

**Environmental Assessment for the Implementation of the  
BRAC Recommendation to Relocate the 91st Division (TSD)  
to Fort Hunter Liggett, California**



*Prepared for:*

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San Francisco, California**

**August 2006**

## ***ENVIRONMENTAL ASSESSMENT ORGANIZATION***

This environmental assessment (EA) addresses the proposed action to implement the BRAC's recommendations at Fort Hunter Liggett, California. The EA has been developed in accordance with the National Environmental Policy Act and implementing regulations issued by the Council on Environmental Quality (40 CFR 1500 – 1508) and the Army (32 CFR 651). Its purpose is to inform decision-makers and the public of the likely environmental and socioeconomic consequences of the proposed action and alternatives.

The ***EXECUTIVE SUMMARY*** is a brief description of the proposed action, the other proposed alternatives, and the environmental and socioeconomic impacts.

***SECTION 1.0: PURPOSE, NEED, AND SCOPE*** summarizes the purpose of and need for the proposed action and describes the scope of the environmental impact analysis process.

***SECTION 2.0: PROPOSED ACTION*** describes the proposed action to implement the BRAC's action at Fort Hunter Liggett, California.

***SECTION 3.0: ALTERNATIVES*** examines alternatives for implementing the proposed action. This section also includes a description of the No Action Alternative.

***SECTION 4.0: AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES*** describes the existing environmental conditions that could be affected by the proposed action and identifies potential environmental effects that could occur if the alternatives were implemented. This section also identifies cumulative actions and evaluates potential cumulative effects.

***SECTION 5.0: CONCLUSIONS*** summarizes the resulting environmental effects.

***SECTION 6.0: LIST OF PREPARERS*** identifies persons who prepared this EA.

***SECTION 7.0: DISTRIBUTION LIST*** identifies recipients of this EA.

***SECTION 8.0: REFERENCES*** is the bibliography for cited sources.

***SECTION 9.0: PERSONS CONSULTED*** is a listing of persons and agencies consulted during the preparation of this EA.

***SECTION 10.0: ACRONYMS AND ABBREVIATIONS*** is a list of acronyms and abbreviations used in this EA.

### ***APPENDICES***

Appendix A	Agency Correspondences
Appendix B	Clean Air Act Determination: Record of Nonapplicability
Appendix C	California Department of Fish and Game Natural Diversity Database

## ENVIRONMENTAL ASSESSMENT

**LEAD AGENCY:** US Army, Combat Support Training Center

**TITLE OF PROPOSED ACTION:** Construction and Operation of an Armed Forces Reserve Center Complex at Fort Hunter Liggett, California

**AFFECTED JURISDICTIONS:** Monterey County

**PREPARED BY:** Peter F. Taylor, Jr., Colonel, District Engineer, US Army Corps of Engineers, Mobile District

**APPROVED BY:** W. Scott Wood, Commander, US Army, Combat Support Training Center

**ABSTRACT:** In this environmental assessment (EA), the Army considers the proposed implementation of its BRAC recommendations at Fort Hunter Liggett, California. The Army identifies, evaluates, and documents the effects of constructing an approximately 60,000-square-foot Armed Forces Reserve Center (AFRC) and an approximately 1,000-square-foot unheated storage building to accommodate the 91st Training Support Division being relocated from Camp Parks, California. Approximately 41 full-time employees would staff the facilities at the project site and 162 part-time reservists would come on rotation one weekend a month for training. Six support vehicles would be relocated to Fort Hunter Liggett. Reservist training would take place inside the proposed AFRC building; there would be no changes to or increased usage of training ranges on Fort Hunter Liggett under the proposed action.

The proposed construction activities would be completed over 20 months, beginning as early as April 2007. Under federal law, the Army must initiate all realignments no later than September 15, 2007, and must complete all realignments no later than September 15, 2011.

The BRAC recommendations specify that the 91<sup>st</sup> Training Support Division should be relocated from Camp Parks to Fort Hunter Liggett, but no site within the installation was specified. Three alternative site locations were identified for implementing the proposed action, each within the cantonment area. A No Action Alternative is also evaluated.

Implementing the proposed action is not expected to result in significant environmental impacts, so an environmental impact statement is not required, and a finding of no significant impact (FNSI) will be published, in accordance with Army's National Environmental Policy Act regulations.

**REVIEW COMMENT DEADLINE:** The EA and draft FNSI are available for review and comment for 30 days beginning September 11, 2006, and continuing through October 11, 2006. Copies of the EA and draft FNSI can be obtained by contacting Gary Houston at Fort Hunter Liggett at (831) 386-2763, or via electronic mail at [public.comment@liggett-emh1.army.mil](mailto:public.comment@liggett-emh1.army.mil). Copies have also been provided to the Monterey County Free Library, San Antonio School Library, and Fort Hunter Liggett Library. Comments on the EA and the draft FNSI should be submitted to CSTC, Attn: IMSW-CST-PWE, Fort Hunter Liggett, CA 93928 or by electronic mail to [public.comment@liggett-emh1.army.mil](mailto:public.comment@liggett-emh1.army.mil) no later than October 11, 2006.

*Draft*  
**Finding of No Significant Impact**  
**Construction and Operation of an Armed Forces Reserve Center Complex at**  
**Fort Hunter Liggett, California**

Pursuant to the Council on Environmental Quality Regulations (40 CFR Parts 1500-1508) for implementing the procedural provisions of the National Environmental Policy Act (42 USC 4321 et seq.) and Army regulations (32 CFR Part 651), the Army conducted an environmental assessment (EA) of the potential environmental and socioeconomic effects of the construction and operation of an Armed Forces Reserve Center (AFRC) complex at Fort Hunter Liggett.

**Purpose and Need**

The purpose of the proposed action is to implement the Base Closure and Realignment Commission's recommendation pertaining to Fort Hunter Liggett.

The need for the proposed action is to enhance military value, to improve homeland defense capability, to greatly improve training and deployment capability, to create significant efficiencies and cost savings, and to be consistent with the Army's force structure plans and the Army transformational objectives.

**Proposed Action**

Under the Base Closure and Realignment Commission's recommendations, the Army proposes to construct an approximately 60,000-square-foot AFRC and an approximately 1,000-square-foot unheated storage building to accommodate relocation of the 91st Training Support Division from Camp Parks, California.

Approximately 41 full-time employees would staff the facilities, and 162 part-time reservists would come on rotation one weekend a month for training. Six support vehicles would be relocated to Fort Hunter Liggett. Reservist training would take place inside the proposed AFRC building.

The proposed construction would be completed over 20 months, beginning as early as April 2007. Under federal law, the Army must initiate all realignments no later than September 15, 2007, and must complete all realignments no later than September 15, 2011.

Protection measures included in the proposed action covered air quality, seismic influences, erosion controls, stormwater and wastewater permitting, sensitive wildlife and botanical species, sensitive natural communities, and cultural resources.

**Alternatives Considered**

Three alternative sites (Alternatives 1, 2, and 3) were considered for implementing the proposed action. Each is located within the Fort Hunter Liggett cantonment area and meets criteria stipulated in the EA. Additionally the No Action Alternative was analyzed in the EA, as prescribed by the Council on Environmental Quality regulations. The No Action Alternative serves as a baseline against which the impacts of the proposed action and alternatives can be evaluated. Under the No Action Alternative, the Army would not implement the proposed action; no construction or relocation activities to support unit realignment would be conducted at Fort Hunter Liggett.

**Factors Considered in Determining that No Environmental Impact Statement is Required**

In the EA, which is incorporated by reference into this finding of no significant impact (FNSI), the Army examined the potential effects of the proposed alternatives and the No Action Alternative on the

following 11 resource areas: aesthetics and visual resources, air quality, noise, geology and soils, water resources, biological resources, cultural resources, socioeconomics and environmental justice, traffic and transportation, utilities, and hazardous and toxic substances.

Implementing the proposed action at any of the three alternative sites would result in minor adverse effects. It would have no effect on environmental justice. The adverse effects on aesthetics and visual resources, air quality, noise, geology and soils, water resources, socioeconomics, traffic and transportation, utilities, and hazardous and toxic substances would be minor. There would be no adverse effects under the No Action Alternative. As part of the proposed action, the Army would implement protection measures for air quality, geology and soils, water resources, biological resources, and cultural resources.

There would be no significant cumulative impacts from implementing Alternative 1, 2, or 3.

### **Conclusion**

Implementing Alternative 1, 2, or 3 would have no significant direct, indirect, or cumulative effects on the resources above.

Based on the overall findings of this evaluation, the Army found Alternative 1 to be the environmentally preferred alternative and the appropriate approach to implementing the proposed action. Because no significant impacts were determined as a result of the project alternatives, an environmental impact statement is not necessary. This EA supports the issuance of a finding of no significant impact.

### **Public Comment**

The EA and draft FNSI are available for review and comment for 30 days beginning September 11, 2006, and continuing through October 11, 2006. Copies of the EA and draft FNSI can be obtained by contacting Gary Houston at the Fort Hunter Liggett at (831) 386-2763 or via electronic mail at [public.comment@liggett-emh1.army.mil](mailto:public.comment@liggett-emh1.army.mil). Copies have also been provided to the Monterey County Free Library, San Antonio School Library, and Fort Hunter Liggett Library. Comments on the EA and the draft FNSI should be submitted to the following address: CSTC, Attn: IMSW-CST-PWE, Fort Hunter Liggett, CA 93928, or by electronic mail to [public.comment@liggett-emh1.army.mil](mailto:public.comment@liggett-emh1.army.mil) no later than October 11, 2006.

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W. Scott Wood  
Colonel, US Army, Commanding  
Combat Support Training Center

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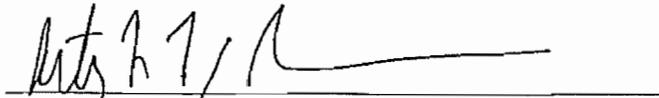
Date

## ENVIRONMENTAL ASSESSMENT

### IMPLEMENTATION OF THE BASE REALIGNMENT AND CLOSURE (BRAC) RECOMMENDATION TO RELOCATE THE 91ST DIV (TSD) TO FORT HUNTER LIGGETT, CALIFORNIA

*Prepared by:*

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US ARMY



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Combat Support Training Center

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## **EXECUTIVE SUMMARY**

## **EXECUTIVE SUMMARY**

### **INTRODUCTION**

The Base Realignment and Closure (BRAC) Commission made the following recommendation concerning Fort Hunter Liggett:

“Realign the Camp Parks Reserve Forces Training Area, CA, by relocating the 91st Div (TSD) to Fort Hunter Liggett, CA.”

With this recommendation, the BRAC Commission considered feasible locations within the demographic and geographic areas of the affected units. A new Armed Forces Reserve Center (AFRC) would be constructed. Three sites were identified on the installation that are of the appropriate size, accessibility, and suitability to accommodate the new AFRC.

### **BACKGROUND**

Fort Hunter Liggett is the largest US Army Reserve Command training installation and the eighth largest Army installation in the continental United States. The installation’s mission is to support total force training and readiness and to provide base operations and area support. Fort Hunter Liggett is a training area for all services of the military, offering a range of realistic training opportunities to fit various training scenarios. The installation encompasses approximately 160,000 acres in Monterey County.

Fort Hunter Liggett is part of the greater US Army Reserve Command and Control in the southwest and is managed by the US Army Combat Support Training Center (CSTC). Fort Hunter Liggett is in Monterey County in west-central California, approximately 70 miles southeast of the city of Monterey, 23 miles southwest of King City, and 12 miles west of Lockwood.

### **PROPOSED ACTION AND ALTERNATIVES**

#### ***Proposed Action***

The proposed action would implement the realignment of the 91st TSD from Camp Parks to Fort Hunter Liggett, in accordance with the BRAC Commission’s recommendations in September 2005. Implementation includes both the staffing transformation and infrastructural development to support the realigned staff. Under the proposed action, realignment of the 91st would include approximately 41 full-time employees (23 military and 18 civilian). The 91st TSD supports approximately 162 part-time reservists who would come to Fort Hunter Liggett on rotation one weekend per month for training, including 35 to 40 Army Reserve band members. This training would take place inside the proposed AFRC building, as opposed to on Fort Hunter Liggett training ranges, comparable to current training at Camp Parks. There would be no change to or effect on the training areas at Fort Hunter Liggett under the proposed action. Six support vehicles would be relocated from Camp Parks to Fort Hunter Liggett.

An AFRC facility is further proposed to accommodate these personnel. In order to accommodate the 91st TSD operations and facility requirements, the Army sought a contiguous eight acres on which to place the new facilities. The following three alternative sites were identified as appropriate:

- **Alternative 1** is northwest of the Fort Hunter Liggett Headquarters building, on the north corner of Infantry Road and Blackhawk Street (the preferred alternative). This site is level and open, with scattered mature valley oak trees and was previously developed with military buildings from the 1950s. The Alternative 1 site includes a paved parking area on the south side of Infantry Road.
- **Alternative 2** is on the north corner of Infantry Road and Bradley Drive. The site includes rolling hills and a lowland swale and is dominated by Blue Oak Woodland. This site is partially developed with the remnants of 1950s military buildings.
- **Alternative 3** is southwest of the Fort Hunter Liggett Headquarters building, on the south corner of Infantry Road and Blackhawk Street. This site includes a hillside and lower-lying area densely vegetated with oak trees and is known to contain an area of purple amole, a federal listed threatened species. The Alternative 3 site includes two paved parking areas in the northern flat area.

The proposed action includes construction that could occur at any one of these alternative sites. Construction proposed under this action includes a new approximately 60,000-square-foot AFRC and an approximately 1,000-square-foot unheated storage building. This plan would provide a 200-member administrative and operational office space adequate to accommodate the 91st TSD from Camp Parks, as well as room for future growth and integration. Existing parking areas would be improved or an adequate parking space would be developed, as appropriate, to accommodate the proposed operations.

Following unit relocation to Fort Hunter Liggett, the operation functions of the 91st TSD would be largely the same as they are at Camp Parks, consisting of administrative functions.

Construction would be completed over 20 months, beginning as early as April 2007. Under federal law, the Army must initiate all realignments no later than September 15, 2007, and complete all realignments no later than September 15, 2011.

Measures that would be undertaken as part of the proposed action include protecting air quality, seismic influences, controlling erosion, obtaining permits for stormwater and wastewater, and protecting sensitive wildlife and botanical species, sensitive natural communities, and cultural resources.

### **No Action Alternative**

Under the No Action Alternative, the Army would not implement the proposed action. No facilities would be constructed at Fort Hunter Liggett, and no units would be relocated from Camp Parks. The 91st TSD would continue to operate from Camp Parks in Building 510. The No Action Alternative would not support the BRAC Commission's recommendations and would violate the executive order.

## **SUMMARY OF ENVIRONMENTAL CONSEQUENCES**

Short-term minor adverse impacts would be expected for air quality, noise, soils, water resources, biological resources, traffic and transportation, solid waste management, and utilities. Construction activities would generate particulates in the air. Alternatives 2 and 3 would have higher levels of fugitive dust emissions than Alternative 1 as substantial grading would be necessary. Noise generated from construction would be temporary and intermittent. Topographic changes could reduce the stability of the soils resulting in erosion under Alternatives 2 or 3. Likewise, disturbed soils may be exposed to stormwater runoff during construction, resulting in the potential for the runoff to carry

sediments or contaminants from accidental spills into nearby surface waters and groundwater. Construction-related noise, dust, and human activity would result in short-term minor impacts on biological resources. The proposed activities would minimally increase the number of vehicles on local roadways. Proposed development would minimally increase demand on water supply and electricity and likewise increase generation of wastewater, and solid waste. Development would not substantially affect existing stormwater flow patterns. Environmental protection measures would minimize these impacts.

Long-term minor adverse impacts would be expected for aesthetic and visual resources, topography, seismicity, water resources, biological resources, cultural resources, socioeconomics, utilities, traffic, and hazardous and toxic substances. Changes to the existing scenery within the cantonment area would result in long-term minor adverse effects on visual resources, especially the topographic characteristics if implemented at the Alternative 2 or 3 site, and the historic landscape as seen from the Hacienda if the proposed facilities are built on the Alternative 2 site. Seismicity is a consideration for most developmental projects in California, specifically in this region since the project area is in one of the most active seismic areas of California and is subject to strong ground shaking in the event of a large earthquake. The project would increase the area of impervious surface, which could decrease the rate of groundwater recharge in the cantonment area. Loss of grassland or woodland habitat and mature oak trees would result in long-term minor impacts on biological resources. Alternatives 2 and 3 would likely result in greater habitat loss as more vegetation and trees would require removal. Potentially long-term adverse impacts may result on architectural resources based on foundations and features found at the Alternative 2 site, and the potential for site development to affect the historic landscape of the Hacienda at either the Alternative 2 or 3 sites. If either of these sites were chosen, surveys would confirm the level of impact and appropriate consultation would begin. Due to the small influx of personnel to Fort Hunter Liggett, long-term minor adverse impacts would result on demographics, housing, quality of life, and protection of children. Similarly, the additional personnel would minimally affect traffic conditions. The proposed action would increase the use of petroleum, oils, and lubricants and could indirectly affect surface and groundwater quality due to increased surface water runoff from the additional or improved paved parking area.

No impacts are expected on mineral resources, archaeological or Native American resources, environmental justice, or telephone and data lines. Long-term beneficial impacts would result to economic development.

## **CONCLUSION**

Based on the findings of this environmental assessment, implementing Alternative 1, 2, or 3 would have no significant direct, indirect, or cumulative effects on the affected resources. Based on the overall findings of this evaluation, the Army finds Alternative 1 to be the environmentally preferred alternative and the appropriate approach to implementing the proposed action. Because no significant impacts were determined to result from the project alternatives, an environmental impact statement is not necessary. This environmental assessment supports the issuance of a finding of no significant impact.

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**SECTION 1.0**  
**PURPOSE, NEED, AND SCOPE**

## **SECTION 1.0**

### **PURPOSE, NEED, AND SCOPE**

#### **1.1 INTRODUCTION**

On September 8, 2005, the Defense Base Realignment and Closure Commission (BRAC Commission) recommended realignment actions that would affect two Army Reserve installations: Fort Hunter Liggett and Camp Parks, both located in California. These recommendations were approved by the President on September 23, 2005, and were forwarded to Congress. The Congress did not alter any of the BRAC Commission's recommendations, and on November 9, 2005, the recommendations became law. The BRAC Commission recommendations must now be implemented as provided for in the Defense Base Closure and Realignment Act of 1990 (Public Law 101-510), as amended.

Part of the BRAC Commission recommendation to transform the Army's training support to the Reserve Component is to realign Camp Parks (formally known as Parks Reserve Forces Training Area) by relocating the 91st Training Support Division (TSD) from Camp Parks to Fort Hunter Liggett.

This environmental assessment (EA) identifies and analyzes the environmental effects associated with the Army's proposed action and alternatives at Fort Hunter Liggett. Details on the proposed action are set forth at Section 2.2. Alternatives are described in Section 3.0.

#### **1.2 PURPOSE AND NEED**

The purpose of the proposed action is to implement the BRAC Commission's recommendation pertaining to Fort Hunter Liggett.

The need for the proposed action is to improve the nation's ability to respond rapidly to challenges of the 21st century. The Army is legally bound to defend the United States and its territories, to support national policies and objectives, and to defeat nations responsible for aggression that endangers the peace and security of the United States. To carry out these tasks, the Army must adapt to changing world conditions and must improve its capabilities to respond to a variety of circumstances across the full spectrum of military operations. The following is a discussion of two major initiatives that contribute to the Army's need for the proposed action.

**Base Realignment and Closure.** In previous rounds of BRAC, the explicit goal was to save money and downsize the military in order to reap a "peace dividend." In the 2005 BRAC round, the Department of Defense sought to reorganize its installation infrastructure to most efficiently support its forces, increase operational readiness and facilitate new ways of doing business. Thus, BRAC represents more than cost savings. It supports advancing the goals of transformation, improving military capabilities, and enhancing military value. The Army needs to carry out the BRAC recommendations at Fort Hunter Liggett, specifically improving the Army's operational effectiveness by putting the 91st TSD at a major training site in their region, in order to achieve the objectives for which Congress established the BRAC process.

**Installation Sustainability.** On October 1, 2004, the Secretary of the Army and the Chief of Staff issued *The Army Strategy for the Environment*, which focuses on the interrelationships of mission, environment, and community. A sustainable installation simultaneously meets current and future

mission requirements, safeguards human health, improves quality of life, and enhances the natural environment. A sustained natural environment is necessary to allow the Army to train and maintain military readiness.

### **1.3 SCOPE**

The 1990 Defense Base Closure and Realignment Act specifies that the National Environmental Policy Act (NEPA) does not apply to BRAC actions of the President, the Commission, or the Department of Defense, except “(i) during the process of property disposal, and (ii) during the process of relocating functions from a military installation being closed or realigned to another military installation after the receiving installation has been selected but before the functions are relocated” (Section 2905[c][2][A], Public Law 101-510, as amended). The law further specifies that in applying the provisions of NEPA to the process, the Secretary of Defense and the secretaries of the military departments concerned do not have to consider “(i) the need for closing or realigning the military installation which has been recommended for closure or realignment by the Commission, (ii) the need for transferring functions to any military installation which has been selected as the receiving installation, or (iii) military installations alternative to those recommended or selected” (Section 2905[c][2][B]). Because the BRAC Commission’s deliberation and decision, as well as the need for closing or realigning a military installation, are exempt from NEPA, this EA does not address the need for realignment. NEPA does apply to the activities proposed to support unit realignment. Therefore the scope of this NEPA analysis is limited to the construction and operation of a new AFRC and ancillary infrastructure at Fort Hunter Liggett.

### **1.4 PUBLIC INVOLVEMENT**

The Army invites public participation in the NEPA process. Consideration of the views and information of all interested persons promotes open communication and enables better decision making. All agencies, organizations, and members of the public having a potential interest in the proposed action, including minority, low-income, disadvantaged, and Native American groups, are urged to participate in the decision making process.

Public participation opportunities with respect to this EA and decision making on the proposed action are guided by 32 CFR Part 651. On its completion, if no significant impacts are identified, the EA will be made available to the public for 30 days, along with a draft finding of no significant impact (FNSI). At the end of the 30-day public review period, the Army will consider any comments submitted by individuals, agencies, or organizations on the proposed action, the EA, or draft FNSI. As appropriate, the Army may then execute the FNSI and proceed with implementing the proposed action. If it is determined prior to issuance of a final FNSI that implementation of the proposed action would result in significant impacts, the Army will publish in the *Federal Register* a notice of intent to prepare an environmental impact statement, commit to mitigation actions sufficient to reduce impacts below significance levels, or not take the action.

Throughout this process, the public may obtain information on the status and progress of the proposed action and the EA by calling Mr. Gary Houston at (831) 386-2763 or via e-mail at [public.comment@liggett-emh1.army.mil](mailto:public.comment@liggett-emh1.army.mil).

## **1.5 IMPACT ANALYSIS PERFORMED**

This EA has been developed in accordance with NEPA and its implementing regulations, issued by the President's Council on Environmental Quality and the Army.<sup>1</sup> Its purpose is to inform decision makers and the public of the likely environmental consequences of the proposed action and alternatives.

An interdisciplinary team of environmental scientists, biologists, planners, economists, engineers, archaeologists, historians, and military technicians has analyzed the proposed action and alternatives in light of existing conditions and has identified relevant beneficial and adverse effects associated with the action. The proposed action, including construction and operation of the new facilities, as well as environmental protection measures, is described in Section 2.0. Alternatives, including the No Action Alternative, are described in Section 3.0. Conditions existing as of November 2005, considered to be the baseline conditions, are described in Section 4.0, Affected Environment and Environmental Consequences. The expected effects of the proposed action, also described in Section 4.0, are presented immediately following the description of baseline conditions for each environmental resource addressed in the EA. Section 4.0 also addresses the potential for cumulative effects.

## **1.6 FRAMEWORK FOR DECISIONMAKING**

A decision on whether to proceed with the proposed action rests on numerous factors, such as mission requirements, schedule, availability of funding, and environmental considerations. In addressing environmental considerations, Fort Hunter Liggett is guided by relevant statutes and their implementing regulations and by Executive Orders (EOs) that establish standards and provide guidance on environmental and natural resources management and planning. These include the Clean Air Act, Clean Water Act, Noise Control Act, Endangered Species Act, National Historic Preservation Act, Archaeological Resources Protection Act, Resource Conservation and Recovery Act, and Toxic Substances Control Act. EOs bearing on the proposed action include EO 11988 (Floodplain Management), EO 11990 (Protection of Wetlands), EO 12088 (Federal Compliance with Pollution Control Standards), EO 12580 (Superfund Implementation), EO 12898 (Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations), EO 13045 (Protection of Children from Environmental Health Risks and Safety Risks), EO 13101 (Greening the Government Through Waste Prevention, Recycling, and Federal Acquisition), EO 13123 (Greening the Government Through Efficient Energy Management), EO 13148 (Greening the Government Through Leadership in Environmental Management), EO 13175 (Consultation and Coordination with Indian Tribal Governments), and EO 13186 (Responsibilities of Federal Agencies to Protect Migratory Birds). These authorities are addressed in various sections throughout this EA when relevant to particular environmental resources and conditions. The full text of the laws, regulations, and EOs is available on the Defense Environmental Network & Information Exchange Web site at <http://www.denix.osd.mil>.

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<sup>1</sup>Council on Environmental Quality *Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act*, 40 *Code of Federal Regulations* (CFR) Parts 1500-1508, and the Army NEPA regulations, 32 CFR Part 651.

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**SECTION 2.0**  
**PROPOSED ACTION**

## **SECTION 2.0**

### **DESCRIPTION OF THE PROPOSED ACTION**

#### **2.1 INTRODUCTION**

This section describes the Army's proposed execution for carrying out the BRAC Commission's recommendations.

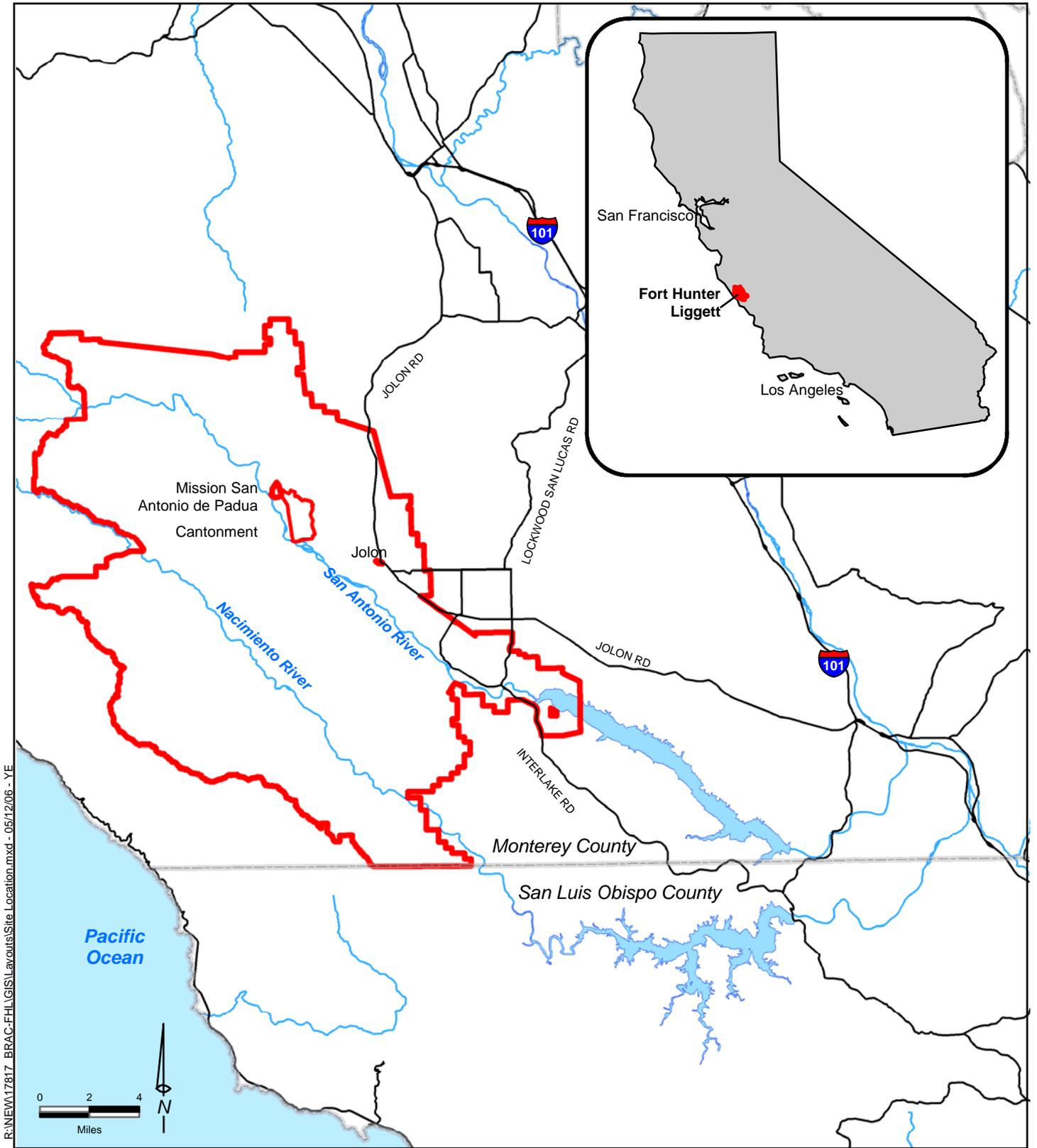
The BRAC Commission made the following recommendation concerning Fort Hunter Liggett:

“Realign the Camp Parks Reserve Forces Training Area, CA, by relocating the 91st Div (TSD) to Fort Hunter Liggett, CA.”

With this recommendation, the BRAC Commission considered feasible locations within the demographic and geographic areas of the affected units. A new AFRC would be constructed. Three sites were identified on the installation that are of the appropriate size, accessibility, and suitability to accommodate the new AFRC. These are discussed further in Section 3.0.

The Fort Hunter Liggett US Army Reserve (USAR) Complex is part of the greater USAR Command and Control in the southwest and is managed by the US Army Combat Support Training Center (CSTC). Fort Hunter Liggett is in Monterey County in west-central California, approximately 70 miles southeast of the city of Monterey, 23 miles southwest of King City, and 12 miles west of Lockwood (Figure 2-1). The installation encompasses approximately 160,000 acres in the San Antonio Valley and the Santa Lucia Mountains. Part of the San Luis Obispo County line forms the southern boundary of the installation, including private agricultural land to the east and south used for grazing and farming. Los Padres National Forest forms the west and north boundaries. The Pacific Ocean is approximately 20 miles west of the cantonment area (USACE 2000; US Army 2004a). Primary access to the installation is via US Highway 101 and Jolon Road (County Road G14).

Fort Hunter Liggett is the largest US Army Reserve Command training installation and the eighth largest Army installation in the continental United States. The installation's mission is to support total force training and readiness and to provide base operations and area support. Fort Hunter Liggett is a training area for all services of the military offering a range of realistic training opportunities to fit various training scenarios. This is supported by the large geographic areas on the installation with a diversity of topographic and vegetative features. This natural habitat is managed by the installation through integrated approaches to natural resource management demonstrating their commitment to environmental stewardship (US Army 2004a). The Fort Hunter Liggett cantonment area includes administrative space, housing, vehicle and tank maintenance, recreation areas, warehousing and storage, a post office, fire station, commissary, and health clinic (USACE 2000).



**Site Location**

Fort Hunter Liggett, Monterey County, California

**Figure 2-1**

## **2.2 PROPOSED ACTION**

This section describes the components, timing, and phasing of the proposed facility construction and operation activities. This EA evaluates Alternative 1, Alternative 2, Alternative 3, and the No Action Alternative, which are described in Section 3.0.

Under the BRAC law, the Army must initiate all realignments no later than September 15, 2007 and must complete all realignments no later than September 15, 2011.<sup>1</sup> The proposed action would be implemented over approximately 20 months.

### **2.2.1 Site Selection and Construction**

The proposed action would realign the 91st TSD from Camp Parks to Fort Hunter Liggett, in accordance with the BRAC Commission's recommendations in September 2005. Because a specific site was not identified on the installation under these recommendations, the Army identified all appropriate and viable sites for the new facilities on Fort Hunter Liggett. Viability was based on four criteria:

- (i) For security reasons, the site should not be on Mission Road, Nacimiento Road, or Silo Road.
- (ii) To accommodate the 91st TSD, the size of the site must be comparable to the existing facility on Camp Parks, with additional space to handle current and future requirements. To contain all proposed structures, parking area, and security structural setback, the site should encompass at least eight acres in size.
- (iii) The site should be in walking distance from barracks and the mess hall and convenient to the Fort Hunter Liggett headquarters and other installation operations.
- (iv) Because there are limited facilities available at Fort Hunter Liggett, placement of the site should not result in demolition of other facilities.

In order to meet these requirements, the Army sought a contiguous eight acres on which to place the new facilities. The following three sites were identified as appropriate:

- Alternative 1 is northwest of the Fort Hunter Liggett Headquarters building, on the north corner of Infantry Road and Blackhawk Street (the preferred alternative);
- Alternative 2, on the north corner of Infantry Road and Bradley Drive; and
- Alternative 3 is southwest of the Fort Hunter Liggett Headquarters building, on the south corner of Infantry Road and Blackhawk Street.

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<sup>1</sup>Section 2904(a), Public Law 101-510, as amended, provides that the Army must "... initiate all closures and realignments no later than two years after the date on which the President transmits a report [by the BRAC Commission] to the Congress ... containing the recommendations for such closures or realignments; and ... complete all such closures and realignments no later than the end of the six year period beginning on the date on which the President transmits the report ... ." The President took the specified action on September 15, 2005.

Each of these alternative locations is discussed further in Section 3.0. This section provides a discussion of the construction activities to occur at one of these sites. This is referred to as the proposed action, which includes construction of a new approximately 60,000-square-foot AFRC and an approximately 1,000-square-foot unheated storage building. Both buildings would be permanent and would be constructed with reinforced concrete foundations, concrete floor slabs, structural steel frames, masonry veneer walls, standing seam metal roof, heating and ventilation air conditioning systems, plumbing, mechanical, security, and electrical systems. Existing parking areas would be improved or an adequate parking space would be developed, as appropriate. The project would increase the area of impervious surface by an estimated 2.1 acres.

Activities required prior to construction include land clearing, paving, fencing, making general site improvements, and extending utilities to serve the project site. Accessibility to the disabled would be provided. Force protection measures (such as physical security) would be incorporated into the design. This may include setting the buildings, parking areas, and vehicle unloading areas well back from the road. Berms, heavy landscaping, and barricading posts would be used when other design measures could not be maintained.

### **2.2.2 Realignment and Operation**

The staffing of the new AFRC would include approximately 41 full-time employees (23 military and 18 civilian). Additionally the 91<sup>st</sup> TSD supports approximately 162 part-time reservists who would come to Fort Hunter Liggett on rotation one weekend per month for training, including 35 to 40 Army Reserve band members. This training would take place inside the proposed AFRC building, as opposed to on Fort Hunter Liggett training ranges, comparable to current Reserve Forces training at Camp Parks. There would be no change to or effect on the training areas at Fort Hunter Liggett under the proposed action. The proposed AFRC facility would provide a 200-member administrative and operational office space adequate to accommodate the 91st TSD from Camp Parks, as well as room for future growth and integration. This space would provide up-to-date space for administrative, educational, assembly, library, learning center, and physical fitness areas for the unit, as well as adequate parking space for military and private vehicles. Existing parking areas may be improved to accommodate the new operations, or where adequate parking space is unavailable, a designated parking area would be included in the final design plans within the proposed footprint. Six support vehicles would be relocated from Camp Parks to Fort Hunter Liggett used primarily by the Army Reserve band. These vehicles would include one five-ton flat bed truck and five General Services Administration vehicles used primarily for transportation of personnel and equipment.

The primary purpose of the 91st TSD is to conduct home station Soldier Readiness Processing/Mobilization/Demobilization activities. Unit function would be largely the same, consisting of administrative functions based at Fort Hunter Liggett.

### **2.2.3 Environmental Protection Measures**

To protect environmental resources present at the project sites, the following measures would be undertaken as part of the proposed action. Unless otherwise specified, the following protection measures would be implemented at the chosen alternate site, whether Alternative 1, 2, or 3.

#### **2.2.3.1 Protection of Air Quality**

The Army would implement dust control measures to reduce particulate emissions from construction that can lead to adverse health effects and nuisance concerns. Furthermore, the Army would use

additional standard management practices, such as applying water to disturbed areas and unpaved roads, limiting vehicle speeds on unpaved areas, covering haul trucks with tarps, stabilizing previously disturbed areas if they will be inactive for several weeks or more, and suspending grading and excavation work when average hourly wind speeds exceed 20 mph. This would minimize the potential impacts on air quality.

### **2.2.3.2 Seismic Protection**

Current building code standards would be incorporated into building designs in order to minimize the potential effects of seismic forces common within the region on the proposed infrastructural development.

### **2.2.3.3 Protection from Erosion**

Initial grading and site preparation would include erosion control best management practices to the planning and design measures to minimize the potential for future erosion. This would correct any effects of past erosion and prevent those that may result from proposed development on sites discussed under Alternative 2 or 3.

### **2.2.3.4 Stormwater and Wastewater Permitting**

The Army would submit a notice of intent to the State Water Resources Control Board and would obtain a National Pollutant Discharge Elimination System General Construction Stormwater Permit that would meet all the minimum requirements set forth in the waste discharge requirements of the permit and would comply with all regulatory requirements.

### **2.2.3.5 Sensitive Wildlife Species Protection**

**Burrowing Owls.** The Army would conduct preconstruction surveys of the project area and a 500-foot buffer zone to determine if burrowing owls were occupying this area. A qualified biologist would conduct these surveys according to professional standards, and adopting California Burrowing Owl Consortium and California Department of Fish and Game (CDFG) guidelines where applicable (CBOC 1993; CDFG 1995). Surveys would be conducted no more than one month prior to the beginning of any ground disturbance or construction activities. If ground-disturbing activities were delayed or suspended for more than 30 days after the preconstruction survey, the site would be resurveyed (CDFG 1995).

If any owls are sighted by the biologist during these surveys, or by other reliable sources, then four dawn or dusk burrow occupancy surveys (also based on CDFG 1995 and CBOC 1993 guidelines) would be initiated to help identify and avoid occupied burrows within the project area and its immediate vicinity. Avoidance and monitoring, in consultation with the CDFG, would reduce potential impacts.

CDFG and California Burrowing Owl Consortium suggested avoidance and environmental protection measures are summarized as follows:

- If feasible, no disturbance would occur within approximately 160 feet of occupied burrows during the nonbreeding season of September 1 through January 31, or within approximately 250 feet during the breeding season of February 1 through August 31.

- Occupied burrows would not be physically disturbed during the nesting season (February 1 through August 31).
- If destruction of occupied burrows is unavoidable, existing unsuitable burrows should be enhanced (enlarged or cleared of debris), or new artificial burrows should be created at a ratio of two to one.

If owls must be moved from the disturbance area, passive relocation techniques should be used rather than trapping.

**San Joaquin Kit Fox.** The Army would conduct preconstruction surveys of the project area and a 500-foot buffer area for the San Joaquin kit fox, in accordance with the USFWS protocol for the northern area (USFWS 1999). These surveys would be combined with the burrowing owl surveys and would be performed by a qualified biologist in addition to the ongoing surveys already conducted by the Army. Active dens would be avoided, in accordance with the USFWS protocol.

#### **2.2.3.6 Protection of Sensitive Botanical Species**

The Army would design the layout of the new facilities to avoid areas where purple amole has been identified. The Army would further protect these communities during construction by erecting fencing and by restricting construction and staging in these areas.

If Alternative 3 were chosen, proposed facility layout would be designed around a known purple amole area. If avoidance could not be accomplished, the Army would enter into formal Section 7 consultation with US Fish and Wildlife Service and would implement mitigation measures identified through that process to address loss of several plants.

To minimize the spread of invasive species, the Army would reseed graded soil with primarily native vegetation to prevent erosion and to help repopulate the area. Reseeding would take place in the fall after construction to take advantage of the onset of the rainy season.

#### **2.2.3.7 Protection of Sensitive Natural Communities**

Because tree removal would constitute a reduction in habitat value, removal would only be done when necessary. To avoid unnecessary tree removal and otherwise minimize the number of trees to be removed, vegetation removal would be completed after initial design planning. Vegetation removal would be completed outside of the avian breeding season in order to avoid adverse impacts on migratory birds. Migratory bird season is roughly February through July.

Any trees that are removed would be replaced off-site at a ratio of 3:1. An appropriate location would be found for this environmental protection measure, an area that would normally support oak trees and in a location that would not be affected by future development. Oak seedlings would be protected by such features as wire or translucent tubing to discourage browsing by deer or other grazers. Seedlings would be monitored for three years after planting and would be replaced as needed to maintain the ratio.

### **2.2.3.8 Protection of Cultural Resources**

#### ***Cultural Resources Protection Measures Applicable to All Alternative Sites***

Before project activities begin, the Army would brief the construction staff on procedures for handling the unexpected discovery of archaeological resources.

Should evidence of archaeological resources be found during ground disturbance, construction staff would immediately notify the CSTC Cultural Resources Office at Fort Hunter Liggett and would suspend excavation or other activities that could damage such resources. A CSTC Cultural Resources Office archaeologist would assess the potential significance of the find and would recommend measures to minimize potential effects on archaeological resources.

If human remains were encountered, the CSTC Cultural Resources Office would contact the Monterey County coroner and every effort would be made to leave them in-place and to adhere to the Advisory Council for Historic Preservation's burial policy.

#### ***Cultural Resources Protection Measures Applicable to the Alternative 1 Site***

To address the possible presence of archaeological or architectural/historic resources at the preferred Alternative 1 site, a cultural survey is being conducted. If cultural resources are identified at the preferred site, the Army would consult with the SHPO and then would either avoid construction within or near the site(s) or would conduct additional studies to determine NRHP eligibility of the site(s). Should the site(s) be determined ineligible, they would be monitored during construction. Should the site(s) be determined NRHP-eligible, construction would be designed to avoid the site or appropriate consultation with SHPO and mitigation would be conducted.

If the survey failed to identify any archaeological resources, no further survey work would be necessary. If archaeological resources are discovered during earth work activities, the emergency discovery procedures outlined in the Fort Hunter Liggett ICRMP would be implemented.

#### ***Cultural Resources Protection Measures Applicable to the Alternative 2 and 3 Sites***

If the Alternative 2 or 3 site is chosen, archaeological and architectural resource surveys and consultation would be conducted, as described for Alternative 1. The Army would also conduct a viewshed analysis of the Hacienda to determine the exact visibility of the Alternative 2 or 3 site from the historic structure. The Army would then consult with SHPO regarding impacts on the historic landscape of the Hacienda and to design the new AFRC structure so as to minimally impact the historic landscape of the Hacienda. Other measures would proceed as discussed above.

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**SECTION 3.0  
ALTERNATIVES**

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## **SECTION 3.0 ALTERNATIVES**

### **3.1 INTRODUCTION**

A bedrock principle of NEPA is that a federal agency, or proponent, should consider reasonable alternatives to a proposed action. Considering alternatives helps to avoid unnecessary impacts and allows analysis of reasonable ways to achieve the stated purpose. To warrant detailed evaluation, an alternative must be reasonable. To be considered reasonable, an alternative must be ready for decision making (any necessary preceding events having taken place), affordable, capable of being implemented, and it must meet the purpose of and need for the action. The following discussion identifies alternatives considered by the Army and whether they are feasible and, hence, subject to detailed evaluation in this EA.

Alternatives to the proposed action have been examined according to three variables: means to physically accommodate realigned units, siting of new construction, and schedule. This section presents the Army's development of alternatives and addresses alternatives available to accomplish the proposed action and describes the No Action Alternative. Figure 3-1 identifies the three alternative site locations. Furthermore, Section 3.6 identifies other alternatives removed from further consideration, including justification for this determination.

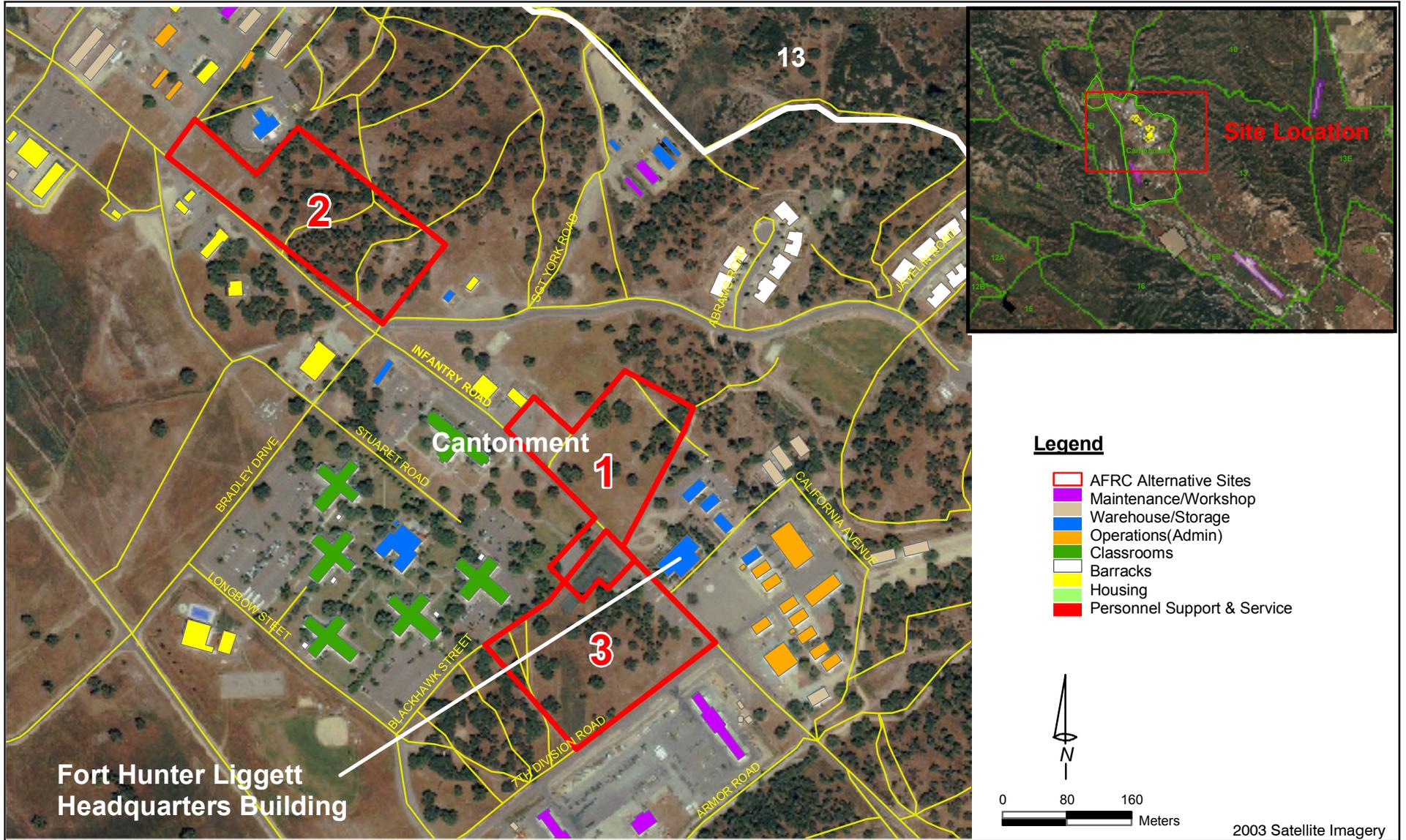
### **3.2 NO ACTION ALTERNATIVE**

The Council on Environmental Quality's regulations requires inclusion of the No Action Alternative, which serves as a baseline against which the impacts of the proposed action and alternatives can be evaluated.

Under the No Action Alternative, the Army would not implement the proposed action. No facilities would be constructed at Fort Hunter Liggett, and no units would relocate from Camp Parks. The 91st TSD would continue to operate from Camp Parks in Building 510. The No Action Alternative is evaluated in detail in this EA, but it would not be consistent with the BRAC Commission's recommendations.

### **3.3 ALTERNATIVE 1**

Alternative 1 is the Army's preferred alternative and includes the project components described in Section 2.2. This alternative includes construction of the proposed 60,000-square-foot AFRC, 1,000-square-foot unheated storage unit, and improvements to the existing parking area within an eight-acre parcel northwest of the Fort Hunter Liggett Headquarters building, along Infantry Road across from the intersection of Blackhawk Street. The site is a level open area, with loose rocky sediment, grasses, scattered mature oak trees, and several possible concrete structural foundations. The site would likely require removing trees prior to site construction, though to a lesser degree than under Alternatives 2 or 3. A small modular structure set on the northern portion of the site is used as an ammunition storage point, which would be removed prior to site construction. The site has been previously disturbed. The proposed use is compatible with adjacent land uses. Electrical and communications utilities are in place for new development.



## Alternative Site Locations

Fort Hunter Liggett, Monterey County, California

### **3.4 ALTERNATIVE 2**

Alternative 2 includes the construction and operations described in Section 2.2 on an eight-acre site northwest of Alternative 1, on the north corner of Infantry Road and Bradley Drive (Figure 3-1). The Alternative 2 site is an undeveloped area that is dominated by Blue Oak Woodland. The terrain includes rolling hills and a lowland swale. This area was previously developed and contains remnants of a building foundation, parts of an abandoned sewer system, and burned structures of undetermined origin. Additionally, a rock and concrete chimney is located to the northeast. The site would require extensive grading and tree removal prior to construction. The proposed use is consistent with neighboring land uses. Electrical and communications utilities are in place for development. Because there is no parking area within or immediately adjacent to the Alternative 2 site area, a parking area would be developed to accommodate the proposed operations.

### **3.5 ALTERNATIVE 3**

Alternative 3 includes the construction and operations described in Section 2.2 on an eight-acre site within the cantonment area southwest of the Fort Hunter Liggett Headquarters Building (Building 238). Also located along Infantry Road on the block between Blackhawk Street and 7th Division Road, the site includes a hillside and lower lying area containing numerous oak trees that would require extensive grading and tree removal prior to site construction (see Figure 3-1). There is evidence of former military training positions. This area is also densely vegetated with oak trees and is known to support a small area of purple amole, a federal listed threatened species. The site is not previously developed, but the proposed use is compatible with adjacent land uses. Electrical and communications utilities are in place for development. There are two parking areas on the north side of the site, and these areas would be improved as necessary to accommodate the proposed operations.

### **3.6 OTHER ALTERNATIVES CONSIDERED BUT REMOVED FROM FURTHER CONSIDERATION**

In order to meet the objectives of the BRAC Commission's recommendations, four primary criteria were used for site selection for the new AFRC to accommodate the relocation of the 91st TSD, as discussed in Section 2.2.1, Site Selection and Construction. Only the three sites identified above met these criteria. The following alternative was identified but removed from further consideration.

#### **3.6.1 Use of Existing Fort Hunter Liggett Combat Support Training Center**

Four training buildings (combined 13,000 square feet), two maintenance buildings (combined 13,667 square feet), and four storage buildings (combined 19,478 square feet) make up the facility space at Fort Hunter Liggett. At 45 percent occupation, these facilities do not offer the space necessary to accommodate the 91st TSD. As discussed in Section 2.2.1, Site Selection and Construction, the relocated unit requires a facility comparable to the existing facility at Camp Parks. Based on the proposed 60,000-square-foot facility and a 1,000-square-foot storage building, the existing space on Fort Hunter Liggett could not adequately accommodate the 91st TSD.

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**SECTION 4.0**  
**AFFECTED ENVIRONMENT AND CONSEQUENCES**

## **SECTION 4.0 AFFECTED ENVIRONMENT AND CONSEQUENCES**

### **4.1 INTRODUCTION**

This chapter is organized by sections for each resource area. Each section is an overview of the baseline physical, biological, social, and economic conditions that occur within the region of influence (ROI) of the proposed action and alternatives. An ROI is generally defined as the physical area that bounds the environmental, sociological, economic, or cultural feature of interest for the purpose of analysis. This may vary in context on the resources being analyzed. The ROI for this environmental evaluation generally includes the cantonment area of Fort Hunter Liggett where the three alternatives are located, and more specifically the sites described in Section 3.0, roadways accessing these sites, and adjacent infrastructure. Figure 4-1 shows the alternative sites and identifies certain features around Fort Hunter Liggett that may be mentioned in subsequent resource sections.

Each baseline resource section is followed directly by a discussion of the potential environmental impacts of Alternatives 1, 2, and 3, and the No Action Alternative. This analysis includes likely beneficial and adverse impacts on the human environment, including short-term and long-term impacts and direct and indirect impacts. The analysis of impacts on resources focuses on environmental issues in proportion to their potential effects. Detailed consideration is given to those resources and issues that have a potential for environmental impacts; those issues that are not likely to result in an adverse impact are not discussed or are summarized if needed to support other issues or resources. Interpretation of impacts in terms of their duration, intensity, and scale is provided where possible. Impacts under the No Action Alternative are compared against baseline effects discussed in the resource-specific affected environment section.

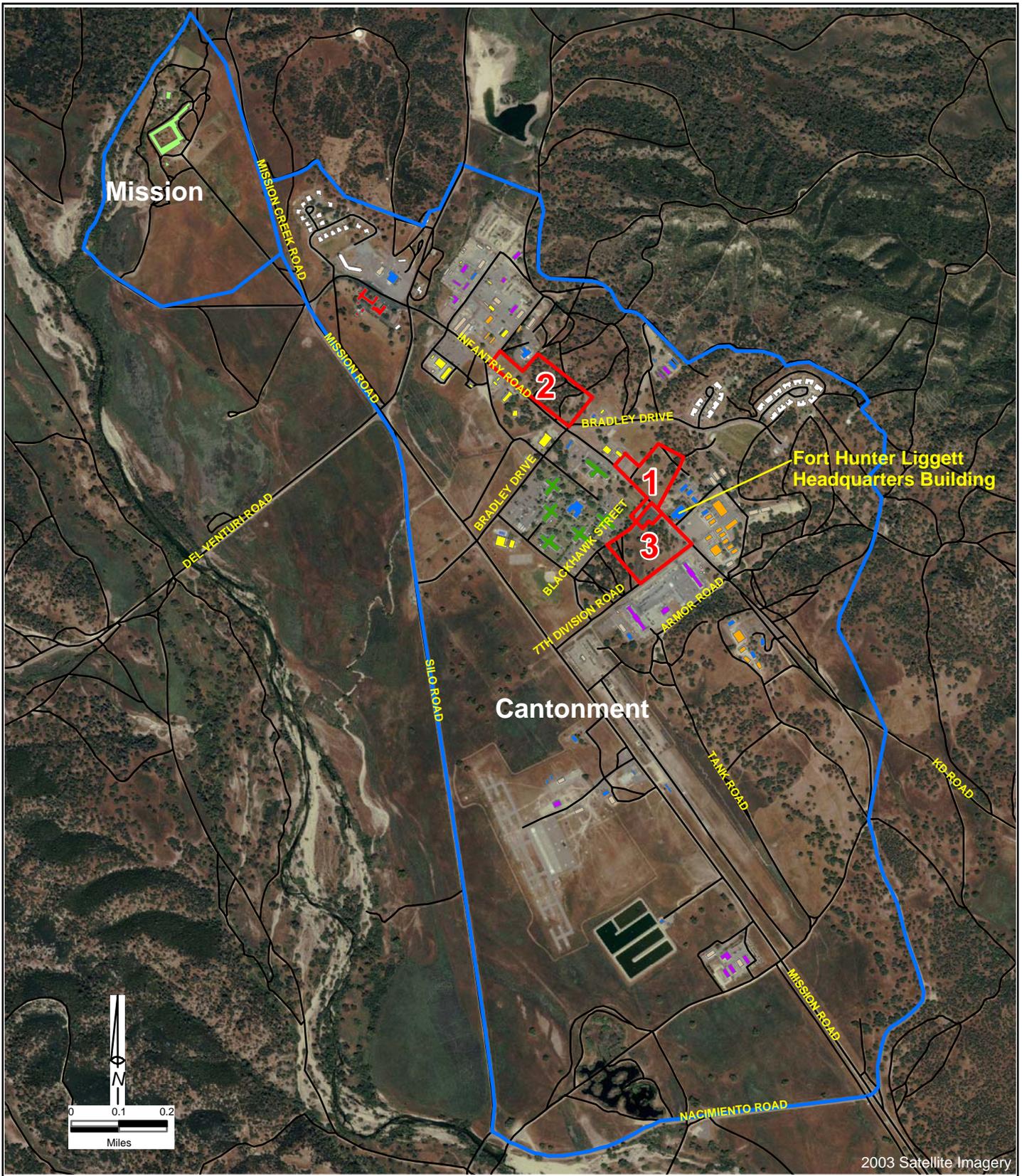
Only those environmental and socioeconomic conditions relevant to the proposed project are presented in this evaluation, including the following:

- 4.2 Aesthetic and visual resources;
- 4.3 Air quality;
- 4.4 Noise;
- 4.5 Geology and soils;
- 4.6 Water resources;
- 4.7 Biological resources;
- 4.8 Cultural resources;
- 4.9 Socioeconomics and environmental justice;
- 4.10 Traffic and transportation;
- 4.11 Utilities; and
- 4.12 Hazardous and toxic substances.

Resource conditions not affected by the proposed action—land use and existing activities—were not considered in this evaluation. The entire project would occur within the boundaries of Fort Hunter Liggett, which is not guided by any outside general plans or zoning designations. There would be no change in surrounding land uses within the cantonment or in the surrounding training areas, and no conflict with adjacent land uses would occur.

Section 4.13 presents the cumulative impacts of the proposed action and alternatives when added to other past, present, and reasonably foreseeable future actions.

A summary of the impacts is included in Section 5.0, Conclusions.



**Legend**

	AFRC Alternative Sites
	Maintenance/Workshop
	Warehouse/Storage
	Operations(Admin)
	Classrooms
	Barracks
	Housing
	Personnel Support & Service
	Mission San Antonio de Padua'
	The Hacienda

## Site Locations within Cantonment Area

Fort Hunter Liggett, Monterey County, California

**Figure 4-1**

## **4.2 AESTHETICS AND VISUAL RESOURCES**

### **4.2.1 Affected Environment**

The proposed action would occur in the Fort Hunter Liggett cantonment area. The ROI for visual resources is the cantonment area.

#### **4.2.1.1 Resource Overview**

The fenced cantonment area supports administrative and classroom activities, and therefore contains most associated development at FHL. It is composed mostly of rolling hills and plains (US Army 2004a). Oak woodland and grassland are the major habitats visible in the cantonment. The proposed BRAC sites along Infantry Road are in the vicinity of similar Army operational, administrative, and logistical facilities. Alternative sites 1 and 2 were previously developed and contain remnants of building foundations. There are no current permanent buildings on any of the project sites. The Alternative 1 site is mostly flat, and adjacent areas include Army administrative and headquarters buildings, other paved areas, and undeveloped open space. The Alternative 2 site includes rolling hills and a lowland swale; the Alternative 3 site includes one hill, with a portion of the site on the hill slope and a portion in a valley. The areas adjacent to the Alternative 2 and 3 sites include Army administrative buildings, other paved areas, and undeveloped open space. All three sites have several to numerous mature oak trees.

Of the three alternatives, Alternative 2 is the closest to the Milpitas Hacienda. The Milpitas Hacienda is on the northern end of the cantonment area, northwest of the Alternative 2 site, and is listed on the National Register of Historical Places (see Figure 4-1) (NPS 2004). None of the alternatives is visible from the San Antonio Mission or from Mission Road that leads to the Mission.

Light sources are mostly exterior lighting for security around buildings and parking lots. Nearby facilities also are sources of nighttime light within the cantonment area.

### **4.2.2 Environmental Consequences**

There would be short- and long-term minor adverse impacts on visual resources from the three alternatives. For all alternatives, short-term adverse impacts on the aesthetics of the cantonment would occur because of construction activities. These impacts would include, for example, the presence of large construction vehicles and dust generated by construction activities.

For all alternatives, minor adverse long-term impacts on the scenic quality of the cantonment would occur because of the new facilities and operations described in Section 2.2. These impacts include the likely loss of some mature trees and the loss of open space because the project sites are currently undeveloped and occupied by mature trees. The impacts on visual resources would be permanent and would diminish the natural aesthetics of the cantonment area.

For all alternatives, nighttime light from the proposed action is expected to be similar to the surrounding sources of nighttime light. Long-term adverse impacts on nighttime light would be minor.

#### **4.2.2.1 Alternative 1**

This alternative would have a minor long-term adverse impact on views of or from nearby areas because new buildings would obstruct current views of the surrounding landscape.

#### **4.2.2.2 Alternative 2**

New construction and operations would be in view of the Hacienda, resulting in minor short-term and long-term impacts.

Alternative 2 would require extensive grading and tree removal prior to construction. Grading and leveling the hillslope and removing oak trees would result in a long-term minor adverse impact on aesthetic and visual resources of the cantonment area.

#### **4.2.2.3 Alternative 3**

This alternative would have a minor long-term adverse impact on views of or from these sites, because new buildings would obstruct current views of the surrounding landscape.

Alternative 3 would require extensive grading and tree removal prior to construction. Grading and leveling the hillslope and removing oak trees would result in a long-term minor adverse impact on aesthetic and visual resources of the cantonment area.

#### **4.2.2.4 No Action Alternative**

Under the No Action Alternative, there would be no impacts on visual resources at the project sites because the human-made structures and natural environment would not change.

## **4.3 AIR QUALITY**

### **4.3.1 Affected Environment**

The ROI for air quality issues varies according to the type of air pollutant being discussed. Primary pollutants, such as carbon monoxide and directly emitted particulate matter, have a localized region of effects, generally restricted to locations within half a mile of the source of emissions. Secondary pollutants, such as ozone, have a broader region of effects, typically covering most or all of a county or air basin.

#### **4.3.1.1 Air Quality Standards**

The US Environmental Protection Agency (EPA) has established ambient air quality standards for several different pollutants, which often are referred to as criteria pollutants (ozone, nitrogen dioxide, carbon monoxide, sulfur dioxide, suspended particulate matter, and lead). Federal ambient air quality standards are based primarily on evidence of acute and chronic health effects. Standards for suspended particulate matter have been set for two size fractions: inhalable particulate matter (PM<sub>10</sub>) and fine particulate matter (PM<sub>2.5</sub>). California has adopted ambient air quality standards that are more stringent than the comparable federal standards and that address pollutants not covered by federal ambient air quality standards. Most state ambient air quality standards are based primarily on health effects data but can reflect other considerations, such as protecting crops and materials or avoiding nuisance conditions, such as objectionable odors. Federal and state ambient air quality standards are available at CARB 2006, Ambient Air Quality Standard and 40 CFR parts 50, 53, and 58.

#### **4.3.1.2 Regional Air Quality Conditions**

Fort Hunter Liggett is in southern Monterey County, which is part of the North Central Coast Air Basin. The Monterey Bay Unified Air Pollution Control District (MBUAPCD) has primary responsibility for air quality management programs in this region. The district includes Santa Cruz, Monterey, and San Benito Counties. The air pollutants of greatest concern in the MBUAPCD include ozone, PM<sub>10</sub>, and PM<sub>2.5</sub>.

Monterey County currently has no federal nonattainment designations but is designated as a federal maintenance area for the 1-hour ozone standard (MBUAPCD 2006). Monterey County also has nonattainment designations for the state ozone and PM<sub>10</sub> standards.

#### **4.3.1.3 Regulatory Considerations**

The project would have an adverse impact on air quality if it were to conflict with or obstruct implementation of the applicable air quality plan, if it were to produce emissions that would violate state or federal ambient air quality standards or otherwise expose people to an adverse health risk, or if it would generate cumulative emissions for a calendar year that exceeded the thresholds established by the EPA's Clean Air Act (CAA) general conformity rule (100 tons per year of ROG or 100 tons per year of NO<sub>x</sub>). In addition, the MBUAPCD has adopted air quality impact significance thresholds based on maximum daily emissions for use in environmental assessment documents prepared under the California Environmental Quality Act (CEQA) (MBUAPCD 2004). Because CEQA does not apply to this project, the project's emissions are evaluated against the MPAUPCD thresholds for comparative purposes only.

### 4.3.2 Environmental Consequences

Potential impacts from the proposed action, whether implemented through Alternative 1, 2, or 3, include construction and operational emissions. Most emissions from the operational phase would be produced by increased traffic.

**Construction Emissions.** NO<sub>x</sub> and PM<sub>10</sub> are the pollutants of greatest concern with respect to construction activities. NO<sub>x</sub> emissions are generated by equipment engines and contribute to regional ozone concentrations; PM<sub>10</sub> emissions can result from a variety of activities, including excavation, grading, vehicle travel on paved and unpaved surfaces, and vehicle and equipment exhaust. Construction-related emissions, particularly site grading, can substantially increase localized concentrations of PM<sub>10</sub>. Particulate matter emissions from construction can lead to adverse health effects and nuisance concerns, such as reduced visibility. The Army would implement environmental protection measures, such as dust control procedures, as described in Section 2.2.3.1, to reduce PM<sub>10</sub> emissions from construction.

Construction emissions have been estimated using a detailed spreadsheet model that contains default emission rates for 89 categories of equipment items, subdivided into engine size categories that correlate with different federal and state emission standards. Construction is assumed to begin in 2007 and would be accomplished in nine, ten, or eleven months for Alternatives 1, 2, and 3, respectively. Estimated annual emissions from construction activities would not exceed the federal CAA conformity thresholds under Alternatives 1 through 3; maximum daily emissions from construction activities under any of the three alternatives would not exceed the MBUAPCD construction thresholds (Table 4-1). Therefore, the air quality impact from construction activities under Alternatives 1 through 3 is considered minor adverse. A signed record of nonapplicability (RONA) for the alternative project sites is included in Appendix B.

**Table 4-1  
Summary of Construction Emissions**

	ANNUAL EMISSIONS, TONS PER YEAR				
	ROG	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>
Alternative 1	0.42	2.12	2.13	0.09	1.65
Alternative 2	0.83	3.73	3.82	0.15	4.66
Alternative 3	0.88	4.84	4.86	0.20	5.51
<i>CAA Conformity Thresholds</i>	<i>100</i>	<i>100</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>
	MAXIMUM DAILY EMISSIONS, POUNDS PER DAY				
	ROG	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>
Alternative 1	7.18	33.97	32.82	1.48	24.08
Alternative 2	17.74	70.13	70.74	2.95	68.32
Alternative 3	14.54	80.42	79.06	3.45	75.55
<i>MBUAPCD Thresholds</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>82</i>

Source: Tetra Tech staff analysis  
NA: Not applicable

**Operational Emissions.** Long-term minor adverse operational air quality impacts are expected. The new facilities constructed under Alternatives 1 through 3 would have only minor fixed emission sources for space heating and water heating. Monterey County traffic would minimally increase as a result of traffic produced by transferred personnel and Reserve Forces traveling to and from

weekend training. Most of the full-time personnel being transferred are expected to find housing in Monterey or San Luis Obispo Counties. Most of the part-time reservists who would train at the new facility are expected to continue living in the San Francisco Bay Area. The cantonment area of Fort Hunter Liggett provides barracks, so personnel traveling to Fort Hunter Liggett would stay on-post during the training weekend.

Emissions from vehicle travel associated with Alternatives 1 through 3 have been estimated using the URBEMIS2002 program (SCAQMD 2005). Vehicle travel by full-time personnel was evaluated assuming an average trip distance of 25 miles. Vehicle travel by part-time personnel attending weekend training was evaluated assuming an average trip distance of 200 miles. Summer emission rates were assumed to apply for eight months of the year, and winter emission rates were assumed to apply for the other four months. As illustrated in Table 4-2, emissions from traffic associated with the alternatives would not exceed the CAA conformity thresholds of 100 tons per year of ROG or NO<sub>x</sub> or the daily thresholds adopted by the MBUAPCD. Because the estimated net increase in annual vehicle traffic emissions would be less than the relevant CAA conformity thresholds, the air quality impact from traffic associated with the alternatives is considered minor adverse. Because vehicle traffic emissions would be the same under each alternative, they are not discussed in each alternative section.

**Table 4-2**  
**Estimated Vehicle Traffic Emissions Under All Alternatives**

	ANNUAL VEHICLE TRAFFIC EMISSION, TONS PER YEAR				
	ROG	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>
Normal weekday traffic	0.20	0.24	2.49	0.00	0.37
Training weekend traffic	0.25	0.36	3.59	0.00	0.58
Annual total	0.45	0.60	6.08	0.01	0.95
<i>CAA Conformity Thresholds</i>	<i>100</i>	<i>100</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>
	DAILY VEHICLE TRAFFIC EMISSION, POUNDS PER DAY				
	ROG	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>
Normal weekday traffic	1.57	1.79	21.75	0.02	3.09
Weekend training traffic	19.24	28.69	335.19	0.27	51.87
<i>MBUAPCD Thresholds</i>	<i>137</i>	<i>137</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>

Source: Vehicle emissions calculated for 2009 using version 8.7 of the URBEMIS2002 program (SCAQMD 2005).

NA = Not applicable

Annual emission assumptions: Normal weekday traffic emissions based on two trips per day for 41 personnel, 25 miles per one-way trip, 240 work days per year. Training weekend traffic emissions based on two trips per day for 41 personnel, 25 miles per one-way trip plus one trip per day by 162 personnel, 200 miles per one-way trip, 24 travel days per year.

Daily emission assumptions: Normal weekday traffic emissions were based on two trips per day for 41 people, 25 miles per one-way trip. Training weekend traffic emissions were based on two trips per day for 41 people, 25 miles per one-way trip plus one trip per day by 1,62 people, 200 miles per one-way trip.

Summer emission rates used for all pollutants except CO, which is based on winter emission rates.

#### 4.3.2.1 Alternative 1

**Construction Emissions.** Short-term minor adverse effects are expected. The site for Alternative 1 is generally flat and would not require extensive excavation or grading. Consequently, it would not be necessary to disturb the entire site in order to construct the proposed facilities. Table 4-1 summarizes the annual construction emissions estimated for Alternative 1. Because annual

construction emissions would be less than the relevant CAA conformity threshold, the air quality impact from construction activities under Alternative 1 is considered short-term minor adverse.

#### **4.3.2.2 Alternative 2**

**Construction Emissions.** Construction on the site for Alternative 2 would require substantial cut-and-fill activity. For analysis purposes, the assumption was that the site for Alternative 2 provides a reasonable balance between excavation and fill requirements, so there would not be extensive hauling of fill material to or from the site. The overall construction period for Alternative 2 was assumed to last one month longer than the duration of construction for Alternative 1. Table 4-1 summarizes annual construction emissions estimated for Alternative 2. Fugitive dust emission estimates included in the table assume implementation of normal dust control practices. Because annual construction emissions would be less than the relevant CAA conformity threshold, the air quality impact from construction under Alternative 2 is considered short-term minor adverse.

#### **4.3.2.3 Alternative 3**

**Construction Emissions.** The site for Alternative 3 contains a small hill and oak woodland occupying much of the site. This hill would have to be removed or substantially leveled for construction to occur at this site. For analysis purposes, it was assumed that most of the material removed from the site for Alternative 3 would have to be hauled to an off-site location for storage or disposal. The existing parking lots at the north end of the site would be left in place. The overall construction period for Alternative 3 was assumed to last two months longer than the duration of construction for Alternative 1. Table 4-1 summarizes annual construction emissions estimated for Alternative 3. Fugitive dust emission estimates included in the table assume implementation of normal dust control practices. Because annual construction emissions would be less than the relevant CAA conformity threshold, the air quality impact from construction under Alternative 3 is considered short-term minor adverse.

#### **4.3.2.4 No Action Alternative**

Under the No Action Alternative, no new facilities would be constructed at Fort Hunter Liggett, and the 91st TSD would remain at Camp Parks. Consequently, the No Action Alternative would not have any net air quality impacts.

## 4.4 NOISE

### 4.4.1 Affected Environment

For the purpose of this evaluation, noise is defined as unwanted sound. Noise can have an effect on both the immediate vicinity and adjacent areas. The ROI for this resource is the cantonment area of Fort Hunter Liggett, with a specific focus to the areas surrounding the three project alternative sites.

#### 4.4.1.1 Resource Overview

There is a wide diversity of human responses to noise, which vary according to the type and characteristic of the noise source. For the Army, high sound levels are both part of the job of operating weapon systems and a necessary training condition because Soldiers must learn to function in an environment similar to what they will encounter on the battlefield.

Noise is measured in decibels (dB). To provide a reference to common noise conditions, Table 4-3 presents a range of decibel sound levels presented in dBA.

**Table 4-3  
Common Sound Levels**

CHARACTERIZATION	dBA	EXAMPLE NOISE CONDITION OR EVENT
Threshold of pain	130	Surface detonation, 30 pounds of TNT at 1,000 feet
Possible building damage	120	Mach 1.1 sonic boom under aircraft at 12,000 feet
	110	Peak crowd noise, pro football game, open stadium
Extremely noisy	95	Locomotive horn at 100 feet; 2-mile range fog horn at 100 feet
8-hour OSHA limit	90	Heavy truck, 35 mph at 20 feet; Leaf blower at 5 feet
Very noisy	85	Power lawn mower at 5 feet; City bus at 30 feet
Noisy	75	Street sweeper at 30 feet; idling locomotive, 50 feet
Moderately noisy	65	Typical daytime busy downtown background conditions
Quiet	45	Typical rural area daytime background conditions
Very quiet	30	Quiet rural area, winter night, no wind
Barely audible	10	Audiometric testing booth
Threshold of Hearing	0	---

Notes:

OSHA = Occupational Safety and Health Administration

The "A-weighted" decibel scale (dBA) is the most widely used measurement scale for determining the level of noise impact because it best approximates the way the human ear responds to noise levels.

Indicated noise levels are average dBA levels for stationary noise sources or peak dBA levels for brief noise events and noise sources moving past a fixed reference point.

Average and peak dBA levels are not time-weighted 24-hour average CNEL or Ldn levels.

Decibel scales are not linear. Apparent loudness doubles with every 10 dBA increase in noise level, regardless of the dBA value.

Source: Data compiled by Tetra Tech staff.

The primary source of noise disturbance at Fort Hunter Liggett is training and testing activities, specifically gun fire and aerial exercises. Secondary noise sources are from traffic, construction, and human voices (e.g., Soldier cadence during physical training). Figure 4-2 represents a worst-case-scenario example of noise produced during range training events at Fort Hunter Liggett. Several other types of training take place at Fort Hunter Liggett that produce varying noise levels that are less than depicted on the figure. As shown on the figure, the three alternative sites are within noise disturbance level Zone 1, portraying the lowest level of annoyance.

#### 4.4.1.2 Sensitive Receptors

The project sites are within the cantonment area of Fort Hunter Liggett surrounded by military administration and operations and field training areas. Surrounding communities and land uses are made up of agricultural, rural residential, and recreational. Much of the installation is bordered by steep hills isolating the area from surrounding uses. The closest town, Lockwood, is approximately 12 miles west.

There are two residential areas within the cantonment area and several sets of barracks (Figure 4-2). The Milpitas Hacienda is 1,700 feet and the Mission San Antonio de Padua is 0.8 mile northwest of the Alternative 2 site. Other sensitive noise receptors include schools, libraries, medical clinics, office buildings, and other similar land uses where people generally expect and need a quiet environment. Sensitive receptors within 300 feet of each of the alternative sites are as follows:

- Alternative 1—A recreation center, snack bar, barracks, the Fort Hunter Liggett Headquarters administrative building, and military police station;
- Alternative 2—A library, housing facility, information systems facility, chapel, and health clinic ; and
- Alternative 3—Barracks, two vehicle maintenance buildings, the Fort Hunter Liggett Headquarters administrative building, a gas station, childcare facility, and classrooms.

#### 4.4.2 Environmental Consequences

This section is an analysis of direct and indirect noise impacts from Alternatives 1, 2, and 3, and the No Action Alternative. Short-term minor adverse impacts are expected from construction activities, and negligible impacts are expected from operations at all three alternatives.

##### 4.4.2.1 Alternative 1

Short-term minor adverse effects are expected. Construction activities could affect sensitive receptors in the vicinity of the site. Although the type and quantity of construction vehicles and equipment have not been identified, typical construction site equipment and their sound levels range from 84 dB to 113 dB (Center to Protect Workers' Rights 2003). The noise produced during the construction phase would be temporary and best management practices (BMPs) would be initiated during construction at the project site.

Noise levels would be temporary and intermittent and would decrease with increasing distance from the project site (more specifically, noise levels attenuate over distance at a rate of 6 dBA for every doubling of distance from the reference noise point). Therefore, noise from construction activities is expected to have short-term minor impacts on military and civilian personnel.

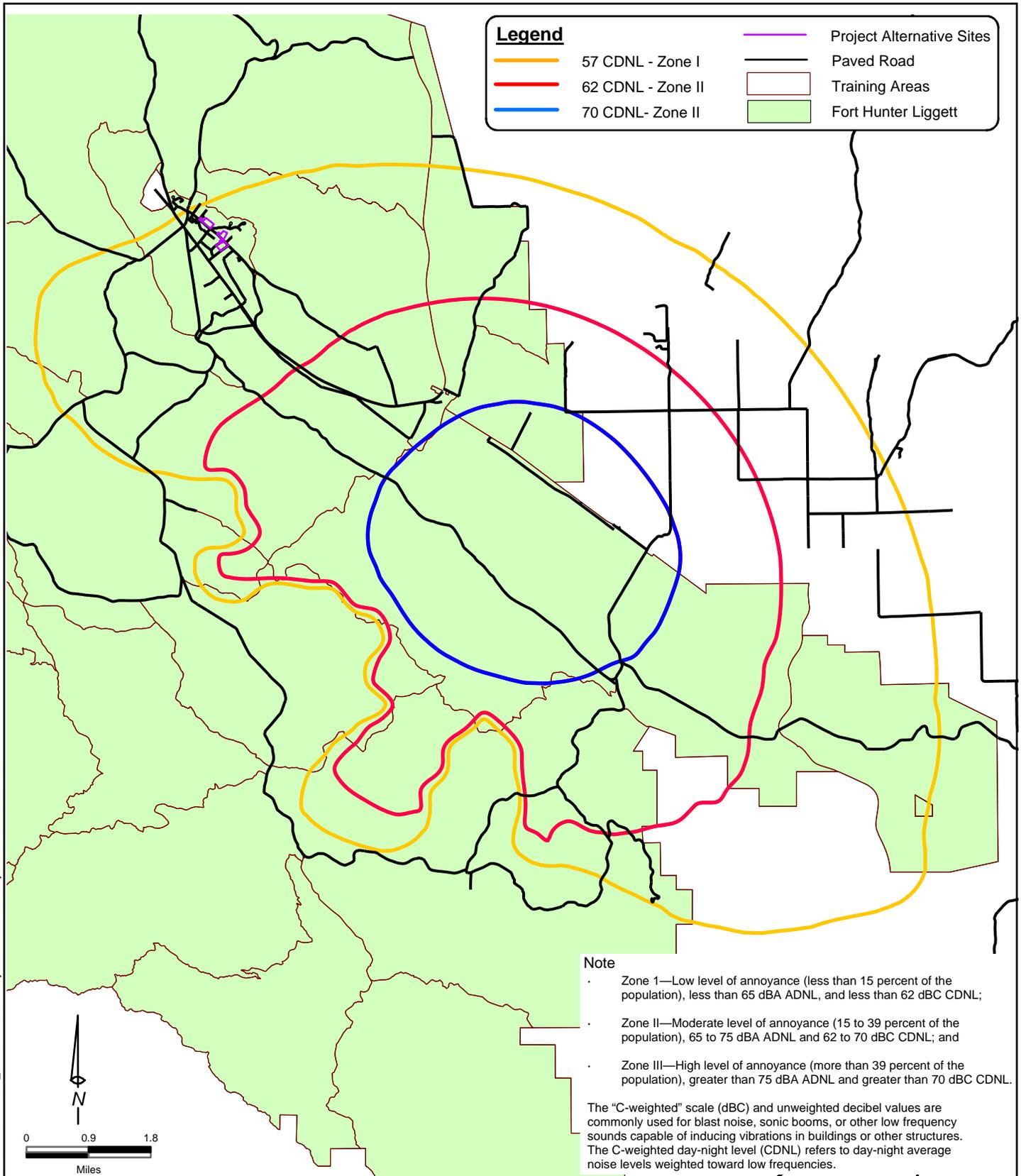
During the operation phase of the project, military personnel that are relocated from other training areas would be exposed to the existing noise sources at the project site, which are similar to the noise sources at Camp Parks; therefore, personnel would not be adversely affected.

Operational noise levels would be lower than construction noise levels. Operation of the 91<sup>st</sup> TSD at Fort Hunter Liggett would be similar to surrounding activities and would not affect local sensitive receptors.

##### 4.4.2.2 Alternative 2

Impacts under Alternative 2 would be slightly greater than those described for Alternative 1 during the construction phase because more earth movement and site grading would be required. The construction phase of the project would be short-term, and BMPs would be used during

R:\NEW\17817\_BRAC-FHL\GIS\Layouts\Noise Ten Days.mxd - 08/16/06 - YE



Noise contours showing average daily exposure during ten days of training with the main battle tank of an armored cavalry battalion. The project area is fully contained within Zone I, low level of annoyance.

## Representative Noise Intrusion During 10-day Average Training Event

Fort Hunter Liggett, Monterey County, California

**Figure 4-2**

construction, so impacts would remain minor. Operational impacts would be the same as under Alternative 1.

#### **4.4.2.3 Alternative 3**

Impacts under Alternative 3 would be greater than under Alternatives 1 or 2 during the construction phase of the project due to the extensive earth movement and site grading that would be required. The construction phase of the project would be short-term and BMPs would be initiated during construction, therefore impacts would remain minor. Operational impacts would be the same as under Alternative 1.

#### **4.4.2.4 No Action Alternative**

The No Action Alternative would result in no change to the existing environment, and no new military personnel would be relocated to Fort Hunter Liggett. Therefore, no impacts are identified.

## **4.5 GEOLOGY AND SOILS**

### **4.5.1 Affected Environment**

This section is a description of the geologic setting and soils at Fort Hunter Liggett. The ROI includes the project site, adjacent contiguous land and waterways, the underlying geologic formations, and regional faults. Regional geologic features are discussed to provide a context for evaluating the geology at Fort Hunter Liggett because some geologic conditions and processes (such as movement along faults) may occur outside the project site but still affect that area.

#### **4.5.1.1 Geologic Setting**

##### ***Physical Geography***

The physical geography that generally covers physical terrain, topography, and other natural features has been extensively evaluated in the installation's integrated natural resource management plan. For the purpose of this evaluation, a short summary of the region is provided.

Fort Hunter Liggett is in the Santa Lucia Mountain Range of the central Coast Ranges of California. The central Coast Range is underlain by two series of basement rocks. The first of the series, the Franciscan eugeosynclinal and basic intrusive rocks, is mostly composed of sandstones that were formed from the marine deposition of volcanic material. The second of the series, the Sur series granitic-metamorphic complex, lies between the San Andreas and Nacimiento fault zones and is exposed on the western portion of the installation (US Army 2004a).

##### ***Seismicity***

The Jolon, Nacimiento, and several other small faults underlie Fort Hunter Liggett. Epicenters of historic earthquakes are close to the main traces of both the Rinconada and Nacimiento Faults (NPS 2004). The Rinconada Fault traverses the southern end of the San Antonio Reservoir (NPS 2004). Faults on the installation generally run from northwest to southeast, paralleling the San Andreas Fault, which lies 30 miles east of the installation.

Although there is little history of earthquakes at Fort Hunter Liggett, the potential for a damaging earthquake exists. In 1991, a seismic study by the US Army Corps of Engineers predicted the Rinconada Fault could generate an earthquake with a potential 7.5 magnitude on the Richter scale, with rock (ground) accelerations ranging from 0.5 to 1.0 gravity (g) near the eastern boundary of Fort Hunter Liggett to 0.3 g along the western boundary (NPS 2004).

The installation's proximity to the San Andreas and Rinconada Faults, its own numerous faults, and the overall geologic activity of the area places Fort Hunter Liggett in a Seismic Risk Zone II. Such areas may experience earthquakes that pose moderate risk to people and structures (US Army 2004a).

##### ***Mineral Resources***

Several abandoned cinnabar, chromite, and gold mines are located on Fort Hunter Liggett, but low quantities of these metals preclude additional mining opportunities. Gravel is found in valleys and is used for operation and maintenance projects (US Army 2004a).

## **Soils**

Installation soils reflect the varied geology and topography of the area. More than 130 soil types occur in 57 soil series on Fort Hunter Liggett (US Army 2004a).

The three dominant soil parent materials on Fort Hunter Liggett are sedimentary (shale and sandstone), metamorphosed sedimentary, and granitic rocks.

Soils that overlay sloped areas at Fort Hunter Liggett are classed as moderately to highly erodible. As the topography becomes more extreme on the slopes of surrounding mountains, the erosion potential increases. The erosion hazard on the San Antonio River Valley floor, which includes the cantonment area, is minimal because of its relatively gentle topography (NPS 2004). Slopes in the cantonment area are typically less than 20 percent (US Army 2004a).

### **4.5.2 Environmental Consequences**

No effects are expected on the physical geography of the site under Alternative 1, and minor impacts are expected under Alternatives 2 and 3. Long-term minor impacts from seismicity are expected under all three alternatives. No impacts are expected on mineral resources under all three alternatives. Negligible impacts are expected on soil resources under Alternative 1 and minor impacts are expected under Alternatives 2 and 3.

#### **4.5.2.1 Alternative 1**

##### **Physical Geography**

No effects are expected because implementing Alternative 1 would not change the physical makeup or topography of the site.

##### **Seismicity**

Long-term minor adverse effects are expected. The project area is in one of the most active seismic areas of California and is subject to strong ground shaking in the event of a large earthquake. Seismicity impacts could be adverse, but the new facilities would be constructed to current building code standards, as discussed in Section 2.2.3.2, so impacts would be minor.

##### **Mineral Resources**

Low quantities of metals preclude mining opportunities at the project site, so development would have no impacts on mineral resource development.

##### **Soils**

No adverse effects are expected. While construction activities would include earth movement, the site is level and the Army would implement erosion control BMPs as part of this alternative (for example, erecting silt fencing and temporary berms). Environmental protection measures to minimize erosion are discussed in Section 2.2.3.3. For these reasons, erosion impacts under the realignment alternative are expected to be negligible.

#### **4.5.2.2 Alternative 2**

##### ***Physical Geography***

Extensive grading would be required under Alternative 2 in order to level the site before construction. However, impacts would be minor because changes to topography would be localized to eight acres and would not alter the physiographic environment of the general area.

##### ***Seismicity***

Impacts would be the same as those identified under Alternative 1.

##### ***Mineral Resources***

Impacts would be the same as those identified under Alternative 1.

##### ***Soils***

Short-term minor adverse effects are expected. The site would require extensive grading and tree removal before construction. Even though the Army would implement erosion control BMPs as part of Alternative 2, construction activities could greatly increase the potential for soil erosion at the site. Erosion impacts under Alternative 2 are expected to be greater than under Alternative 1. Grading and site preparations, as stipulated in the environmental protection measures described in Section 2.2.3.3, would minimize the potential for future erosion. For these reasons, erosion impacts under Alternative 2 are expected to be minor.

#### **4.5.2.3 Alternative 3**

##### ***Physical Geography***

Impacts would be the same as those identified under Alternative 2.

##### ***Seismicity***

Impacts would be the same as those identified under Alternative 1.

##### ***Mineral Resources***

Impacts would be the same as those identified under Alternative 1.

##### ***Soils***

Short-term minor adverse effects are expected. The Alternative 3 site includes a hillside and lower lying area that would require extensive earth moving and grading before construction. Even though the Army would implement erosion control BMPs as part of Alternative 3, construction activities could greatly increase the potential for soil erosion at the site. Environmental protection measures to minimize erosion are discussed in Section 2.2.3.3. Erosion impacts under Alternative 3 are expected to be greater than under Alternative 1 and similar to those discussed under Alternative 2.

#### **4.5.2.4 No Action Alternative**

No adverse effects are expected because the No Action Alternative would result in no change to the existing environment.

## **4.6 WATER RESOURCES**

### **4.6.1 Affected Environment**

The proposed action and alternatives would occur in the cantonment area in the San Antonio River watershed. The ROI for water resources includes the project sites and surrounding areas. Water usage and stormwater are addressed in Section 4.11.

#### **4.6.1.1 Climate**

The climate is Mediterranean and generally semiarid (US Army 2004a). Hot periods of low humidity typically begin in mid-May and occur with increasing frequency into mid-October. Cold periods usually occur by mid-November, although freezes can occur earlier. Most rain falls from December through March. Rain concludes in April or May and is followed by a dry period lasting six to seven months. The Cantonment lies in the rain shadow of the Santa Lucia Mountains and averages only about 19 inches of precipitation annually.

#### **4.6.1.2 Surface Water**

The major water courses of Fort Hunter Liggett are the San Antonio and the Nacimiento Rivers (US Army 2004a). These distinctly linear drainages are about five miles apart and flow southeast.

The San Antonio River watershed on Fort Hunter Liggett includes all or major portions of the cantonment area and approximately the eastern half of FHL (US Army 2004a). Water flow in area rivers and streams is generally seasonal. The San Antonio River is three quarters of a mile from proposed project sites. Sulphur Springs Creek, a tributary of the San Antonio River, is more than a quarter mile from the project sites. The water courses have experienced minor flooding in the past that did not affect the project sites. Small grassy drainages or drainage ditches are evident at or near each project site and carry stormwater flow, eventually to San Antonio River (Clark 2006).

#### **4.6.1.3 Groundwater**

The Jolon Fault separates the Lockwood Groundwater Basin to the east from the San Antonio Basin to the west and prevents the waters of the two basins from mixing.

#### **4.6.1.4 Water Quality Management**

The Fort Hunter Liggett Environmental Division maintains an Installation Spill Contingency Plan that explains procedures to be followed if a hazardous material is released (US Army 2004a). The installation has implemented the Fort Hunter Liggett stormwater pollution prevention plan (SWPPP), which primarily addresses industrial activities and requires separate permits and individual SWPPPs for certain projects. Hazardous and toxic substances are discussed further in Section 4.12.

### **4.6.2 Environmental Consequences**

#### **4.6.2.1 Alternatives 1, 2, and 3**

Potential impacts on water resources are similar for all alternatives.

Short-term minor adverse effects are expected on surface water and groundwater during construction. Disturbed soils may be exposed to stormwater runoff during construction, resulting in the potential for the runoff to carry sediments or contaminants from accidental spills into nearby surface waters and groundwater. To address these effects, the Army would comply with installation plans designed to protect water quality.

The project would disturb greater than one acre of soil. As a protection measure, the Army would submit a notice of intent to the State Water Resources Control Board and would obtain a National Pollutant Discharge Elimination System General Construction Stormwater Permit that would meet all the minimum requirements set forth in the waste discharge requirements of the permit. The Army would comply with all regulatory requirements, including preparation and implementation of a project-specific SWPPP that would include BMPs developed to minimize potential impacts associated with increased runoff. Erecting a silt fence is an example of a BMP that could be implemented to filter water running off the project site.

Long-term minor adverse effects are expected on groundwater during operations. The project would increase the area of impervious surface by approximately 2.1 acres, thereby decreasing the area of vegetated land. This could decrease the rate of groundwater recharge in the cantonment area. However, because most of the cantonment is undeveloped, much of the runoff would continue to flow into grassy ditches and farther into the San Antonio River; groundwater recharge would not change dramatically.

Although Alternatives 1 and 3 would improve upon existing parking areas as necessary to accommodate the proposed operations, additional parking area development would be necessary under Alternative 2 and could be a potential source of petroleum, oils, and lubricants (POLs). This potential source would continue under Alternatives 1 and 3, as usage of these existing parking areas would increase. Long-term minor adverse effects are expected on surface and groundwater quality due to increased POLs present in surface water runoff from the additional and improved paved parking area.

The project is not expected to alter flooding conditions. The sites would be designed with appropriate grading and leveling to prevent flooding from occurring on-site and off-site. The proposed action would increase runoff that may require making improvements to stormwater infrastructure to further reduce the potential for floods. Stormwater infrastructure is discussed in Section 4.11.

#### **4.6.2.2 No Action Alternative**

Under the No Action Alternative, there would be no changes to the project area. There would be no impacts on water resources.

## **4.7 BIOLOGICAL RESOURCES**

### **4.7.1 Affected Environment**

The biological resources discussed in this section are vegetation, sensitive habitats, wildlife, and special status species. The biological resource ROI for the proposed project includes the project sites (Figure 3-1) plus a 500-foot buffer. The descriptions of biological resources at Fort Hunter Liggett are based on the following:

- Literature reviews;
- The CDFG California Natural Diversity Data Base (CNDDDB) (CNDDDB 2006) (Appendix C);
- The California Native Plant Society (CNPS) rare species list (CNPS 2006).

The status of biological resources in the cantonment area of Fort Hunter Liggett was also gathered from the Fort Hunter Liggett Integrated Natural Resources Management Plan (INRMP) (US Army 2004a), from the Programmatic Biological Assessment for Activities Conducted at Fort Hunter Liggett (US Army 2004b), and from the Programmatic Biological Opinion for Activities Conducted at Fort Hunter Liggett (USFWS 2005).

#### **4.7.1.1 Regulatory Overview**

Biological resources in the project ROI were evaluated in accordance with the applicable provisions of the statutes, executive orders, permits, and regulations detailed below.

##### **Federal Regulations**

- The Migratory Bird Treaty Act of 1918 (MBTA);
- The Endangered Species Act of 1973 (ESA);
- Fish and Wildlife Conservation Act, 16 USC 2901;
- Executive Order 13186: Responsibilities of Federal Agencies to Protect Migratory Birds (January 10, 2001); and
- EO 13112: Invasive Species (February 3, 1999).

##### **State Regulations**

- California Endangered Species Act, California Fish and Game Code Sections 2050-2097.

#### **4.7.1.2 Resource Overview**

The proposed action and alternatives would occur in a small portion of the cantonment area near existing buildings or previously disturbed areas, although each site includes grasslands and woodland vegetation communities.

##### **Vegetation**

The three main habitats within the ROI are oak woodland, annual grassland, and developed lands (roads, buildings, and structures). Vegetation communities and habitats are identified according to

the *California Wildlife Habitat Relationships System* by the CDFG (Laudenslayer 1988) and *A Manual of California Vegetation* (Sawyer and Keeler-Wolf 1995).

The Alternative 1 site supports annual grasslands that have been previously disturbed, as well as several large and mature blue and valley oak trees. The Alternative 2 site supports the largest and densest blue oak woodland of the three sites, as well as a ground cover of annual grasslands. The Alternative 3 site supports blue oak woodland on its hilly northeastern side, with scattered mature valley oaks on the southwest side, as well as annual grasslands as ground cover and in open areas; this site has parking lots on the northeast edge (Clark 2006).

### **Sensitive Habitats**

Valley Oak Woodland is considered a CNDDDB sensitive natural community (CNDDDB 2006). This habitat likely occurred historically in the cantonment, and many scattered mature valley oak trees remain, including a scattered few in the proposed sites. Valley Oak Woodland provides important habitat for wildlife (Laudenslayer 1988). This woodland alliance was formerly extensive throughout portions of California, but high quality stands have been virtually eliminated by agriculture, firewood harvesting, and urbanization.

### **Wildlife**

The ROI is likely to support a number of wildlife species, particularly in the less degraded woodland areas that are less exposed to human use and development. Species observed during the site visit are western blue-bird (*Sialia mexicana*), acorn woodpecker (*Melanerpes formicivorus*), band-tailed pigeon (*Columba fasciata*), mourning dove (*Zenaida macroura*), American crow (*Corvus brachyrhynchos*), yellow-billed magpie (*Pica nuttalli*), barn swallow (*Hirundo rustica*), American robin (*Turdus migratorius*), desert cottontail (*Sylvilagus auduboni*), and California ground squirrel (*Spermophilus beecheyi*).

### **Special Status Species**

Special status species are those that are listed by the federal or state government as threatened or endangered, or species that are considered federal or state species of concern or protected species. Special status species include both migratory birds and those plants on the California Native Plant Society (CNPS) Lists 1 and 2. A list of federal- and state-listed species and CNPS List 1 and 2 plants that are likely to occur on Fort Hunter Liggett is included as Appendix D, Table D-2. The list is compiled from the INRMP (US Army 2004a) and CNDDDB (2006; Appendix C). In addition, many migratory birds are found on Fort Hunter Liggett, ranging from songbirds to hawks, as well as additional state species of concern.

Sensitive species with the potential to occur in the ROI include purple amole, San Joaquin kit fox (*Vulpes macrotis mutica*), and migratory birds, including the western burrowing owl (*Athene cunicularia*). No CNPS List 1 or 2 plant species or state species of concern are known to be in or near the project sites.

**Federally Listed Species.** Suitable habitat for San Joaquin kit fox is present at the sites for Alternatives 1 and 3. Tree cover at Alternative 2 makes this site marginal for kit foxes. No kit foxes have been sighted in the cantonment and Infantry Road during the regular nighttime surveys that have been conducted since 1996. The most recent kit fox sightings in or near Fort Hunter Liggett were in January 2000, more than six miles from the project site (Clark 2006). Suitable habitat for purple amole is present at all three sites, all of which were surveyed for purple

amole in May 2006. Purple amole occurs more than 100 feet from the Alternative 1 site, no purple amole was found at the Alternative 2 site, and purple amole at the Alternative 3 site includes a very small occurrence on a knoll.

**CNPS List 1 and 2.** Marginal to suitable habitat is found in the ROI in all three alternatives sites for the following CNPS List 1B species: dwarf calycadenia (*Calycadenia villosa*), Obispo Indian paintbrush (*Castilleja densiflora* ssp. *obispoensis*), pale-yellow layia (*Layia heterotricha*), shining navarretia (*Navarretia nigelliformis* ssp. *radians*), prostrate navarretia (*N. prostrate*), slender pentachaeta (*Pentachaeta exilis* ssp. *aeolica*), hooked popcorn flower (*Plagiobothrys uncinatus*), and caper-fruited tropidocarpum (*Tropidocarpum capperideum*). Alternative 1 has the poorest habitat for these plants due to soil compaction and previous development. None of these plants has been found in or near the three alternatives sites.

**Migratory Birds.** Many birds protected by the MBTA may roost and nest in the oak trees or grasslands within the ROI for all three sites. Migratory birds are most sensitive to harm during their nesting season. The western burrowing owl is a federal bird of conservation concern (USFWS 2002) and a state species of concern; there is suitable habitat for this species within the ROI. Burrowing owls have been sighted during kit fox surveys in the Nacimiento and San Antonio Valleys, but none have been sighted in the cantonment area and Infantry Road during surveys conducted since 1996.

#### 4.7.2 Environmental Consequences

The proposed action would have short-term and long-term minor adverse impacts on biological resources at any of the three alternative sites. Construction-related noise, dust, and human activity would result in short-term minor impacts. Loss of grassland or woodland habitat and mature oak trees would result in long-term minor impacts. Wildlife species associated with mature oaks and oak woodland habitat would be lost or displaced from the eight-acre project area, and foraging and burrowing habitat would be lost. At each alternative site, the habitat loss and wildlife displacement would occur in areas that lie adjacent to other human use areas, such as roads and buildings, which minimizes habitat fragmentation. There is low potential for loss of CNPS List 1 and 2 plants based on current known locations that occur outside the cantonment. Endangered Species Act consultation with the US Fish and Wildlife Service would be required to address potential San Joaquin kit fox habitat and proximity to known purple amole sites. Preconstruction surveys would be required to identify if San Joaquin kit foxes were active at or near the project sites, as addressed in protection measures, Section 2.2.3.5. Migratory birds would be avoided by protection measures addressed in Sections 2.2.3.5 and 2.2.3.7, specifically, to conduct preconstruction surveys for burrowing owls and to remove trees outside the bird nesting season. Migratory bird nesting season is roughly February through July. Protection measures would provide for a landscaping plan to reseed disturbed undeveloped construction areas and to replace lost oak trees (Section 2.2.3.7).

After construction at any one of the alternative sites, the cantonment would continue to support large and relatively undisturbed areas of Blue Oak Woodland and Annual Grassland habitat, and scattered mature valley oak trees. The Training Areas that surround the cantonment would continue to remain largely undeveloped to support ongoing military training.

#### **4.7.2.1 Alternative 1**

Site clearing would likely result in loss of several mature blue and valley oak trees, though protection measures would limit loss to those that are unavoidable. The southern one-acre of Blue Oak Woodland habitat north of the project site would likely be disturbed by construction within the eight-acre project site. Grassland at the site is highly disturbed, and rare plants are unlikely to be found there. Suitable denning habitat for San Joaquin kit fox and burrowing owl is available at the site, but there is a low potential for disturbance of these species, based on prior surveys. Purple amole near the site would be marked for avoidance and would be provided with a minimum 50-foot buffer from construction activities.

#### **4.7.2.2 Alternative 2**

Site preparation would result in loss of many mature blue oak trees in up to eight acres of Blue Oak Woodland that would be cleared to level the site for construction. Based on current knowledge, no known CNPS 1 or 2 plant populations are known from the site but there is suitable habitat for species previously described. Were this site to be chosen, a rare plant survey would be conducted before construction to identify if any rare plants occur on the site. Marginal to poor denning habitat for San Joaquin kit fox and burrowing owl is present due to cover and shade from Blue Oak Woodland habitat. Purple amole was not detected during May 2006 surveys and is not likely to occur in abundance due to cover and shade from oaks.

#### **4.7.2.3 Alternative 3**

Impacts on oak trees, Blue Oak Woodland, and rare plants is similar to those of Alternative 2; impacts on San Joaquin kit fox and burrowing owl are similar to those of Alternative 1. Purple amole is known to be present in the area of a knoll at this site. If Alternative 3 were chosen, proposed facility layout would be designed around these communities. If avoidance could not be accomplished, the Army would enter into formal Section 7 consultation with US Fish and Wildlife Service and would implement mitigation measures identified through that process to address loss of several plants.

#### **4.7.2.4 No Action Alternative**

The No Action Alternative would result in no change to the existing environment and would have no foreseeable impact on biological resources.

## **4.8 CULTURAL RESOURCES**

### **4.8.1 Affected Environment**

Cultural resources can be prehistoric, historic, or Native American. The ROI for cultural resources is the area of potential effect (APE), which encompasses the surfaces and depths that would be disturbed by construction activities at the various project sites. The APE would be expanded beyond this at each alternative site should the location be within the viewshed of a NRHP-listed or -eligible historic property or a Native American traditional cultural property (TCP). According to the Fort Hunter Liggett cultural resources database, there are no previously recorded cultural resources within any of the alternative sites. However, the most recent survey of these areas was a five-percent sample survey conducted in 1980 (Zahniser and Roberts 1980). It is not clear whether the current sites were included as part of this sample.

Due to the archaeologically sensitive nature of the region and the age of the most recent survey, discussed further below, as well as the depositional geologic environment of the Alternative 1 APE, a pedestrian survey and subsurface testing program is planned before project activities. Results from these efforts will be incorporated into this NEPA analysis.

#### **4.8.1.1 Regulatory Context**

The project sites are federal property and thus federal and military regulations, policies, and laws apply, including the following:

- Sections 106 and 110 of the National Historic Preservation Act (NHPA);
- Native American Graves Protection and Repatriation Act;
- American Indian Religious Freedom Act;
- Archaeological Resources Protection Act;
- Executive Order 13007;
- Executive Order 13175;
- White House Memorandum for Government-to-Government Relations with Native American Tribal Governments (dated April 29, 1994);
- The Department of Defense's Annotated Policy on American Indians and Alaska Natives (dated October 27, 1999); and
- US Army Reserve Integrated Cultural Resources Management Plan (ICRMP [US Army Reserve, undated a]).

Section 106 and the ICRMP provide the basis for assessing project-related impacts on cultural resources.

#### **4.8.1.2 Resource Overview**

This discussion is based primarily on past cultural resources and environmental studies for the Fort Hunter Liggett area, particularly the cultural resources overview of Fort Hunter Liggett by Malcolm Margolin (Margolin 1997). Supplementing these reports are the Fort Hunter Liggett cultural resources database, a sacred lands file search through the Native American Heritage Commission (NAHC), and a May 3, 2006, site visit to the APEs. There also has been a request for local Native American contacts. During the site visit, ground surfaces of the APEs were observed, but a formal cultural resources survey of the area was not conducted.

### **Alternative 1 Site**

The Alternative 1 site is not within the viewshed of any NRHP-eligible or -listed sites or TCPs (Moore 2006). Therefore, the APE of Alternative 1 is considered to be the horizontal expanse and vertical depth of disturbance expected from construction.

**Archaeological Resources.** The eastern end of the Alternative 1 APE is within an area of colluvial (loose, rocky) deposition. This creates the possibility that archaeological resources may be buried beneath the rocky soils of the APE. Environmental Research Associates (ERA) conducted an archaeological survey of Fort Hunter Liggett in 1980 to assess the effects of military activities on archaeological and historic resources (Zahniser and Roberts 1980). However, the document is too old to be relied on for this analysis. Additionally, there is a lack of survey coverage maps in the document to indicate which specific areas were covered by the survey.

A historic 1957 aerial photograph shows that the APE for Alternative 1 included a built environment of what appear to be military barracks. This would make the structures somewhere between 49 and 57 years old. Although the structures are no longer in place, subsurface remains of these structures may be present. During the site visit, concrete foundation-type blocks and metal debris were observed within the APE. These surface remnants may be associated with the structures seen in the 1957 aerial photograph.

The Army wrote to local historic interest groups on June 5, 2006, and requested that they notify the Army of any concerns regarding the project site. As of this publication, no responses have been received.

Based on this assessment, prior to site work the Army and a subcontractor are planning a new pedestrian survey and subsurface testing program at the Alternative 1 site to determine the presence or absence of archaeological or buried architectural resources within the APE.

**Native American Resources.** No Native American resources have been identified at this site. While Fort Hunter Liggett has been determined to lie outside the traditional territory of any federally recognized tribe, the Army contacted the NAHC to request a sacred lands file search to identify any TCPs that may exist on or near the three alternative project sites. In a letter dated May 24, 2006, the NAHC responded with a list of Native Americans culturally affiliated with Fort Hunter Liggett. All interested parties were contacted by letter on June 5, 2006, and requested to notify the Army of any TCPs or other cultural concerns regarding the project sites. Appendix A includes the initial correspondence to the NAHC; follow on correspondences to the individual points of contact were not included to limit publication of personal information. As of this publication, no responses have been received.

### **Architectural Resources.**

There are no architectural resources within the Alternative 1 site.

### **Alternative 2 Site**

The Alternative 2 site is within the viewshed of the NRHP-listed Hacienda. The Alternative 2 site is not within the viewshed of any known TCPs (Moore 2006). Therefore, the direct APE of Alternative 2 is considered to be the horizontal expanse and vertical depth of disturbance expected from construction. An indirect APE is extended to the viewshed of the Hacienda.

**Archaeological Resources.** As with the Alternative 1 site, it is not possible to determine whether the Alternative 2 site was surveyed by ERA. The western end of the direct APE extends into a

slumping drainage. This creates the possibility that archaeological resources may be buried beneath the silty soils of the direct APE.

A historic 1957 aerial photograph shows that the eastern portion of the Alternative 2 site included a built environment of what appear to be a row of military structures. The structures were built after 1949 and before 1957, since they do not appear on a 1949 historic aerial photograph. This would make the structures somewhere between 49 and 57 years old. Although the structures are no longer in place, subsurface remains of these structures may be present.

No additional surveys of the Alternative 2 site are planned. If the Alternative 2 site is selected for construction of the AFRC, a cultural survey similar to that planned for the Alternative 1 site would be conducted to assess the presence or absence of archaeological resources.

**Native American Resources.** No Native American resources have been identified at this site. The Army has conducted the Native American coordination efforts described for the Alternative 1 site.

**Architectural Resources.** During the May 2006 site visit, large concrete foundation-type block was observed in the eastern portion of the direct APE and what may have been a modern barbeque pit in the western portion. The concrete could be associated with the structures seen in the 1957 aerial.

The Alternative 2 direct APE, specifically the western portion, is within the viewshed and historic landscape of the Hacienda NRHP site. The Secretary of the Interior considers modern construction within the historic landscape of a NRHP-listed or -eligible structure to be an impact on that resource (Weeks and Grimmer 1995).

Local historic interest groups were contacted by letter on June 5, 2006, and requested to notify the Army of any concerns regarding the project sites. As of this publication, no responses have been received.

No additional surveys of the Alternative 2 site are planned. If the Alternative 2 site is selected for construction of the AFRC, a cultural survey similar to that planned currently for the Alternative 1 site would be conducted to assess the barbeque pit and concrete foundation-type block.

### **Alternative 3 Site**

The Alternative 3 site is not within the viewshed of any NRHP-eligible or -listed sites or TCPs (Moore 2006). However, a structure of two-stories or more constructed atop the hill at the Alternative 3 site could be within the viewshed of the Hacienda, described under Alternative 2. Therefore, the direct APE of Alternative 3 is considered to be the horizontal expanse and vertical depth of disturbance expected from construction. An indirect APE is extended to the viewshed of the Hacienda.

**Archaeological Resources.** As with the Alternative 1 site, it is not possible to determine whether the Alternative 2 site was surveyed by ERA.

The APE is not within a depositional environment. As such, the possibility of buried archaeological resources is low.

No additional surveys of the Alternative 3 site are planned.

**Native American Resources.** No Native American resources have been identified at this site. The Army has conducted the Native American coordination efforts described for the Alternative 1 site.

**Architectural Resources.** A historic 1957 aerial photograph indicates that the northern portion of the Alternative 3 APE included what appears to be a vehicle parking lot. There is no built environment within the Alternative 3 site today, other than two paved parking lots.

As stated above, a structure of two stories or more constructed atop the hill in the southeastern corner of the APE would most likely be visible from the Hacienda NRHP site. The Secretary of the Interior considers construction within the historic landscape of a NRHP-listed or -eligible structure an impact on the resource (Weeks and Grimmer 1995).

Local historic interest groups were contacted by letter on June 5, 2006, and requested to notify the Army of any concerns regarding the project site. As of this publication, no responses have been received.

No additional surveys of the Alternative 3 site are planned.

#### **4.8.2 Environmental Consequences**

The NHPA and its regulations state that an undertaking has a significant adverse effect on a historic property when that undertaking can alter those characteristics of the property that qualify it for inclusion in the NRHP or can diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Consultation between the Army and the California SHPO regarding NRHP-eligibility of resources would be completed before construction begins. A project's effects on cultural resources regulated by the American Indian Religious Freedom Act or the Native American Graves Protection and Repatriation Act can also be considered significant impacts.

No impacts on cultural resources are expected from the preferred alternative, Alternative 1, following completion of a planned survey and consultations with SHPO. If Alternative 2 or 3 were chosen, then a site survey would be conducted and the protection measures described below would be implemented, resulting in no impact on archaeological resources and a potential minor adverse impact on architectural resources.

##### **4.8.2.1 Alternative 1**

#### **Archaeological Resources**

Although no archaeological sites have been identified within the Alternative 1 APE, due to the possibility of buried archaeological resources, this alternative could adversely affect archaeological resources. However, the planned survey, discussed in Section 2.2.3.8 as an environmental protection measure, as well as the resultant consultation with the SHPO is expected to mitigate for any impacts on cultural resources. As such, no impacts on archaeological resources are expected from the preferred alternative.

#### **Native American Resources**

No adverse effects are expected. No Native American concerns or TCPs have been identified at the time of publication of this report. Additionally, there are no federally recognized tribes associated with Fort Hunter Liggett. As such, no impacts on Native American resources are expected from this alternative.

#### **Architectural Resources**

There are no architectural resources within the Alternative 1 APE, so no impacts on architectural resources are expected.

#### **4.8.2.2 Alternative 2**

##### ***Archaeological Resources***

Expected impacts under Alternative 2 are similar to those expected under Alternative 1.

##### ***Native American Resources***

No adverse effects are expected. Impacts on Native American resources under Alternative 2 would be the same as those described under Alternative 1.

##### ***Architectural Resources***

Neither the source nor the age of the concrete foundation-type block and the barbecue pit within the Alternative 2 site are known, and demolishing them could be a potentially long-term adverse impact. However, the survey provided for in the protection measures discussed in Section 2.2.3.8 would minimize this impact.

A structure within the western portion of the direct APE could impact the historic landscape of the Hacienda within the indirect APE. However, these impacts would be minimized through additional consultations with SHPO, as outlined in the environmental protection measure discussed in Section 2.2.3.8.

#### **4.8.2.3 Alternative 3**

##### ***Archaeological Resources***

Expected impacts under Alternative 3 are similar to those expected under Alternatives 1 and 2.

##### ***Native American Resources***

No adverse effects are expected. Impacts on Native American resources under Alternative 3 are the same as those described under Alternative 1.

##### ***Architectural Resources***

There are no architectural resources within the direct APE of Alternative 3, so no impacts on architectural resources within the direct APE are expected.

A structure atop the hill within the direct APE could affect the historic landscape of the Hacienda within the indirect APE. However, these impacts would be minimized by limiting the height of the new AFRC so as not to be visible to the Hacienda, or by constructing the building in the lower flat portion of the direct APE outside of the southeast corner. If built here, the AFRC would not be visible from the Hacienda and eliminating any impacts on the Hacienda. Should the AFRC or portions of it be constructed within the viewshed of the Hacienda, the environmental protection measure discussed in Section 2.2.3.8 would minimize any impacts on architectural resources.

#### **4.8.2.4 No Action Alternative**

Under the No Action Alternative, no construction or associated ground disturbance would occur. As such, no impacts on cultural resources would occur.

## **4.9 SOCIOECONOMICS AND ENVIRONMENTAL JUSTICE**

### **4.9.1 Affected Environment**

This section is a description of the socioeconomic conditions of the ROI, including economic development, demographics, housing, quality of life, environmental justice, and the protection of children. The geographical area in which the predominant social and economic impacts of the project alternatives would occur defines the ROI for this study. The major factors used to determine the ROI are the residency distribution of the site's employees, commuting distances and times, and the location of businesses providing goods and services to the site and their personnel and dependents. Based on these criteria, the ROI for the proposed action is the Salinas metropolitan statistical area (MSA), which encompasses Monterey County.

The baseline year for socioeconomic data is 2004. Data were obtained primarily from the 2004 Census, but when it was available, more recent data were used to best characterize the current conditions of the socioeconomic ROI. For example, unemployment rates are presented for April 2006, the most recent statistical data.

#### **4.9.1.1 Economic Development**

In 2006, the unemployment rate in the Salinas MSA was 8.3 percent, with 212,200 civilian labor force (EDD 2004). In 2006, the unemployment rate for Monterey County was 7.2 percent, slightly above the 2005 estimate of 7.0 percent (EDD 2006).

In April 2006, beside the government sector, the largest source of jobs in the ROI was farm jobs, which generated 26.4 percent of total employment in the Salinas MSA. Trade, transportation, and utilities generated 14.5 percent of total employment, and the leisure and hospitality sector provided 11.9 percent of total employment in the Salinas MSA. Educational and health services accounted for 7.0 percent of the total employment in the Salinas MSA (EDD 2006). In 2004, the per capita personal income in the Salinas MSA was \$33,952, 13 percent higher than the per capita personal income for 2000 (BEA 2004).

#### **4.9.1.2 Demographics**

Total population for 2000 was reported at 401,762 for the Salinas MSA, an increase of 11.5 percent since 1990 (US Census Bureau 1990, 2000a). For 2004, population estimates were reported for Monterey County. Total population for that year was estimated at 392,192 for Monterey County, a decrease of 2.4 percent since 2000 (US Census Bureau 2004a).

#### **4.9.1.3 Housing**

##### ***On-Post***

There are between 23 to 25 unoccupied family housing units at Fort Hunter Liggett. Additionally, there are barracks facilities, where unaccompanied Soldiers can be hosted, in Building 229 (72 rooms, each with its own bathroom) and Building 295 (114 rooms, with shared latrines, one per 10 rooms) (Carpenter 2006).

## Off-Post

There were 136,549 housing units in Monterey County in 2004, an increase of 3.6 percent from 2000. Table 4-4 provides a summary of the occupancy characteristics of housing in Monterey County. The rate of vacant housing units has also increased from 8.0 percent in 2000 to 8.3 percent in 2004. The rate of owner-occupied units has been slightly higher than the rate of renter-occupied units, for both years.

**Table 4-4**  
**Characteristics of the Monterey County Housing Units**

	Monterey County	
	2000	2004
Total housing units	131,708	136,549
Occupied housing units	121,236	125,177
Vacant housing units	10,472	11,372
Owner-occupied	57,073	64,971
Renter-occupied	54,213	60,206

US Census Bureau 2000b, 2004b

### 4.9.1.4 Quality of Life

#### **Law Enforcement Services**

The Fort Hunter Liggett police department provides law enforcement. The department employs 22 sworn officers and 1 reserve officer (seasonal). At least three officers must be on duty during each 12-hour shift.

Police department services include law enforcement, crime prevention, criminal investigation, general patrols, and traffic enforcement. The department also has a Special Emergency Response Team, consisting of seven people who perform search and rescue activities. The department also has a jail, which functions as a 72-hour holding facility.

#### **Fire Protection Services**

Fort Hunter Liggett operates its own fire department that has a full crash fire rescue and wildland firefighting unit. The department's mission is to provide fire prevention and protection services for all Fort Hunter Liggett facilities, personnel, natural resources, and tenant units.

There is one fire station at Fort Hunter Liggett, in the cantonment area. There are 84 fire hydrants in the cantonment area, and each produces 1,000- to 1,600-gallons per minute fire flow. During winter, the Lockwood Fire Station is closed and the Fort Hunter Liggett fire department responds to its calls and to others in the Lockwood Valley. The Fort Hunter Liggett fire department also serves Jolon.

The Fort Hunter Liggett fire station employs 25 full-time firefighters, 24 of whom were trained as emergency medical technicians; 10 are trained and certified in hazardous material and waste safety. The Fort Hunter Liggett fire station responds to approximately 135 emergency calls annually.

The Fort Hunter Liggett fire department has mutual and automatic aid agreements with other agencies within the region, in the event that additional assistance is needed. Agencies that have

mutual aid agreements with the Fort Hunter Liggett fire department include the California Department of Forestry and Fire Protection and the United States Forest Service. Agencies that have automatic aid agreements with Fort Hunter Liggett are Camp Roberts military installation and the South Monterey County Fire Protection District. The South Monterey County Fire Protection District provides fire protection primarily to rural properties.

### **Medical Services**

Fort Hunter Liggett relies on its fire department for emergency medical technician services. The closest 24-hour emergency care facility is the George L. Mee Memorial Hospital, 23 miles northeast in King City. A medical clinic including ambulance service is on-post on Bradley Drive between Stuart Road and Infantry Road. This clinic might be staffed only during military training events.

### **Schools**

There are 21 school districts within Monterey County with 23 elementary schools, 11 middle schools, and 9 high schools. San Antonio Union School in Lockwood is the closest school to Fort Hunter Liggett, at approximately 11 miles to the east. San Antonio Union School had a 2005-2006 enrollment of 200 students (San Antonio Union School District 2006).

The high school nearest to Fort Hunter Liggett is King City High School. Total enrollment at King City High School for the year 2005-2006 was 1,045 (Martinez 2006).

### **Family Support**

Family support services within Monterey County are provided by city, county, and state governments, as well as by local churches and other organizations. There is a variety of services offered, including adoption and foster care, child care resources, disability services, disaster assistance, family planning services, housing and shelter resources, welfare assistance, health care assistance, and drug and alcohol dependency counseling.

There are various social service organizations in Monterey County. Service providers include the American Red Cross Monterey County Chapter and Head Start Child and Family Services. California Rural Legal Assistance advocates on behalf of migrant farm workers and other low-income people regarding employment and housing issues. A post chapel, within the cantonment, is available on the installation as well.

### **Shops and Services**

There is a variety of major department stores, shopping centers, and individual shops within Monterey County. On-post there are community facilities such as a commissary, post office, library, and post exchange.

### **Recreation**

Recreational facilities within the region include the San Luis Reservoir State Recreation Area, which includes the San Luis and Los Banos Reservoirs, Lakes San Antonio and Nacimiento Recreation Areas, and Pinnacles National Monument.

There are a variety of recreational facilities within the cantonment area and Miller Ranch. Cantonment area recreational facilities include a soccer field, swimming pool, tennis courts,

theater, bowling center, a football and baseball field (joint use), basketball, volleyball, and racquetball courts, physical fitness center, and a recreation center. There is a primitive campground area near the main entrance. The Army also allows hunting and fishing on-post.

#### 4.9.1.5 Environmental Justice

On February 11, 1994, President Clinton issued Executive Order 12898, Federal Actions to Address Environmental Justice in Minority and Low-Income Populations. It is designed to focus the attention of federal agencies on the human health and environmental conditions in minority and low-income communities. Environmental justice is analyzed to identify potential disproportionately high and adverse impacts on minority and low-income populations from proposed actions and to identify alternatives that might mitigate the impacts.

With the exception of the Hispanic or Latino groups, the ROI has a lower percentage of minority groups than both California and the United States as a whole. The ROI has fewer individuals reporting to be Black or African American and American Indian and Alaska Native than in California or the United States. The percentage of Asian in the ROI is lower than for California but higher than for the United States as a whole. Table 4-5 summarizes these statistics.

The Census Bureau bases the poverty status of families and individuals on 48 threshold variables, including income, family size, number of family members under the age of 18 and over 65, and amount spent on food. In 2004, approximately 15.9 percent of the Monterey County residents were classified as living in poverty, lower than for California and lower than the United States as a whole.

**Table 4-5  
Race, Ethnicity, and Poverty Status for the Monterey County, California, and  
the United States (2004)**

	Monterey County	California	United States
White	54.0%	63.0%	75.6%
Black or African American	2.3%	6.1%	12.2%
American Indian and Alaska Native	1.2%	0.7%	0.7%
Asian	7.0%	12.1%	4.2%
Native Hawaiian and other Pacific Islander	0.5%	0.3%	0.1%
Hispanic or Latino <sup>1</sup>	51.0%	35%	14.2%
Other	32.5%	14.5%	5.2%
Persons living in poverty	15.9%	13.3%	13.1%

Source: US Census Bureau 2004a, 2004c, 2004d, 2004e, 2004f

<sup>1</sup>Persons of Hispanic or Latino origin may be of any race; because of this, the sum of the percentages does not equal 100.

#### 4.9.1.6 Protection of Children

Executive Order 13045 seeks to protect children from disproportionately incurring environmental health or safety risks that might arise as a result of Army policies, programs, activities, and standards. Environmental health risks and safety risks to children are those that are attributable to substances that a child is likely to come into contact with or to ingest.

Family housing units are present at Fort Hunter Liggett. The closest residential areas with children outside of Fort Hunter Liggett are Lockwood, 12 miles to the east, and King City at 23 miles to the northeast.

## **4.9.2 Environmental Consequences**

### **4.9.2.1 Alternative 1**

Short and long-term minor adverse and beneficial impacts are expected. The new facility would be staffed with 41 full-time employees (23 of which would be military and would be restationed and relocated to Fort Hunter Liggett), and 162 part-time reservists who would be restationed at Fort Hunter Liggett. The remaining 18 civilian full-time employees would be given the option for relocation from their current Camp Parks location, and would otherwise be hired locally.

#### ***Economic Development***

The project would result in minor long-term beneficial impacts on the economy in the area. The proposed action would increase employment and regional spending during construction and operations.

#### ***Demographics***

Long-term minor adverse impacts on demographics in the ROI are expected. Of the 41 full-time employees, those who are military personnel would be relocated to the area, and civilians would be given the option to relocate. Even if all the full-time employees were to relocate to the ROI, this number is negligible, compared to the population currently within the ROI.

#### ***Housing***

Long-term minor adverse impacts on housing are expected. The small number of new full-time employees to the region would negligibly affect housing demand. The full-time reservists could otherwise live in an available housing unit at Fort Hunter Liggett.

#### ***Quality of Life***

Alternative 1 would have long-term minor impacts by increasing the demand on schools, law enforcement, medical services, family support services, recreation, or other special programs.

#### ***Environmental Justice***

There would be no effect on environmental justice, and there would be no disproportionately high or adverse human health or environmental effects on minority or low-income populations as a result of Alternative 1.

#### ***Protection of Children***

Short-term minor adverse effects on protection of children are expected. During construction, there would be a potential safety hazard to children living on-post. Family housing units are approximately 2,000 feet north of the Alternative 1 site. During construction, safety measures stated in 29 CFR 1926, Safety and Health Regulations for Construction, and Army Regulation 385-10, Army Safety Program, would be followed to protect the health and safety of residents. Barriers would be placed around construction sites to deter children from entering these areas.

#### **4.9.2.2 Alternative 2**

Under Alternative 2, impacts similar to those described under Alternative 1 are expected for demographics, housing, quality of life, and environmental justice.

Family housing units are approximately 2,000 feet east of the Alternative 2 site. Safety measures stated under Alternative 1 would be implemented during construction to protect the health and safety of residents and to deter children from entering the construction site.

#### **4.9.2.3 Alternative 3**

Impacts under Alternative 3 are similar to those described for Alternative 1. The proposed site for Alternative 3 is the farthest of the three alternatives from family housing units.

#### **4.9.2.4 No Action Alternative**

Because there would be no additional personnel or changes to socioeconomic conditions in the ROI, no impacts are expected under the No Action Alternative.

## **4.10 TRAFFIC AND TRANSPORTATION**

### **4.10.1 Affected Environment**

Fort Hunter Liggett is in Monterey County in west-central California in a remote area, approximately 70 miles southeast of the city of Monterey, 23 miles southwest of King City, and 12 miles west of Lockwood. The proposed action would occur in the cantonment area. The ROI for transportation is the cantonment area and regional roads used to access Fort Hunter Liggett.

#### **4.10.1.1 Roadways**

The major regional travel routes to Fort Hunter Liggett are US Highway 101 and Highway 1. Primary access to the installation is via Jolon Road (County Road G14), connecting with Highway 101 near King City and again at Bradley, and secondarily via Nacimiento-Fergusson Road originating at Highway 1 near the town of Lucia (NPS 2004).

Fort Hunter Liggett has approximately 702 miles of maintained roads and tank trails (US Army 2004a). Mission Creek Road, Del Venturi Road, and Infantry Road are important links in the installation's roadway network. Mission Creek Road and Infantry Road connect the cantonment area with more remote portions of Fort Hunter Liggett (NPS 2004). With a few exceptions, roads outside of the cantonment area have restricted public access and require a permit for entry.

The Alternative 1 site is along Infantry Road and north of the road's intersection with Blackhawk Street. The Alternative 2 site is north of the Infantry Road and Bradley Drive intersection. The Alternative 3 site also is along Infantry Road and between Blackhawk Street and 7th Division Road.

#### **4.10.1.2 Traffic**

Level of service (LOS) is a qualitative measure of operating conditions within a traffic stream and their perception by motorists and passengers. Individual LOSs are designated by letters A for most favorable to F for least favorable, with each representing a range of conditions.

Monterey County considers LOS D or better to be acceptable county roadway and intersection operating conditions (Monterey County 2006). Based on daily volumes and capacities, Mission Creek Road and Infantry Road operated at LOS A in 1991 (NPS 2004). Jolon Road operated at LOS A and B in 1995.

### **4.10.2 Environmental Consequences**

#### **4.10.2.1 Alternatives 1, 2, and 3**

Potential impacts on traffic and transportation conditions are the same for all alternatives. There would be short- and long-term minor adverse impacts.

Transportation infrastructure for the alternatives would be designed and constructed in accordance with applicable local, state, and federal roadway regulations/guidelines. As a result, there would be no impacts from hazards due to a roadway design feature, inadequate emergency access, and parking capacity.

During construction, short-term minor adverse impacts on traffic are expected from the workers and the construction equipment. These impacts would be temporary and limited to the duration of construction. As discussed under Section 4.10.1 and shown on Figure 4-1, the cantonment area consists of various corridors allowing for alternate flow patterns if a road should be temporarily closed or if traffic is slowed during construction.

The following components of the alternatives would contribute additional vehicle trips to local roadways:

- The new AFRC includes approximately 41 full-time employees (23 military and 18 civilian). A ratio of one privately owned vehicle (POV) per employee is assumed.
- The 91st TSD supports approximately 162 part-time reservists who would come to Fort Hunter Liggett one weekend per month for training. This training would take place inside the proposed AFRC building, as opposed to at Fort Hunter Liggett training ranges. Because these reservists would be mobilizing to and from Fort Hunter Liggett from different locations and at different times, one POV is assumed per one reservist.
- Six support vehicles would be relocated from Camp Parks to Fort Hunter Liggett. These vehicles would include one five-ton flat bed truck and five General Services Administration vehicles used primarily for transporting Army Reserve band members and equipment. These vehicles would be kept on-post when not in use.

The alternatives would increase the number of vehicles on local roadways during the week, and training would further increase the number of vehicles on local roadways during the weekend. Jolon Road is the primary roadway for accessing the proposed site. The additional traffic from the alternatives would have long-term minor adverse impacts on the LOS for Jolon Road. This corridor is in a remote location with limited traffic flow. Furthermore, Jolon Road is in good condition. Traffic resulting from the project alternatives would not be expected to change the LOS rating for this area. Because public access to the cantonment area is limited, long-term minor adverse impacts on traffic in the cantonment area are expected to be lower than the impacts on Jolon Road. There would be no need for new personnel to access training ranges or more remote areas of Fort Hunter Liggett. Access would be permitted only with proper identification, as is the case now.

#### **4.10.2.2 No Action Alternative**

Under the No Action Alternative, no new personnel or associated POV or military vehicles would be assigned to Fort Hunter Liggett, so there would be no impacts on traffic or transportation.

## **4.11 UTILITIES**

### **4.11.1 Affected Environment**

Utilities are generally connected across the cantonment area and therefore contribute collectively to the overall capacity, use, and storage as a unit. As such, the ROI for this resource is the cantonment area of Fort Hunter Liggett.

#### **4.11.1.1 Potable Water Supply**

Three wells supply Fort Hunter Liggett with its potable water needs—wells 236, 382, and 383. Drinking water is provided primarily by wells 382 and 383, with well 236 as a backup. Connected to the system are two potable water storage tanks, with capacities of 1 million gallons and 200,000 gallons. Together, the three wells draw water from two groundwater basins: the Mission-San Antonio Basin, which consists of approximately 6,000 acres and located completely within the installation boundary, and the Mission-San Antonio Basin, which is estimated to contain 35,000 acre-feet of usable groundwater in storage, with a safe yield of 2,500 acre-feet per year (US Army 2004a).

Water from wells 382 and 383 is treated with chlorine and a corrosion inhibitor prior to being pumped into the distribution and storage system. The installation meets or exceeds federal and state water quality standards (US Army 2004a).

Water mains run throughout the cantonment, connecting buildings to the wells and treatment facility.

#### **4.11.1.2 Liquid Propane Gas**

Liquid propane gas (LPG) is trucked into the installation to refill the 68 LPG aboveground storage tanks that are installed across the developed portion of the installation. The LPG tanks range in size from 250 gallons to 9,200 gallons and are connected to buildings throughout the cantonment via buried pipeline. There are no tanks on the project sites.

#### **4.11.1.3 Wastewater**

The main cantonment area is served by a gravity sewer system and an oxidation lagoon sewer treatment plant (NPS 2004). The sewer lines range in age and condition. For example, there are vitrified clay lines constructed in the 1930s for the Hacienda and new lines installed during the construction of the Spanish Oaks and Milpitas family housing areas. An old utility line crosses the Alternative 1 site.

The oxidation lagoons were constructed in 1972 and are in the southeast portion of the cantonment area between Mission Road and the San Antonio River (NPS 2004). They are outside the BRAC sites. The lagoons have a design capacity of a million gallons per day. As recently as 1995, sewage flows averaged less than 10 percent of the design capacity. Sewer infiltration and storm drain connections significantly increase during the wet season.

Secondary treatment effluent is disinfected and pumped from the oxidation ponds to a spray irrigation site approximately two-thirds of a mile east of the sewer treatment plant (NPS 2004). The irrigation site is fenced to impede public contact.

#### **4.11.1.4 Electricity**

Electricity at the installation is provided by the Pacific Gas and Electric Company and is distributed via overhead lines.

#### **4.11.1.5 Telephone and Data Line**

Telephone and data line service is provided to Fort Hunter Liggett by SBC/AT&T Communications via an underground cable extending from the installation's main gate off Jolon Road. The communication cables run to the Directorate of Information Management building. The cantonment area has a system of underground telephone and data cables that connect buildings to the main service line.

#### **4.11.1.6 Solid Waste Management**

Solid waste disposal in southern Monterey County is supplied by the Salinas Valley Solid Waste Authority. Solid waste from Fort Hunter Liggett goes to the Jolon Road Sanitary Landfill, which has a daily maximum permitted throughput of 100 tons per day and has a remaining capacity of 826,500 cubic yards (SWIS 2006).

#### **4.11.1.7 Stormwater**

Stormwater at the cantonment area of Fort Hunter Liggett is directed toward the San Antonio River via a series of channels, most of which are grassy but some are concrete. Fort Hunter Liggett has implemented a stormwater pollution prevention plan, which primarily addresses industrial activities and requires separate permits and individual stormwater pollution prevention plans for larger construction projects.

### **4.11.2 Environmental Consequences**

Impacts on utilities are similar under all three alternatives. The only differences are variations in the lengths of extensions of utilities required to bridge the new AFRC to existing utility lines.

#### **4.11.2.1 Alternatives 1, 2, and 3**

##### ***Potable Water Supply, Wastewater, LPG, Electricity, Telephone and Data Line***

**Construction activities.** Construction of the AFRC and associated facilities would result in short-term, minor adverse impact on potable water and wastewater at the project sites. Water would be consumed for the following:

- Dust-control during earth-disturbing activities;
- Drinking and washing water for construction workers;
- Wash water for construction equipment at appropriate locations; and
- Domestic use within the restroom facilities of the proposed AFRC.

Wastewater would be generated by the construction workers on the site and in the restrooms of the proposed ARFC. Construction activities would result in a short-term minor impact on potable water supply and wastewater services at the installation. No impact on LPG, electricity, telephone, or the data line is expected from construction activities.

As mentioned in Section 4.11.1.3, a wastewater utility line crosses the Alternative 1 site. The condition and capability of this line is questionable and may require upgrade or repair prior to use

if Alternative 1 is chosen for the proposed action. Alternately, the proposed facility may bypass this line and be connected to the primary line along Infantry Road. Sewer lines for Alternative 2 and 3 sites would be extended from existing source lines along Infantry Road and are expected to have adequate capacity for the proposed facility and staffing.

**Operational activities.** AFRC operations would result in long-term minor adverse impacts on water, wastewater, LPG, and electricity, as the demand for each of these utilities would increase with the increased full-time staff and part-time reservist populations.

No shortages in the water tables have been identified, so water supplies are considered to be sufficient.

LPG deliveries to the installation would be increased proportionally to meet an increased need. No shortages in LPG have been identified regionally.

Electricity, telephone, and data lines would be extended to the AFRC and associated facilities, and a new transformer would be installed. There is no shortage of electricity available in the central coast region of California.

### **Solid Waste Management**

**Construction activities.** Construction of the combined approximated 61,000 square feet of buildings would generate an estimated 119<sup>1</sup> tons of solid waste. The assumption is that construction would take place over 16 months, resulting in an estimated daily waste stream of approximately 500 pounds. Construction debris would be taken to the Jolon Road Sanitary Landfill. The additional waste stream generated by the project would represent 0.4 percent of the landfill's maximum daily permitted capacity and would have a minor adverse impact on the landfill's long-term closure date. The alternatives would have a short-term minor adverse effect on solid waste management.

**Operational activities.** Operation of the AFRC and associated facilities would result in a long-term minor adverse impact on solid waste disposal. The additional 41 full-time staff would be present only during working hours of the day and would generate approximately 32 tons<sup>2</sup> of solid waste per year. This would equate to approximately 255 pounds per work day.<sup>3</sup> This waste stream would represent 0.12 percent of the daily permitted throughput at the Jolon Road Sanitary Landfill.

### **Stormwater**

The alternatives would have long-term minor adverse impacts on stormwater infrastructure at Fort Hunter Liggett. Construction of the AFRC would result in an additional approximately 93,000 square feet of impervious surface at the cantonment area. This would increase the amount of stormwater generated within the cantonment area and would increase flow rates through the existing culverts and channels. Improvements to stormwater structures may be required at the installation to reduce the potential for floods. Such upgrades, should they be needed, may result in secondary short-term minor adverse impacts during construction.

#### **4.11.2.2 No Action Alternative**

No effects on utilities are expected from implementing the No Action Alternative.

<sup>1</sup>Calculated using a nonresidential construction debris generation rate of 3.89 pounds per square foot, per Franklin Associates. 1998.

<sup>2</sup>Calculated using as estimated solid waste generation rate of 0.4 ton/person/year for a "business" operation, subtype "Public Administration" (CIWMB 2006).

<sup>3</sup>Assumes 251 workdays per year (365 days per year – 104 weekend days – 10 federal holidays = 251 working days).

## **4.12 HAZARDOUS AND TOXIC SUBSTANCES**

### **4.12.1 Affected Environment**

Hazardous and toxic substances can pose a risk to workers and the environment. This section addresses specific conditions of concern related to the presence of hazardous and toxic substances within the ROI, defined for this evaluation as the project sites.

In order to conduct training exercises, hazardous and toxic substances are routinely used, stored, and disposed of at Fort Hunter Liggett. Hazardous and toxic substances are used in conjunction with training and testing, vehicle refueling and maintenance, medical care, utilities, facility maintenance, and other normal operations. The most common of these substances are POLs, paints, and solvents. Other hazardous substances occasionally found at Fort Hunter Liggett include medical waste and, under certain conditions, munitions.

In order to ensure compliance with federal and state statutes, Fort Hunter Liggett has implemented a number of regulations that address hazardous substances management. These include a hazardous waste management plan (Regulation 200-1), a hazardous waste minimization plan (Regulation 420-25) and a general training regulations document (Regulation 350-2) that addresses hazardous substances. Fort Hunter Liggett also has a spill prevention, control and countermeasure plan (US Army 2001a) and a business response and installation spill contingency plan (US Army 2001b).

#### **4.12.1.1 Site Contamination and Cleanup**

Fort Hunter Liggett began an installation restoration program in 1983 to identify and clean up contaminated sites. The Army identified 34 sites requiring remediation, 30 of which have been remediated. None of the four remaining sites are on or adjacent to the project sites identified for Alternatives 1, 2, or 3.

A small, portable modular structure is on the northwest portion of the project site identified by Alternative 1. The structure has been used as a munitions storage facility and is used for storing munitions.

No other conditions of concern related to hazardous and toxic substances at the project sites are known to exist.

### **4.12.2 Environmental Consequences**

The environmental consequences of the proposed action with regard to hazardous and toxic substances would be the same at each of the three alternative sites.

#### **4.12.2.1 Alternatives 1, 2, and 3**

Short- and long-term negligible adverse impacts are expected from implementing the proposed action. These impacts are primarily related to the use of POLs. Overall, the environmental consequences of implementing the proposed action would be minor adverse.

POLs, primarily fuel for construction equipment, would be used during construction of the AFRC and the associated storage facility and parking area. A risk of spills would exist from normal operations or from vehicle accidents. Management of POLs during construction would adhere to standards of the Occupational Safety and Health Administration and Fort Hunter Liggett regulations, as listed in Section 4.12.1. Use of POLs during construction would have a short-term minor adverse impact.

Under Alternative 1, the small, portable modular structure on the project site would be removed. If the site requires inspection for contamination, the munitions would be inspected for age and

damage, and the munitions would be removed by trained personnel. If the munitions require disposal, it would be in compliance with the Military Munitions Rule (40 CFR Part 260 through 270).

Implementing the alternatives includes the permanent relocation of six Army vehicles to Fort Hunter Liggett. Operation and maintenance of these vehicles would introduce an incremental amount of POLs to Fort Hunter Liggett. The use of POLs resulting from the alternatives would have a long-term minor adverse impact.

There would be no change in the use, storage, or handling of other hazardous materials. Paints for construction and development would be used in accordance with the aforementioned regulations. Additional part-time and full-time personnel working on Fort Hunter Liggett could increase the use of the medical facilities and subsequently result in an increase in biomedical waste generation. However, These increases would be negligible and there would be no change in how these wastes are handled. Also, because new personnel would not use Fort Hunter Liggett training ranges, there would be no change to training procedures and no increase in munitions expended or weapons used under any of the project alternatives. All proposed protocol would be in line with existing procedures and managed by the Environmental Division on Fort Hunter Liggett.

#### **4.12.2.2 No Action Alternative**

Under the No Action Alternative, the Army would not implement the proposed alternatives. No environmental impacts related to hazardous and toxic substances would occur.

## **4.13 CUMULATIVE EFFECTS SUMMARY**

### **4.13.1 Introduction**

In this section the cumulative effects of the proposed alternatives are identified. A cumulative impact is defined in the Code of Federal Regulations (40 CFR 1508.7) as “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or nonfederal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.” Only those resources with similar and comparable types of environmental effects from both the proposed alternatives and the cumulative projects are considered to have cumulative effects.

Guidance for implementing NEPA recommends that federal agencies identify the temporal and geographic boundaries of the potential cumulative effects of a proposed action (CEQ 1997). For the purposes of this EA, the Army considered activities and effects within a range of five years, with emphasis given to projects that may have a bearing on determining current conditions and future impacts. More specifically, to account for past, present, and future activities that may collectively contribute to cumulative effects, the temporal range considered includes planned, proposed, ongoing, and completed activities between 2001 through 2011. This boundary encompasses a range within which data are reasonably available and forecasts can be reasonably made. Past to present activities are discussed in the appropriate affected environment resource section.

The geographic boundaries of analysis vary, depending on the resource and potential effects. For most resources, the analysis area is the same as introduced in the resource-specific consequences section, primarily characterized by the cantonment area of Fort Hunter Liggett. If different, the analysis area is specifically defined under each resource section.

This analysis takes into consideration the effects of the proposed alternatives, as evaluated in detail in the other sections, when they are combined with the effects of other past, present, and future actions in the affected region.

### **4.13.2 Cumulative Actions**

Discussed below are projects that are similar in size or scope to the proposed action or that could cumulatively affect the same resources as the alternatives. These projects are in the same geographical area as the proposed action. Some resources could be affected by several or all of the described activities, while others could be affected very little by them or not at all.

#### **4.13.2.1 Fort Hunter Liggett Long-term Training and Testing**

An EA was completed in 1995 by Jones & Stokes Associates for long-term training and testing at Fort Hunter Liggett. Ongoing training and testing is conducted pursuant to this evaluation.

#### **4.13.2.2 Schoonover Airfield Expansion and C-17 Semi-Prepared Runway Operations Test**

The US Army Installation Management Agency, Army Reserve Office (IMA-ARO) and CSTC prepared an EA and FNSI for expanding the Schoonover Airfield and a C-17 semi-prepared runway operations test at Fort Hunter Liggett. Schoonover is south of the cantonment,

between Mission Road and San Antonio River. These documents were completed in September 2005, and work is anticipated to begin in August 2006.

#### **4.13.2.3 Urban Training Facilities**

The US Army IMA-ARO and CSTC completed an EA and FNSI in October 2005 for construction and use of a temporary Military Operations in Urban Terrain Course, a Shoot House, and an Urban Assault Course in training areas 24 and 27 in the Nacimiento Valley on Fort Hunter Liggett. The temporary Military Operations in Urban Terrain Course has been completed; the Shoot House and Urban Assault Course are scheduled for fiscal year 2007.

#### **4.13.2.4 Forward Operating Base**

An EA was prepared by US Army IMA-ARO and CSTC for construction and use of a forward operating base at Fort Hunter Liggett. This project involves a military training bivouac site in training area 27. The draft EA and draft FNSI were completed in July 2006.

#### **4.13.2.5 Range Construction at Training Area 22**

An EA is being prepared by US Army IMA-ARO and CSTC for range construction in training area 22 on Fort Hunter Liggett. This project involves construction and use of four additional ranges in training area 22 and upgrade of one range. The draft EA is anticipated to be released for public review in August 2006.

#### **4.13.2.6 Convoy Live Fire Course and Combined Arms Collective Training Facility**

Planning is underway for a convoy live-fire course and Combined Arms Collective Training Facility, which will probably be located in the Nacimiento Valley. An EA will be prepared for this project, which is scheduled for fiscal years 2007-2008.

### **4.13.3 Resource Overview**

#### **4.13.3.1 Aesthetic and Visual Resources**

Short-term minor adverse effects are expected on visual and aesthetic resources as a result of construction and staging areas traffic increases during construction. Projects listed in Section 4.13.2 are not expected to occur simultaneously which would spread out this effect and would minimize the area of impact. Likewise, traffic is not expected to be concentrated in any one particular area. Therefore, the adverse impacts on visual resources from construction activities are expected to be minor and short-term.

After construction of the cumulative projects and the proposed project, the built environment at Fort Hunter Liggett would noticeably increase. Preservation of the scenic landscape and natural aesthetics at Fort Hunter Liggett would depend on, for example, the number of mature trees preserved, the amount of surface disturbance, and the design of new facilities. These effects would be long-term minor adverse on visual and aesthetic resources.

#### **4.13.3.2 Air Quality**

Short-term minor adverse effects are expected. Cumulative air quality impacts would occur when multiple projects affect the same geographic areas at the same time or when sequential projects extend the duration of air quality impacts on a given area over a longer period of time. Ozone

precursor emissions associated with engine exhaust from construction equipment and military vehicles would contribute slightly to area-wide and regional air quality conditions. Fugitive dust emissions from construction activities and military training activities generally would have a more localized impact, with the most noticeable impacts occurring within one-half mile of the activity site. Most of the cumulative projects identified in Section 4.13.2 are in the Fort Hunter Liggett training range areas a long distance from the cantonment area. To the extent that these projects and activities would occur in 2008, there would be some minor cumulative impacts in terms of regional ozone precursor emissions. Only minor adverse cumulative impacts in terms of fugitive dust and PM<sub>10</sub> emissions are expected due to the distances between the proposed AFRC project and various training range facilities and activities.

#### **4.13.3.3 Noise**

Short-term minor adverse effects are expected. The proposed alternatives would produce increased short-term noise during the construction phase of the project. However, this noise would not result in a substantial change in the existing noise environment, based on current noise produced in the area. Cumulative development projects in the ROI would result in greater noise levels from new sources, including vehicle traffic. In addition, cumulative development projects could introduce new sensitive land uses (e.g., incorporation of tenant use of the cantonment area) into areas already affected by noise. Cumulative projects that involve increasing training or expanding outside training areas (e.g., adding a live-fire course and expanding of the airfield) could also adversely increase noise sources at Fort Hunter Liggett. However, any such cumulative noise impacts would be controlled through the planning process and land use compatibility guidelines in place and would be enforced by the local regulations. Also, these activities would primarily be a long distance from the cantonment area and most sensitive human resources. The proposed action would make a negligible contribution to these effects.

#### **4.13.3.4 Geology and Soils**

Long-term minor adverse cumulative impacts are expected. Cumulative physical geographic impacts would be minor because changes to topography would be localized to individual development sites included in the projects listed in Section 4.13.2 and would not alter the physiographic environment of the general area. The project ROI is in one of the most active seismic areas of California and is subject to strong ground shaking in the event of a large earthquake. Seismicity impacts could be adverse, but cumulative development projects would be constructed to current building code standards, so impacts would be minor. The cumulative soil resource effects of the proposed alternatives and other developments in the ROI would likely increase the disturbance of soil and the overall volume of soil in stormwater runoff. However, these effects would be mitigated by preparing stormwater pollution prevention plans and using appropriate construction practices to minimize runoff. Depending on the types of soil on which they would be constructed, the cumulative projects may increase the potential for soil erosion and slope instability. Proponents of the individual projects would be responsible for conducting soils investigations and other activities to reduce the potential impacts on soil erosion and slope instability.

#### **4.13.3.5 Water Resources**

Short- and long-term minor adverse cumulative effects on water resources are expected. Cumulative construction activities would increase the potential for soil erosion and sedimentation of nearby surface waters. However, project developers would use BMPs like those discussed in Section 4.6 to control erosion and to minimize the potential for sedimentation. Any construction

projects on sites greater than one acre would be required to implement a project- or site-specific SWPPP to minimize their effects on surface water.

Long-term minor adverse cumulative effects are expected on groundwater during operations. The proposed alternatives and cumulative projects would increase the amount of impervious surface at Fort Hunter Liggett, and the amount of vegetated land would decrease. This would decrease the rate of groundwater recharge in the cantonment. Because much of the surrounding land is not covered with impervious surfaces, this is not expected to be a major cumulative impact.

#### **4.13.3.6 Biological Resources**

Short- and long-term minor adverse cumulative effects are expected on biological resources. Cumulative impacts from projects listed in Section 4.13.2 would include short-term construction-related impacts and long-term habitat modification and changes to functionality. Construction projects and ongoing and modified training planned for Fort Hunter Liggett would increase dust and noise in the ROI and would elevate human activity, which would diminish the value of these habitats for plants and wildlife and could deter native wildlife from using the areas during construction. Use of BMPs and SWPPPs would help avoid and reduce potential construction-related impacts but would not eliminate them altogether.

Long-term minor adverse affects include reducing open space and habitat degradation due to edge effects and fragmentation. These habitat changes would likely have a negative impact on common native species, as well as sensitive and rare species at FHL. Furthermore, such species common to or otherwise identified on Fort Hunter Liggett such as the purple amole, Acorn Woodpecker, and Western Burrowing Owl could be negatively affected. Section 7 consultations would be needed for projects affecting federally-listed species, such as the purple amole, and surveys and mitigation measures would need to be implemented to avoid violating the ESA and the MBTA. INRMP environmental measures, including land management programs, would reduce some potential long-term impacts by tracking land use and altering operational use to reduce excess use of lands. These measures would not completely avoid or compensate for potential long-term cumulative impacts on biological resources.

#### **4.13.3.7 Cultural Resources**

The cumulative actions described above could have impacts on known and unknown cultural resources, including TCPs. The ICRMP identifies low to high risks as possible for both military training/testing activities and facilities development and maintenance, categories under which the identified cumulative actions fall. Any action to occur on sites that do not have a definitive inventory of these resources would require appropriate surveys and monitoring of the sites and consultation with SHPO.

The historic landscape of the NRHP-listed Milpitas Hacienda has been dramatically altered by military activities and construction. Additional construction within this landscape would contribute to long-term impacts.

#### **4.13.3.8 Socioeconomics and Environmental Justice**

No cumulative impacts on demographics and housing are expected beyond those projected to result from the proposed action. Because the ROI for the project analysis and the cumulative analysis are the same for this resource, long-term minor adverse impacts to demographics and housing are expected. For the same reason, long-term beneficial impacts are expected on economic development. Cumulative construction impacts and range operations at Fort Hunter Liggett would have short-term minor adverse impacts on children and families living on-post.

The cantonment area where these on-post residential and community areas are located makes up only about four percent of the entire installation area; the remaining 96 percent is made up of training areas that directly abut the cantonment and the two residential areas. However, the installation is designed so that hazardous conditions, such as live-fire training or artillery firing that may produce elevated noise levels, are appropriately separated from these community areas. Access to the ranges is restricted to unauthorized personnel. The Army further maintains standard precautions to ensure the safety of children during construction and operation of the ranges at Fort Hunter Liggett, including maintaining fencing and signage.

#### **4.13.3.9 Traffic and Transportation**

Short-term minor adverse cumulative effects are expected from construction traffic for each of the projects listed in Section 4.13.2. Although the proposed alternatives and cumulative projects would increase traffic volumes, construction traffic is not expected to be concentrated in any one particular area. Therefore, the impacts on congestion and reduced LOS from construction traffic are expected to be minor and short term.

Jolon Road is the primary roadway for accessing Fort Hunter Liggett. The additional traffic from the proposed action and the cumulative projects would have long-term minor adverse impacts on the LOS for Jolon Road. Additionally, the 2006 County of Monterey General Plan (Draft) states that a winery corridor will be designated in the Salinas Valley that consists of Jolon Road (Monterey County 2006). The traffic associated with Fort Hunter Liggett and winery traffic could noticeably lower the LOS rating for Jolon Road, which could increase congestion and the potential for accidents on the road.

#### **4.13.3.10 Utilities**

The identified cumulative actions would have short- and long-term minor impacts on potable water, wastewater, stormwater, LPG, electricity, and solid waste disposal. While impacts from the proposed action are expected to result in short- and long-term adverse impacts on utilities, cumulative projects listed in Section 4.13.2 would primarily result in short-term minor increases in water usage and solid waste generation during construction. Impacts to wastewater, LPG, and stormwater would primarily be the result of the proposed action without contribution by other cumulative activities. The Combined Arms Collective Training Facility would use electricity from power lines, however other projects would draw energy from generators. Impacts on utilities would be short- and long-term minor adverse, and the proposed action would be the primary, though minor, source of impact.

#### **4.13.3.11 Hazardous and Toxic Substances**

Minor short-term and long-term cumulative impacts are expected. Short-term cumulative impacts would be from the increased use of POLs during construction, especially if the construction phases of multiple projects listed in Section 4.13.2 occur at the same time. Construction would adhere to Occupational Safety and Health Administration guidelines, thus minimizing the risk of spills.

Minor long-term impacts are expected from the use and disposal of POLs associated with AFRC support vehicles. Several of the cumulative projects listed in Section 4.13.2 require administrative or combat vehicles, each of which requires the use of POLs for operation and maintenance. The six vehicles supporting the proposed alternatives would make a negligible contribution.

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**SECTION 5.0**  
**CONCLUSIONS**

## SECTION 5.0 CONCLUSIONS

### 5.1 SUMMARY OF CONSEQUENCES

The environmental effects of Alternatives 1, 2, and 3, and the No Action Alternative are presented in Table 5-1. The proposed alternatives would have no effect on environmental justice. The adverse effects on all other evaluated resources would be short-term and/or long-term minor adverse. No adverse effects are expected under the No Action Alternative.

**Table 5-1  
Summary of Environmental Effects**

Resource	Alternative 1 (Preferred)	Alternative 2	Alternative 3	Cumulative Impacts	No Action Alternative
<b>Aesthetic and Visual Resources</b>	Long-term minor adverse	Long-term minor adverse	Long-term minor adverse	Short- and long-term minor adverse	No impacts
<b>Air Quality</b>	Short-term minor adverse	Short-term minor adverse	Short-term minor adverse	Short-term minor adverse	No impacts
<b>Noise</b>	Short-term minor adverse	Short-term minor adverse	Short-term minor adverse	Short-term minor adverse	No impacts
<b>Geology and Soils</b>					
• Physical geography	No impacts	Long-term minor adverse	Long-term minor adverse	Long-term minor adverse	No impacts
• Seismicity	Long-term minor adverse	Long-term minor adverse	Long-term minor adverse	Long-term minor adverse	No impacts
• Mineral resources	No impacts	No impacts	No impacts	No impacts	No impacts
• Soils	No impacts	Short-term minor adverse	Short-term minor adverse	Long-term minor adverse	No impacts
<b>Water Resources</b>					
• Surface water	Short-term minor adverse	Short-term minor adverse	Short-term minor adverse	Short-term minor adverse	No impacts
• Groundwater	Long-term minor adverse	Long-term minor adverse	Long-term minor adverse	Long-term minor adverse	No impacts

**Table 5-1  
Summary of Environmental Effects (continued)**

<b>Resource</b>	<b>Alternative 1 (Preferred)</b>	<b>Alternative 2</b>	<b>Alternative 3</b>	<b>Cumulative Impacts</b>	<b>No Action Alternative</b>
<b>Biological Resources</b>	Short- and long-term minor adverse	Short- and long-term minor adverse	Short- and long-term minor adverse	Short- and long-term minor adverse	No impacts
<b>Cultural Resources</b>					
• Archaeological Resources	No impacts	No impacts	No impacts	No impacts	No impacts
• Native American Resources	No impacts	No impacts	No impacts	No impacts	No impacts
• Architectural Resources	No impacts	Long-term minor adverse	Long-term minor adverse	Long-term minor adverse	No impacts
<b>Socioeconomics and Environmental Justice</b>					
• Economic Development	Long-term beneficial	Long-term beneficial	Long-term beneficial	Long-term beneficial	No impacts
• Demographics	Long-term minor adverse	Long-term minor adverse	Long-term minor adverse	Long-term minor adverse	No impacts
• Housing	Long-term minor adverse	Long-term minor adverse	Long-term minor adverse	Long-term minor adverse	No impacts
• Quality of life	Long-term minor adverse	Long-term minor adverse	Long-term minor adverse	Short-term minor adverse	No impacts
• Environmental justice	No impacts	No impacts	No impacts	No impacts	No impacts
• Protection of children	Short-term minor adverse	Short-term minor adverse	Short-term minor adverse	Short-term minor adverse	No impacts
<b>Traffic and Transportation</b>	Short- and long-term minor adverse	Short- and long-term minor adverse	Short- and long-term minor adverse	Short- and long-term minor adverse	No impacts
<b>Utilities</b>					
• Potable water supply	Short- and long-term minor adverse	Short- and long-term minor adverse	Short- and long-term minor adverse	Short-term minor adverse	No impacts

**Table 5-1  
Summary of Environmental Effects (continued)**

<b>Resource</b>	<b>Alternative 1 (Preferred)</b>	<b>Alternative 2</b>	<b>Alternative 3</b>	<b>Cumulative Impacts</b>	<b>No Action Alternative</b>
• LPG	Long-term minor adverse	Long-term minor adverse	Long-term minor adverse	Long-term minor adverse	No Impacts
• Wastewater Collection	Short- and long-term minor adverse	Short- and long-term minor adverse	Short- and long-term minor adverse	Short- and long-term minor adverse	No Impacts
• Electricity	Long-term minor adverse	Long-term minor adverse	Long-term minor adverse	Long-term minor adverse	No Impacts
• Telephone and Data Lines	No Impacts	No Impacts	No Impacts	No Impacts	No Impacts
• Solid Waste Management	Short-term minor adverse	Short-term minor adverse	Short-term minor adverse	Short-term minor adverse	No Impacts
• Stormwater	Short-term minor adverse	Short-term minor adverse	Short-term minor adverse	Short-term minor adverse	No Impacts
<b>Hazardous and Toxic Substances</b>	Short- and long-term minor adverse	Short- and long-term minor adverse	Short- and long-term minor adverse	Short- and long-term minor adverse	No Impacts

## 5.2 CONCLUSIONS

Implementing Alternative 1, 2, or 3 would have no significant direct, indirect, or cumulative effects on the environment. Based on the overall findings of this evaluation, the Army finds Alternative 1 to be the environmentally preferred alternative and the appropriate approach to implementing the proposed action. Because no significant impacts were determined to result from the project alternatives, an environmental impact statement is not necessary. This EA supports the issuance of a finding of no significant impact.

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

## **SECTION 6.0**

### **LIST OF PREPARERS**

#### **6.1 PROJECT MANAGEMENT**

**John Bock**

BS, Environmental Toxicology  
Years of Experience: 13  
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**Leslie Garlinghouse**

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MS, Environmental Management  
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(Hazardous and Toxic Substances)

**Amy Cordle**

BS, Civil Engineering  
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MS, Environmental Management  
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**Rima Ghannam**

MS, Environmental Management  
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MPA, Environmental Policy and Natural Resource Management  
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MA, Cultural Anthropology  
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**SECTION 7.0**  
**DISTRIBUTION LIST**

## **SECTION 7.0**

### **DISTRIBUTION LIST**

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California State Historic Preservation Officer  
Office of Historic Preservation  
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Sacramento, CA 94296-0001

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Patricia Port  
Office of Environmental Policy and Compliance  
Department of the Interior  
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Oakland, CA 94607

California Department of Fish and Game  
Attn: Terry Palmisano  
PO Box 47  
Yountville, CA 94590

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Monterey Bay Unified Air  
Pollution Control District  
PO Box 946  
King City, CA 93930

Monterey County Water Resources Agency  
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Salinas, CA 93901

Governor's Office of Planning and Research  
California State Clearinghouse  
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Sacramento, CA 95812-3044

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San Miguel, CA 93451-9740

Robert Hoover, Co-Board Chairman  
Friends of Historic San Antonio Mission  
Cabrillo College  
Aptos, CA 95003

Ann Beckett, Co-Board Chairman  
Friends of Historic San Antonio Mission  
PO Box 43  
Lockwood, CA 93932

San Antonio School Library  
PO Box 5000  
Lockwood, CA 93932

Fort Hunter Liggett Library  
Attn: AFRC-FMH-PAD  
Building 191, Fort Hunter Liggett  
Jolon, CA 93928

Monterey County Free Library  
26 Central Avenue  
Salinas, CA 93901

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**SECTION 8.0**  
**REFERENCES**

## SECTION 8.0 REFERENCES

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**SECTION 9.0**  
**PERSONS CONSULTED**

## **SECTION 9.0 AGENCIES AND INDIVIDUALS CONSULTED**

### **9.1 DEPARTMENT OF DEFENSE**

Gary Houston, Environmental Manager, Combat Support Training Center, Fort Hunter Liggett  
Scott Olsen, Compliance Manager, Combat Support Training Center, Fort Hunter Liggett  
Liz Clark, Wildlife Biologist, Combat Support Training Center, Fort Hunter Liggett  
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Penny Kailer, Realty Specialist, Combat Support Training Center, Fort Hunter Liggett  
Larry Moore, Cultural Resource Manager, Combat Support Training Center, Fort Hunter Liggett  
John Love, Army Chief of Staff for Installation Management  
David Robinson, Army Chief of Staff for Installation Management

### **9.2 NATIVE AMERICAN ORGANIZATIONS**

Rob Wood, Native American Heritage Commission  
Judith Bomar Grindstaff, Salinan Tribe  
Susan Lata, Salinan Tribe  
Xielolixii, Salinan-Chumash Nation  
Donna Haro, Xolon Salinan Tribe  
Gregg Castro, Administrator, Salinan Nation Cultural Preservation Association  
Doug Alger, Cultural Resources Coordinator, Salinan Nation Cultural Preservation Association  
Robert Duckworth, Environmental Coordinator, Salinan Nation Cultural Preservation Association  
Jose Freeman, President, Salinan Nation Cultural Preservation Association  
Shirley Macagni, Cultural Resources Representative, Salinan Tribe of Monterey, San Luis Obispo, and San Benito Counties  
John W. Burch, Salinan Tribe of Monterey, San Luis Obispo, and San Benito Counties  
Bonnie Pierce, Salinan Tribe of Monterey, San Luis Obispo, and San Benito Counties

### **9.3 LOCAL AGENCIES AND ORGANIZATIONS**

William Bartosh, Co-President, San Antonio Valley Historical Association  
Ann Beckett, Co-President, San Antonio Valley Historical Association  
Rob Edwards, Co-Board Member, Friends of Historic San Antonio Mission  
Robert Hoover, Co-Board Member, Friends of Historic San Antonio Mission

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**SECTION 10.0**  
**ACRONYMS AND ABBREVIATIONS**

## **SECTION 10.0**

### **ACRONYMS AND ABBREVIATIONS**

<b>Acronym</b>	<b>Full Phrase</b>
AFRC	Armed Forces Reserve Center
APE	area of potential effect
BMPs	best management practices
BRAC	Base Closure and Realignment
CAA	Clean Air Act
CDNL	C-weighted day-night level
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CNDDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CO	carbon monoxide
CSTC	Combat Support Training Center
dB	decibels
dBA	A-weighted decibels
dBC	C-weighted decibels
DoD	Department of Defense
EA	environmental assessment
EO	executive order
EPA	Environmental Protection Agency
ESA	Endangered Species Act
FNSI	finding of no significant impact
HUD	US Department of Housing and Urban Development
IMA	installation management agency
MBTA	Migratory Bird Treaty Act
NAHC	Native American Heritage Commission
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NRHP	National Register of Historic Places
OSHA	Occupational Safety and Health Administration
PM <sub>10</sub>	inhalable particulate matter, smaller than 10 microns diameter
PM <sub>2.5</sub>	fine particulate matter, smaller than 2.5 microns diameter

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<b>Acronym</b>	<b>Full Phrase</b>
POLs	petroleum, oils, and lubricants
POV	personnel-owned vehicle
ROG	reactive organic gases
ROI	region of influence
RONA	record of nonapplicability
SHPO	State Historical Preservation Office
SOx	sulfur oxides
SWPPP	stormwater pollution prevention plan
TCP	traditional cultural property
URBEMIS 2002	Urban Emissions Model 2002
USAR	US Army Reserve
USC	United States Code
USFWS	US Fish and Wildlife Service
USGS	US Geological Survey

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## **APPENDICES**

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**APPENDIX A**  
**AGENCY CORRESPONDENCES**



DEPARTMENT OF THE ARMY  
INSTALLATION MANAGEMENT AGENCY  
UNITED STATES ARMY COMBAT SUPPORT TRAINING CENTER  
P. O. BOX 7090  
FORT HUNTER LIGGETT, CA 93928-7090

REPLY TO  
ATTENTION OF

May 12, 2006

Rob Wood  
Native American Heritage Commission  
915 Capitol Mall, Room 364  
Sacramento, CA 95814

Subject: Base Realignment and Closure Activities at Fort Hunter Liggett, Monterey County, CA

Dear Mr. Wood,

As part of Base Realignment and Closure (BRAC) activities, the US Army is proposing to relocate units from various California locations to Fort Hunter Liggett, 23 miles southwest of King City in Monterey County (see attached location maps). As part of this relocation, the US Army plans to construct a new facility near the Fort Headquarters in order to accommodate the influx of Army personnel to Fort Hunter Liggett. The project area is located on the Cosio Knob USGS 7" Quadrangle, but please refer to the enclosed maps for specific location information.

We would appreciate a copy of the current Native American contacts list for the area so that we may coordinate with the appropriate tribal representatives, if necessary. We are also requesting a Sacred Lands Search to identify areas of traditional importance that have been identified within the project's area of potential effect.

If possible, please fax this information to me at 831-386-2787 and copy Erin King of Tetra Tech, at 415-974-5914. If you have any questions or would like additional information, please call me at 831-386-2365. Thank you for your assistance.

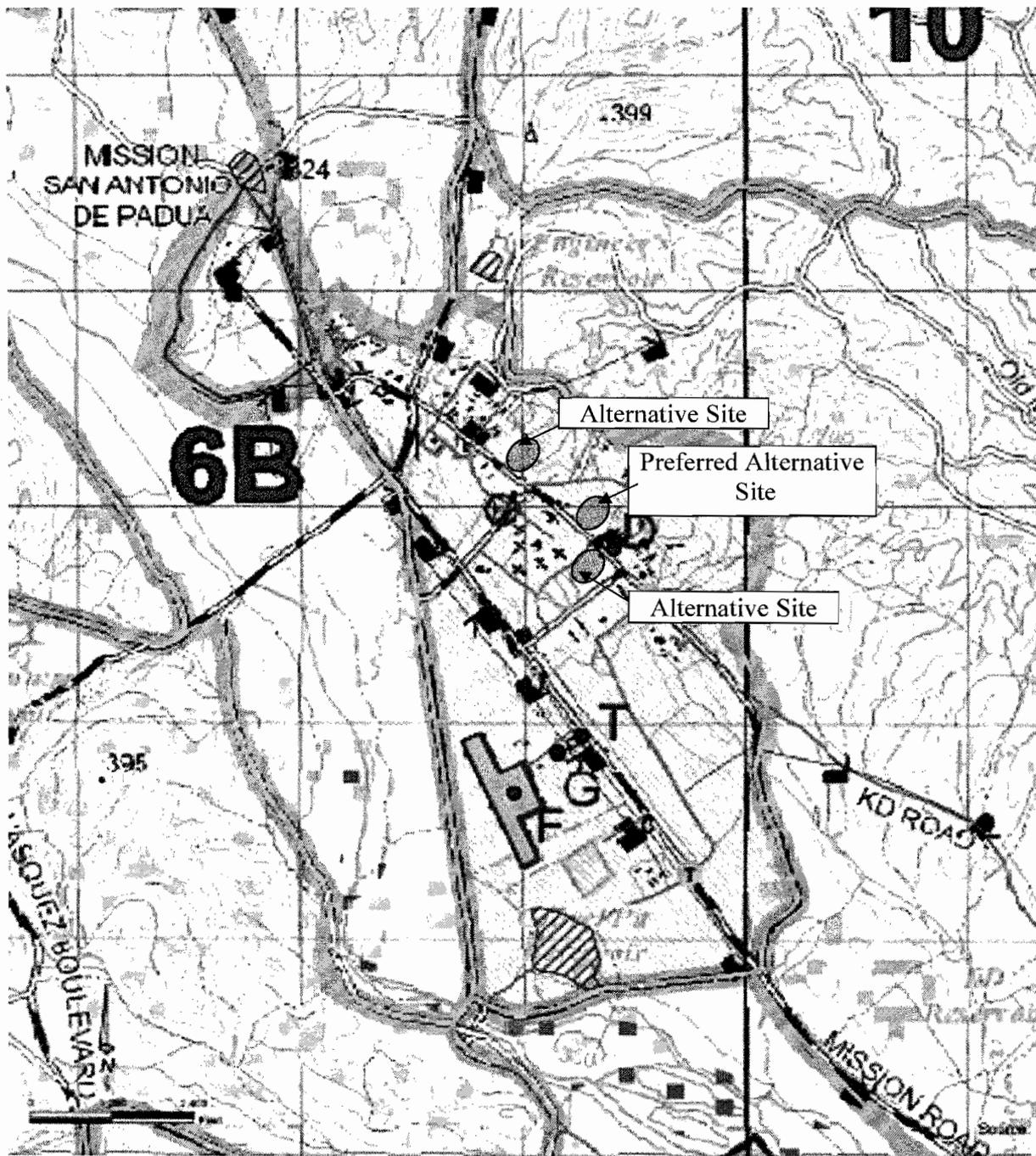
Respectfully,

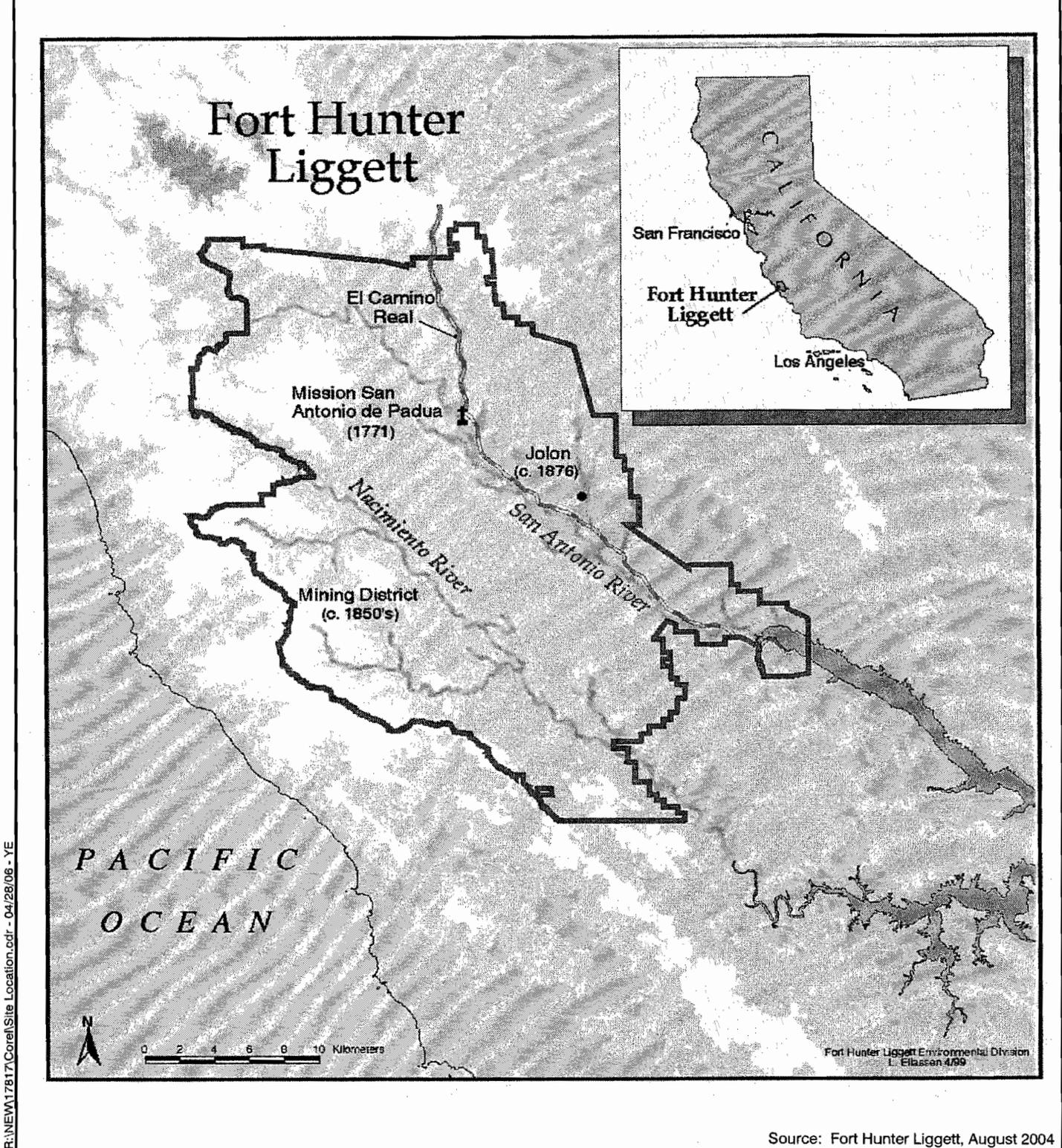
A handwritten signature in black ink, appearing to read "Gary Houston".

Gary Houston

Environmental Division Chief

US Army Combat Support Training Center





**Site Location**

Fort Hunter Liggett, Monterey County, California

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**APPENDIX B**  
**CLEAN AIR ACT CONFORMITY DETERMINATION:**  
**RECORD OF NONAPPLICABILITY**

RECORD OF NONAPPLICABILITY FOR ARMED FORCES RESERVE CENTER  
CONSTRUCTION AT FORT HUNTER LIGGETT

In 2005 the Defense Base Realignment and Closure (BRAC) Commission recommended realigning the 91st Training Support Division from Camp Parks in Dublin, California, to Fort Hunter Liggett in Monterey County, California. A new Armed Forces Reserve Center (AFRC) building would be constructed at Fort Hunter Liggett to accommodate the realignment. The US Army proposes to construct an approximately 60,000-square-foot AFRC building and an approximately 1,000-square-foot unheated storage building at one of three sites in the cantonment area of Fort Hunter Liggett. Additionally existing parking areas would be improved or an adequate parking space would be developed, as appropriate, to accommodate the proposed operations. Project construction is estimated to begin in 2007. The project duration is approximately 20 months, with construction activity occurring between nine and eleven months, depending on the alternative. An estimated 41 full-time employees would staff the proposed AFRC at Fort Hunter Liggett. In addition, approximately 162 part-time reservists would be restationed at Fort Hunter Liggett, traveling to the installation one weekend per month for training at the AFRC.

Fort Hunter Liggett is in the North Central Coast Air Basin, which has no federal nonattainment area designations but is designated as a maintenance area for the former federal 1-hour ozone standard. Revocation of the former federal 1-hour ozone standard did not rescind the ozone maintenance area designation for the basin, so the proposed action is subject to Clean Air Act conformity review requirements.

The proposed Army action has been evaluated for compliance with Section 176(c) of the Clean Air Act (42 USC 7506) and with the US Environmental Protection Agency rule promulgated at 40 CFR Part 93.

The environmental assessment prepared for the proposed action estimates the quantities of direct and indirect emissions resulting from construction and operational activities at the proposed facility. Separate estimates of construction emissions were prepared for each of the three alternative facility sites in the cantonment area. Emissions from vehicle traffic associated with the AFRC would be the same regardless of the chosen construction site. Total direct and indirect emissions for each of the alternative sites would be less than the relevant Clean Air Act conformity de minimis levels of 100 tons per year of reactive organic compounds and 100 tons per year of nitrogen oxides.

Pursuant to 40 CFR 93.153(c)(1), the requirements of the EPA general conformity rule are not applicable to the proposed Army action. The point of contact for the project is Gary Houston, who can be reached at (831) 386-2763 or via electronic mail at [public.comment@liggett-emh1.army.mil](mailto:public.comment@liggett-emh1.army.mil).

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

  
8/16/06

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**APPENDIX C**  
**CALIFORNIA DEPARTMENT OF FISH AND GAME**  
**NATURAL DIVERSITY DATABASE**

California Department of Fish and Game  
Natural Diversity Database  
Selected Elements by Common Name - Portrait  
Cosio Knob USGS 7.5 minute quadrangle

Common Name/Scientific Name	Element Code	Federal Status	State Status	GRank	SRank	CDFG or CNPS/R-E-D
1 California tiger salamander <i>Ambystoma californiense</i>	AAAAA01180	Threatened		G2G3	S2S3	SC
2 Carmel Valley bush mallow <i>Malacothamnus palmeri</i> var. <i>involucratus</i>	PDMAL0Q0B1			G3T2Q	S2.2	1B/2-2-3
3 Cooper's hawk <i>Accipiter cooperii</i>	ABNKC12040			G5	S3	SC
4 Davidson's bush mallow <i>Malacothamnus davidsonii</i>	PDMAL0Q040			G1	S1.1	1B/2-2-3
5 Hardham's evening-primrose <i>Camissonia hardhamiae</i>	PDONA030N0			G1Q	S1.2	1B/3-2-3
6 Hickman's checkerbloom <i>Sidalcea hickmanii</i> ssp. <i>hickmanii</i>	PDMAL110A2			G3T2	S2.3	1B/2-1-3
7 Hickman's onion <i>Allium hickmanii</i>	PMLIL02140			G2	S2.2	1B/2-2-3
8 Jolon clarkia <i>Clarkia jolonensis</i>	PDONA050L0			G2	S2.2	1B/3-2-3
9 San Antonio collinsia <i>Collinsia antonina</i>	PDSCR0H010			G1	S1.2	1B/3-2-3
10 San Joaquin kit fox <i>Vulpes macrotis mutica</i>	AMAJA03041	Endangered	Threatened	G4T2T3	S2S3	
11 Santa Lucia bush mallow <i>Malacothamnus palmeri</i> var. <i>palmeri</i>	PDMAL0Q0B5			G3T2Q	S2.2	1B/2-2-3
12 Valley Oak Woodland	CTT71130CA			G3	S2.1	
13 arroyo toad <i>Bufo californicus</i>	AAABB01111	Endangered		G2G3	S2S3	SC
14 caper-fruited tropidocarpum <i>Tropidocarpum capparideum</i>	PDBRA2R010			G1	S1.1	1B/3-3-3
15 dwarf calycadenia <i>Calycadenia villosa</i>	PDAST1P0B0			G2	S2.1	1B/2-3-3
16 hooked popcorn-flower <i>Plagiobothrys uncinatus</i>	PDBOR0V170			G2	S2.2	1B/2-2-3
17 shining navarretia <i>Navarretia nigelliformis</i> ssp. <i>radians</i>	PDPLM0C0J2			G4T1	S1.1	1B/2-2-3
18 southwestern pond turtle <i>Emys (=Clemmys) marmorata pallida</i>	ARAAD02032			G3G4T2T3 Q	S2	SC