	A	A	A	A	D	A
5	Constitution Drive at Hospital Road	A	A	A	A	D	B

Source: Martinez Engineering Group, 2010.

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4.0 MITIGATION MEASURES

Most potential adverse impacts identified in Chapter 3 of this EA are identified as minor or would avoid severe thresholds through adherence to Federal and State regulatory requirements and use of typical BMPs during construction and operation activities. Each VEC section in Chapter 3 specifically identifies these required management practices, regulatory requirements, and BMPs where applicable. Subsequently, these required measures are not considered within this section.

Due to the proximity of the proposed East Fort Bliss Campus site to El Paso International Airport, the following additional measures would be implemented by EPCC to avoid the potential for significance of adverse environmental impacts to individual species:

- Any onsite permanent water would incorporate the use of bird balls to camouflage the liquid surface from the air and deter birds and waterfowl. Provided the proposed East Fort Bliss Campus design meets the requirements of the FAA Advisory Circular 150/5200-33B - *Hazardous Wildlife Attractants On or Near Airports*, the Proposed Action is not anticipated to have an adverse effect on BASH considerations at either airfield.

- Landscape design would be compatible with the BASH program and would include measures to avoid attracting avian species such as minimizing outside trees to discourage nesting habitat; designing buildings with no shady spots under cooling systems, vent systems, or ducting so as not to provide nesting habitat; and discouraging permanent water on the site.

In order to reduce the potential for the introduction and spread of invasive species to the site, any necessary fill materials would be obtained by EPCC from nearby sites to reduce unwanted invasive weed dispersal. Borrow pits would also be inspected by EPCC for exotic weeds before use.

Given the property's past use as a military TA, the following additional measure would be enforced by EPCC during site preparation and construction:

- Prior to start of project, EPCC contractors would receive a UXO Safety briefing given by Fort Bliss Range Safety office.

- Any soil discoloration, odors, rubbish and/or any environmental concerns uncovered during construction would be notified by the contractor to the appropriate authority (e.g., Contracting Officer, Contracting Officer's Representative, Project Manager, Project Engineer, and the DPW Environmental Compliance) immediately of the findings. Included in the notification shall be a brief statement to the Contracting Officer stating the exact location, extent of the work affected and a description of the findings. The contractor would suspend work on the site of the discovery and would continue construction operations in all other areas.

Due to the property's proximity to the historical Butterfield Trail, the following additional measure would be followed by EPCC during site design and construction:

- No disturbance would occur within 50 feet of the Trail, east to west, all along the footprint of the proposed campus.

Furthermore, to minimize overall adverse impacts during construction, only those areas necessary to accommodate the planned construction would be graded. This would serve to reduce the potential for wind erosion and dust and reduce overall impacts to vegetation and wildlife habitat.

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5.0 LIST OF PREPARERS AND CONTRIBUTORS

CEA Engineering Group

Arredondo, Jesse I.
B.S. Civil Engineering 2006
Years Experience: 3
EA: Potable Water, Waste Water, & Stormwater

Chavez, Ruben P.E.
B.S. Civil Engineering 1995
Years Experience: 15
EA: Project Manager, Prime

Potomac Hudson Engineering

Cornwell, Camilla
B.S. Biology
M.S. Soil Science
Years Experience: 8
EA: Land Use, Soils and Geology, Water Resources

Lavallee, Timothy, P.E.
B.S. Mechanical Engineering
M.S. Civil and Environmental Engineering
Years Experience: 18
EA: Air Quality, Noise, Traffic and Transportation

Naumann, Robert
B.S. Natural Resources
M.S. Environmental Science
Years Experience: 12
EA: Project Manager, Biological Resources, Socioeconomics, and Cultural Resources

Unter, Irene
B.S. Natural Resources
M.S. Environmental Science
Years Experience: 12
EA: Utilities, Hazardous Materials and Waste, Human Health and Safety

Walker, Debra A.
B.A. Biology
Years Experience: 32
EA: Program Manager

Wilkes, Andrea
M.A. Science Writing; B.S. Civil and Environmental Engineering; B.S. English Literature
Years Experience: 24
EA: Technical Reviewer

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APPENDICES

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APPENDIX A
AIR EMISSION CALCULATIONS AND RECORD OF NONAPPLICABLITY

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Appendix A

AIR EMISSION CALCULATIONS AND RECORD OF NONAPPLICABLITY

Table A-1 Construction Equipment Use

Equipment Type	Number of Units	Days on Site	Hours Per Day	Operating Hours
Excavators Composite	1	115	4	460
Rollers Composite	1	173	8	1384
Rubber Tired Dozers Composite	2	115	8	1840
Plate Compactors Composite	2	115	4	920
Trenchers Composite	2	58	8	928
Air Compressors	2	115	4	920
Cement & Mortar Mixers	2	115	6	1380
Cranes	1	115	7	805
Generator Sets	2	115	4	920
Tractors/Loaders/Backhoes	2	230	7	3220
Pavers Composite	1	58	8	464
Paving Equipment	2	58	8	928

Table A-2 Construction Equipment Emission Factors (lbs/hour)

Equipment	CO	NO_x	VOC	SO_x	PM_{10}	$PM_{2.5}$	CO_2
Excavators Composite	0.5828	1.3249	0.1695	0.0013	0.0727	0.0727	119.6
Rollers Composite	0.4341	0.8607	0.1328	0.0008	0.0601	0.0601	67.1
Rubber Tired Dozers Composite	1.5961	3.2672	0.3644	0.0025	0.1409	0.1409	239.1
Plate Compactors Composite	0.0263	0.0328	0.0052	0.0001	0.0021	0.0021	4.3
Trenchers Composite	0.5080	0.8237	0.1851	0.0007	0.0688	0.0688	58.7
Air Compressors	0.3782	0.7980	0.1232	0.0007	0.0563	0.0563	63.6
Cement and Mortar Mixers	0.0447	0.0658	0.0113	0.0001	0.0044	0.0044	7.2
Cranes	0.6011	1.6100	0.1778	0.0014	0.0715	0.0715	128.7
Generator Sets	0.3461	0.6980	0.1075	0.0007	0.0430	0.0430	61.0
Tractors/Loaders/Backhoes	0.4063	0.7746	0.1204	0.0008	0.0599	0.0599	66.8
Pavers Composite	0.5874	1.0796	0.1963	0.0009	0.0769	0.0769	77.9
Paving Equipment	0.0532	0.1061	0.0166	0.0002	0.0063	0.0063	12.6

Source: CARB, 2007b.

Table A-3 Construction Equipment Emissions (Tons per Year)

Equipment	CO	NO_x	VOC	SO_x	PM_{10}	$PM_{2.5}$	CO_2
Excavators Composite	0.1341	0.3047	0.0390	0.0003	0.0167	0.0167	27.5037
Rollers Composite	0.3004	0.5956	0.0919	0.0005	0.0416	0.0416	46.4006
Rubber Tired Dozers Composite	1.4684	3.0058	0.3353	0.0023	0.1296	0.1296	219.9772
Plate Compactors Composite	0.0121	0.0151	0.0024	0.0000	0.0010	0.0010	1.9843
Trenchers Composite	0.2357	0.3822	0.0859	0.0003	0.0319	0.0319	27.2467
Air Compressors	0.1740	0.3671	0.0567	0.0003	0.0259	0.0259	29.2594
Cement and Mortar Mixers	0.0309	0.0454	0.0078	0.0001	0.0031	0.0031	5.0012
Cranes	0.2419	0.6480	0.0716	0.0006	0.0288	0.0288	51.7885
Generator Sets	0.1592	0.3211	0.0494	0.0003	0.0198	0.0198	28.0566
Tractors/Loaders/Backhoes	0.6542	1.2470	0.1939	0.0012	0.0964	0.0964	107.5583
Pavers Composite	0.1363	0.2505	0.0455	0.0002	0.0178	0.0178	18.0811
Paving Equipment	0.0247	0.0492	0.0077	0.0001	0.0029	0.0029	5.8593
Total	**3.57**	**7.23**	**0.99**	**0.0063**	**0.42**	**0.42**	**568.72**

Table A-4 Painting

VOC Content	0.84	lbs/gallon	
Coverage	400	sqft/gallon	
Emission Factor	0.0021	lbs/sqft	
Building/Facility	Wall Surface	VOC [lbs]	VOC [tpy]
All Buildings Combined	80000	160000	336.0
Total	**80000**	**160000**	**336.00**

Table A-5 Delivery of Equipment and Supplies

Number of Deliveries	2						
Number of Trips	2						
Miles Per Trip	30						
Days of Construction	230						
Total Miles	27600						
Pollutant	**CO**	**NO_x**	**VOC**	**SO_x**	**PM_{10}**	**$PM_{2.5}$**	**CO_2**
Emission Factor (lbs/mile)	0.0219	0.0237	0.0030	0.0000	0.0009	0.0007	2.7
Total Emissions (lbs)	605.80	654.47	82.60	0.71	23.63	20.41	75056.4
Total Emissions (tpy)	**0.30**	**0.33**	**0.04**	**0.0004**	**0.01**	**0.01**	**37.53**

Source: CARB, 2007a.

Table A-6 Paving Off Gasses

VOC Emissions Factor	2.62	lbs/acre	
Building/Facility	**Area [acres]**	**VOC [lbs]**	**VOC [tpy]**
All Combined Parking	5.52	14.46	0.0072
Total	**5.52**	**14.46**	**0.0072**

Source: SQAQMD, 1993.

Table A-7 Surface Disturbance

TSP Emissions	80	lb/acre				
PM_{10}/TSP	0.45					
$PM_{2.5}$/PM_{10}	0.15					
Period of Disturbance	30	days				
Capture Fraction	0.5					
Building/Facility	**Area [acres]**	**TSP[lbs]**	**PM_{10}[lbs]**	**PM_{10}[tons]**	**$PM_{2.5}$[lbs]**	**$PM_{2.5}$[tons]**
Construction	7.4	17664	7949	3.97	596	0.30
Total	**7.4**	**17664**	**7949**	**3.97**	**596**	**0.30**

Sources: USEPA, 1995 and USEPA, 2005.

Table A-8 Worker Commutes

Number of Workers	30						
Number of Trips	2						
Miles Per Trip	30						
Days of Construction	230						
Total Miles	414000						
Pollutant	**CO**	**NO_x**	**VOC**	**SO_x**	**PM_{10}**	**$PM_{2.5}$**	**CO_2**
Emission Factor (lbs/mile)	0.0105	0.0011	0.0011	0.0000	0.0001	0.0001	1.1
Total Emissions (lbs)	4367.05	456.59	446.79	4.45	35.21	21.91	455206.4
Total Emissions (tpy)	**2.18**	**0.23**	**0.22**	**0.0022**	**0.02**	**0.01**	**227.60**

Source: CARB, 2007a.

Table A-9 Total Construction Emissions (Tons per Year)

Activity/Source	**CO**	**NO_x**	**VOC**	**SO_x**	**PM_{10}**	**$PM_{2.5}$**	**CO_2**
Construction Equipment	3.57	7.23	0.99	0.0063	0.42	0.42	568.72
Painting	0.00	0.00	0.17	0.0000	0.00	0.00	0.00
Delivery of Equipment and Supplies	0.30	0.33	0.04	0.0004	0.01	0.01	37.53
Paving Off Gasses	0.00	0.00	0.01	0.0000	0.00	0.00	0.00
Surface Disturbance	0.00	0.00	0.00	0.0000	3.97	0.30	0.00
Worker Commutes	2.18	0.23	0.22	0.0022	0.02	0.01	227.60
Total Construction Emissions	**6.06**	**7.79**	**1.43**	**0.0088**	**4.42**	**0.73**	**833.85**

Table A-10 Boiler Emissions

Gross Area	80000	sf				
Heating Requirements	25600	Btu/sf				
Total Annual Heat Required	2048000000	Btu				
Heating Value	1020	Btu/scf				
Total NG Used	2007843.1	scf				
Pollutant	**CO**	**NO_x**	**VOC**	**SO_x**	**PM_{10}**	**$PM_{2.5}$**
Emission Factor (lb/10^6 scf)	84	190	5.5	0.6	1.9	1.9
Total Emissions (tons)	**0.08**	**0.19**	**0.01**	**0.00**	**0.00**	**0.00**

1. Emission factors for all pollutants were obtained from U.S. EPA's AP-42, Section 1.3. Conservatively assume that PM_{10} = PM.
2. Heating requirements obtained from Commercial Buildings Energy Consumption Survey, DOE 2003

Table A-11 Staff and Faculty Commutes

Number of Workers	95					
Number of Trips	2					
Miles Per Trip	30					
Days of Work	260					
Total Miles	1482000					
Pollutant	**CO**	**NO_x**	**VOC**	**SO_x**	**PM_{10}**	**$PM_{2.5}$**
Emission Factor (lbs/mile)	0.0105	0.0011	0.0011	0.0000	0.0001	0.0001
Total Emissions (lbs)	15632.78	1634.47	1599.36	15.93	126.05	78.44
Total Emissions (tons)	**7.82**	**0.82**	**0.80**	**0.01**	**0.06**	**0.04**

Source: CARB, 2007a.

Table A-12 Student Commutes

Number of Workers	3500					
Number of Trips	2					
Miles Per Trip	10					
Days of Training	144					
Total Miles	10080000					
Pollutant	**CO**	**NO_x**	**VOC**	**SO_x**	**PM_{10}**	**$PM_{2.5}$**
Emission Factor (lbs/mile)	0.0105	0.0011	0.0011	0.0000	0.0001	0.0001
Total Emissions (lbs)	106328.25	11117.07	10878.27	108.33	857.35	533.52
Total Emissions (tons)	**53.16**	**5.56**	**5.44**	**0.05**	**0.43**	**0.27**

Source: CARB, 2007a.

Table A-13 Total Operational Emissions (tons)

Activity/Source	**CO**	**NO_x**	**VOC**	**SO_x**	**PM_{10}**	**$PM_{2.5}$**
Boiler Emissions	0.08	0.19	0.01	0.00	0.00	0.00
Staff and Faculty Commutes	7.82	0.82	0.80	0.01	0.06	0.04
Student Commutes	53.16	5.56	5.44	0.05	0.43	0.27
Total Operational Emissions	**61.06**	**6.57**	**6.24**	**0.06**	**0.49**	**0.31**

Appendix A Air Emission Calculations References:

California Air Resources Board (CARB). 2007a. *EMFAC 2007 (v2.3) Emission Factors (On-Road).* California Air Resources Board, Sacramento, CA.

California Air Resources Board (CARB). 2007b. *EMFAC 2007 (v2.3) Emission Factors (Off-Road).* California Air Resources Board, Sacramento, CA.

South Coast Air Quality Management District (SQAQMD). 1993. *CEQA Air Quality Handbook*. South Coast Air Quality Management District, Diamond Bar, CA.

Department of Energy (DOE). 2003. *Consumption and Gross Energy Intensity by Census Region for Sum of Major Fuels, Commercial Buildings Energy Consumption Survey*.

U.S. Environmental Protection Agency (USEPA). 2005. *Methodology to Estimate the Transportable Fraction (TF) of Fugitive Dust Emissions for Regional and Urban Scale Air Quality Analyses.* Accessed March 2010 at http://www.epa.gov/ttn/chief/emch/dustfractions/transportable_fraction_080305_rev.pdf.

U.S. Environmental Protection Agency (USEPA). 1995. *Compilation of Air Pollutant Emission Factors, AP-42, 5th edition, Vol. I: Stationary Point and Area Sources.*

RECORD OF NON-APPLICABILITY
In Accordance with the Clean Air Act - General Conformity Rule For
The Proposed Constructing and Operating of
the El Paso Community College East Fort Bliss Campus
at Fort Bliss, Texas

13 September 2010

The Army proposes to transfer land and permit the construction and operation of the El Paso Community College East Fort Bliss Campus at Fort Bliss, Texas. The new campus would consist of an 80,000 square foot complex. The construction of the campus is scheduled to commence in late 2010/early 2011 and be completed by Spring of 2012. Maximum anticipated student enrollment within the proposed East Fort Bliss Campus would be approximately 3,500 students and the campus would employ approximately 80 faculty and 15 staff personnel. The Proposed Action supports the mission of both Ft. Bliss and EPCC which is to provide a high quality education for active duty military and their dependents as well as the general public.

General Conformity under the Clean Air Act, Section 176 has been evaluated according to the requirements of 40 CFR 93, Subpart B. The requirements of this rule are not applicable to the Proposed Action because:

> All activities associated with the Proposed Action are located in an area designated by EPA to be in attainment for all criteria pollutants.

Supported documentation and emission estimates:

( ) Are Attached

( ) Appear in the NEPA Documentation

(X) Other (Not Necessary)

_____
Signature

_____
Title

_____
Date

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APPENDIX B
AGENCY COORDINATION

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Robert Naumann

From: Aimee_Roberson@fws.gov
Sent: Monday, May 03, 2010 11:13 AM
To: Robert Naumann
Cc: Luela_Roberts@fws.gov; Wade_Harrell@fws.gov
Subject: Request for informal consultation under Section 7 of the Endangered Species Act for Proposed construction of El Paso Community College East Side Campus complex within Fort Bliss (Consultation # 21450-2010-SL-0177)

Importance: High

Follow Up Flag: Follow up
Flag Status: Flagged

Dear Mr. Naumann:

Thank you for your March 16, 2010, letter to the U. S. Fish and Wildlife Service's (Service) Austin Ecological Services Field Office regarding El Paso Community College's proposed construction of an "East Side Campus" complex within Fort Bliss, El Paso County, Texas. In future correspondence regarding this project, please refer to consultation # 21450-2010-SL-0177.

We are providing the following information to assist consultants and/or Federal action agencies in assessing, avoiding, and minimizing adverse effects to species listed as threatened or endangered according to the Endangered Species Act of 1973, as amended (16 United States Code [U.S.C.] 1531 *et seq.*), designated critical habitat, as well as migratory birds protected by the Migratory Bird Treaty Act of 1918, as amended (16 U.S.C. §§ 703-712), and designated wetlands.

Federally Listed Species
According to Section 7(a)(2) of the Endangered Species Act and its implementing regulations, it is the responsibility of each Federal agency to ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of any Federally-listed species.

A county-by-county listing of Federally-listed threatened and endangered species that occur within this office's work area can be found at http://www.fws.gov/southwest/es/EndangeredSpecies/lists/. You should use the county-by-county listing and other current species information to determine whether suitable habitat for a listed species is present at your project site. If suitable habitat is present, a qualified individual should conduct surveys to determine whether a listed species is present. After completing a habitat evaluation and/or any necessary surveys, you should evaluate the project for potential effects to listed species and make one of the following determinations:

1) No effect - the appropriate determination when a project, as proposed, is anticipated to have no effects to listed species or critical habitat. A "no effect" determination does not require section 7 consultation; however, the action agency should maintain a complete record of their evaluation, including the steps leading to the determination of effect, the qualified personnel conducting the evaluation, habitat conditions, site photographs, and any other related information.

2) May affect, but is not likely to adversely affect – the appropriate determination when a proposed action's anticipated effects are insignificant, discountable, or completely beneficial. Insignificant effects relate to the size of the impact and should never reach the scale where "take" of a listed species occurs. "Take" is defined as harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. In addition to the direct take of an individual animal, habitat destruction or modification can be considered take, regardless of whether it has been formally designated as critical habitat, if it would result in the death or injury of wildlife by removing essential habitat components or impairing essential behavior patterns, including breeding, feeding or sheltering. Discountable effects are those extremely unlikely to occur. Based on best judgment, a person would not be able to meaningfully measure, detect, or evaluate insignificant effects, or expect discountable effects to occur. This determination requires written concurrence from the Service. A biological evaluation or other supporting information justifying this determination should be submitted with a request for written concurrence.

1

3) May affect, is likely to adversely affect – the appropriate determination if any adverse effect to listed species or critical habitat may occur as a direct or indirect result of the proposed action, and the effect is not discountable or insignificant. This determination requires formal section 7 consultation.

The Service's Consultation Handbook is available online to assist you with further information on definitions, process, and fulfilling Endangered Species Act requirements for your projects at http://endangered.fws.gov/consultations/s7hndbk/s7hndbk.htm.

If a "may affect" determination is made, the Federal action agency shall initiate the formal section 7 consultation process by writing to: Field Supervisor; Austin Ecological Service Field Office, U.S. Fish and Wildlife Service, 107011 Burnet Road, Suite 200, Austin, Texas 78758. If no effect is evident, no further consultation is needed; however, we would appreciate it if you could submit a copy of your determination for our files.

Non-Federal representatives (i.e. consultants, state agencies, county or local officials) may request and receive species lists, prepare environmental documents, biological assessments, and provide information for formal consultations. However, the Service requires the action agency to designate the non-Federal representative in writing. If not designated, we recommend non-Federal representatives provide a complete record of their evaluation to the Federal action agency so that they may make a determination of effect and, if necessary, consult with the appropriate Service office on the proposed action.

The Service recommends the action agency and/or non-Federal representative maintain a complete record that identifies steps leading to the determination of effect, the qualified personnel conducting the evaluation, habitat conditions, site photographs, and any other related articles.

State Listed Species

The State of Texas protects certain species. Please contact the Texas Parks and Wildlife Department (Endangered Resources Branch), Fountain Park Plaza Building, Suite 100, 3000 South IH-35, Austin, Texas 78704 (telephone 512/912-7011) for information concerning fish, wildlife, and plants of State concern or visit their website at http://www.tpwd.state.tx.us/nature/Ending/animals/mammals/.

Migratory Birds

The Migratory Bird Treaty Act (MBTA) implements various treaties and conventions for the protection of migratory birds. Under the MBTA, taking, killing or possessing migratory birds is unlawful. Many may nest in trees, brush areas or other suitable habitat. The Service recommends activities requiring vegetation removal or disturbance avoid the peak nesting period of March through August to avoid destruction of individuals, nests or eggs. If project activities must be conducted during this time, we recommend surveying for nests prior to commencing work. If a nest is found, and if possible, the Service recommends a buffer of vegetation (= 164 feet [ft] for songbirds, ≥ 328 ft for wading birds, and ≥ 590 ft for terns, skimmers and birds of prey) remain around the nest until young have fledged or the nest is abandoned. A list of migratory birds may be viewed at http://migratorybirds.fws.gov/intrnltr/mbta/proposedbirdlist.pdf.

Wetlands

Wetlands and riparian zones provide valuable fish and wildlife habitat and contribute to flood control, water quality enhancement, and groundwater recharge. Wetland and riparian vegetation provide food and cover for wildlife, stabilize banks, and decrease soil erosion. These areas are inherently dynamic and very sensitive to changes caused by such activities as overgrazing, logging, major construction, or earth disturbance. Executive Order 11990 asserts that each agency shall provide leadership and take action to minimize the destruction, loss or degradation of wetlands, and to preserve and enhance the natural and beneficial value of wetlands in carrying out the agency's responsibilities. Construction activities near riparian zones should be carefully designed to minimize impacts. If vegetation clearing is needed in these areas, they should be re-vegetated with native wetland and riparian vegetation to prevent erosion or loss of habitat. We recommend minimizing the area of soil scarification and initiating incremental re-establishment of herbaceous vegetation at the proposed work sites. Denuded and/or disturbed areas should be re-vegetated with a mixture of native legumes and grasses.

Species commonly used for soil stabilization are listed in the Texas Department of Agriculture's (TDA) Native Tree and Plant Directory, available from TDA at P.O. Box 12847, Austin, Texas 78711. The Service also urges taking precautions to ensure sediment loading does not occur to any receiving streams in the proposed project area. To prevent and/or minimize soil erosion and compaction associated with construction activities, avoid any unnecessary clearing of vegetation, and follow established rights-of-way whenever possible. All machinery and petroleum products should be stored outside the floodplain and/or wetland area during construction to prevent possible contamination of water and soils. No permanent structures should be placed in the 100-year floodplain.

2

If your project will involve filling, dredging, or trenching of a wetland or riparian area it may require a Section 404 permit from the U.S. Army Corps of Engineers (COE). For permitting requirements please contact the U.S. Corps of Engineers, District Engineer, P.O. Box 1229, Galveston, TX 77553-1229, (409) 766-3002.

Beneficial Landscaping
In accordance with Executive Order 13112 on Invasive Species and the Executive Memorandum on Beneficial Landscaping, where possible, any landscaping associated with project plans should be limited to seeding and replanting with native species. A mixture of grasses and forbs appropriate to address potential erosion problems and long-term cover should be planted when seed is reasonably available. Although Bermuda grass is listed in seed mixtures, this species and other introduced species should be avoided as much as possible. The Service also recommends the use of native trees, shrubs and herbaceous species that are adaptable, drought tolerant and conserve water.

Service Response
Please note that the Service strives to respond to requests for project review within 30 days of receipt, however, this time period is not mandated by regulation. Responses may be delayed due to workload and lack of staff. Failure to meet the 30-day timeframe does not constitute a concurrence from the Service that the proposed project will not have effects to threatened and endangered species.

Thank you for your concern for endangered and threatened species and other resources, and we appreciate the opportunity to comment on the proposed project. If we can be of further assistance, or if you have any questions about these comments, please contact me at this e-mail address, or at the phone number or address listed below.

Thank you,

Aimee Roberson

~~~~~~~~~~~~~~~~~~~~
Aimee M. Roberson
Fish & Wildlife Biologist
Trans-Pecos Sub-Office
U. S. Fish & Wildlife Service
500 West Avenue H
Suite 104F, Box 3
Alpine, Texas 79830
office: (432) 837-0747
cell: (432) 294-1662
~~~~~~~~~~~~~~~~~~~~

June 4, 2010

Mr. Robert Naumann, Project Manager
Potomac-Hudson Engineering
7830 Old Georgetown Road, Suite 220
Bethesda, MD 20814

RE: Proposed Construction of an "East Side" El Paso Community College Complex (EPCC), Ft. Bliss, El Paso County

Dear Mr. Naumann:

Texas Parks and Wildlife Department (TPWD) reviewed the project description for the proposed construction of the EPCC complex and would like to offer the following comments, information and recommendations. Based on the project description, TPWD does not anticipate potential adverse impacts to protected species or other important biological resources, with the following exceptions, discussed below.

Project Description

The proposed project entails the construction of an 80,000 square foot college campus. EPCC would construct and operate the campus on an approximate 200-acre parcel of undeveloped desert land composed of mesquite and sand scrub dominated coppice dunes. The proposed project would include a landscaped campus with educational and training facilities and parking lots connected by new internal roadways. The potential also exists for the placement of athletic fields within the campus. The document indicates plans to incorporate storm water management procedures compliant with Federal and State regulations.

TPWD Review Methods

As part of the review, TPWD searched the Texas Natural Diversity Database (TXNDD) of known records for species and rare resources within 10 miles of the project. TXNDD Element Occurrence (EOID) records found within a 10 mile radius provide a best estimate of the species and other rare resources that have potential to occur on a project. **A lack of site-specific records should not be interpreted as presence/absence data, but instead that little information is available to date.** The current **TPWD Annotated List of Rare Species for El Paso County** (attached) was reviewed for species on the County List. Landscape and vegetation features were examined using Geographic Information System

based aerial imagery, in-house natural resources data files and publicly available natural resource information on the internet.

Potential Impacts to Rare and Protected Species

Review of TXNDD records and the ***TPWD Annotated List of Rare Species for El Paso County*** indicate that the following rare and protected species may occur on site if suitable habitat is present. A copy of the EOID records is attached.

Federally Protected Species
Sneed's pincushion cactus (*Escobaria sneedii* var. *sneedii*) (4 EOID records)

State Protected Species
Mountain short-horned lizard (*Phrynosoma hernandesi*)
Texas horned lizard (*Phrynosoma cornutum*)

Rare Species
ANIMALS
Franklin Mountain Talus Snail (*Sonorella metcalfi*) (1 EOID record)
Pecos River Muskrat (*Ondatra zibethicus ripensis*) (1 EOID record)
Western Burrowing Owl (*Athene cunicularia hypugaea*) (1 EOID record)

PLANTS:
Desert night-blooming cereus (*Peniocereus greggii* var. *greggii*) (1 EOID record)
Resin-leaf brickellbush (*Brickellia baccharidea*) (8 EOID records)
Sand prickly-pear (*Opuntia arenaria*) (2 EOID records)
Wheeler's spurge (*Chamaesyce geyeri* var. *wheeleriana*) (4 EOID records)

> **Recommendation:** If not done to date, and prior to construction, TPWD recommends on-ground surveys by qualified biologists be performed to determine if rare or protected species/habitat on the ***TPWD Annotated List of Rare Species for EL Paso County*** are present within the project area. This would include the species discussed above as well as migratory birds, discussed below. Although the rare plant and animal species are not protected by law, TPWD considers them to be at risk for endangerment. If present on-site, they could be adversely impacted by the proposed project. Rare species are tracked in the TXNND and TPWD actively promotes their conservation. TPWD considers it important that potential impacts to rare species and their habitat be evaluated and, if applicable, impacts be avoided to reduce the likelihood of endangerment. If these species are present, then steps should be taken to any avoid harm, and TPWD should be contacted for further guidance, including salvage of rare plants.

Mr. Robert Naumann
Page Three
June 4, 2010

Recommendation: As noted in the project description, only personnel with a TPWD scientific collection permit are allowed to handle and move state-listed species. A copy of ***Protection of State-Listed Species - Texas Parks and Wildlife Department Guidelines*** is attached. Any take (incidental or otherwise) of state-listed species, such as the Texas horned lizard, is prohibited by state law. There are penalties associated with take of state-listed species. For further information on the required permit please contact Chris Maldonado at (512) 389-4647 or by e-mail at christopher.maldonado@tpwd.state.tx.us.

Recommendation: Observations of rare and protected resources during project survey, construction, or maintenance should be recorded with location, a description, and photographs and reported to TPWD to include in the TXNDD. Disturbance activities should be temporarily stopped until actions to minimize impacts have been determined. A copy of the ***TPWD Texas Natural Diversity Database Reporting Form*** is attached.

Recommendation: For additional project specific guidance, please contact Lois Balin, TPWD Urban Biologist, El Paso, at 915-774-9603 or by email at lois.balin@tpwd.state.tx.us.

Migratory Bird Treaty Act

Vegetation, including trees and shrubs in the project area may provide habitat for migratory birds. Migratory Birds are protected by the ***Migratory Bird Treaty Act of 1918*** (MBTA) which prohibits the take of migratory birds, their nests, eggs or young. The prohibition also includes harassment of nesting birds and young during the breeding season. The Endangered Species Act and state law protect migratory birds that are considered endangered or threatened. El Paso County is located within the Central Flyway for migratory birds. Fall and spring migrants use the region for temporary stops during travel between the northern and southern hemispheres. Other species, such as the Burrowing Owl may be year-round residents. Federal/state listed and rare migratory birds are included on the ***TPWD El Paso County Annotated List of Rare Species***.

Recommendations: TPWD recommends that the bird species that use the area be identified and best management practices for avoiding harassment and harm to migratory birds be implemented. In accordance with the MBTA, TPWD recommends that vegetation removal and ground disturbing activities be phased to occur outside of the nesting season (March 15 to September 15) and impacts to spring and fall migrants be avoided. Construction noise that could harass nesting birds should be phased to occur outside of the nesting season as well. If federally-listed

bird species protected by the MBTA are to be affected by the project, then coordination with the U.S. Fish and Wildlife Service would be required.

Mitigation for Impacts to Wildlife Habitat

Recommendation: The project description indicates that the proposed project would impact approximately 200 acres of existing native desert wildlife habitat/vegetation. Construction impacts to native vegetation should be avoided to the greatest extent practicable. If impacts are unavoidable, TPWD recommends in-kind replacement/conservation at a ratio of 1:1 of all existing native desert wildlife habitat/vegetation that would be permanently altered by the proposed project. Mitigation values should be commensurate with the habitat value. If applicable, TPWD recommends that the project proposal be amended to include a compensatory mitigation plan.

Invasive Species and Revegetation

Recommendations: Invasive species pose a significant threat to the existence of native plant communities in disturbed areas. In accordance with the ***Executive Order on Invasive Species (EO 13112)*** and the ***Executive Memorandum on Beneficial Landscaping,*** TPWD recommends that practices be implemented to prevent the establishment of invasive species and sustain native species, particularly during the early stages of revegetation. Lists of invasive species to avoid can be accessed online at http://texasinvasives.org/invasives_database/. The Lady Bird Johnson Wildflower Center's ***Native Plant Alternatives to Invasives*** database can be accessed at http://www.wildflower.org/alternatives/index.php.

The ***TPWD Texas Wildscapes*** website has information about selecting native plants that would be best suited for revegetation and landscaping. Information on ***Texas Wildscapes*** (including how to obtain a free copy of an interactive Texas Wildscapes DVD) is available at http://www.tpwd.state.tx.us/huntwild/wild/wildscapes/. Additional sources include the TPWD ***Texas Plant Information Database*** at http://tpid.tpwd.state.tx.us/ and the Lady Bird Johnson Wildflower Center's ***Recommended Native Plants*** database at http://www.wildflower.org/collections/.

Recommendation: For additional project specific guidance, please contact Lois Balin, TPWD Urban Biologist, El Paso, at 915-774-9603 or by email at lois.balin@tpwd.state.tx.us.

Mr. Robert Naumann
Page Five
June 4, 2010

I appreciate the opportunity to review and comment on this project. TPWD strives to respond to requests for project reviews within the review period. Response may be delayed due to workload and lack of staff. Failure to meet the review time frame does not constitute concurrence from TPWD that the proposed project will not adversely impact fish and wildlife resources. Please contact me at (512) 389-8054 or by email at karen.clary@tpwd.state.tx.us if I may be of further assistance.

Sincerely,

Karen H. Clary

Karen H. Clary, Ph.D.
Wildlife Habitat Assessment Program
Wildlife Division

KHC:gg.14961

Attachments