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ENVIRONMENTAL ASSESSMENT

Future Development Master Plan Joint Interoperability Test Command Fort Huachuca, Arizona



May 2004

Directorate of Installation Support
US Army Garrison, Fort Huachuca, Arizona

HOW THIS ENVIRONMENTAL ASSESSMENT IS ORGANIZED

The FINDING OF NO SIGNIFICANT IMPACT briefly describes the Proposed Action and alternatives. Direct and indirect impacts are summarized and compared, and cumulative impacts are briefly described. The conclusions from the analysis are also stated

- SECTION 1 INTRODUCTION discusses the purpose and need for the Proposed Action, the regulatory background surrounding this project, and the scope of this Environmental Assessment.
- SECTION 2 DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES discusses the proposed action and alternatives addressed in this environmental assessment.
- SECTION 3 AFFECTED ENVIRONMENT describes the existing environment within the region of influence.
- SECTION 4 ENVIRONMENTAL CONSEQUENCES provides a comparison of environmental consequences associated with the proposed action alternatives. Mitigation measures are also addressed in this section.
- SECTION 5 CUMULATIVE IMPACTS includes the analysis of the action in the context of its anticipated contributions to other past, present and reasonably foreseeable activities in the region.
- SECTION 6 FINDINGS AND CONCLUSIONS provides a summary of anticipated environmental impacts.
- SECTION 7 LIST OF PREPARERS AND CONTRIBUTORS provides a list of those persons whose expertise contributed to the completion of the analysis
- SECTION 8 REFERENCES provides bibliographical information for sources cited in the text of this Environmental Assessment.
- SECTION 9 ACRONYMS AND ABBREVIATIONS

FINDING OF NO SIGNIFICANT IMPACT (FNSI)
Future Development Master Plan for Joint Interoperability Test Command
Fort Huachuca, Arizona
August 2004

Title of the Proposed Action: Future Development Master Plan for Joint Interoperability Test Command at Fort Huachuca, Arizona.

Introduction: An Environmental Assessment (EA), dated May 2004, has been prepared to support the decision-making process of the US Army Garrison and Joint Interoperability Test Command (JITC) on the proposed construction and operation of three new facilities to provide for updated, efficient infrastructure for mission accomplishment. This EA was prepared in compliance with the National Environmental Policy Act (NEPA) (Public Law 91-190, 42 U.S.C. 4321-4347, as amended), the Council on Environmental Quality (CEQ) Regulations for Implementing NEPA (40 CFR 1500-1508), and AR 200-2, Environmental Effects of Army Actions (32 CFR 651, March 2002). The EA is incorporated by reference in this FNSI.

Description of the Proposed Action (PA): Under the PA, up to three major JITC Test and Evaluation Facilities would be constructed in the area adjacent to the current JITC Headquarters. The new facilities would provide for efficiency in command, control and communications, and improve energy efficiency. New personnel could be required as a result of this Proposed Action or the alternatives to accomplish the JITC mission, and therefore installation of technology sufficient to off-set water use from the additional personnel would also be part of the proposed action or any alternative. To accommodate the proposed new facilities, ancillary facilities will also be necessary to provide access and ease of use. These modifications include addition of parking areas, secure or flammable storage areas and pedestrian walkways.

Alternatives Considered: Three alternatives were considered and evaluated in the EA: the PA, Alternative A-Phased Development, and Alternative B-Phased implementation with temporary structures, and the No Action alternative. Alternative A includes the same proposed project area as discussed in the PA; however, the construction would occur in phases based on JITC mission priorities and construction funding authorization. The initial phase of development would include construction of paved roads and parking and one of the proposed new buildings. This phase would also see the addition of approximately half of the eventual 150 additional mission personnel added to the JITC workforce. The initial construction would allow for current activities to continue and provide access to the site. The remaining JITC facilities would be phased in over time as needed. Under the Alternative B - the facilities would be phased as in the first alternative, but while awaiting Congressionally authorized funding, temporary structures up to the amount of square footage required, would be used. In the No Action, the JITC facilities will remain as they are at the publication of this EA. No new facilities, personnel or upgrades to existing facilities would occur.

Anticipated Environmental Effects: The EA documents that no significant impacts associated with the PA or alternatives are anticipated. Only minor impacts to air quality, noise, transportation, water resources, and biological resources would occur as a result of the PA or Alternatives A or B, and the majority of the impacts are limited to on-post resources.

Impacts to local air quality resulting from construction activities were found to be temporary and not significant. Noise levels would increase in the project area from temporary construction activity, and from a slight increase in traffic levels. The construction areas are not near human residential areas and the associated noise will not interfere with on-going military training activities. After construction of the new facilities, traffic may increase slightly along access roads. However, the increase will be small and will not raise

ambient noise to or above significant levels. No significant noise impact is anticipated as a result of construction activity or increase in vehicular traffic associated with the PA.

Due to conservation and reuse efforts, the installation's annual water withdrawal from the local aquifer is anticipated to decline. The proposed JITC facilities support this reduction trend by incorporating water conservation technologies and allowing for additional conservation technology to be installed to offset potential water use increases from additional personnel. The new facilities will use water saving features (i.e. waterless urinals, low flow faucets and toilets, etc.) to the maximum extent possible. In addition, JITC will educate its workforce on water conservation.

Impacts to biological resources will not be significant. Vegetation will be lost on up to 50 acres during the proposed construction activities, but no significant impact to existing wildlife (including federally-listed threatened and endangered species) is anticipated. To limit the size of the impact area, vegetation removal will be limited to roadways and building sites as much as possible. Disturbed areas outside of the permanent facility footprints will be revegetated with native species, where appropriate.

Impacts to socioeconomic resources will not be significant. The total one-time construction cost for all facilities would be approximately \$70 million, of which a large percentage would be spent on materials. Approximately 150 additional personnel are required as a result of the Proposed Action to accomplish the JITC mission. An additional annual payroll and ancillary spending of approximately 8 million dollars would be realized once all personnel have been hired. This is not a significant increase in the local economy. Any construction projects related to this proposed action or alternatives are subject to the availability of funds, and the larger buildings would require Congressional appropriations not currently forecast in the Future Years Defense Plan. Temporary facilities are the likely alternative for implementation.

Findings: Based on the findings of the EA, it is the conclusion of this analysis that neither the PA nor any of the alternatives constitute a major federal action with significant impact on the human environment, and a Finding of No Significant Impact for the PA should be issued to complete the documentation. Therefore, an Environmental Impact Statement will not be prepared.

Consideration of Public Comments: A 30-day public comment period extended from 10 July until 9 August 2004. Notice of the comment period was published in the Sierra Vista Herald for 3 consecutive days. In addition, copies of the draft FNSI were sent to interested parties, and the EA was available on the internet and at the Sierra Vista Public library. No comments were received during the comment period. Therefore, no substantive changes to the FNSI were made. Questions concerning the public comment period or this FNSI may be addressed to Ms. Gretchen Kent at (520) 533-2549, or by e-mail: gretchen.kent@us.army.mil. Copies of the EA may also be reviewed on line at: <http://huachuca-www.army.mil/USAG/DIS/DISHOME.HTM#ENRD>

Approved:



JONATHAN B. HUNTER
Colonel, US Army
Commander, US Army Garrison

ENVIRONMENTAL ASSESSMENT

Future Development Master Plan

Joint Interoperability Test Command

Fort Huachuca, Arizona

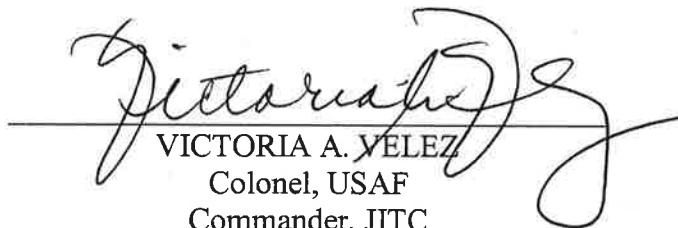
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Commander, US Army Garrison

May 2004

ENVIRONMENTAL ASSESSMENT
Future Development Master Plan
for the Joint Interoperability Test Command
Fort Huachuca, Arizona

LEAD AGENCY: Department of Defense

TITLE OF THE PROPOSED ACTION: Future Development Master Plan for the Joint Interoperability Test Command at Fort Huachuca, Arizona

AFFECTED JURISDICTION: Cochise County, Arizona

PREPARED BY: Directorate of Installation Support, US Army Garrison, Fort Huachuca

REVIEWED and APPROVED BY: Commander, Joint Interoperability Test Command, Fort Huachuca

APPROVED BY: Commander, US Army Garrison, Fort Huachuca, Arizona

ABSTRACT: An Environmental Assessment (EA), dated May 2004, has been prepared to support the decision-making process of the US Army Garrison and US Joint Interoperability Test Command on the proposed collocation, construction, and operation of three new facilities on up to 50 acres adjacent to the existing JITC Headquarters. This EA analyzes the potential impacts of the proposed action (PA): construction and operation of three new JITC facilities, adjacent to the current JITC Headquarters, and related ancillary structures, such as test areas and parking lots. The collocation and upgrade of the facilities will improve safety and efficiency in communications. Up to 150 additional personnel would be added to the JITC over the next 5 years as part of the Proposed Action to accomplish the JITC mission. The estimated total one-time cost for the construction is \$70 million. Three alternatives were considered and evaluated in the EA: the PA, Alternative A-Phased Development, and Alternative B-No Action. Alternative A includes the same proposed project area as discussed in the PA; however, the collocation will occur in phases based on mission priorities. Under the Alternative B -temporary facilities would be used while awaiting construction of the permanent facilities. In the No Action alternative, no new facilities or upgrades to existing facilities would occur. The EA documents that no significant impacts associated with the PA are anticipated. Only minor impacts to air quality, noise, transportation, water resources, and biological resources would occur as a result of the PA or the alternatives, and the majority of the impacts are limited to the immediate area of the new facilities on-post. The EA concludes that implementation of the proposed action or either of the alternatives would not significantly impact archaeological, cultural and historic resources, noise, climate and air quality, soil, safety, waste management, socioeconomics, transportation, or energy at Fort Huachuca or the region of interest. Implementing the action would not significantly affect the region's hydrology, water or ecological resources.

REVIEW COMMENT DEADLINE: Public comments must be received within 30 days from the publishing date of this document. Public comments may be provided to: Commander, USAIC&FH, ATTN: ATZS-ISB (Kent/JITC), Fort Huachuca, Arizona 85613-7010. Comments may also be faxed to (520) 533-3043.

1.0 PURPOSE AND NEED FOR THIS ENVIRONMENTAL ASSESSMENT

1.1 Introduction. The National Environmental Policy Act (NEPA) requires that agencies of the federal government implement an environmental impact analysis program to determine whether proposed actions are "...major federal actions significantly affecting the quality of the human environment." Under NEPA, an action becomes a "major federal action significantly affecting the quality of the human environment" by virtue of the magnitude of its impact in various media areas. An Environmental Assessment (EA) documents the analysis to determine whether the implementation of a project will, by virtue of its impact, have significant impact on the human environment, and therefore, whether it is a "major federal action significantly affecting the quality of the human environment." For example, a small project with significant impact could be a "major federal action significantly affecting the quality of the human environment" while a \$20 million dollar building remodeling project may not, because it could have minimal impact on the environment.

Army Regulation (AR) 200-2 implements the NEPA process for Army commands and installations. The Regulation states that "... all Army decision making that may have an impact on the human environment will use a systematic, interdisciplinary approach that ensures the integrated use of natural and social sciences, planning and the environmental design arts..." (USA 1988, Section 2-1). This EA was prepared in compliance with NEPA (Public Law 91-190, 42 U.S.C. 4321-4347, as amended), the Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of NEPA (40 CFR 1500-1508), and AR 200-2, Environmental Effects of Army Actions (32 CFR 651).

1.2 Purpose and Need for the Proposed Action. The purpose of this EA is to document the Joint Interoperability Test Command (JITC) need to design and construct permanent facilities to accomplish their mission. The JITC's mission is to support the military in their efforts to manage information on and off the battlefield. The JITC is DOD's primary certifier of interagency compatibility (joint interoperability), supporting all the military services, agencies, as well as federal and state agencies. JITC functions include evaluating, and certifying various types of communication and electronics systems used in joint and combined operations.

The recent DOD mandates for joint and combined systems and strategies has greatly expanded JITC's prime mission area. The expanded JITC mission exceeds the facilities currently available. The lack of space to accommodate personnel and requirements is reducing JITC's efficiency and ability to accomplish the mission.

The JITC is responsible for an environmental analysis of their proposed action. The Army has agreed to conduct an environmental assessment of this proposed action to comply with the National Environmental Policy Act (NEPA) in support of the JITC mission at Fort Huachuca. An environmental impact statement (EIS) is not required because the anticipated outcome of this action will not have a significant impact on the human environment. A Record of Environmental Consideration (REC), a lesser level of environmental review, is not sufficient because of potential concerns with regard to natural resources that do not satisfy the screening criteria under which a REC is authorized, most specifically, a construction footprint that exceeds 5 acres.

1.3 Scope of This Environmental Assessment

In accordance with NEPA and AR 200-2, the Army has prepared this EA to assess the potential environmental impacts that may result from a proposed action to construct and operate an additional three facilities in addition to the current facility at the Joint Interoperability Test Command (JITC), and provide necessary site modifications and access at Fort Huachuca. The proposed activities will occur within the cantonment (urbanized) area of Fort Huachuca (the Fort). A complete description of these activities is provided in Section 2, *Description of Proposed Action and Alternatives*.

Upon completion of the preliminary environmental screening for this EA, the Army determined that this EA would evaluate the potential impacts on the human environment by focusing on the following environmental resources:

- Land Use (Sections 3.1, 4.1)
- Soil Properties and Conditions (Sections 3.2, 4.2)
- Air Quality (Sections 3.3, 4.3)
- Noise (Sections 3.4, 4.4)
- Socioeconomic Environment (Sections 3.5, 4.5)
- Water Resources (Sections 3.6, 4.6)
- Biological Resources (Sections 3.7, 4.7)
- Cultural Resources (Sections 3.8, 4.8)
- Public Services, Utilities, Energy (Sections 3.9, 4.9)
- Hazardous Materials and Wastes (Sections 3.10, 4.10)

In addition to the evaluation for potential direct and indirect impacts on the above resources, the proposed activities were also evaluated for cumulative impacts on the environment as described in Section 5, *Cumulative Impact Analysis*.

This EA incorporates three documents by reference: 1) the August, 2002, Biological Opinion of the U.S. Fish and Wildlife Service concerning Fort Huachuca (# AESO/SE 2-21-02-F-229); 2) the "Approval of Land Use and Real Estate Investment Strategies in Support of Real Property Master Planning" Future Development Master Plan Environmental Impact Statement for Fort Huachuca, January 2000; and 3) The Environmental Assessment for the Real Property Master Plan for the Electronic Proving Ground, Fort Huachuca, AZ, November 2002.

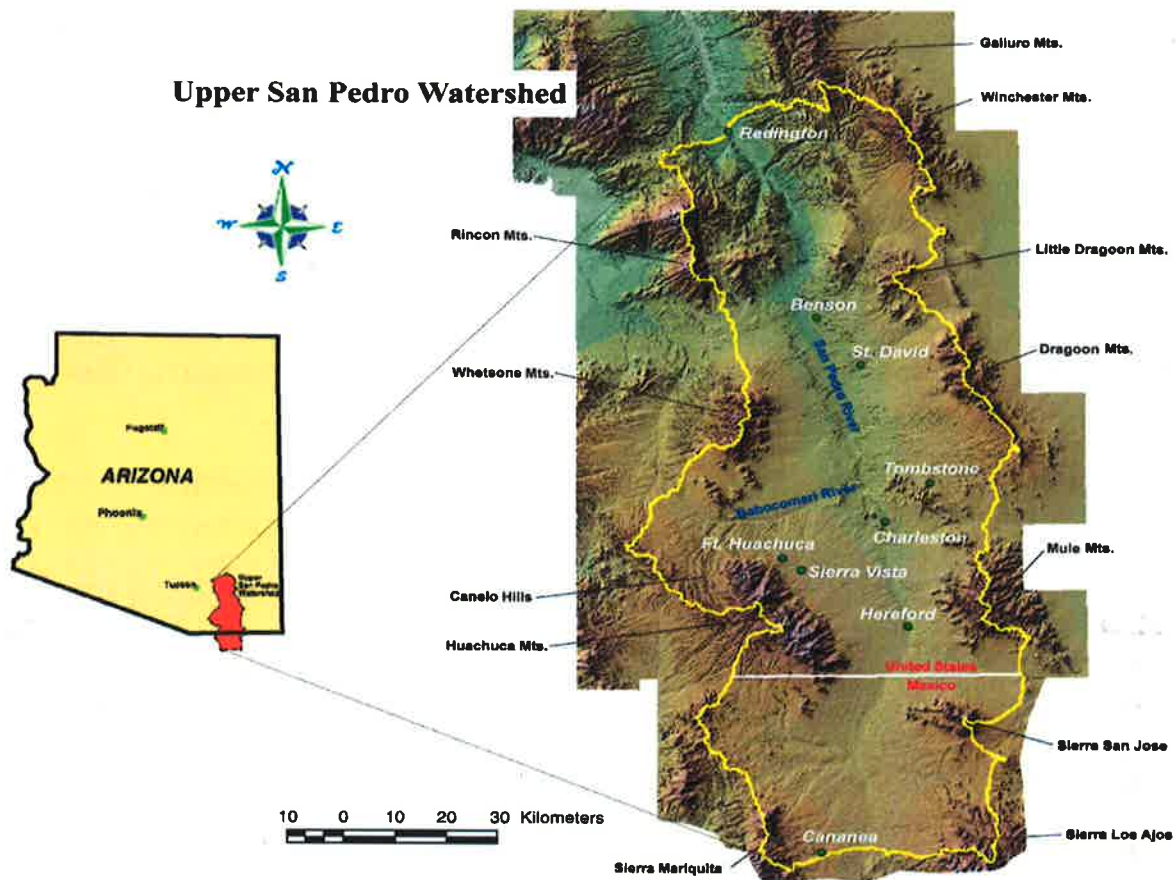
1.4 Public Outreach

The CEQ and AR 200-2 regulations that implement NEPA recommend an early and open process for the preparation of an EA. In keeping with an open decision-making process, the Army has made this EA available to agencies and the general public for review and comment. A complete copy of the draft Finding of No Significant Impact (FNSI) was published in the *Sierra Vista Herald* newspaper. Distribution of this EA and the draft FNSI included agencies and individuals that had previously expressed interest in activities at Fort Huachuca.

For further information regarding this EA or the Proposed Action, contact: Commander, U.S. Army Garrison, ATTN: ATZS-ISB (Kent), Fort Huachuca, Arizona 85613-7010, comments may also be faxed to (520) 533-3043. To obtain copies of the EA, contact (520) 533-3120 and leave a name and address, or write to: U.S.A.I.C & F.H., ATTN: ATZS-ISB (JITCEA), Fort Huachuca, Arizona 85613-6000. A copy of the document is also available on the internet at URL:

http://huachuca-www.army.mil/USAG/DIS/envirol_compliance_docs.htm

The public is invited to comment on this EA and draft FNSI during the 30-day public comment period. Comments postmarked after that date will be considered to the extent practicable. Questions and comments may be directed to the addresses provided on the previous page.



Map shows the relative location of Fort Huachuca within Arizona, and the Upper San Pedro River Valley.

2.0 DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

2.1 Introduction : Under NEPA, the proponent for an action is responsible for considering all reasonable alternatives for achieving a goal or implementing a project or program. For this EA, three action scenarios were evaluated based on the following goals set forth by JITC: 1) the ability to improve the security and efficiency of the organization; 2) provide the facilities necessary for their expanding development and testing missions; 3) provide for infrastructure that is energy-efficient and; 4) reduce or eventually eliminate temporary facilities being used to accomplish the mission. In addition, the proposed improvements will be environmentally compliant, and will allow for new technology, storage and personnel requirements. The evaluations were based on the ability of each scenario to meet the purpose and need of JITC's goal to provide facilities that result in more efficient operations to fulfill their mission. As a result, a preferred alternative was selected and is presented as the Proposed Action. The other two action scenarios were considered less effective in improving JITC's operations. The three action scenarios are:

2.2 Description of the Proposed Action (PA): Construct permanent facilities: Commander, Joint Interoperability Test command (JITC) proposes to develop up to 50 acres along Brainard Road at Fort Huachuca with the required permanent facilities to accommodate the expanding JITC national defense support role. The development site is across from the current JITC Headquarters location, and would be south of Brainard Road. The proposed action consists of concurrent construction and development of the site, with up to three permanent buildings of up to 90,000 square feet each, required ancillary and support facilities. The three primary buildings would total up to 270,000 square feet of administrative and operational space. Administrative areas would include reception and security, office space, break rooms, restrooms, conference rooms, library, and storage rooms. Operational space includes computer labs, software development areas, system integration areas, testing labs, communications interface venues, classified storage and work areas, and test and systems monitoring. A field test area would have the capability to temporarily establish outdoor test areas. The field test site would consist of improved and unimproved staging areas for tactical equipment and shelters. Improved areas may include a combination of pavement, conventional electrical power, telecommunications links, antenna tie-downs, natural gas generators. These improvements would enable various configurations of power and communication to service and interconnect tactical communication systems and any other JITC test facilities and laboratories. With an increase in its mission, JITC estimates an increase of up to thirty personnel per year for the next ten years. As part of the proposed action, JITC will fund projects to zero-balance the reasonably anticipated additional water use from this addition of personnel.

In addition to the construction of primary facilities, support facilities would also be included. Support facilities may include paved parking for privately owned and government vehicles, security fencing, security lights, and outdoor smoking and break areas.

2.3 Alternatives to the Proposed Action:

2.3.1 Alternative A: Develop permanent facilities in phases: Development would consist of construction and development of the site, with up to three permanent buildings of up to 90,000 square feet each, along with required ancillary and support facilities. As in the proposed action, the three primary facilities would total up to 270,000 square feet of administrative and operational space, but construction would be accomplished incrementally over the next ten years rather than concurrently.

2.3.2 Alternative B: Use temporary structures while awaiting permanent facilities: This alternative would include continuing to plan for implementation of either the Proposed Action or Alternative A, and provide interim temporary work space with associated ancillary and support structures and facilities until permanent construction occurs. These temporary facilities would be located in or around the existing JITC, Joint Test Facility (JTF) compound and / or in the future construction area, until funding for, and construction of the permanent structures has been accomplished. The work and administrative space would consist of various configurations of temporary modular buildings not to exceed the square footage requested through the Military Construction Congressional Appropriations Process. Ancillary and support facilities would be designed and constructed to either meet the requirements of the final build-out, or be temporary in nature so they may be easily removed upon construction of the permanent facilities.

2.3.3 Alternatives considered but not analyzed in this document: In addition to the alternatives described above, five alternatives were considered but dismissed. The alternatives were rejected because they are either not feasible, or do not meet other mission or NEPA requirements. These are briefly discussed below.

a) Expand the current facility to the West: This alternative would put the facilities in the LAAF safety fan, which is not allowable under Army Regulation .

b) Expand the current facility to the East: The area to the east has insufficient acreage available to meet the JITC needs and meet other safety regulations associated with the LAAF.

c) Construct permanent structures within the JITC, JTF compound. This alternative would exceed the capacities of existing utilities (gas, water, sewer, and power), require changes in drainage channels outside the current property and impact the LAAF operations, and reduce the available space for testing of tactical communication systems.

d) Relocate the JITC to another location on Fort Huachuca. This alternative would disrupt testing operations, and be potentially damaging to expensive, sensitive electronic equipment that would need to be moved. Such a move would require duplication of the JITC headquarters building, adding additional expense to the project and expand the new project footprint. The resulting larger, relocated project could increase impacts to the environment. Although potentially feasible, this alternative has no environmental benefit to the region, no economic benefit to the DoD or US Taxpayer, and no operational benefit to the JITC.

e) Relocate the JITC out of the local area: This alternative is not within the approval authority of the project proponent.

1 **2.3.4 No Action Alternative:** Under CEQ regulations, a No Action scenario must also be
2 evaluated, presented as an alternative in this document. Under the No Action Alternative, the
3 existing JITC facilities will remain at their existing locations. No new facilities or upgrades to
4 existing facilities will occur. No temporary facilities would be authorized. This alternative
5 represents the continuation of baseline environmental conditions with respect to the JITC
6 facilities at Fort Huachuca. Although an evaluation of this scenario is required, it does not
7 fulfill the mission requirements of the JITC.

3.0 AFFECTED ENVIRONMENT

The affected environment descriptions in this section provide the context for understanding the environmental consequences described in Section 4, *Environmental Consequences*. For more detailed information in each media area, a previous, but recent, baseline document is incorporated by reference for the reader's further review, if desired. These documents may be reviewed at the Environmental and Natural Resources Division at Fort Huachuca with prior notice. The descriptions that follow serve as existing conditions for comparing changes caused by implementation of the Proposed Action and alternatives. Fort Huachuca is located on the western side of the Upper San Pedro River Valley in Cochise County in southeastern Arizona, 75 miles southeast of Tucson and approximately 8 miles north of the Mexican border (see Figure 1). Fort Huachuca encompasses approximately 73,142 acres adjacent to the City of Sierra Vista and Huachuca City in the foothills of the Huachuca Mountains. The region of influence (ROI) studied is defined for each resource area affected by the Proposed Action and alternatives. The general ROI includes Fort Huachuca and surrounding environs.

3.1 LAND USE

This section provides information on the existing land uses and controls within the ROI. The section summarizes existing zoning and planned land uses within the Fort Huachuca military installation in its entirety, local cities and towns, and parts of Cochise and Santa Cruz counties.

3.1.1 Setting and Location

Cochise County encompasses approximately 6,219 square miles in the southeastern-most portion of Arizona. Forty-two percent of the land is privately owned and the remainder is held by the State of Arizona (34 percent), federal agencies (21 percent), and other public entities (3 percent) (UAV 2000). The major economic sectors in the county are farming, ranching, tourism, and government employment. The U.S. Forest Service (USFS) and Bureau of Land Management (BLM) manage much of the land adjacent to the fort on the west and south of the West Reservation, and east of the East Range. For additional information, the Environmental Assessment titled: Rehabilitation of Historic Adobe Structures, Fort Huachuca, AZ, March 2002; is incorporated by reference.

The open/operational areas on the West and East Reservations are used as training and test ranges and comprise approximately 93 percent of the installation. JITC facilities proposed for collocation are scattered throughout the Fort. The proposed JITC collocation area will be within the cantonment area, adjacent to JITC Headquarters. Within the cantonment area and other developed areas on Fort Huachuca, land use control, management activities, and maintenance fall under the direction of the Fort Huachuca Master Planner, Directorate of Installation Support (DIS). Future activities in the cantonment area are guided by the Fort Huachuca Real Property Master Plan (Nakata Planning Group, 1997). The existing and proposed JITC facilities are located within the cantonment area and have been addressed by the Fort Huachuca Real Property Master Plan.

3.2 SOIL PROPERTIES AND CONDITIONS

This section describes soils of the proposed project area and is intended to provide a baseline for use as a point of comparison when evaluating impacts potentially resulting from the proposed collocation of JITC facilities and site modifications discussed in this EA.

Soil management is a significant operational consideration at Fort Huachuca due to the potential for erosion. The proposed project area is located within the Terrarossa soil complex as identified in the Cochise County Soil Survey. This complex consists of a group of highly intermixed, similar soils. It is comprised of well-drained, sandy loams, gravelly loams, and very gravelly sand loams with slopes from 0 percent to 45 percent. Soil properties and characteristics of the Terrarossa complex include: slow permeability, high shrink-swell potential, clay texture, and high water erosion potential.

3.3 AIR QUALITY

This section identifies current ambient air quality conditions and policies affecting the Fort Huachuca area, located in the Southeast Arizona Air Quality Control region. This region encompasses the counties of Cochise, Graham, and Santa Cruz. Local air quality standards fall under the jurisdiction of the U.S. Environmental Protection Agency (EPA) and are regulated by the National AAQS as directed by the Clean Air Act of 1971 and the ADEQ. Available monitoring data indicates that air quality in the Fort Huachuca area meets AAQS for criteria air pollutants, and has met the standards since the inception of monitoring programs. The Environmental Assessment titled: Comprehensive Unmanned Aerial Vehicle Testing and Training at Fort Huachuca, AZ, June 2000 is incorporated by reference.

3.4 NOISE

The degree to which noise will disrupt an area is dependent on the perception of the people living in the affected area. By definition, noise is unwanted sound; when sound interrupts daily activities such as sleeping or conversation, it becomes noise. Typically, noise is measured as a nuisance; the more the noise interferes with daily activities, the greater the level of nuisance. The ROI for noise includes areas that could potentially be subject to noise levels in excess of 65 dB L_{dn} related to the Proposed Action and alternatives. The Environmental Assessment titled: Comprehensive Unmanned Aerial Vehicle Testing and Training at Fort Huachuca, AZ, June 2000 is incorporated by reference.

3.5 SOCIOECONOMIC ENVIRONMENT

The Programmatic Biological Assessment for Ongoing and Programmed Future Operations and Activities, Fort Huachuca, AZ, July 2002, is incorporated by reference.

3.5.1 Public Safety

The Environmental Assessment titled: Rehabilitation of Historic Adobe Structures, Fort Huachuca, AZ, March 2002, is incorporated by reference.

3.5.2 Environmental Justice

The Environmental Assessment titled: Rehabilitation of Historic Adobe Structures, Fort Huachuca, AZ, March 2002, is incorporated by reference.

3.5.3 Children's Health and Safety

Protection of Children From Environmental Health Risks and Safety Risks (EO 13045), was introduced in 1997 to prioritize the identification and assessment of environmental health and safety risks that may affect children and to ensure that federal agencies' activities address environmental and safety risks to children.

3.5.4 Transboundary Issues

The southern-most boundary of Fort Huachuca is located eight miles north of the U.S.-Mexican international border. Naco, Arizona is the nearest border crossing and is an approximate 25-mile drive from Fort Huachuca via Arizona Highway 92.

3.5.5 Regional and Fort Huachuca Population and Economy

The Programmatic Biological Assessment for Ongoing and Programmed Future Operations and Activities, Fort Huachuca, AZ, July 2002, is incorporated by reference.

3.6 WATER RESOURCES

The Programmatic Biological Assessment for Ongoing and Programmed Future Operations and Activities, Fort Huachuca, AZ, July 2002, is incorporated by reference.

3.7 BIOLOGICAL RESOURCES

For the purpose of this evaluation, biological resources include wildlife and native vegetation found within the proposed project area, which encompasses approximately 150 acres within the cantonment area. The following subsections describe the vegetation, wildlife, Threatened and Endangered species, and other species of concern associated with the proposed project area.

3.7.1 Vegetation

The proposed project area is located in the Semidesert Grassland biotic community, as described by D.E. Brown (1994) at an average elevation of 4,735 ft above mean sea level (msl). Semidesert Grassland communities are typically perennial, grass-scrub dominated landscapes; however, within the project area, small-sized mesquite trees have invaded the scrub as an important associate species. The proposed project area is typical of an urban setting. Existing paved and unpaved roads, buildings, and other development and landscaping practices dominate the landscape. Many of the native species have been replaced with exotics such as Lehmann lovegrass (*Eragrostis lehmanniana*), burroweed (*Isocoma tenuisecta*) and snake weed (*Gutierrezia sarothrae*). *Agave palmeri*, an important forage species for the federally endangered lesser long-nosed bat, was not found in the project area. A dry wash crosses the eastern portion of the proposed project area, draining in a northeasterly direction. Wash vegetation is similar to that found in the surrounding upland plant community.

3.7.2 Wildlife

A large diverse group of wildlife species can be found in Semidesert Grassland communities. Mammals are well represented and include black-tailed jackrabbit (*Lepus californicus*), spotted ground squirrel (*Spermophilus spilosoma*), ord's kangaroo rat (*Dipodomys ordii*), banner-tailed kangaroo rat (*Dipodomys spectabilis*), merriam's kangaroo rat (*Dipodomys merriami*), southern grasshopper mouse (*Onychomys torridus*), collared peccary or javelina (*Tassayu tajacu*), coyote (*Canis latrans*), 14 species of bats, and a number of larger mammals including mountain lion (*Felis concolor*), desert mule deer (*Odocoileus hemionus*), and pronghorn antelope (*Antilocapra americana*). A variety of bird species are also well represented in Semidesert Grasslands and include: kestrel (*Falco sparverius*), mourning dove (*Zenaida macroura*), scaled quail (*Callipepla squamata*), roadrunner (*Geococcyx californianus*), burrowing owl (*Athene cunicularia*), horned lark (*Eremophila alpestris*), gila woodpecker (*Melanerpes uropygialis*), curve-billed thrasher (*Toxostoma curvirostre*), ruby-crowned kinglet (*Regulus calendula*) in winter, turkey vulture (*Cathartes aura*) in summer, and a variety of hummingbirds, to name a few.

3.7.3 Federally-listed Threatened, Endangered, Proposed, and Candidate Species

The Programmatic Biological Assessment for Ongoing and Programmed Future Operations and Activities, Fort Huachuca, AZ, July 2002, is incorporated by reference for additional information. None of the federally listed species occur at the project site. The *Agave palmeri*, a protected plant species, is found in the vicinity of the project, and may be used by the foraging lesser long-nosed bat (*L. curasoae*). Protected agave plant community areas have been identified in the northwest, west, and southwest of the project area. The closest protected area is located approximately 1.6 miles to the northwest.

3.8 CULTURAL RESOURCES AND HISTORIC PROPERTIES

The baseline information for evaluating the cultural resource impacts that may be caused by the Proposed Action and alternatives discussed in this EA is the Fort Huachuca Integrated Cultural Resources Management Plan (ICRMP) of September 2001. The 2001 ICRMP is incorporated by reference, and may be reviewed at the Sierra Vista Public Library.

The proposed project for collocation of facilities would occur in an undeveloped area within the cantonment area, near the JITC headquarters. This area is relatively undisturbed with respect to cultural resources, although portions of this area have been disturbed by the unpaved road and tank trail.

3.9 PUBLIC SERVICES, UTILITIES, ENERGY

This section describes the utilities and energy resources that may be affected by the Proposed Action or any of the alternatives. The ROI for these resources is confined to Fort Huachuca.

3.9.1 Potable Water

The Programmatic Biological Assessment for Ongoing and Programmed Future Operations and Activities, Fort Huachuca, AZ, July 2002, is incorporated by reference for additional information.

3.9.2 Electricity

Primary electrical power for the Fort is obtained from a Tucson Electric Power Company (TEP) Above-ground power lines distribute electricity within the cantonment area.

3.10 HAZARDOUS MATERIALS AND WASTES

The ROI for hazardous materials is confined to areas where construction activities would take place. Therefore, the ROI considered for the purposes of this evaluation is limited to the area within the Fort's boundaries.

3.10.1 Hazardous Materials

Fort Huachuca operates a Hazardous Material Control Center (HMCC), which allows for collection and withdrawal of usable hazardous materials on the installation. Additionally, the Fort Huachuca *Installation Spill Contingency Plan* (ISCP) describes the response procedures for an accidental spill of hazardous substances or petroleum, oil, and lubricants (POL). Hazardous materials are currently stored at the existing JITC Motor Pool Facility. These hazardous materials are stored within a containment area to minimize risk of leaks or spills.

3.10.2 Hazardous Waste

Fort Huachuca is a large quantity generator of hazardous wastes, but does not maintain a Part B permit to operate a treatment, storage, and disposal facility under RCRA. The Fort operates one 90-day accumulation point and approximately 20 satellite accumulation points established by the DIS Environmental and Natural Resources Division (ENRD). One of these satellite accumulation points is located at the JITC. The Fort implements several environmental plans and programs for hazardous waste management and monitoring.

In the case of a hazardous waste release, the Fort Huachuca Fire Department has first responder responsibilities at Fort Huachuca, with the DIS maintenance contractor responsible for cleanup once imminent danger to life and health has passed. Under agreement with Cochise County and the City of Sierra Vista, backup for response to accidental spills of hazardous substances or POL on the Fort is available.

3.10.3 Wastewater

Wastewater at Fort Huachuca is collected and treated at WWTP #2, a tertiary treatment facility. The Programmatic Biological Assessment for Ongoing and Programmed Future Operations and Activities, Fort Huachuca, AZ, July 2002, is incorporated by reference for additional information.

4.0 ENVIRONMENTAL CONSEQUENCES

This section describes the potential environmental consequences associated with the Proposed Action and Alternatives A–Phased Development, Alternative B Temporary facilities in lieu of permanent construction and the "No Action" alternative (fully described in Section 2, *Description of Proposed Action and Alternatives*). To determine whether an impact is considered significant as it relates to NEPA, the following assessment considers both the context and intensity of impact. The context of an impact relates to the project setting. The intensity of an impact is related to the magnitude of the change over the existing conditions. Consistent with the discussion in Section 3, *Affected Environment*, this section has been organized by resource area to provide a comparative framework for evaluating the impacts of the Proposed Action and alternatives on the individual resources. Each resource section discusses the impact criteria used to determine significance.

4.1 LAND USE

Potential land use impacts were projected based on compatibility of land uses associated with the Proposed Action and alternatives with adjacent land uses and zoning, and consistency with general plans and other applicable land use plans and regulations. A determination of significant impact on land use could result if the action is incompatible with surrounding land use or if activities on military land are inconsistent or in conflict with the applicable environmental goals, objectives, or guidelines of the surrounding non-military community land use plans.

4.1.1 Proposed Action

The proposed project area is approximately 50 acres within the cantonment area. The majority of the project area is situated south and west of the JITC Headquarters building. In addition to the square footage of the proposed buildings, the proposed site development includes paving up to 10 acres of parking in the existing and new facilities area. The Proposed Action will not significantly impact traffic or parking near the proposed JITC facilities, on Fort Huachuca, or within the surrounding communities.

The construction of the JITC facilities and site modifications will not result in any conflicting land use at the proposed site location. The proposed facilities are already within an area designated for JITC program activity, as delineated in the Real Property Master Plan (Nakata Planning Group, 1997). New construction within these areas will concentrate similar land uses across the installation. All activities associated with the proposed action are consistent with surrounding land uses, are within the scope of applicable land use controls, and do not exceed thresholds of significance. Therefore, no significant impacts to land use will occur within the ROI as a result of implementation of the Proposed Action.

4.1.2 Alternative A – Phased Development

Alternative A has the same activities and potential to affect land use within the ROI as described above under the Proposed Action. However, the impact of the project will be spread out over several years, but will eventually be equivalent to those of the proposed action. Therefore, Alternative A will have no significant impact on land use within the ROI.

4.1.3 Alternative B – Temporary facilities

This alternative would temporarily concentrate temporary facilities within the existing JITC developed area. This is not a change in the land use designation, but would increase the facilities density for several years.

4.1.4 No Action

Based on the Real Property Master Plan for the installation, the existing land use classification is designated for industrial uses, and has been for over a decade. Not building the facilities would not change the land use designation for the 50 acres, nor will it have significant impact on land use within the ROI.

4.2 SOIL PROPERTIES AND CONDITIONS

Impacts to soils resulting from project implementation are related to the amount and type of projected soil disturbance that can be attributed to the Proposed Action and alternatives. A determination of significant impact on soils could result if either of the following criteria is met:

- Construction activities or field operations result in additional erosion (either short-term or long-term)
- Construction activities or site use have a high potential for soil contamination.
-

4.2.1 Proposed Action

Up to 50 acres will be disturbed during construction activities associated with the JITC improvements. Construction activities will include clearing and grading of the proposed site area. The Proposed Action will, however, disturb soil, so a Stormwater Pollution Prevention Plan (SWPPP) to minimize erosion through the use of Best Management Practices (BMPs) is required prior to implementation. These BMP's will be followed to ensure that construction-related soil erosion is kept to a minimum. No significant impact to soils would occur from the Proposed Action.

4.2.2 Alternative A – Phased Development

Some erosion control and stormwater management projects will be implemented, and impacts to soil will be spread over time. The methods for managing the proposed activities will be similar to those outlined for the Proposed Action, although at a smaller scale, during the initial phase of development. There will be no significant impacts to soils under this alternative.

4.2.3 Alternative B – Temporary facilities

This alternative would have the most impact on soils, as it would increase the area of disturbance and potential erosion. Special care would be required and strict adherence to BMP's would be necessary to prevent or minimize erosion and down-gradient sedimentation. However, due to the small size of the project overall, no significant impact to soils are anticipated to occur from implementation of this alternative.

4.2.3 No Action

Under the No Action Alternative there will be no changes in the existing soil conditions on or off the installation. Existing conditions will remain as they are with no construction disturbance. There will be no significant impacts to soil resources under this alternative.

4.3 AIR QUALITY

Impacts on air quality can be divided into both short-term and long-term. Short-term impacts are usually associated with construction and grading activities, and long-term impacts are typically associated with build-out conditions. Most long-term emissions will be due to increased vehicle use, use of back-up generators and heating systems, if not powered by electricity alone. To reduce the potential for exceeding the fort's air quality permit, generators may not be run for more than 250 hours each per year. Heating will use electricity or natural gas, unless a cleaner alternative energy source is available.

A determination of significant impact on air quality could result if activities release criteria pollutants that exceed the federal primary and secondary standards for pollutant species adopted by the State of Arizona, and/or the activities are not in conformity with Section 176 of the Federal Clean Air Act for federal actions. The area within which the proposed activities will occur is an attainment area, the activities associated with the Proposed Action or any of the alternatives will not result in a violation of the general conformity rule.

4.3.1 Proposed Action

4.3.1.1 Temporary Construction Vehicle Activity

Annual criteria pollutant emissions from vehicle operations were estimated for construction related activities. Estimates were derived as a function of the number and type of vehicles and their corresponding emission factors, and proposed number of miles driven. Vehicle emission factors were obtained from the U.S. Air Force (U.S. Air Force 1994)

Under the Proposed Action, several types of heavy-duty diesel vehicles would be used in JITC construction. Pollutants from equipment and vehicle engine exhaust include NO_x, CO, PM₁₀ and Volatile Organic Compounds (VOCs). Vehicle exhausts would be temporary with no long-term impacts. The construction period required for the facilities would be approximately 2 years. The estimated emissions for the equipment used during the construction of the JITC facilities and site modifications are shown in Table 4.3.

4.3.1.2 Temporary Construction Dust Activity

Minor, temporary air quality impacts would occur during construction of the proposed facilities and site modifications. Fugitive dust would be generated by: 1) construction activity; 2) equipment traffic; and 3) entrainment of dust particulates by the action of the wind on exposed soil surface and debris. Emissions would vary daily depending on the type of operation, level of activity, prevailing weather conditions and distance from the site. Some fugitive dust control measures would be implemented to prevent or reduce PM₁₀ emissions. Reasonable precautions include wetting dusty road or work surfaces, covering stockpiles; and planting vegetation.

4.3.1.3 Total Emissions

None of the construction activities or fugitive dust levels will release criteria pollutants in quantities that exceed federal standards; therefore, a SIP Conformity Analysis does not have to be prepared. In addition, estimated emissions would not be considered regionally significant, as they would be less than 10 percent of regional emissions. Therefore, no significant impact to air quality is anticipated as a result of the Proposed Action.

**Table 4.3 Estimated Total Emissions
with Implementation of the Proposed Action**

Activity Type	Estimated Emissions (tons)			
	CO	NO _x	HC	PM ₁₀
Construction Vehicle Activity	0.71	0.19	0.09	0.003
Fugitive Dust Emissions	N/A	N/A	N/A	0.047
Total =	0.71	0.19	0.09	0.05

Note: N/A = Not Applicable

4.3.2 Alternative A – Phased Development

The levels of construction involved with this alternative are similar to the Proposed Action, but would be spread over time. Therefore, like the Proposed Action, Alternative A will not result in any significant impacts on air quality following the implementation of the dust control measures.

4.3.3 Alternative B – Temporary facilities

The levels of construction involved with this alternative are similar to or slightly more than the Proposed Action, but would be spread over time. Temporary modular facilities require less site preparation and generate less dust than full construction projects, as the ground is left bare for less time, and drainage mitigation is emplaced more quickly. Therefore, like the Proposed Action, Alternative A will not result in any significant impacts on air quality following the implementation of the dust control measures.

4.3.4 No Action

No construction or other emitting activities will occur. The proposed project area is located within an area of air quality attainment for criteria air pollutants. There would be no significant impact to air quality anticipated as a result of the No Action Alternative.

4.4 NOISE

The effects of noise can be divided into short-term and long-term impacts. Short-term impacts are usually associated with construction and grading activities, where long-term impacts are associated with increased vehicle noise within the ROI. A determination of significant noise impact on the human environment could result if activities (more than one per week) result in frequent noises at very high levels (in excess of 110 dB) in areas not already designated for such noise events or activity-generated noise emissions expose offsite receptors to long-term noise levels in excess of the 65 dB as specified in AR 200-1.

4.4.1 Proposed Action

After construction, long-term noise impacts from the Proposed Action would relate to noise emissions from additional street traffic on Brainard Road to the proposed JITC facilities. This increase in daily or annual traffic is insignificant within the existing daily and projected future traffic volumes on-post and within the ROI. The majority of the increase traffic activity will occur during daytime hours, Monday through Friday. No residential areas are near the facilities, and there would be no increase in ambient noise in the residential areas from this action. Vehicle noise levels would be comparable to other vehicles used at Fort Huachuca. No significant noise impact is anticipated as a result of the increase in vehicular activity in the Proposed Action.

Additional temporary noise would occur during the construction phase of the proposed action. Construction noise levels may range from 85-90 dB at a distance of 50 feet from the equipment, for short periods during site preparation, grading and paving. Typically, a distance of 890 feet will be necessary to reduce construction noise to a normally acceptable level of 65 dB (UAV 2000). The nearest sensitive noise receptors are significantly farther than 500 feet from the site. Construction activity will be temporary, during the day and will not be near residential population areas, so no significant impacts from construction noise are anticipated. Wildlife populations present during daytime hours are accustomed to regular human activities, so it is not anticipated that wildlife will experience significant impacts from noise.

4.4.2 Alternative A – Phased Development

Alternative A is identical to the Proposed Action with the exception of a reduced level of construction activity. The reduced level of construction activity and traffic under this alternative will create even less of a noise impact within the ROI during the first phase of development. Therefore, similar to the Proposed Action, implementation of Alternative A will have no significant noise impact to the human environment.

4.4.3 Alternative B– Temporary facilities

Alternative B is similar to the Proposed Action with the exception of an additional slight increment of construction activity for emplacement of facilities for temporary buildings. This increment will not occur at the same time as the permanent construction project, and therefore will not increase the level of noise to significance. Therefore, similar to the Proposed Action, implementation of Alternative B will have no significant noise impact to the human environment.

4.4.4 No Action

Under the No Action Alternative, which maintains the status quo, there will be no change in noise conditions at Fort Huachuca or the surrounding area. Therefore, under this alternative there will be no significant noise impact on the human environment.

4.5 SOCIOECONOMIC ENVIRONMENT

4.5.1 Proposed Action

4.5.1.1 Public Safety

The Proposed Action will not result in the need for additional police, fire, or security services. The evaluated activities will not generate or increase the public's exposure to any hazardous or biological wastes or materials; result in the likelihood of an uncontrolled release of any hazardous materials, nor create a situation that could expose the public to unusual risk. No significant impacts to public safety are anticipated.

4.5.1.2 Environmental Justice

The Proposed Action is wholly contained in existing built-up areas on the Fort. This action will not produce a significant increase in air emission or hazardous waste. The minimal daytime noise generated by demolition or construction operations will not be audible off-installation. No impact on local minority or low-income communities is anticipated. No significant impact in the area of environmental justice is anticipated.

4.5.1.3 Children's Health and Safety

To comply with Executive Order 13045, *Protection of Children from Environmental Health Risks and Safety Risks*, the distribution of children and location of children population relative to the location of the Proposed Action was analyzed for environmental risks and safety risks to children. The facilities for children's residences and for the majority of children's activities on the fort are located approximately four (4) miles south of the proposed project area. Scouting activities on post use building 80812, approximately 1 mile southeast of the proposed facility. Because this facility is used sporadically, most activities occur within a building, and the building is within another fenced area, no impact on children participating in scouting activities is anticipated from this action. Implementation of the Proposed Action would not result in environmental health or safety risks to children based on the distance to the facilities. Potential health or safety impacts to children playing in the vicinity of the Proposed Action area would be minimal. Therefore, no significant impacts to children from health or safety risks would result.

4.5.1.4 Transboundary Issues

The Mexican border is approximately eight miles south of Fort Huachuca and no JITC activities are expected to affect or require traveling across the border. Proposed JITC work activities will remain the same but with a slight increase in the activity level, only the location of the facilities on-installation will change. No significant impacts to transboundary issues would result from implementation of the Proposed Action.

4.5.1.5 Regional and Fort Huachuca Population and Economy

The estimated value of the JITC construction project over the life of the plan is approximately \$70 million. Of that, approximately \$49 million (or 70 percent) would be spent on materials, while the remaining \$21 million (or 30 percent) will be used for labor costs. This is a one-time expenditure. A short-term minor local increase in construction and demolition jobs, salaries and expenditures are anticipated from the Proposed Action.

To accommodate anticipated mission increases, JITC will need to add additional personnel to accomplish the JITC mission. Up to 150 personnel may be added to the staff over the next 5 years, and would be some combination of active duty military, civilian and contractor personnel. A one-time expense for each added employee of \$10,000 would be incurred by JITC for computer and network expenses for a one-time expenditure total of approximately \$1.5 million over the 5 year hiring period. In addition, recurring economic influx from the project be comprised of up to \$7.5 million per year in additional salaries once all personnel are hired at the end of 5 years, and an additional \$500,000 per year in administrative and operational support expenditures for a total of \$8 million in annual recurring economic impact. The estimated employment increase resulting from the Proposed Action is not anticipated to have a significant impact on the local or regional economy.

4.5.2 Alternative A – Phased Development

Impacts in this resource area will be similar to those of the proposed action, but at a lower intensity for a longer period of time. Therefore, no significant impact in these resource areas is anticipated.

4.5.3 Alternative B – Temporary facilities

Permanent personnel increases from this action are likely to occur sooner than in the proposed action. Impacts of the temporary construction in this resource area will add an increment to, but

remain similar to those of the proposed action. The incremental difference for the temporary structures will be at a low intensity locally, as the cost of fabrication of modular facilities will enter the economies of distant communities that have the fabrication facilities. Only the site preparation and placement costs would enter the local economies. The aggregate economic impact of this alternative is anticipated to be similar to the proposed action. Therefore, no significant impact in these resource areas is anticipated.

4.5.4 No Action

No significant impacts to environmental justice, homeless, public safety, transboundary issues, health or safety issues to children, and, regional and Fort Huachuca population and economy are anticipated.

4.6 WATER RESOURCES

Analysis of impacts of the Proposed Action and alternatives on water resources considers groundwater quality and quantity, surface water quality, surface water drainage diversion, and non-point source surface runoff. Impacts to surface or groundwater resources could be direct, indirect, short-term, or long-term. A determination of significant impact to surface water could result if grading or other construction activities affect drainage facilities or watercourses; or stormwater and/or runoff constituents significantly degrade downstream surface water quality. A determination of significant impact to groundwater could result if a usable groundwater aquifer is adversely affected from depletion or contamination; an increase in soil settlement or ground swelling results from inundation and/or changes in the groundwater level; and/or an unmitigated net increase in annual water use is created at the Fort.

4.6.1 Proposed Action

The Proposed Action consists of constructing three additional major JITC facilities, with peripheral site modifications. These activities will require grading, clearing, paving roads and parking areas, and installing drainage management features. Personnel increases would increase water pumping by up to 150 acre feet per year, with some portion of that amount returned to the fort or Sierra Vista waste water treatment plant (WWTP). The proposed action includes conservation measures that would return the net water use to zero. The potential impacts that could result from these activities to surface and groundwater resources are described below.

4.6.1.1 Surface Water

Proposed construction activities would create additional impermeable surfaces including buildings and parking facilities. The additional impermeable surfaces would increase local runoff volumes by reducing infiltration into the ground during storm events. There would not be a significant impact because of the relatively small area of proposed new construction, the permeability of topsoil in the ROI, and the normally small quantities of local annual precipitation. A SWPPP for all activities that involve the disturbance of one or more acres will be required. The best management practices (BMPs) for erosion control and stormwater management will be included in the SWPPP (Thomas Webb, personal conversation, Environmental and Natural Resources Division, Fort Huachuca, August 2001). Conformance with the erosion control requirements associated with the plan will reduce potential water quality impacts to below a level of significance. The potential construction area is not considered subject to hazards associated with 100-year flood events. No significant impacts related to floodplains or associated hazards are anticipated for the Proposed Action.

Project-related construction activities may involve the short-term use and storage of hazardous substances such as vehicle fuels and lubricants. Accidental discharges of such substances during operation or maintenance activities (e.g., while refueling or changing vehicle fluids) could result in significant impacts to surface water quality, especially in areas within or adjacent to drainage courses. The Fort Huachuca ISCP describes the procedures to be implemented in the event of hazardous materials or POL spill, on- or off-post. Those potential impacts would be reduced below a level of significance through the employment of applicable BMP's.

4.6.1.2 Ground Water

The Proposed Action is not anticipated to impact groundwater supply conditions. An estimated net increase in use of 80 acre feet of groundwater per year is anticipated by the end of the personnel increases, and will be zero-balanced as part of the Proposed Action. This assumes that approximately 45 percent of the gross additional pumping from the proposed action would be returned to the groundwater system as treated effluent recharge. No impact on groundwater quality is anticipated from the Proposed Action.

The Proposed Action is not anticipated to significantly impact the aquifer through accelerated depletion. The Proposed Action will not result in an increase in soil settlement or ground swelling that damages structures, utilities, or other facilities caused by changes in the groundwater level. The Proposed Action will not result in any significant impact to local or regional groundwater resources.

4.6.2 Alternative A – Phased Development

Alternative A would be developed over time, with similar final annual water use and replacement amounts. No significant impacts to surface or ground water resources are expected. Therefore, there will be no significant impact to local or regional water resources as a result of Alternative A.

4.6.3 Alternative B – Temporary facilities

Alternative A would be developed over time, with similar final annual water use and replacement amounts, however those end point numbers would be reached earlier than in the proposed action, thus requiring replacement earlier. No significant impacts to surface or ground water resources are expected.

4.6.4 No Action

No significant impact to surface water resources is anticipated as a result of the No Action Alternative. No significant impact to groundwater resources is anticipated as a result of the No Action Alternative.

4.7 BIOLOGICAL RESOURCES

Impacts on biological resources would be considered significant if there is: 1) loss or disturbance of individuals or populations of a federally-listed threatened or endangered species; 2) substantial loss of individuals or populations of a federal-candidate, regionally-rare, or otherwise sensitive species; 3) adverse modification of designated critical habitat; 4) loss of a critical, yet limited resource used by a federally-listed threatened or endangered species; and/or 5) permanent disruption of heavily-used wildlife movement areas, such as international migratory bird routes.

4.7.1 Proposed Action

The three new JITC facilities will be collocated and constructed in the area across Brainard Road from the current JITC Headquarters, in the cantonment area. Vegetation in the cantonment area is

typically disturbed, and most wildlife either avoid the area, or become accustomed to human activities. Site modifications will be necessary to provide access and allow for existing activities at the site to continue. The following subsections discuss anticipated impacts of the proposed action on vegetation, wildlife, federally-listed threatened, endangered, proposed, and candidate species, and other species of concern.

4.7.1.1 Vegetation

Construction will disturb approximately 50 acres of mostly exotic and invasive vegetation. In relation to the total grassland foraging area for most animals, this is minimal. The surrounding habitat west of the project site is similar in composition and density. To the east, the cantonment area is relatively urbanized with traffic, structures, and landscaped vegetation. There are no streams, dry washes or wetlands on the site. Use of soil erosion BMPs and stormwater management projects will be implemented in order to lessen the potential impacts to the downgradient washes due to construction on the site.

4.7.1.2 Wildlife

A minor, temporary impact on wildlife is likely to occur during construction activities, where noise and human activity may disturb wildlife. This impact will most likely be minimal, and will not result in a significant impact on wildlife within the project area.

Common wildlife affected by construction activities are birds, deer, small mammals and reptiles. These may be temporarily displaced during construction, but will likely relocate to similar habitat exists in the immediate vicinity. After construction is completed, some of the displaced animals will return to the general area where habitat still exists. Fencing may disrupt movement corridors and/or daily activities of wildlife, in particular, larger mammals. Smaller animals will be able to move through the openings of the fence undisturbed. The loss of acreage due to construction will result in a reduction of breeding and foraging habitat for wildlife using the area. In total, approximately 50 acres of previously disturbed, moderate quality habitat will be lost due to construction activities. Any additional temporary ground disturbance will be revegetated with native species, where appropriate, upon project completion.

4.7.1.3 Federally-listed Endangered, Threatened, Proposed, and Candidate Species

The Proposed Action has the potential to directly impact federally-listed, proposed, and candidate species only if these species:

- Occur at the same place as activities associated with the Proposed Action,
- Occur in the immediate proximity of activities associated with the Proposed Action
- Occur immediately downstream of activities associated with the Proposed Action
- Occur at the same time as activities associated with the Proposed Action.

The Proposed Action will have no effect on any federally-listed species due to the absence of one or more of the following criteria: 1) No suitable habitat within the project area; 2) Project area is outside the elevation of the species; and/or 3) Project area is outside the known range of the species.

The lesser long-nosed bat is known to forage on the stands of *Agave palmeri* located in the project vicinity. No agaves were found during the site visits within the project limits, and because the plant is the primary food source for the bat, it is unlikely that they would be seen there. On occasion, they may be observed traveling a straight-line overhead to reach the agave stands located outside the project area. In addition, any noise activity associated with construction will be conducted during the daylight hours when the bats are roosting away from the area. In accordance with the Army Requirements for current formal consultation (USFWS

2002), the Biological Opinion states that prior to construction activities, pre-construction surveys shall be conducted for paniculate agaves that may be directly affected by construction activities. If agaves are found during pre-construction surveys, the measures will be implemented to minimize impact on them.

4.7.2 Alternative A - Phased Development

This alternative does not change the amount of acreage to be disturbed, only the timeframes during which the activities will be carried out. Under Alternative A, the portions of the site, already discussed in the Proposed Action, will be developed in phases according to JITC mission priorities. The impacts to wildlife, discussed in the Proposed Action, are the same for Alternative A.

4.7.3 Alternative B - Temporary facilities

This alternative slightly increases the amount of acreage to be disturbed as well as the timeframes during which the activities will be carried out. Under Alternative B, the portions of the site already discussed in the Proposed Action, will be developed in phases according to JITC mission priorities. Additionally, in the interim, parts of the existing JITC mission designated area may have grading for placement of temporary buildings. Most of the candidate locations for the temporary buildings are covered with Bermuda grass or are on bare ground. The impacts to wildlife, discussed in the Proposed Action, are the same for Alternative B.

4.7.4 No Action Alternative

Under the No Action Alternative, the JITC facilities will remain at their current location throughout the installation. No new facilities or upgrades to existing facilities will occur as currently proposed. No significant impact to biological resources is anticipated as a result of implementing this alternative.

4.8 CULTURAL RESOURCES AND HISTORIC PROPERTIES

Potential impacts to cultural resources could result from ground-disturbing activities such as grading and excavation for new construction. A determination of significant impact to cultural resources (prehistoric, historic or traditional) could result if construction were to adversely affect properties listed on, or recommended as eligible for, the National Register of Historic Places; and/or if the proposed construction activities were to disturb or damage significant cultural resources and/or cultural resource sites.

4.8.1 Proposed Action

The majority of the cantonment area has been surveyed for the presence of cultural resources (see Section 3.8); however, the proposed project area has not been previously surveyed. Prior to construction of the proposed JITC facilities and site modifications taking place, a cultural resource assessment will be completed according to all applicable Federal and Army regulations in consultation with the State Historic Preservation Office (SHPO) and all concerned Native American groups. Construction activities will not affect the viewshed of the Old Post Historic District on the cantonment area and will not alter or otherwise affect the viewshed or individual structures within the Old Post District.

All previously unsurveyed areas involved by the Proposed Action will be subject to Class III surveys for cultural resources prior to ground disturbance. Any resources encountered will be evaluated to determine if they are eligible for the National Register of Historic Places. If

resources are not recommended as eligible, no mitigation will be required. Resources that are recommended eligible will either be avoided or impacts to these resources will be mitigated in compliance with the NHPA, in consultation with the Arizona SHPO. If resources are encountered that are of indeterminate eligibility, appropriate testing methods will be implemented to classify eligibility.

If there is a discovery of cultural items or human remains on federally-owned or tribal lands, construction activities associated with the Proposed Action, work will be halted at the site and the Post Archaeologist will consult with Native American tribes that have claimed affiliation to the area. In the event that any cultural resources are discovered during construction or ground disturbance, construction will be halted and resources will be evaluated by a qualified archaeologist, such as the Post Archaeologist. The Post Archeologist will then consult with SHPO.

4.8.2 Alternative A - Phased Development

Construction activities associated with Alternative A will occur over time. No significant architectural or historic resources have been identified within the proposed JITC project area. Therefore, there will be no impact to known historic resources.

4.8.3 Alternative B - Temporary facilities

Construction activities associated with Alternative B will occur over time. No significant architectural or historic resources have been identified within the proposed JITC project area. Therefore, no impacts to known historic resources are anticipated.

4.8.4 No Action

Under the No Action Alternative, there will be no change to recorded prehistoric, historic, or traditional resources on Fort Huachuca. There will be no impact to existing resources and no additional areas on Fort Huachuca will need to be surveyed for activities proposed in the Proposed Action and the Enhanced Existing Facilities Alternative.

4.9 PUBLIC SERVICES, UTILITIES AND ENERGY

Potential impacts to utilities could include the potential for the Proposed Action or alternatives to create a new demand for utilities beyond the utility's capacity, to diminish the quality of an existing utility, or to use a utility in a wasteful manner. The impacts on utilities or energy resources could be determined significant if any of the following criteria are met:

- A resource exceeds its present and/or future capacity to serve.
- A resource has a long-term interruption to, or interference of service.
- A significant increase in annual energy consumption or peak potential loading is calculated to exceed the capacity of the transmission lines and transformers.

4.9.1 Proposed Action

The Proposed Action has the potential to affect the utilities within the ROI during construction associated with the JITC facilities and site modifications. Because impacts resulting from construction-related activities are anticipated to be short-term and negligible, the focus of this section is on the impact to utility services, resulting from the use of the proposed JITC facilities following construction.

4.9.1.1 Electricity

The proposed JITC facilities will be constructed with energy efficient materials and will result in a small increase in energy usage over the use at their existing facilities. This level of consumption will not affect the electrical substation's ability to provide the Fort with electrical power or result in brownouts or blackouts. Therefore, the power demand due to the Proposed Action will not result in any significant impacts on the electricity supply or distribution system.

4.9.1.2 Potable Water System

The current water supply system servicing the JITC Headquarters building has the capacity to support the transfer of their existing personnel to the new facilities. There will be no significant impacts on the potable water system, or water quality, as a result of the implementation of the Proposed Action.

4.9.1.3 Wastewater Collection and Treatment System

The proposed new facilities will be equipped with metering faucets, low flow toilets and waterless urinals. Where showers are present, 1.5 gpm showerheads will be used. Break areas will use low volume aerators at sinks. The runoff from the parking areas will drain into the nearby stormwater channels, and into the stormwater recharge basin on the East Range. There would be no significant increase in the amount of wastewater generated with the implementation of the Proposed Action. Existing sewer lines will be extended to the proposed JITC facilities. The present wastewater treatment system can accommodate the impacts of the Proposed Action.

4.9.1.4 Solid Waste Disposal

Implementation of the Proposed Action would increase the amount of solid waste generated on the project site during construction activities. The debris will be disposed in landfills ADEQ approved for the type of solid waste generated. Generation of solid waste by JITC personnel is not expected to increase significantly over existing conditions. There will be no significant impacts to solid waste disposal or to local landfills as a result of the implementation of the Proposed Action.

4.9.1.5 Telecommunications

The existing installation telecommunications infrastructure has the capacity to serve the Proposed Action during and after the construction of the JITC facilities. There will be no significant impacts to telecommunications as a result of the implementation of the Proposed Action.

4.9.2 Alternative A – Phased Development

The impacts of phased implementation of this alternative are anticipated to be similar to those of the proposed action, which exhibited no significant impacts, but impacts will be occur over time. Therefore, like the Proposed Action, Alternative A will not result in any significant impacts within any of the elements of this media area.

4.9.3 Alternative B – Temporary facilities

The impacts of phased implementation of this alternative are anticipated to be similar to those of the proposed action, which exhibited no significant impacts, but impacts will be occur over a longer time, and would begin sooner than in the proposed action. Therefore, like the Proposed Action, Alternative B will not result in any significant impacts within any of the elements of this media area.

4.9.4 No Action

Under the No Action Alternative, construction of the Proposed Action will not occur. It is anticipated that there will be no increase in the generation of solid waste as a result of the No Action alternative. This alternative will result in a continuation of existing conditions at the JITC facilities and will result in no significant impact to the provision of utilities within the ROI.

4.10 HAZARDOUS MATERIALS AND WASTES

Evaluation for impacts from hazardous materials and wastes is based on both the potentials for accident and the consequences of any negative effect associated with normal operations. Beneficial impacts may result from any direct or indirect safety improvements due to project implementation. A determination of significant impacts related to hazardous materials and wastes could result if: People are exposed to unsafe levels of hazardous materials or hazardous waste; hazardous materials or hazardous waste are generated in quantities or types that could not be accommodated by the current disposal system; the likelihood increases significantly for an uncontrolled release of hazardous materials that could contaminate soil, surface water, and groundwater; or there is unusual risk to military personnel, visitors, nearby residents, and the general public off-site.

4.10.1 Proposed Action

The construction of the proposed JITC facilities and site modifications are short-term activities that are not anticipated to generate unusual hazardous waste. Hazardous materials use is anticipated to be use of construction adhesives, and temporary on-site storage and use of fuel for construction equipment. The contractor will be required to collect and properly dispose of any oil leaks from construction machinery. If unanticipated on-site hazardous substances are encountered during construction, activities will cease until appropriate remediation efforts are completed. Hazardous waste will be disposed of in accordance with EPA and ADEQ regulations. There will be no significant impacts to public safety from hazardous material issues associated with this action.

Following construction, the new facilities will be used for primarily administrative functions. Hazardous materials will include routine cleaning supplies and office supplies, most of which are expended during use, leaving no waste that would be classified as hazardous. If testing of field equipment occurs in the new facilities, batteries of various types may also be expended, with the spent batteries managed as hazardous waste. There will be no significant impacts to public safety from hazardous material or wastes associated with this action. No major changes to the Installation's Hazardous Waste Management Plan are required as a result of this action, other than to note the new facility locations and that materials will be similar to the existing JITC use and storage list. There will be no significant impacts from hazardous materials and wastes as a result of implementation of the Proposed Action.

4.10.2 Alternative A – Phased Development

All hazardous materials and hazardous waste uses proposed under this alternative have been discussed under the Proposed Action and will not constitute a significant impact to the human environment. There will be no significant impacts associated with hazardous materials as a result of implementation of Alternative A.

4.10.3 Alternative B – Temporary facilities

All hazardous materials and hazardous waste uses proposed under this alternative have been discussed under the Proposed Action and will not constitute a significant impact to the human environment. There will be no significant impacts associated with hazardous materials as a result of implementation of Alternative B.

4.10.4 No Action

Under the No Action Alternative, the proposed activities will not occur, and most likely, the existing conditions will continue. Currently, there are no hazardous material issues and none are anticipated in the foreseeable future. Therefore, there will be no significant impact to issues surrounding hazardous materials with the No Action Alternative.

5.0 CUMULATIVE IMPACT ANALYSIS

Cumulative impacts are defined in the CEQ regulations (40 CFR 1500-1508) as those impacts attributable to the Proposed Action combined with other past, present, or reasonable foreseeable future impacts, regardless of the source or agency causing them. This cumulative impact analysis looks at the impacts of the Proposed Action and alternatives in connection with related past, present, and reasonable foreseeable future actions. Cumulative impacts can result from individually minor, but collectively significant actions, taking place over a period of time. However, to be considered a cumulative impact, the effects must: occur in a common locale or region; not be localized; impact a particular resource in a similar manner; and be long-term (short-term impacts would be temporary and would not typically contribute to significant cumulative impacts).

5.1 ANALYSIS OF CUMULATIVE IMPACTS

Analysis of cumulative impacts requires the evaluation of a broad range of information that may have a relationship to the Proposed Action and alternatives. A good understanding of the politics, sociology, economics, and environment of the region is key to this analysis, as is an accurate evaluation of factors that contribute to cumulative impacts. The most common regional and local environmental concerns voiced during previous EA public scoping activities included:

- Trends relating to water resources;
- Trends affecting other natural resources (particularly federally-listed species and their habitats);
- Population growth and economic activity in the Fort Huachuca/Sierra Vista area; and
- Resulting implications on water and ecological resources in the region.

5.2 CONTRIBUTION IMPACTS

This section addresses the resource areas where the impacts of the Proposed Action and alternatives, in connection with related past, present, and reasonably foreseeable future actions, warrant further consideration. All resource areas were examined for regional conditions to determine the potential of the Proposed Action and alternatives to contribute to regional trends or environmental conditions. The cumulative impacts analysis will focus on water resources, natural resources and socioeconomic impact, and their relationships, as these areas were identified to be of greatest concern to individuals and organizations during the scoping process. This consideration is given because of the elevated sensitivity regarding these resources, not because the Proposed Action or alternatives would create any significant contribution to past, present, and reasonably foreseeable future actions in the local or regional context for any given resource including water resources, and biological resources.

5.2.1 Water Resources

The cumulative impacts on water resources in the region are important to the sensitive wildlife and habitat of the USPB watershed. Factors potentially affecting the region's riparian ecosystems include: Increased residential and economic development; increased agricultural pumping; water use along the river, both human and natural; potential pollution in Mexico; and cones of depression from well withdrawals. Current groundwater pumping in the Sierra Vista subwatershed exceeds natural recharge. A consensus of scientific opinion concludes that continued and projected aggregate pumping may impact portions of the Upper San Pedro River; thereby, threatening listed species and their critical habitat. This project, implemented either as the proposed action or the alternative, is not anticipated to impact the net water use at Fort

Huachuca, and will therefore have no significant impact on the estimated deficit pumping in the region.

Selection of the No Action Alternative (Alternative B) will mean that the levels of reuse and recharge of water at the Fort will remain at their current levels. Water consumption will increase compared to the Proposed Action and Alternative A, due to the lack of water conservation fixtures, plumbing, and continued leakage. While the Fort is currently taking an aggressive approach to managing and minimizing water use, valuable opportunities to improve these efforts will not be realized. There would be no adverse impacts associated with not implementing the collocation of the JITC facilities, but use of existing leaking facilities would continue and increase over time as facilities and infrastructure deteriorate. Installation of water conservation features and positive impacts associated with the Proposed Action would not occur.

5.2.2 Other Natural Resources and Ecosystem Responses

Water Resources Impacts

Cumulative impacts to biological resources at or near Fort Huachuca are the result of the complex interactions of several different trends. The Fort's water resource management is a factor in the overall future of the region's biological resources. Fort Huachuca's water resources management program (discussed above) addresses both groundwater and local riparian concerns, and will provide an important long-range contribution to the overall health of the region's biological resources, particularly that of the San Pedro Riparian NCA. The NCA is Critical Habitat for a number of species (avian, fish, and plant) and serves as a significant international migratory bird corridor in the southwest. As a result of Fort Huachuca's conservation activities, the impact on local biological resources is diminishing, and the contribution to recovery of species populations and their habitats is increasing. This positive trend will continue and strengthen in the future as long as conservation actions continue to be taken. Implementation of the No Action Alternative would slightly hinder the Fort's efforts. Likewise, regional population growth and economic activity not associated with the Fort (and resulting increases in private groundwater consumption in the Sierra Vista subwatershed) may overshadow or offset these efforts. The Upper San Pedro Partnership is working to develop plans and implement projects to mitigate these regional impacts.

Non-native or Exotic Species

The intrusion of non-native or exotic species into the area and the accompanying displacement of vulnerable native species present environmental concerns. Some disruptive exotics, i.e., Lehmann's lovegrass, have shown the ability, under current conditions, to out-compete native species. Several programs introduced by Fort Huachuca, such as the conservation easement and aquifer recharge projects, address these concerns, and the Proposed Action includes several revegetation activities that may further reduce the presence of non-native vegetation on the Fort.

Grasslands

Semi-desert and Plains Grasslands biotic communities encompass approximately 45 percent of the vegetation cover of southeastern Arizona. In southern Arizona, grassland communities provide important habitat for a diverse group of animals, many of which also occupy adjacent habitats. Some wildlife species contribute uniquely to the grassland ecosystem. (M. McClaran and T. Van Devender 1995). Changes in the desert grasslands include increases in woody shrubs and trees and fragmentation, resulting from local development. When habitat is fragmented, patches of desert grassland are likely to be isolated, which hinders species dispersal and the

spread of fires. Land use activities in grasslands, such as the Proposed Action, can be expected to affect wildlife movement patterns, resource availability, population numbers, and vulnerability to population decline.

Table 5. identifies the projects currently under consideration on and in the vicinity of Fort Huachuca. With the development of these projects, along with the Proposed Action, cumulative effects of grassland fragmentation can be expected to continue to interfere with natural ecological processes such as water drainage and erosion patterns, dispersal of grassland plants and animals, and successional patterns in the Fort Huachuca vicinity.

Table 5. Projects Currently Under Consideration on and in the Vicinity of Fort Huachuca

Proponent	Project	Size (acres)	Time	Resource Impact
State of Arizona	Veterans' Cemetery	130	2002	Grasslands, water, socioeconomics
Fort Huachuca	Unmanned Aerial Vehicle Facility Upgrade	Up to 50	In progress	Grasslands
AAFES	New Mini mall at Fort Huachuca	5	2004	Grasslands
Fort Huachuca	Recreational Vehicle Park Expansion	50	TBD	Grasslands, water
Electronic Proving Ground	Facilities consolidation master plan	62	TBD	Grasslands
Directorate of Morale, Recreation Welfare, Fort Huachuca	Wilcox Gate development plan	Up to 50	TBD	Disturbed grasslands, traffic
City of Sierra Vista	Developments: Highland Park Silverado Estates Remington Park Canyon De Flores Greenbrier Villas Chaparral Village Winterhaven (2, 3, 4) La Terraza	35 15.5 48 395 17 236 250 56	Ongoing and future	Grasslands, traffic, water, socioeconomic
City of Sierra Vista	Campus Drive Business Park Section 12 commercial Castro Maintenance Center Hospital	27 37 20 40	Ongoing and future	Grasslands
Total potential loss of grasslands =		1548.5		

Sources: Fort Huachuca Master Planning, Sierra Vista "Vista 2020", 2003

Other Programs

Among other key programs being planned or implemented that will make a positive contribution to native and T&E species in the region include:

- Integrated Natural Resource Management Plan;
- Various endangered species management plans;
- Active management and protection of key sites like Agave Management Areas, bat roosts, springs, and owl nesting sites;
- Participation in management and recovery programs for such species as the Ramsey Canyon leopard frog;
- Erosion control range rehabilitation programs; and
- Implementation of a prescriptive fire program to improve habitat conditions and avoid catastrophic wildfire.
- Development of regional water management and conservation plans with the USPP

In terms of Fort Huachuca's relationship to the Mexican border and to the larger regional context, Fort Huachuca's contribution to cumulative impacts on ecological resources has been positive for many years. Fort Huachuca serves as an incidental federal protectorate of several species of federally-protected threatened and endangered species and their on-post habitats. The various components of the Proposed Action and Alternative A would contribute to the positive trends in biological resources already being experienced on the Fort. With respect to the San Pedro Riparian NCA and other regional environs, the Proposed Action and Alternative A will have a positive impact by decreasing water usage and replanting native vegetation and controlling downstream erosion.

5.2.3 Soils

The proposed action and alternatives would be built in an area adjacent to the block of 62 acres dedicated to the proposed EPG facilities realignment. If the two construction projects were to occur concurrently, the potential for erosion could increase toward significance. In this unlikely event, additional BMP's would be required on both sites to reduce this potential. Otherwise, the project is sufficiently buffered by vegetated areas that it is unlikely to contribute to regional erosion or sedimentation regimes.

5.2.4 Socioeconomic

New personnel are required as a result of the Proposed Action and the other alternatives to accomplish the JITC mission. Therefore, the Proposed Action will impact the population, schools, housing and employment trends at the Fort or in the region.

The Proposed Action would involve a one-time expenditure of approximately \$70 million to the economy in the way of temporary construction materials and labor opportunities. A one-time expense for each added employee of \$10,000 would be incurred by JITC for computer and network expenses for a one-time expenditure total of approximately \$1.5 million over the 5 year hiring period. In addition, recurring economic influx from the project be comprised of up to \$7.5 million per year in additional salaries once all personnel are hired at the end of 5 years, and an additional \$500,000 per year in administrative and operational support expenditures for a total of \$8 million in annual recurring economic impact. The impact is not significant at a regional level. For additional cumulative impacts information, see the Programmatic Biological Assessment for Ongoing and Programmed Future Operations and Activities, Fort Huachuca, AZ. July 2002.

5.3 SUMMARY

In summary, neither the Proposed Action nor any alternative will be anticipated to result in any significant contribution to past, present, and reasonably foreseeable future actions in the local or regional context for any given resource including water resources, biological and ecosystem resources, and socioeconomic resources.

6.0 FINDINGS AND CONCLUSIONS

It is the conclusion of this analysis that neither the Proposed Action nor any of the alternatives constitute a major federal action with significant impact on the human environment, an EIS is not required. A Finding of No Significant Impact for the Proposed Action should be issued to complete the documentation.

Table 6 presents a summary of the potential environmental impacts of the Proposed Action.

Table 6. Summary of Potential Impacts of the JITC Proposed Action

Environmental Factor	Potential Positive Impacts	Potential Negative Impact s	Permit Requirements
Land Use	Consistent with surrounding land uses. Collocation increases efficiency of JITC activities.	None	None required
Soil Properties and Conditions	Use of BMP's will minimize soil erosion. Installation of culverts, recontouring and re-vegetation will decrease local run-off volumes.	None	SWPPP required
Air Quality	Remain in attainment for criteria air pollutants. Pavement of existing dirt parking areas will decrease total PM ₁₀ emissions.	Temporary increase in emissions from construction, demolition activities, and fugitive dust. Fugitive dust control measures will be implemented to prevent or reduce PM ₁₀ emissions.	None required
Noise	Closest noise sensitive receptor is located over a mile from proposed project area, which is within the acceptable and compatible 65 dB level.	Temporary increase in noise emissions related to slight increase in traffic levels, construction and demolition activities.	None required
Socioeconomic Environment	Temporary increase in construction and demolition jobs. Permanent incremental increase from salaries and operational costs.	None	None required
Water Resources	Additional increment from additional employees will be zero-balanced.	None	None required
Biological Resources	No effect on any federally-listed species or critical habitats.	Contributes to grassland fragmentation.	None required
Cultural Resources	None	None	None required
Public Services, Utilities, Energy	Installation of energy efficient fixtures and materials. Increased telecommunications capabilities. Water use will be zero-balanced.	Temporary increase in solid waste generation and disposal due to construction.	None required
Hazardous Materials and Wastes	No new waste streams are anticipated.	Slight incremental increase in hazardous waste may occur.	None required

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9.0 ACRONYMS AND ABBREVIATIONS

1		
2	AAQS	Ambient Air Quality Standards
3	AAR	Artificial Aquifer Recharge
4	ac-ft	Acre-feet
5	ADEQ	Arizona Department of Environmental Quality
6	ADWR	Arizona Department of Water Resources
7	AHPA	Archeological and Historic Data Preservation Act
8	APP	Aquifer Protection Permit
9	AR	Army Regulation
10	ARPA	Archeological Resources Protection Act
11	ASIP	Army Stationing and Installation Plan
12	ASM	Arizona State Museum
13	BEA	Bureau of Economic Analysis
14	BLM	Bureau of Land Management
15	BMP	Best Management Practice
16	B.P.	Before present
17	C2	Command and control
18	C4I	Command, control, communications, computers, intelligence
19	CEQ	Council on Environmental Quality
20	CFR	Code of Federal Regulation
21	cfs	Cubic Feet per Second
22	CO	Carbon Monoxide
23	dB	Decibels
24	dBA	A-weighted decibel
25	DEH	Directorate of Engineering and Housing
26	DIS	Directorate of Installation Support
27	DoD	Department of Defense
28	DRM	Directorate of Resource Management
29	EA	Environmental Assessment
30	EIS	Environmental Impact Statement
31	ENRD	Environmental and Natural Resources Division
32	EPA	Environmental Protection Agency
33	JITC	Electronic Proving Ground
34	FY	Fiscal Year
35	HMCC	Hazardous Material Control Center
36	HMMWV	High Mobility Multipurpose Wheeled Vehicles
37	HVAC	Heating Ventilation Air Conditioner

1	ICRMP	Huachuca Integrated Cultural Resource Management Plan
2	ISCP	Installation Spill Contingency Plan
3	KWh	Kilowatt hours
4	LAAF	Libby Army Airfield
5	LDN	Day-night average levels
6	mg/L	Milligrams per liter
7	MGD	Million Gallons per Day
8	MI	Military Intelligence
9	MSL	Mean sea level
10	NCA	National Conservation Area
11	NEPA	National Environmental Policy Act
12	NHPA	National Historic Preservation Act
13	NO _x	Nitrogen Dioxide
14	NPDES	National Pollution Discharge Elimination System
15	O ₃	Ozone
16	POLs	Petroleum, oil, and lubricants
17	ppm	Parts per million
18	PM ₁₀	Particulate matter smaller than 10 microns in diameter
19	RCRA	Resource Conservation and Recovery Act
20	ROI	Region of Influence
21	RU	Rural Development
22	SHPO	State Historic Preservation Officer
23	SINGARS	Single channel Ground and Airborne Radio Systems
24	SIP	State Implementation Plan
25	SO _x	Sulfur Dioxide
26	SWPPP	Stormwater Pollution Prevention Plan
27	TEP	Tucson Electric Power Company
28	UAV	Unmanned Aerial Vehicles
29	U.S.C.	United States Code
30	USA	United States Army
31	USFS	United States Forest Service
32	USFWS	United States Fish and Wildlife Service
33	USPB	Upper San Pedro Basin
34	WSMR	White Sands Missile Range
35	WWTP	Waste Water Treatment Plant
36	µg/m ³	Micrograms per cubic meter
37	µm	Microns
38		