

Final
**Environmental Assessment for the
Implementation of Base Realignment and Closure 2005
Realignment Actions at
Huntsville, Texas**



Prepared for:

U.S. ARMY RESERVE

Prepared by:

**U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT**

March 2009

ENVIRONMENTAL ASSESSMENT ORGANIZATION

This environmental assessment addresses the proposed action to implement the Base Closure and Realignment Commission (BRAC Commission) recommendations for the U.S. Army Reserve Component at Huntsville, Texas. It has been developed in accordance with the National Environmental Policy Act and implementing regulations issued by the Council on Environmental Quality (Title 40 of the *Code of Federal Regulations* [CFR] Parts 1500–1508) and the Army (32 CFR Part 651.14). Its purpose is to inform decision makers and the public of the likely environmental and socioeconomic consequences of the proposed action and alternatives.

An ***EXECUTIVE SUMMARY*** briefly describes the proposed action, environmental and socioeconomic consequences, and mitigation measures.

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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 Commission recommendations at Huntsville, Texas.

SECTION 3.0: ALTERNATIVES examines alternative sites and alternatives to implementing the proposed action.

SECTION 4.0: AFFECTED ENVIRONMENT AND CONSEQUENCES describes the existing environmental and socioeconomic setting at Huntsville and identifies potential effects of implementing the proposed action.

SECTION 5.0: FINDINGS AND CONCLUSIONS summarizes the environmental and socioeconomic effects of implementing the proposed action.

SECTION 6.0: LIST OF PREPARERS identifies the persons who prepared the document.

SECTION 7.0: DISTRIBUTION LIST indicates recipients of this environmental assessment.

SECTION 8.0: REFERENCES provides bibliographical information for cited sources.

SECTION 9.0: PERSONS CONSULTED provides a listing of persons and agencies consulted during preparation of this environmental assessment.

APPENDICES

- A*** Emissions Calculations and Record of Non-applicability
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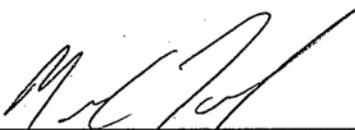
ACRONYMS AND ABBREVIATIONS at the end provides a list of acronyms and abbreviations used in the document.



**FINAL ENVIRONMENTAL ASSESSMENT FOR THE IMPLEMENTATION
OF BASE REALIGNMENT AND CLOSURE 2005 REALIGNMENT
ACTIONS AT HUNTSVILLE, TEXAS**

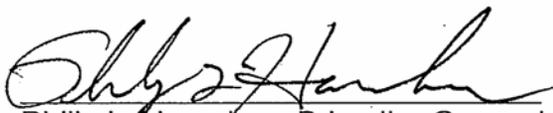
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ENVIRONMENTAL ASSESSMENT

LEAD AGENCY: U.S. Army Reserve, 90th Regional Readiness Command

TITLE OF PROPOSED ACTION: Final Environmental Assessment for the Implementation of Base Realignment and Closure 2005 Realignment Actions at Huntsville, Texas

AFFECTED JURISDICTION: Huntsville, Texas

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ABSTRACT: This environmental assessment (EA) considers the proposed implementation of the Base Closure and Realignment Commission (BRAC Commission) recommendations at Huntsville, Texas. The EA identifies, evaluates, and documents the environmental and socioeconomic effects of facility construction, operation, and maintenance proposed to accommodate the changes mandated by the BRAC Commission. A No Action Alternative is also evaluated. Implementation of the proposed action is not expected to result in significant environmental or socioeconomic impacts. Therefore, preparation of an environmental impact statement is not required and a finding of no significant impact (FNSI) will be published in accordance with the National Environmental Policy Act.

REVIEW COMMENT DEADLINE: The final EA and draft FNSI are available for review and comment for 30 days from the publication of a Notice of Availability in the *Huntsville Item*. Copies of the final EA and draft FNSI can be obtained by contacting Sam Pett at 703-385-6000 or at sam.pett@tetrattech.com. A copy of the EA is available for review at the Huntsville Public Library, 1216 14th Street, Huntsville, Texas. The document is available online at http://www.hqda.army.mil/acsim/brac/env_ea_review.htm. Comments on the EA and draft FNSI should be submitted to Mr. James Wheeler II, Chief, Environmental Division, at U.S. Army Reserve, 90th Regional Readiness Command, 8000 Camp Robinson Rd, N. Little Rock, AR 72118, or at jim.wheeler@usar.army.mil. Comments on the EA and draft FNSI should be submitted by no later than the end of the public comment period.

EXECUTIVE SUMMARY

ES.1 INTRODUCTION

This environmental assessment (EA) describes and analyzes the effects of implementing the 2005 Defense Base Closure and Realignment Commission (BRAC Commission) recommendations with respect to Huntsville, Texas, and associated actions on the natural and human environment.

ES.2 BACKGROUND

With respect to Huntsville, Texas, the BRAC Commission recommended in relevant part:

Close the Miller United States Army Reserve Center, Huntsville, Texas, and relocate units into a new Armed Forces Reserve Center in Huntsville, Texas, if the Army is able to acquire suitable land for the construction of the facilities. The new AFRC shall have the capability to accommodate Texas National Guard units from the Texas ARNG Readiness Center in Huntsville, Texas, if the state decides to relocate those National Guard units.

To meet the BRAC directive, the Army proposes to acquire approximately 15 acres in Huntsville, Texas. After acquiring a suitable site, the Army would construct an Armed Forces Reserve Center (AFRC) (including an Organizational Maintenance Shop [OMS] and unheated storage building) having approximately 57,000 square feet of space. In the EA, the Army identifies and describes the environmental effects associated with its proposed action at Huntsville, Texas.

ES.3 PROPOSED ACTION AND ALTERNATIVES

ES.3.1 Proposed Action

The site proposed for the new AFRC (identified as Site 8 during the Army's site-evaluation process) is on the east side of the intersection of FM 1374 and Veterans Memorial Parkway. The property consists of approximately 31 acres, but the property owner has indicated a willingness to divide the property to provide the 15 acres desired by the Army to meet its needs. This is the Preferred Alternative for implementing the proposed action. The site is relatively flat with mixed hardwood and pine trees. There are some low areas and a pond measuring approximately 0.3 acre at the center of the site. The site is outside the 100-year flood zone. Zoned for timber production, the site would be accessible from Interstate 45/Powell Road. There is one metal building on the site that could be used or would be demolished. The primary facilities of the new AFRC would consist of a training building, OMS, an unheated storage building, and a parking area for military vehicles. The facilities would be sufficient to accommodate 200 personnel. Construction could begin as early as January 2010 and could be completed by March 2011. The Huntsville AFRC would support operations of units of the Army Reserve and Texas Army National Guard.

ES.3.2 Site 9 Alternative

This site consists of 53 acres fronting FM 2821, Highway 19, and Ryans Ferry Road. The property owner has indicated a willingness to divide the property to provide the 15 acres desired by the Army to meet its needs; the Army would desire the 15 acres fronting Ryans Ferry Road at the southern end of the tract. While the property is remote from other development, it has all

utilities in close proximity. The site is densely populated with hardwood and pine trees. Outside the 100-year flood zone, it is zoned for agricultural uses. This site is evaluated in detail in the EA.

ES.3.3 No Action Alternative

Inclusion of the No Action Alternative is prescribed by Council on Environmental Quality regulations. The No Action Alternative serves as a baseline alternative against which other alternatives can be evaluated. Under the No Action Alternative, the Army would not implement the proposed action. No land would be acquired, no facilities would be constructed, and no units would relocate from other facilities. The units proposed for relocation under the proposed action would continue to operate from their current facilities. The No Action Alternative is evaluated in the EA.

ES.4 ENVIRONMENTAL CONSEQUENCES

The EA evaluates potential effects on land use, aesthetics and visual resources, air quality, noise, geology and soils, water resources, biological resources, cultural resources, socioeconomics (including environmental justice and protection of children), transportation, utilities, and hazardous and toxic materials. For each resource, the predicted effects of the proposed action and the No Action Alternative are briefly described below. The consequences of the two alternatives are summarized in Table ES-1.

ES.4.1 Proposed Action

No effects would be expected on geology, topography, prime farmland soils, groundwater, floodplains, the coastal zone, sensitive species, cultural resources, population, housing, quality of life, environmental justice, the protection of children, and utilities. *Short-term adverse effects* would be expected on the noise environment, soils, and surface waters. *Long-term adverse effects* would be expected on land use, aesthetics and visual resources, air quality, vegetation, wildlife, wetlands, transportation, and hazardous and toxic substances. *Short-term beneficial effects* would be expected on regional economic activity. None of the adverse effects would be significant.

ES.4.2 Site 9 Alternative

The effects of implementing the Site 9 Alternative would be similar to those of implementing the proposed action, with the following differences. Implementing the Site 9 Alternative would have *no effects* on wetlands, because the site does not have wetlands; *unknown effects* on cultural resources, because a cultural resources survey of the site has not been done and it is unknown whether the site has any cultural resources; and *short-term adverse effects* on the protection of children, because children are curious about construction areas and a residential area is close to Site 9. None of the adverse effects would be significant.

ES.4.3 No Action Alternative

No effects would result from implementing the No Action Alternative. Under the No Action Alternative, the Army would not implement the proposed action. No land would be acquired, no facilities would be constructed, and no units would relocate from other facilities. The units proposed for relocation under the proposed action would continue to operate from their current facilities.

Table ES-1
Summary of potential environmental and socioeconomic consequences

Resource Area	Environmental and socioeconomic effects		
	Proposed Action	Site 9 Alternative	No Action Alternative
Land use	Long-term minor adverse	Long-term minor adverse	No effect
Aesthetics and visual resources	Long-term minor adverse	Long-term minor adverse	No effect
Air quality	Long-term minor adverse	Long-term minor adverse	No effect
Noise	Short-term minor adverse	Short-term minor adverse	No effect
Geology and soils			
• Geology, topography	No effect	No effect	No effect
• Soils	Short-term minor adverse	Short-term minor adverse	No effect
• Prime farmland soils	No effect	No effect	No effect
Water resources			
• Surface water	Short-term minor adverse	Short-term minor adverse	No effect
• Groundwater	No effect	No effect	No effect
• Floodplains	No effect	No effect	No effect
• Coastal zone	No effect	No effect	No effect
Biological resources			
• Vegetation	Long-term minor adverse	Long-term minor adverse	No effect
• Wildlife	Long-term minor adverse	Long-term minor adverse	No effect
• Wetlands	Long-term minor adverse	No effect	No effect
• Sensitive species	No effect	No effect	No effect
Cultural resources	No effect	Unknown	No effect
Socioeconomics			
• Regional economic activity	Short-term minor beneficial	Short-term minor beneficial	No effect
• Population	No effect	No effect	No effect
• Housing	No effect	No effect	No effect
• Quality of life	No effect	No effect	No effect
• Environmental justice	No effect	No effect	No effect
• Protection of children	No effect	Short-term minor adverse	No effect
Transportation	Long-term minor adverse	Long-term minor adverse	No effect
Utilities	No effect	No effect	No effect
Hazardous and toxic substances	Long-term minor adverse	Long-term minor adverse	No effect

ES.5 CUMULATIVE EFFECTS

No significant adverse cumulative effects would be expected to result if one of the alternatives identified in the EA was implemented.

ES.6 MITIGATION

Mitigation actions are used to reduce, avoid, or compensate for significant adverse effects. The EA does not identify the need for any mitigation measures. Mitigation measures for wetlands applicable to either the proposed action or the Site 9 Alternative, if necessary, would be determined upon application to the USACE for a Clean Water Act Section 404 permit. Mitigation measures for cultural resources, if such resources were found during site development at either site (or on Site 9 upon completion of a cultural resources survey) would be determined in coordination with the Texas State Historic Preservation Office.

ES.7 CONCLUSIONS

On the basis of the analysis performed in the EA, implementation of the proposed action would have no significant direct, indirect, or cumulative effects on the quality of the natural or human environment. Preparation of an environmental impact statement is not required. Issuance of a Finding of No Significant Impact would be appropriate.

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ACRONYMS AND ABBREVIATIONS

SECTION 1.0 PURPOSE, NEED, AND SCOPE

1.1 INTRODUCTION

On September 8, 2005, the Defense Base Closure and Realignment Commission (BRAC Commission) recommended that certain realignment actions occur throughout the United States. The President approved these recommendations on September 15, 2005, and the Congress did not alter any of the BRAC Commission's recommendations. 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.

The BRAC Commission recommended the closure of the Miller United States Army Reserve Center, Huntsville, Texas, and relocation of units into a new Armed Forces Reserve Center (AFRC) in Huntsville if the Army is able to acquire suitable land for the construction of the facilities. The new AFRC would also have the capability to accommodate Texas Army National Guard (ARNG) units from the Texas ARNG Readiness Center in Huntsville if the state decides to relocate those ARNG units. In this environmental assessment (EA), the Army identifies and describes the environmental effects associated with its proposed action in Huntsville. Details on the proposed action are set forth in Section 2.2.

1.2 PURPOSE AND NEED

The purpose of the proposed action is to provide the necessary facilities to support the BRAC Commission's recommendation pertaining to United States Army Reserve and ARNG units to be located in Huntsville. Figure 1-1 shows a general location map of Huntsville and the proposed sites being considered for the new AFRC.

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 proposed action also is needed because existing Army Reserve and ARNG facilities are substandard and are not adequately sized to support the number of assigned Soldiers. 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 to reap a peace dividend. In the 2005 BRAC round, the Department of Defense (DoD) also 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 must carry out the BRAC Commission's recommendations at Huntsville to achieve the objectives of the BRAC process.



1.3 SCOPE

The 1990 Defense Base Closure and Realignment Act specifies that the National Environmental Policy Act (NEPA) does not apply to actions of the President, the BRAC Commission, or the DoD, 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 NEPA provisions 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. Because NEPA does apply to the activities proposed to support unit realignment, the Army addresses those actions in this document.

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 Title 32 of the *Code of Federal Regulations* (CFR) Part 651.14. The EA is available to the public for 30 days, along with a draft finding of no significant impact (FNSI). At the end of the 30-day 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 before issuance of a final FNSI that implementing the proposed action would result in significant impacts, the Army will commit to mitigation actions sufficient to reduce impacts below significance levels, or will take no action or will publish in the *Federal Register* a notice of intent to prepare an environmental impact statement.

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 (CEQ) and the Army.¹ Its purpose is to inform decisionmakers 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

¹ Council on Environmental Quality *Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act*, 40 CFR Parts 1500–1508, and *Environmental Analysis of Army Actions*, 32 CFR Part 651.

alternatives in light of existing conditions and has identified relevant beneficial and adverse effects associated with the action. The proposed action is described in Section 2.0, and alternatives, including the No Action Alternative, are described in Section 3.0. Conditions considered to be the baseline 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 area addressed in the EA. The potential for cumulative effects is also addressed in Section 4.0, and mitigation measures are identified where appropriate. Conclusions are presented in Section 5.0.

1.6 FRAMEWORK FOR DECISION MAKING

In addressing environmental considerations, the Army 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; Coastal Zone Management Act; Endangered Species Act; National Historic Preservation Act (NHPA); Archaeological Resources Protection Act; Native American Graves Protection and Repatriation Act; American Indian Religious Freedom Act; Resource Conservation and Recovery Act; Comprehensive Environmental Response, Compensation, and Liability Act; Community Environmental Response Facilitation 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 13175 (*Consultation and Coordination with Indian Tribal Governments*); EO 13186 (*Responsibilities of Federal Agencies to Protect Migratory Birds*), and EO 13423 (*Strengthening Federal Environmental, Energy, and Transportation Management*). These authorities are addressed in various sections throughout this EA when relevant to environmental resources and conditions. To the extent that state or local laws, ordinances, or regulations are relevant, they are discussed within the appropriate narrative section of this EA, and accompanying citations of authority or other references are provided. The full text of the laws, regulations, and EOs is available on the Defense Environmental Network and Information Exchange Web site, at <http://www.denix.osd.mil>.

SECTION 2.0 DESCRIPTION OF THE PROPOSED ACTION

2.1 INTRODUCTION

This section describes the Army's Preferred Alternative for carrying out the BRAC Commission's recommendations, which became law on November 9, 2005, as follows:

Close the Miller United States Army Reserve Center, Huntsville, Texas, and relocate units into a new Armed Forces Reserve Center in Huntsville, Texas, if the Army is able to acquire suitable land for the construction of the facilities. The new AFRC shall have the capability to accommodate Texas National Guard units from the Texas ARNG Readiness Center in Huntsville, Texas, if the state decides to relocate those National Guard units.

To meet the BRAC Commission's directive, the Army proposes to acquire approximately 15 acres in Huntsville, Texas. After acquiring a suitable site, the Army would construct and operate an AFRC (including a training building, an Organizational Maintenance Shop, and an unheated storage building) having approximately 57,000 square feet of space.

2.2 PROPOSED ACTION

2.2.1 Site Description

The site proposed for the new AFRC is on the east side of FM 1374 at its intersection with Veterans Memorial Parkway (see Figure 2-1). During the Army's site-evaluation process, this site was identified as *Site No. 8*. The property consists of approximately 31 acres. The property owner has indicated a willingness to divide the property to provide the 15 acres desired by the Army to meet its needs. This is the Preferred Alternative for implementing the proposed action, as is further discussed in Section 3.0 and throughout this EA.

The site is relatively flat with mixed hardwood and pine trees. There are some low areas and a pond measuring approximately 0.3 acre at the center of the site. The site is outside the 100-year flood zone. Zoned for timber production, the site would be accessible from Interstate 45/Powell Road.

There is one metal building on the site. The owner has used the building for truck maintenance in a dirt-hauling business. The building might be incorporated into the Army's facility design, it could be disassembled and relocated, or it could be demolished. All utilities are available at the site's frontage.

2.2.2 Facilities Construction

In addition to land acquisition, primary facilities of the new AFRC would consist of a training building, Organizational Maintenance Shop, an unheated storage building, and a parking area for military vehicles. The facilities would be sufficient to accommodate 200 personnel. Table 2-1 provides information on the size of these facilities. Buildings would be of permanent construction with reinforced concrete foundations; concrete floor slabs; structural steel frames; plumbing;



LEGEND
[Red Outline] Site Boundary

Site 8 (Preferred Alternative)

Figure 2-1

**Table 2-1
Facility sizes**

Facility	Size (square feet)
Armed Forces Reserve Center	49,500
Organizational Maintenance Shop	4,677
Unheated storage building	2,860
Organizational parking	76,887
Privately owned vehicle parking, walks, curbs, and gutters	28,764

heating, ventilation, and air conditioning systems; and mechanical, security, and electrical systems. In accordance with Army policy for constructing new facilities, this project would be designed to meet Leadership in Energy and Environmental Design Silver standards, or better, with a view toward enhanced sustainability and energy efficiency.

Facilities would require land clearing, paving, fencing, general site improvements, and extension of utilities to serve the project. Force protection (physical security) measures would be incorporated into the design, including maximum standoff distance from roads, parking areas, and vehicle unloading areas. Berms, heavy landscaping, and bollards would be used to prevent access when standoff distances cannot be maintained.

Construction could begin as early as January 2010 and could be completed by March 2011—a buildout period of approximately 15 months.

2.2.3 Operations

The Huntsville AFRC would support operations of units of the Army Reserve and Texas ARNG. The AFRC complex would be used Monday through Friday by a small full-time staff of approximately 10 personnel and on weekends by the various Reserve Component units for training. Daily operations would include administrative, training, and maintenance support of unit missions and requirements; recruiting; and preparation for battle assembly weekends.

Approximately 200 Reservists and Guardsmen would be assigned to the units stationed at the AFRC complex. These Soldiers would participate in training activities on weekends each month. A typical training weekend would involve approximately 120 Soldiers on-site. On weekends that include a military-observed holiday, training would not occur. Training activities from a holiday weekend would be shifted to one of the other weekends during the same month, resulting in higher training populations during the remaining weekends in that month. Peak weekend populations at the AFRC during such weekends would be approximately 200 Soldiers.

Training activities conducted during drill weekends would include Military Occupational Specialties training in a Soldier's skill (such as maintenance and communications), required briefings, physical training, mentoring, and evaluations. Weekend traffic would include personal vehicles and military vehicles, such as high-mobility multipurpose wheeled vehicles of various configurations, 2.5- and 5-ton cargo trucks, light-medium tactical vehicles, wreckers, and trailers of various configurations.

SECTION 3.0 ALTERNATIVES

3.1 INTRODUCTION

A bedrock principle of NEPA is that an agency should consider reasonable alternatives to a proposed action. Considering alternatives helps to avoid unnecessary effects and allows analysis of reasonable ways to achieve the stated purpose. To warrant detailed evaluation, an alternative must be reasonable. The following discussion identifies alternatives that the Army considered and whether they are feasible and, hence, subject to detailed evaluation in this EA.

Alternatives to the proposed action were assessed on the basis of alternative sites. The Army assembled a Site Selection Team to prepare an *Available Site Identification and Validation Report* evaluating nine potential sites for the AFRC (USACE 2008). For a site to be considered as a potential site for the AFRC, it had to meet all of the following criteria:

- Net usable acreage
- Compatibility with surrounding land uses
- Support for intended construction and environmental compliance
- Ready access to public utilities
- Reasonable cut or fill requirements
- Proximity to a major roadway corridor and safe ingress and egress
- Reasonable purchase price, within budget
- Appropriate zoning and antiterrorism (property set-back requirements) considerations

Four of the potential sites (Site Nos. 4, 7, 8, and 9) were identified as meeting the above criteria. During on-site visits, the Army determined that neither Site 4 nor Site 7 would be suitable locations for the AFRC, bringing the number of potential sites to two. The two sites considered as alternatives for the proposed action, as well as the No Action Alternative, are discussed below.

3.2 PROPOSED ACTION (SITE NO. 8)

This site is the Army's Preferred Alternative for the AFRC. Described in detail in Section 2.2.1, it is evaluated in detail in this EA.

3.3 SITE 9 ALTERNATIVE

Site 9 consists of 53 acres fronting FM 2821, Route 19, and Ryans Ferry Road (Figure 3-1). The property owner has indicated a willingness to divide the property to provide the 15 acres desired by the Army to meet its needs; the Army would desire the 15 acres fronting Ryans Ferry Road at the southern end of the tract. While the property is remote from other development, it has all utilities in close proximity. The site is densely populated with hardwood and pine trees. Outside the 100-year flood zone, it is zoned for agricultural uses. This site is evaluated in detail in this EA.



LEGEND

 Site Boundary

Site 9

Figure 3-1

3.4 NO ACTION ALTERNATIVE

The CEQ regulations require inclusion of the No Action Alternative, which serves as a baseline against which the effects of the proposed action and alternatives can be evaluated. Under the No Action Alternative, the Army would not implement the proposed action. No land would be acquired, no facilities would be constructed, and no units would relocate from other facilities. The units proposed for relocation under the proposed action would continue to operate from their current facilities.

SECTION 4.0

AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

4.1 LAND USE

4.1.1 Affected Environment

Site 8 is zoned “non-residential” by the city of Huntsville and is currently used for timber production. The site is forested and undeveloped except for an unpaved road across its northern portion and a metal building at its northeast corner. North of the site across Veterans Memorial Parkway is an undeveloped lot, with residences beyond that. A residential lot and a farm are across Montgomery Road west of the site. South and east of the site are undeveloped lots. An area designated by the city of Huntsville as “Neighborhood Conservation” (areas reserved for single-family residential development) is a few hundred feet southeast of the site, with the nearest residence in the neighborhood being about 900 feet from the edge of the site. A pond is east of the site along Veterans Memorial Parkway.

Site 9 is zoned for agricultural use and is undeveloped and forested except for a cleared firebreak and utility corridor (sewer line) that crosses the site from northwest to southeast. Across Ryans Ferry Road along the site’s southeastern boundary is residential development. Route 19 and mostly undeveloped land are west and south of the site, and FM 2821 (Fish Hatchery Road) and undeveloped land are north of the site.

4.1.2 Environmental Consequences

4.1.2.1 Proposed Action

Long-term minor adverse effects on land use would be expected from implementing the proposed action. The closest occupied land use near the site is residences north of Site 8 across Veteran’s Memorial Parkway and west of the site across Montgomery Road. The city of Huntsville considers a low-intensity commercial use (as the AFRC would be classified, based on estimated traffic to the AFRC). A low-intensity commercial use adjacent to a residential use is considered a conflicting use and requires that a vegetated buffer be placed between them to minimize the conflict between them (City of Huntsville. 2009).

4.1.2.2 Site 9 Alternative

Long-term minor adverse effects on land use would be expected from implementing the Site 9 Alternative. The closest occupied land use near Site 9 is a residential area east of the site along its southeastern boundary. Low-intensity commercial use of the site as an AFRC would be considered a conflicting use and requires that a vegetated buffer be placed between them to minimize the conflict between the two uses (City of Huntsville. 2009).

4.1.2.3 No Action Alternative

No effects on land use would result from implementing the No Action Alternative. Under the No Action Alternative, the Army would not implement the proposed action. No land would be acquired, no facilities would be constructed, and no units would relocate from other facilities.

4.2 AESTHETICS AND VISUAL RESOURCES

4.2.1 Affected Environment

Both Site 8 and Site 9 are undeveloped and wooded. Site 8 is surrounded by other wooded areas and has a rural character. Site 9 is bounded by Route 19 (a busy, four-lane highway), Ryans Ferry Road, and FM 2821, which gives the site more of a developed aesthetic than Site 8, even though it is completely wooded. Visibility from each site is limited by dense tree growth.

4.2.2 Environmental Consequences

4.2.2.1 Proposed Action

Long-term minor adverse effects on aesthetics and the visual environment would be expected from implementing the proposed action. The aesthetics of Site 8 would be changed from a natural site to a developed site, and though there are no other commercial establishments or residential areas nearby from which the view would be affected, the rural character of the immediate area would be affected. The Army would incorporate setbacks from the property boundary and suitable landscaping to minimize any adverse effects on the area's aesthetics to the extent that the layout of the AFRC and the size of the property permit.

4.2.2.2 Site 9 Alternative

Long-term minor adverse effects on aesthetics and the visual environment would be expected from implementing the Site 9 Alternative. The aesthetics of Site 9 would be changed from a natural site to a developed site, and the views of residents living east of the site across Ryans Ferry Road would be affected by the change in land use. Depending on site layout, the natural aesthetics of the site could be retained by leaving a buffer of trees between Ryans Ferry Road and the AFRC facilities.

4.2.2.3 No Action Alternative

No effects on aesthetics and visual resources would result from implementing the No Action Alternative. Under the No Action Alternative, the Army would not implement the proposed action. No land would be acquired, no facilities would be constructed, and no units would relocate from other facilities.

4.3 AIR QUALITY

4.3.1 Affected Environment

This section presents a description of ambient air quality at the proposed site with respect to attainment of National Ambient Air Quality Standards (NAAQS) and identifying applicable air quality regulations.

The U.S. Environmental Protection Agency (EPA) Region 6 and the Texas Commission on Environmental Quality (TCEQ), regulate air quality in Texas. The Clean Air Act (42 *United States Code* [U.S.C.] 7401–7671 *et seq.*), as amended, gives EPA the responsibility to establish the primary and secondary NAAQS (40 CFR Part 50) that set acceptable concentration levels for seven criteria pollutants: fine particulate matter (PM₁₀), very fine particulate matter (PM_{2.5}), sulfur

dioxide (SO₂), carbon monoxide (CO), nitrous oxides (NO_x), ozone, and lead. Short-term standards (1-, 8-, and 24-hour periods) have been established for pollutants contributing to acute health effects, while long-term standards (annual averages) have been established for pollutants contributing to chronic health effects. On the basis of the pollution problem severity, nonattainment areas are categorized as marginal, moderate, serious, severe, or extreme. Each state has the authority to adopt standards stricter than those established under the federal program; however, Texas accepts the federal standards.

Federal regulations designate Air-Quality Control Regions (AQCRs) in violation of the NAAQS as *nonattainment* areas. Federal regulations designate AQCRs with levels below the NAAQS as *attainment* areas. Walker County, Texas, and all proposed AFRC facilities are completely within the Metropolitan Houston-Galveston Intrastate AQCR (AQCR 216) (USEPA 2008). EPA has designated Walker County as a severe nonattainment for the 8-hour ozone NAAQS and as in attainment for all other criteria pollutants (40 CFR 81.344).

4.3.2 Environmental Consequences

4.3.2.1 Proposed Action

Long-term minor adverse effects on air quality would be expected as a result of implementing the proposed action. The effects would be primarily from air emissions during facility construction and from creating new stationary sources of air emissions, such as heating boilers and standby generators, at the AFRC. Increases in emissions would not be expected to exceed applicability thresholds, be regionally significant, or contribute to a violation of any federal, state, or local air regulation.¹

Estimated Emissions and General Conformity. The Clean Air Act contains the legislation that mandates the General Conformity Rule to ensure that federal actions in nonattainment and maintenance areas do not interfere with a state's timely attainment of the NAAQS. The general conformity process requires federal agencies to determine if their action(s) would increase emissions of criteria pollutants above preset threshold levels (40 CFR 93.153). The general conformity rule specifies threshold or *de minimis* (of minimum importance) emission levels. *De minimis* emissions are total direct and indirect emissions of a criteria pollutant caused by a federal action in a nonattainment area at rates less than specified applicability thresholds. All proposed sites are in a region that has been designated a severe nonattainment for the 8-hour ozone NAAQS. Therefore, the applicability thresholds are 25 tons per year for NO_x and volatile organic compounds. In addition, the general conformity rule applies if the emissions are *regionally significant*. *Regionally significant* emissions are defined as the total direct and indirect emissions of a federal action that represents 10 percent or more of an area's total emissions for a criteria pollutant.

The Army accounted for the total direct and indirect emissions associated with the following activities:

- Constructing the new facilities
- Operating vehicles for construction workers

¹ A facility's emissions are regionally significant if its emissions could equal or exceed 10 percent of the emissions of one or more pollutants of concern in the nonattainment or maintenance area [40 CFR 93.153(h)(4)(i)]. Regional significance is not applicable to facilities constructed in an attainment area.

- Paving parking areas
- Operating personal vehicles for employees and trainees
- Operating new boilers
- Operating new backup generators

The total direct and indirect emissions associated with the proposed action would not be expected to exceed applicability threshold levels and would not be regionally significant (Table 4-1 and Table 4-2). Therefore, the General Conformity Rule does not apply, and a general conformity determination is not required. A detailed breakdown of emissions and a record of non-applicability to the General Conformity Rule are in Appendix A.

Table 4-1
Construction emissions - applicability review

Pollutant	Annual emissions (tpy)	Regional emissions ^a (tpy)	Percent regional emissions	Regionally significant (yes/no)	Applicability threshold (tpy)	Exceeds <i>de minimis</i> thresholds? (yes/no)
NO _x	7.9	424,495	<0.0001%	No	100	No
VOC	1.5	564,290	<0.0001%	No	100	No

tpy = tons per year, voc = volatile organic compound

^a Source: TCEQ 2007

Table 4-2
Operational emissions - applicability review

Pollutant	Annual emissions (tpy)	Regional emissions ^a (tpy)	Percent regional emissions	Regionally significant (yes/no)	Applicability threshold (tpy)	Exceeds <i>de minimis</i> thresholds? (yes/no)
NO _x	1.8	424,495	<0.0001%	No	100	No
VOC	0.3	564,290	<0.0001%	No	100	No

tpy = tons per year, voc = volatile organic compound

^a Source: TCEQ 2007

For the purposes of calculating emissions, it was assumed that approximately 10 permanent personnel and 200 trainees would be stationed at the AFRC. It was also assumed that a 700-kilowatt backup generator would be used at the facility either initially or in the future. Moderate changes in the size or type of equipment ultimately selected or the number of workers would not be expected to substantially change the total direct or indirect emissions, applicability analysis, or the level of impact under NEPA.

Regulatory Review. The Clean Air Act, as amended in 1990, mandates that state agencies adopt and implement State Implementation Plans to eliminate or reduce the severity and number of violations of the NAAQS. Since 1990, Texas has developed a core of air quality regulations that EPA has approved. These approvals signified the development of the general requirements of the State Implementation Plan. The Texas program for regulating air emissions affects industrial sources, commercial facilities, and residential development activities. Regulation occurs primarily through a process of reviewing engineering documents and other technical information, applying emission standards and regulations in permit issuance, performing field inspections, and assisting industries in determining their compliance status with applicable requirements.

As part of these requirements, TCEQ oversees programs for permitting the construction and operation of new or modified stationary source air emissions in Texas. TCEQ air permitting is required for many industries and facilities that emit regulated pollutants. These requirements include Title V permitting of major sources, New Source Review, Prevention of Significant Deterioration, New Source Performance Standards for selected categories of industrial sources, and the National Emission Standards for Hazardous Air Pollutants. TCEQ air permitting regulations do not apply to mobile sources, such as trucks. An overview of the applicability of these regulations to the project is outlined in Table 4-3.

Table 4-3
Air quality regulatory review for proposed stationary sources

Regulation	Project status
New Source Review (NSR)	The potential emissions would not exceed NSR threshold and would be exempt from NSR permitting requirements. It is possible that a state operating permit would be required for both the boilers and emergency back-up generators.
Prevention of Significant Deterioration (PSD)	Potential emissions would not exceed the 250-tons-per-year PSD threshold. Therefore, the project would not be subject to PSD review.
Title V Permitting Requirements	The facility's potential to emit would be below the Title V major source threshold and would not require a Title V permit.
National Emission Standards for Hazardous Air Pollutants (NESHAP)	Potential Hazardous Air Pollutant emissions would not exceed NESHAP thresholds. Therefore, the use of Maximum Available Control Technology would not be required.
New Source Performance Standards (NSPS)	Both emergency generators and boilers would be subject to NSPS.

Other non-permitting requirements may be required through the use of compliant practices or products or both. These regulations are outlined in TCEQ Regulations: Title 30, Part 1, Chapters 101–118. They include the following:

- General Air Quality Rules (30 TAC 1.101)
- Air pollution from Visible Emissions and Particulate Matter (Chapter 30 TAC 1.111.A)
- Air pollution from Open Burning (Chapter 30 TAC 1.111.B)
- Air pollution from Motor Vehicle (Chapter 30 TAC 1.114)
- Air pollution from Volatile Organic Compounds (Chapter 30 TAC 1.101)

In addition to those outlined above, no person may handle, transport, or store any material in a manner that would allow unnecessary amounts of air contaminants to become airborne. During construction reasonable measures may be required to prevent unnecessary amounts of particulate matter from becoming airborne (30 TAC 1.111.B). Such precautions would likely include using water to control dust during construction operations, road grading, or land clearing, and other standard practices.

4.3.2.2 Site 9 Alternative

Long-term minor adverse effects on air quality would be expected as a result of implementing the Site 9 Alternative. The total direct and indirect emissions associated with the Site 9 Alternative, permitting requirements, and non-permitting regulatory provisions would be the same as the proposed action.

4.3.2.3 No Action Alternative

No effects on air quality would result from implementing the No Action Alternative. Under the No Action Alternative, no land would be acquired, no facilities would be constructed, and no new Reserve training operations would occur. Ambient air-quality conditions would remain as described in Section 4.3.1.

4.4 NOISE

4.4.1 Affected Environment

Noise is defined as any sound that is undesirable because it interferes with communication, is intense enough to damage hearing, or is otherwise intrusive. Human response to noise varies depending on the type and characteristics of the noise, the distance between the noise source and the receptor, receptor sensitivity, and time of day.

Sound varies by both intensity and frequency. Sound pressure level, described in decibels (dB), is used to quantify sound intensity. The dB is a logarithmic unit that expresses the ratio of a sound pressure level to a standard reference level. Hertz are used to quantify sound frequency. The human ear responds differently to different frequencies. A-weighting, described in A-weighted decibels (dBA), approximates this frequency response to express accurately the perception of sound by humans. Sounds encountered in daily life and their approximate levels in dBA are provided in Table 4-4.

**Table 4-4
Common sounds and their levels**

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

Source: Harris 1998

The dBA noise metric describes steady noise levels. Very few noises are, in fact, constant, so a noise metric, day-night sound level (DNL) has been developed. DNL is defined as the average sound energy in a 24-hour period with a 10-dB penalty added to nighttime levels (10 p.m. to 7 a.m.). DNL is a useful descriptor for noise because it averages ongoing yet intermittent noise, and it measures total sound energy over a 24-hour period. In addition, equivalent sound level (L_{eq}) is often used to describe the overall noise environment. L_{eq} is the average sound level in dB.

The Noise Control Act of 1972 (Public Law 92-574) directs federal agencies to comply with applicable federal, state, interstate, and local noise control regulations. In 1974 EPA provided information suggesting that continuous and long-term noise levels in excess of DNL 65 dBA are normally unacceptable for noise-sensitive land uses such as residences, schools, churches, and

hospitals. Texas has no statewide noise regulation. The city of Huntsville maintains a general nuisance noise ordinance. The code, however, does not set explicit not-to-exceed sound levels or specific time constraint on construction noise (Huntsville Municipal Code, Section 21.01.05).

Existing sources of noise near the proposed sites include local road traffic, high-altitude aircraft overflights, and natural noises, such as leaves rustling and bird vocalizations. Site 8 is adjacent to Veterans Memorial Parkway, and Site 9 is adjacent to Route 19. Both are four-lane divided roadways, which would be an ongoing source of background noise. There are no rail corridors or airports near either site. Existing noise levels (DNL and L_{eq}) were estimated for the proposed sites and surrounding areas using the techniques specified in the *American National Standard Quantities and Procedures for Description and Measurement of Environmental Sound Part 3: Short-term measurements with an observer present* (ANSI 2003). Table 4-5 outlines the closest noise-sensitive areas such as residents, schools, churches, and hospitals, and the estimated existing noise levels at each location. Notably, there are no churches, schools, or hospitals within 1,200 feet of either site.

Table 4-5
Estimated existing noise levels at nearby noise-sensitive areas

Location	Closest noise-sensitive area			Estimated existing sound levels (dBA)		
	Distance	Direction	Type	DNL	L_{eq} (daytime)	L_{eq} (nighttime)
Site 8	400 feet (120 meters)	West	Residential	60	58	52
	920 feet (280 meters)	Southeast	Residential			
Site 9	190 feet (60 meters)	East	Residential			
	1500 feet (450 meters)	West	School (Huntsville High School)			

Source: ANSI 2003.

4.4.2 Environmental Consequences

4.4.2.1 Proposed Action

Short-term minor adverse effects on the noise environment would be expected from implementing the proposed action. Minor increases in noise would be primarily from using heavy equipment during construction. The effects would be temporary in nature and would end upon completion of construction. Noise from facility operations would be expected to be negligible.

The proposed action would require constructing several new facilities at Site 8. Individual pieces of construction equipment typically generate noise levels of 80 to 90 dBA at a distance of 50 feet (Table 4-6). With multiple items of equipment operating concurrently, noise levels can be relatively high during daytime periods at locations within several hundred feet of active construction sites. The zone of relatively high construction noise levels typically extends to distances of 400 to 800 feet from the site of major equipment operations. Locations farther than 1,000 feet from construction sites seldom experience appreciable levels of construction noise.

Table 4-6
Noise levels associated with outdoor construction

Construction phase	dBA L_{eq} at 50 feet from source
Ground Clearing	84
Excavation, Grading	89
Foundations	78
Structural	85
Finishing	89

Source: USEPA 1971

Depending on the exact location of construction, there would be several residences closer than 800 feet to Site 8 that would experience appreciable amounts of construction noise. Given the temporary nature of the construction, it would be expected to have only a minor effect. Construction activities would not likely occur at night and are not expected to violate Huntsville's nuisance noise ordinance.

Although construction-related noise effects would be minor, best management practices that would be recommended to minimize noise effects include limiting construction to normal weekday business hours and properly maintaining construction equipment mufflers.

Noise effects on construction personnel could be limited by ensuring that all personnel wear adequate personal hearing protection to limit exposure and ensuring compliance with federal health and safety regulations, including those outlined by the U.S. Occupational Safety and Health Administration. Training at the AFRC would not generate disruptive noise levels at the adjacent residences. No use of weaponry, demolitions, or aircraft operations would occur with the implementation of the proposed action. Therefore, no changes in the existing noise environment associated with these sources would be expected.

Intermittent car and truck noise would be expected at the AFRC because of the proximity of Veterans Memorial Parkway to Site 8. These events could be loud enough to interfere with speech outside the building but would not interfere with indoor operations.

4.4.2.2 Site 9 Alternative

Short-term minor adverse effects on the noise environment would be expected from implementing the Site 9 Alternative. The levels of noise associated with this alternative would be similar in both level and frequency as that outlined under the proposed action. As with the proposed action, there are existing residences closer than 800 feet to Site 9 that would experience appreciable amounts of construction noise. Intermittent car and truck noise would be expected at the AFRC because of the proximity of Route 19 to Site 9. These events could be loud enough to interfere with speech outside the building but would not interfere with indoor operations.

4.4.2.3 No Action Alternative

No effects on the noise environment would result from implementing the No Action Alternative. Under the No Action Alternative, no land would be acquired, no facilities would be constructed, and the land would remain in its current state. Ambient noise conditions would remain as described in Section 4.4.1.

4.5 GEOLOGY AND SOILS

4.5.1 Affected Environment

4.5.1.1 Geologic and Topographic Conditions

The proposed AFRC sites are in the Interior Coastal Plains physiographic province that is comprised of alternating belts of resistant uncemented sands and weaker shales that erode into long, sandy ridges (BEC 1996). Topographically, Site 8 is relatively flat with some low areas (DA, HQ, 90th RRC 2008). Site 9 has an elevation ranging from 350 to 390 feet above sea level with the lower part of the site being in the west central section of the parcel.

4.5.1.2 Soils

The soils of Site 8 are classified as gently rolling and belonging to the Depcor-Huntsburg-Gunter association. The soils are derived from loamy, sandy, or clayey marine deposits and alluvium and are moderately well drained with a low to moderate available water capacity. Slopes can be 1 to 5 percent, the depth to water table is from about 6 to 60 inches, and the depth to a restrictive feature is more than 80 inches (USDA 2009a, 2009b).

The soils of Site 9 are classified as gently undulating to rolling and belonging to the Annona, Depcor-Huntsburg, and Depcor-Huntsburg-Gunter associations. The soils are derived from clayey alluvium and marine and clayey marine deposits. They are moderately well drained with a moderate available water capacity. Slopes can be 1 to 8 percent, and the depth to the water table is from 24 inches to more than 80 inches. The depth to restrictive features can be greater than 80 inches.

4.5.1.3 Prime Farmland

Congress enacted the Farmland Protection Policy Act as a subtitle of the 1981 Farm Bill. The purpose of the law is to “minimize the extent to which Federal programs contribute to the unnecessary conversion of farmland to nonagricultural uses” (Public Law 97-98, Sec. 1539-1549; 7 U.S.C. section 4201 et seq.). Neither the soils of Site 8 nor Site 9 are rated as prime farmland soils. No further evaluation under the Farmland Protection Policy Act, therefore, is required.

4.5.2 Environmental Consequences

4.5.2.1 Proposed Action

Short-term minor adverse effects on soils would be expected from implementing the proposed action. Removal of vegetation, site grading, and exposure of soil during construction would lead to some soil erosion. These effects would be minimized by the use of appropriate best management practices. Compliance with the Texas Construction Stormwater General Permit (TXR150000) would be required (TCEQ 2008a). No effects on geology, topography, or prime farmland soils would be expected.

4.5.2.2 Site 9 Alternative

Short-term minor adverse effects on soils would be expected from implementing the Site 9 Alternative. Effects would be the same as those from implementing the proposed action.

4.5.2.3 No Action Alternative

No effects on geology, topography, soils, or prime farmland soils would result from implementing the No Action Alternative. Under the No Action Alternative, no land would be acquired, no facilities would be constructed, and the land would remain in its current state.

4.6 WATER RESOURCES

4.6.1 Affected Environment

Huntsville straddles the drainage divide between the Trinity River basin to the north, which includes Lake Livingston, and the San Jacinto River basin to the south, which includes Lake Conroe (see Figure 1-1) (TCEQ 2004, TWDB 2008). Site 8 is in the San Jacinto River basin, and Site 9 is in the Trinity River basin (FEMA 2009, TCEQ 2004). Both rivers flow generally southeast toward the Gulf Coast of Texas. The West Fork San Jacinto River flows from Walker County through Lake Conroe into Montgomery County. Then it continues into Harris County, where the West Fork and East Fork San Jacinto rivers flow through Lake Houston and continue through the Houston Ship Channel into the San Jacinto Bay arm of Galveston Bay about 95 miles southeast of Huntsville (TCEQ 2004). South of Lake Livingston, the Trinity River continues southeast then south until it empties into the Trinity Bay arm of Galveston Bay (Handbook of Texas Online 2008) about 20 miles east of the San Jacinto River's mouth at upper San Jacinto Bay (TWDB 2008).

4.6.1.1 Surface Water

Site 8 (proposed action). Site 8 is in the headwaters region of McDonald Creek, about ½-mile to the east, and Robinson Creek, just under a mile to the west, along the relatively flat area straddling the drainages of the two creeks (USGS 1997). Both creeks drain toward the southwest roughly paralleling FM1374, on either side of the road, and empty into the West Fork San Jacinto River just above Lake Conroe, about 9 miles southwest of Site 8 (see Figure 1-1). McDonald Creek and Robinson Creek are unclassified surface water segments and are not listed on Texas' 2008 303(d) list of impaired waters (TCEQ 2008b). Site 8 has a single 0.3-acre pond near its center. Just east of the site is a constructed pond that detains water near the headwaters along a small unnamed tributary to McDonald Creek (USACE 2008; see Figure 2-1). Huntsville topographic data indicate that natural surface drainage from Site 8 would flow toward the constructed pond or to its outfall stream and then to McDonald Creek (USACE 2008).

Site 9. Site 9 is in the headwaters area between Spring Branch, about ¾-mile east of Ryans Ferry Road, and Horse Branch, about ⅜-mile west of Route 19. Both streams convey water ultimately to Harmon Creek, a Trinity River tributary that begins east of Huntsville and flows northeasterly to its mouth on the Trinity River just upstream of Lake Livingston and about 10 miles northeast of Site 9 (see Figure 1-1). TCEQ designated Harmon Creek as an ecologically significant stream segment due to its abundant aquatic habitat (TCEQ 2008b, TPWD 2008a). Horse Branch, Spring Branch, and Harmon Creek are not listed on the Texas 2008 303(d) list of impaired waters (TCEQ 2008b). Site 9 has no surface waterbodies within its footprint (see Figure 3-1). Huntsville topographic data indicate that a drainage swale bisects the site from southeast to northwest, and natural drainage from Site 9 would flow offsite at the northwest site boundary along Highway 19 (USACE 2008). Thereafter, natural surface drainage is conveyed northwest toward Horse Branch, a tributary to Town Branch, which flows north to Parker Creek, which flows north to Harmon Creek.

4.6.1.2 Hydrogeology/Groundwater

Site 8 (proposed action). Huntsville is in Groundwater Management Area 14 of the Texas Water Development Board and is underlain by the Gulf Coast major aquifer and Yegua-Jackson Minor aquifer (Turner et al. 2004, TWDB 2009). In Walker County, the Gulf Coast aquifer includes Willis Sand, Oakville Sand, and Catahoula Sandstone water-bearing formations. The Yegua-Jackson and Gulf Coast aquifers outcrop in northern Walker County. In the Bluebonnet Groundwater Conservation District, which includes Walker County, water quality in the Yegua-Jackson aquifer ranges from fresh to moderately saline, and water quality in the Gulf Coast aquifer ranges from fresh to slightly brackish (Turner et al. 2004). Huntsville relies on surface water from Lake Livingston for its water supply, and Site 8 does not have any known groundwater wells. The depth to the water table in the area is from about 6 to 60 inches.

Site 9. Hydrogeology and groundwater conditions pertaining to Site 9 in Huntsville are as described above for Site 8. Site 9 has no known groundwater wells.

4.6.1.3 Floodplains

Site 8 (proposed action). No Federal Emergency Management Agency-designated 100-year floodplain occurs on Site 8 (USACE 2008). Drainage from Site 8 flows generally southwest toward floodplain zones along McDonald Creek (FEMA 2001).

Site 9. No Federal Emergency Management Agency-designated 100-year floodplain occurs on Site 9 (USACE 2008). Drainage from the site flows generally northwest toward floodplain zones along Horse Branch west of Highway 19 (FEMA 2001).

4.6.1.4 Coastal Zone

The federal Coastal Zone Management Act (16 U.S.C. 1451 *et seq.* as amended) was enacted to preserve, protect, develop, and where possible restore or enhance the resources of the coastal zone of the United States, including the Gulf of Mexico. Provisions under the federal Coastal Zone Management Act assist states in developing coastal management programs to manage and balance competing uses of the coastal zone and require federal agencies to act consistently with federally approved state coastal management programs. Texas' coastal zone is "generally the area seaward of the Texas coastal facility designation line which roughly follows roads that are parallel to coastal waters and wetlands generally within 1 mile of tidal rivers" and encompasses all or portions of 18 coastal counties (NOAA 2004, 2008). Walker County is not one of those 18 counties (TCMP 2008). Sites 8 and 9 are outside any areas regulated under Texas' Coastal Management Program, and, accordingly, Huntsville AFRC operations and activities are not subject to any requirements under the Texas Coastal Management Program.

4.6.2 Environmental Consequences

4.6.2.1 Proposed Action

Short-term minor adverse effects on water resources would be expected under the proposed action. Land disturbance activities and vegetation clearing associated with site development, potential building demolition, and construction activities could result in erosion and sediment runoff leading to short-term adverse effects. The effects would be minimized by using construction-specific best management practices to control storm water runoff and by

implementing a site-specific sediment and erosion control plan during land development, construction. The Army and its contractors would comply with Texas Pollutant Discharge Elimination System Construction General Permit for Storm Water (TXR150000), including the requirement to develop a site-specific Storm Water Pollution Prevention Plan (TCEQ 2008c). These measures would minimize the short-term effects of land disturbance activities on water resources.

Developing the proposed AFRC at Site 8 would require removal of about 11 acres of vegetation that consists of mixed hardwood and pine trees and old fields. There would be increased impervious cover on the site consisting of pavement and rooftops, and development in general also leads to increases in pollutant loads in storm water runoff from such areas. However, a limited amount of development would occur under the proposed action and the surrounding area in general is wooded with a limited amount of development. The proposed action, therefore, would not be expected to cause measurable changes in surface water or groundwater quality. Additionally, the Army would incorporate into its site design best management practices and sustainability features in accordance with Texas construction site guidance and the U.S. Green Building Council's Leadership in Energy and Environmental Design Silver standard or better. This would be expected to minimize long-term adverse effects on surface waters and groundwater.

No effects on floodplains or coastal zone resources would be expected under the proposed action.

4.6.2.2 Site 9 Alternative

Short-term minor adverse effects on water resources would be expected, as described in Section 4.6.2.1. Site 9 is surrounded by roadways that carry a substantial amount of traffic annually, and though developing the site would change the immediate site from wooded to partially developed, the change would not be expected to add appreciable amounts of pollutants to surface waters or ground water. The Army would comply with Texas regulations concerning site development and post-development storm water runoff control and would incorporate sustainability features in accordance with the U.S. Green Building Council's Leadership in Energy and Environmental Design Silver standard (or better).

No effects on floodplains or coastal zone resources would be expected.

4.6.2.3 No Action Alternative

No effects on water resources would be expected under the No Action Alternative because baseline conditions would remain the same.

4.7 BIOLOGICAL RESOURCES

4.7.1 Affected Environment

Huntsville is near the boundary between the Southern Mixed Forest Province and the Prairie Parkland Province, a region of prairies and savannas (Bailey et al. 1994). It is part of the grassland-forest transition area of the central United States. The region has warm winters and hot summers, so rainfall occurs throughout the year, with frequent hurricanes during the autumn months.

4.7.1.1 Vegetation

This east-central region of Texas is locally termed the piney woods (Griffith et al. 2004). The region represents the western edge of the southern coniferous forest belt. Once dominated by a mix of pine and hardwood forests, much of the region is now in loblolly and shortleaf pine plantations. (All scientific names of species mentioned in the text are provided in Appendix B.) Short and medium-to-tall grasses (principally bluestem grasses) with scattered trees, typically widely spaced evergreens (including loblolly and shortleaf pines) dominate open areas (Bailey et al. 1994).

Site 8 is mostly forested with a mixture of hardwoods and pines. An open, grassed area is along Veterans Memorial Parkway (USACE 2008). The vegetation on Site 8 is a mix of maintained roadside vegetation, herbaceous old fields, and second-growth forest with trees approximately 15 to 20 years in age. Some larger, older trees are present on field edges and roadsides. There is a pond on the site, but the pond margin does not appear to support significant wetland vegetation. The site's old fields have a mixture of grasses and forbs with joe pye weed, goldenrod, and warm-season and cool-season grasses. The site's second growth forests are predominantly loblolly pine, with a significant hardwood component consisting of sweetgum, post oak, blackjack oak, sugarberry, and sweetbay. Vines and shrubs dominate the understory. Cross vine and greenbrier are common vines. The exotic invasive shrub Chinese privet is prevalent throughout. The young forest on the site appears to have grown back naturally and would not be of high value for timber production without substantial management.

Site 9 is almost entirely forested, with hardwoods (primarily sweetgum, post oak, and blackjack oak) dominating the eastern half of the property and pines (mostly loblolly pine) more prevalent on the western side.

4.7.1.2 Wildlife

Fauna vary with the age and stocking of timber stands, mixture of pine and hardwood species, availability of openings, and presence of bottomland forest types. Given the vegetation of the sites, whitetail deer, opossum, nine-banded armadillo, striped skunk, southeastern myotis, eastern fox squirrel, coyote, and raccoon could be expected to be encountered on the sites or nearby areas (TPWD 2008c). Bird species common in the area include the rock dove, mourning dove, chimney swift, ruby-throated hummingbird, red-bellied woodpecker, white-eyed vireo, blue jay, American crow, tufted titmouse, pine warbler, and other eastern species that are common in mixed forests (Wolf et al. 2001). The sites' forest cover and the pond on Site 8 could be of value to wildlife.

4.7.1.3 Sensitive Species

The Texas Parks and Wildlife Department maintains a database of listed species by county of occurrence (TPWD 2008b). The database lists five federal listed species for Walker County (Table 4-7). On the basis of on habitat requirements and occurrence data, none of the species would likely be found on either of the sites proposed for the AFRC. A biologist from the Savannah District Corps of Engineers participated in the site visit and noted that the sites are relatively flat with mixed hardwood and pine trees and are not suitable for the red-cockaded woodpecker (DA, HQ, 90th RRC 2008).

**Table 4-7
Federal listed species in Walker County**

Common name	Federal status	State status	Suitable habitat on Site 8 or Site 9?
Louisiana black bear	T	T	No
Red wolf	E	E	No
Red-cockaded woodpecker	E	E	No
Piping plover	T	T	No
Louisiana pine snake	C	T	No

4.7.1.4 Wetlands

A survey crew found a pond measuring approximately 0.3 acre on Site 8. The pond is in the south-central portion of the site. The pond would not be able to be avoided during site development and would need to be drained and graded to use the site. The pond was approximately 2 feet deep when discovered on the site. It is not known whether the pond would qualify as jurisdictional wetlands, and the pond margin does not appear to support wetland vegetation. No wetlands are known to be on Site 9.

4.7.2 Environmental Consequences

4.7.2.1 Proposed Action

Long-term minor adverse effects on vegetation, wildlife, and wetlands would be expected from implementing the proposed action. Development of Site 8 would require removal of trees and other vegetation and the wildlife habitat that it provides. Landscaping installed after the AFRC's construction would not provide the same quantity or quality of habitat that now exists on either site. The proposed layout of the AFRC and associated structures would affect the pond on Site 8. The Army would be required to obtain a Clean Water Act section 404 permit from the U.S. Army Corps of Engineers (USACE) before affecting wetlands and other waters of the United States. The USACE would determine appropriate mitigation for the affected wetlands, and the Army would be obligated to perform the required mitigation. No effects on sensitive species would be expected. Coordination letters regarding the proposed action were sent to the Texas Parks and Wildlife Department and the U.S. Fish and Wildlife Service, and both agencies responded (see Appendix C). The U.S. Fish and Wildlife Service stated concerns about the potential to affect the endangered red-cockaded woodpecker. A response was sent to the service indicating that the property was visited by a person qualified to assess the habitat's suitability for the species, and that the habitat on the property is not suitable for the species' nesting or foraging. The Texas Parks and Wildlife Department stated that it does not have sufficient information about the sites to fully assess impacts on fish and wildlife resources, and recommended that the Army use the site that requires the least amount of clearing of vegetation.

4.7.2.2 Site 9 Alternative

Long-term minor adverse effects on vegetation and wildlife would be expected from implementing the Site 9 Alternative. The effects would be much the same as those described for the proposed action, except that no effects on wetlands would be expected.

4.7.2.3 No Action Alternative

No adverse effects on biological resources would result from implementing the No Action Alternative. Under the No Action Alternative, no land would be acquired, no facilities would be constructed, and the land would remain in its current state.

4.8 CULTURAL RESOURCES

4.8.1 Affected Environment

Cultural Resources are comprised of historic properties (buildings, structures, districts, landscapes, and others, as defined by Army Regulation 200-1 [AR 200-1] and the NHPA), archaeological sites (as defined and governed by the Archaeological Resources Protection Act, AR 200-1, and the NHPA), Native American sacred sites (as identified in EO 13007 and the American Indians Religious Freedom Act), Traditional Cultural Properties (as defined in the NHPA and as described in National Register Bulletin 38), and sites and artifacts associated with Native American Graves (as defined and governed by the Native American Graves Protection and Repatriation Act).

Note that Site 9 was not included in the Archaeological Impact Evaluation. However, if the preferred site (Site 8) is not selected and the Army instead elects to move forward with the Site 9 Alternative, the Army would first conduct a Phase I Cultural Resources Survey and any further consultation that would be required to remain in compliance with the NHPA before proceeding with construction.

4.8.1.1 Archaeological Resources

A review of the Texas Archaeological Sites Atlas and the Texas State Archaeological Landmark register revealed no previously recorded archaeological sites within the Area of Potential Effect (APE) for the proposed project. The APE for the proposed undertaking included the area within the boundary of the proposed site, as well as the viewshed adjacent to the proposed site, which typically extends from 1.5 to 2 miles from the site boundary. Three previously recorded archaeological sites (north of the project area) were identified within a 1-mile radius of the APE (Table 4-8). All three sites have been evaluated as not eligible for listing on the National Register of Historic Places (NRHP). The three identified sites are associated with Native American occupation of the area spanning the Dalton through the Woodland periods; most of the sites date to the Archaic.

Table 4-8
Previously recorded archaeological sites within a 1-mile radius
of the APE for the proposed action

Site	Site type	Cultural affiliation	Relation to APE	NRHP status
41WA261	Prehistoric artifact scatter	Unknown and late Prehistoric	Outside	Not eligible
41WA262	Prehistoric lithic scatter	Unknown Prehistoric	Outside	Not eligible
41WA263	Prehistoric artifact scatter	Unknown Prehistoric	Outside	Not eligible

Source: Warhop and Olson 2009

New South Associates archaeologists conducted an Archaeological Impact Evaluation of the APE between January 23 and 24, 2009, to identify those areas of the APE that were too disturbed to

contain archaeological sites and to identify areas with potential to contain archaeological deposits. The archaeologists conducted an Intensive Archaeological Survey of those areas of the APE with potential to contain archaeological deposits. The Archaeological Impact Evaluation completes a 100 percent archaeological survey of the APE. This survey, which included pedestrian survey and hand excavated shovel tests, revealed no archaeological deposits within the project's APE. The archaeologists concluded that there are no archaeological resources within the APE for the proposed project (36 CFR 800.16[1]) and that there are no State Archaeological Landmarks.

4.8.1.2 Historic Buildings

A review of the NRHP and the Texas Historical Commission's historic properties files identified no previously recorded historic buildings or structures within the APE for the proposed project. New South Associates conducted a cultural resource survey of the APE between January 16 and 19, 2009, which revealed no historic buildings or structures 50 years of age or older (built before 1958), in the APE for the proposed project.

4.8.1.3 Historic Districts

Background research conducted of the NRHP and the Texas Historical Commission's historic properties files identified no previously recorded historic districts or historic landmark districts within the APE for the proposed project. New South Associates conducted a cultural resource survey of the APE, which identified no historic districts or historic landmark districts within the APE for the proposed project.

4.8.1.4 Historic Markers, Monuments, and Memorials

No previously recorded historic markers, monuments, or memorials were identified within the APE for the proposed project. The cultural resource survey that was conducted of the APE identified no historic markers, monuments, or memorials within the APE.

4.8.1.5 Traditional Cultural Properties, National Historic Landmarks, and World Heritage Sites

No previously recorded Traditional Cultural Properties, National Historic Landmarks, World Heritage Sites, or any state or locally designated landmarks were identified within the APE. The cultural resource survey conducted of the APE did not identify any of these resource types within the APE for the proposed project, either.

4.8.2 Environmental Consequences

4.8.2.1 Proposed Action

No adverse effects on cultural resources would be expected from implementing the proposed action. A survey of the APE determined that there are no NRHP-listed or eligible, archaeological or historic resources within the APE for the proposed project area. A coordination letter regarding the proposed action was sent to the Texas State Historic Preservation Officer (SHPO) and the SHPO responded, requesting further information regarding the possibility that a structure on the property could be an historic building (see Appendix C). The structure in question has been determined to not be eligible for the NRHP based on its age. A Phase I cultural survey report for

the site has been provided to the SHPO for review and concurrence. Coordination letters were also sent to potentially affected tribes.

4.8.2.2 **Site 9 Alternative**

Unknown effects on cultural resources would be expected from implementing the Site 9 Alternative. Site 9 was not included in the Phase I Cultural Resources Survey. If this alternative was chosen, the Army would be responsible for having a Phase I Cultural Resources Survey performed before construction could begin.

4.8.2.3 **No Action Alternative**

No effects on cultural resources would result from implementing the No Action Alternative. Under the No Action Alternative, no land would be acquired, no facilities would be constructed, and the land would remain in its current state.

4.9 **SOCIOECONOMICS**

4.9.1 **Affected Environment**

The socioeconomic indicators used for this study include economic development, demographics, quality of life, environmental justice, and protection of children. These indicators characterize the region of influence (ROI). The ROI is a geographic area selected as a basis on which social and economic impacts of project alternatives are analyzed. The ROI for the social and economic environment is Walker County, Texas. The ROI covers an area of 787 square miles. The closest major metropolitan area to Huntsville is Houston, about 70 miles to the south.

The baseline year for socioeconomic data is 2006, the most recent year for which most of the ROI socioeconomic indicators (e.g., population, employment) are reasonably available. Where 2006 data are not available, the most recent data available are presented.

4.9.1.1 **Economic Environment**

Employment and industry. The ROI has a civilian labor force of 26,071, an increase of 4 percent over the 2000 labor force of 25,078 (Table 4-9). The ROI 2007 annual unemployment rate was 4.8 percent, higher than the national unemployment rate of 4.6 percent (BLS 2008). The primary sources of ROI employment were government and government enterprises, retail trade, accommodation and food services, and other services (except public administration). Together these industry sectors accounted for 65 percent of regional employment (BEA 2008a).

Table 4-9
Labor force and unemployment

	2000 civilian labor force	2007 civilian labor force	Change in labor force, 2000–2007	2007 Unemployment rate
Walker County	25,078	26,071	4%	4.8%
United States	142,583,000	153,124,000	7%	4.6%

Source: BLS 2008

Income. ROI income levels were lower than state and national averages (Table 4-10). The ROI per capita personal income (PCPI) was 55 percent of the state PCPI of \$23,294 and 49 percent of the national PCPI of \$26,178. ROI median household income was 64 percent of the state median household income of \$46,248 and 60 percent of the national median household income of \$50,007 (U.S. Census Bureau 2008a).

Table 4-10
Income, 2005 – 2007 three-year estimates

	Walker County	Texas	United States
PCPI	\$12,737	\$23,294	\$26,178
Median household income	\$29,817	\$46,248	\$50,007

Source: U.S. Census Bureau 2008a.

Population. The ROI's population was 63,902, an increase of 3.5 percent from the 2000 population of 61,758 (Table 4-11). During the same time period (2000 – 2007), the Texas population grew by 14.6 percent and the U.S. population increased by 7.2 percent (U.S. Census Bureau 2009).

Table 4-11
Population

	2000 population	2007 population	Change in population, 2000–2007
Walker County	61,758	63,902	3.5%
Texas	20,851,820	23,904,380	14.6%
United States	281,421,906	301,621,157	7.2%

Source: U.S. Census Bureau 2009

4.9.1.2 Sociological Environment

Housing. ROI housing data are presented in Table 4-12. As shown, ROI housing costs were lower than state and national levels. The ROI vacancy rate was higher than the state and national rates (U.S. Census Bureau 2008a).

Table 4-12
Housing data, 2005 – 2007 three-year estimates

	Number of housing units	Occupied	Vacant	Median monthly mortgage	Median gross rent
Walker County	22,579	85%	15%	\$977	\$696
Texas	9,224,352	88%	12%	\$1,329	\$725
United States	126,237,884	88%	12%	\$1,427	\$781

Source: U.S. Census Bureau 2008a.

Law enforcement, fire protection, medical services. ROI law enforcement is provided by the Huntsville Police Department along with the county sheriff and state law enforcement officers. The department employs more than 40 sworn officers and about 10 civilian employees (City of Huntsville 2008). The proposed AFRC Site 8 is about 3 miles from the Huntsville Police Department headquarters, and Site 9 is about 2 miles from the police station.

The Huntsville City Fire Department has three fire stations. The department is mostly volunteer, with five career firefighters (FireDepartments.net 2008). Site 8 is about ½ mile from a fire station, and Site 9 is less than 2 miles from a fire station.

The Huntsville Memorial Hospital is a short-term acute care hospital that provides emergency facilities, urgent medical care, inpatient care, and surgical facilities (AHD 2008). Site 8 is about 1 mile from the hospital, and Site 9 is about 5 miles from the hospital.

Schools. The ROI has three public school districts with a total enrollment of more than 7,600 students in 15 schools. There are also five private schools with a total student enrollment of more than 600 students (NCES 2007). There are no schools on or immediately adjacent to the proposed AFRC Sites 8 and 9. The Huntsville High School is on FM 2821 less than 1 mile west of Site 9.

Support services, shops, and recreation. There is an array of the typical shopping, service, and recreational facilities in the ROI.

4.9.1.3 Environmental Justice

On February 11, 1994, President Clinton issued EO 12898, *Federal Actions to Address Environmental Justice in Minority and Low-Income Populations*. The EO is designed to focus the attention of federal agencies on the human health and environmental conditions in minority communities and low-income communities. Environmental justice analyses are performed to identify the disproportionate placement of high and adverse environmental or health effects from proposed federal actions on minority or low-income populations, and to identify alternatives that could mitigate these effects.

Minority populations are identified as Black or African American; American Indian and Alaska Native; Asian; Native Hawaiian and other Pacific Islander; persons of two or more races; and persons of Hispanic origin. Minority populations should be identified where either the minority population of the affected area exceeds 50 percent or the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis (CEQ 1997). As of 2006, 74 percent of the ROI population was white, and 26 percent was of a minority population. The ROI had a higher percentage of minority populations compared to Texas and the United States, which had 17 percent and 20 percent minority populations, respectively (U.S. Census Bureau 2008a).

Poverty thresholds established by the Census Bureau are used to identify low-income populations (CEQ 1997). Poverty status is reported as the number of persons or families with income below a defined threshold level. Twenty-one percent of ROI residents were classified as living in poverty, higher than Texas' 16 percent poverty rate and the national poverty rate of about 13 percent (U.S. Census Bureau 2008b).

4.9.1.4 Protection of Children

EO 13045, *Protection of Children from Environmental Health and Safety Risks*, requires federal agencies, to the extent permitted by law and mission, to identify and assess environmental health and safety risks that might disproportionately affect children. There are residential homes on Ryans Ferry Road east of Site 9.

4.9.2 Environmental Consequences

4.9.2.1 Proposed Action

EIFS Methodology. The economic effects of implementing the proposed action are estimated using the Economic Impact Forecast System (EIFS) model, a computer-based economic tool that calculates multipliers to estimate the direct and indirect effects resulting from a given action. Changes in spending and employment caused by constructing the AFRC represent the direct effects of the action. Using the input data and calculated multipliers, the model estimates ROI changes in sales volume, income, employment, and population, accounting for the direct and indirect effects of the action.

For purposes of this analysis, a change is considered significant if it falls outside the historical range of ROI economic variation. To determine that range, the EIFS model calculates a rational threshold value (RTV) profile for the ROI. This analytical process uses historical data for the ROI and calculates fluctuations in sales volume, income, employment, and population patterns. The historical extremes for the ROI become the thresholds of significance (i.e., the RTVs) for social and economic change. If the estimated effect of an action falls above the positive RTV or below the negative RTV, the effect is considered significant. Appendix D discusses this methodology in more detail and presents the model inputs and outputs developed for this analysis.

EIFS model results. Short-term minor beneficial effects on economic development would be expected from implementing the proposed action. In the short term, the expenditures and employment associated with construction of the AFRC and associated facilities would increase ROI sales volume, employment, and income. A benefit of any type of development is the construction spending, especially if local labor and materials are used. The economic benefits would be for a short term, lasting only for the duration of the construction period. These changes in sales volume, employment, and income would fall within historical fluctuations (i.e., within the RTV range) and be considered minor (Table 4-13 and Appendix D).

Table 4-13
EIFS model output

Indicator	Projected change	Percentage change	RTV range
Direct sales volume	\$16,000,000		
Induced sales Volume	\$13,600,000		
Total sales volume	\$29,600,000	3.01	-11.13% to 13.46%
Direct income	\$2,727,513		
Induced income	\$2,318,386		
Total income	\$5,045,898	0.57	-9.95% to 9.90%
Direct employment	90		
Induced employment	76		
Total employment	166	0.60	-3.48% to 8.33%
Local population	0	0.00	-3.56% to 7.79%

Source: EIFS model calculations.

Population. No effects on population development would be expected from implementing the proposed action. The proposed action would not change the ROI's population because the closing

Miller Army Reserve Center is also in Huntsville. AFRC employees and the Reservists would commute from their current homes to the training center.

Housing. No effects on housing would be expected from implementing the proposed action. The proposed action would not change the ROI's population and would not affect the housing market. AFRC employees and the Reservists would commute from their homes to the training center.

Quality of Life. The following paragraphs identify the anticipated effects for each of the key components of quality of life.

- **Law Enforcement, Fire Protection, and Medical Services.** No effects on public services would be expected from implementing the proposed action. The Huntsville police, fire, and medical emergency departments would respond to emergencies at the proposed site.
- **Schools.** No effects on schools would be expected from implementing the proposed action. The proposed action would not change the ROI population and would not affect school enrollment.
- **Family Support, Shops and Services, and Recreation.** No effects on family services would be expected from implementing the proposed action. Shopping and service facilities (such as gas stations or food establishments) needed by the Reservists or AFRC staff are available in Huntsville.

Environmental Justice. No effects on environmental justice would be expected from implementing the proposed action. No aspect of the construction or operation of the AFRC would create environmental or health risks that would disproportionately affect low-income or minority populations.

Protection of Children. No effects on the protection of children would be expected from implementing the proposed action. Children would not use the AFRC, facilities frequented by children are not close to the proposed site, and no aspect of the construction or operation of the AFRC would disproportionately create environmental, health, or safety risks to children.

4.9.2.2 Site 9 Alternative

Effects would be the same as those stated above in Section 4.9.2.1, with the exception of protection of children. These effects are discussed below.

Protection of Children. Short-term minor adverse effects on the protection of children would be expected from implementing the Site 9 Alternative. There are residential homes and a high school within 1 mile of the proposed Site 9. Demolition, renovation, and construction activity could pose an increased safety risk because construction sites can be enticing to children. During construction, the safety measures stated at 29 CFR Part 1926, *Safety and Health Regulations for Construction*, and AR 385-10, *Army Safety Program*, would be followed to protect the health and safety of nearby residents, as well as construction workers. It is recommended that barriers and No Trespassing signs be placed around construction sites to deter children from playing in these areas and that construction vehicles and equipment be secured when not in use.

4.9.2.3 No Action Alternative

No effects on socioeconomics, environmental justice, or the protection of children would result from implementing the No Action Alternative. Under the No Action Alternative, there would be no changes to the existing condition of socioeconomic resources.

4.10 TRANSPORTATION

This section describes the existing highway and transit subsystems near the proposed sites; the effects associated with the proposed action and alternatives; and potential mitigation measures, if required.

4.10.1 Affected Environment

Traffic in Huntsville is generated primarily by personal operating vehicles (POVs). Roadways are predominately paved two- or four-lane asphalt. Regional access to Huntsville is provided by Interstate 45. Interstate 45 travels northwest and southeast between Houston and Dallas/Fort Worth.

Travelers would approach and access Site 8 most efficiently via Montgomery Road or Veterans Memorial Parkway. Montgomery Road and Veterans Memorial Parkway have average daily traffic counts of 5,600 and 3,320 vehicles per day, respectively, near Site 8 (TXDOT 2006). Travelers would approach Site 9 most efficiently via Route 19 once entering the Huntsville area, and depending on their point of origin, could approach via Fish Hatchery Road. Route 19 and Fish Hatchery Road have average daily traffic counts of 9,200 and 2,700 vehicles per day, respectively, near Site 9 (TXDOT 2006). Overall traffic circulation patterns are at acceptable levels of service, and area arterial roadways are under capacity.

The Brazos Transit District provides limited bus service to the region. However, there are no fixed routes in Walker County. There are several charter bus services in Huntsville. Amtrak provides passenger train service to Houston, approximately one hour south of Huntsville.

The largest airport in the area is the George Bush Intercontinental Airport in Houston, which is a 1-hour drive from Huntsville. This airport is one of Texas' largest airports serving the greater Houston area and surrounding southeastern cities. There are approximately 700 daily departures to cities and hubs throughout the United States. In addition, Huntsville Municipal Airfield is 3 miles west of site 9 and provides limited air service to the region.

4.10.2 Environmental Consequences

4.10.2.1 Proposed Action

Long-term minor adverse effects on traffic would be expected from implementing the proposed action. Only small changes to the transportation system would be expected with the proposed action. The changes would be primarily contributable to construction vehicles and small changes in localized traffic patterns from facility personnel.

Construction vehicles and traffic would increase traffic locally. These effects would be temporary and would end with the construction phase. The local roadway infrastructure is sufficient to support the construction vehicle traffic. Road closures or detours to accommodate utility system work could be expected, creating short-term traffic delays. All construction vehicles would be

equipped with backing alarms, two-way radios, and *Slow Moving Vehicle* signs, when appropriate. Although the effects would be minor, the Army would route and schedule construction vehicle traffic to minimize conflicts with other traffic and strategically locate construction material staging areas to minimize traffic effects.

Access to Site 8 would be limited to a single entrance/exit from Montgomery Road or Veterans Memorial Parkway, which would result in effects that are more noticeable on streets near Site 8 than on any of the regional roadways. Approximately 10 permanent on-post personnel and support staff would work at the proposed AFRC during normal weekday business hours. These personnel would constitute approximately 24 POV trips per normal weekday (ITE 2003)—only a fraction of which would occur during peak traffic periods. This small increase in traffic would not likely affect the capacity of any of nearby roadway segments or intersections adjacent to Site 8. Weekday operational activities would result in long-term negligible adverse effects on local and regional traffic levels.

Weekend training activities would generate traffic, mostly on Saturday morning and Friday and Sunday evenings. Weekend training sessions would generate approximately 288 POV trips over an average weekend and 480 POV trips over a peak weekend training session (ITE 2003). None of the new trips would occur during weekday peak periods. Although this would be an increase in trips to and from Site 8, it would be only a fraction of the existing weekday traffic at any of the intersections or roadways affected. The additional traffic would likely cause negligible changes on nearby roadway segments or intersections adjacent to Site 8. Therefore, the effects would be expected to be minor. Moderate changes in the number of personnel would not be expected to substantially change the number of daily trips, the times of travel, or the level of impact under NEPA.

Because the administrative personnel and weekend trainees would be within driving distance of the AFRC, the proposed action would likely have no effect on public transit, rail, bus, or air traffic in the area. The 2.4 acres of parking would be adequate for the permanent personnel and trainees' POVs and for staging military vehicles.

4.10.2.2 Site 9 Alternative

Long-term minor adverse effects on traffic would be expected with the Site 9 Alternative. The effects of construction and AFRC operation on traffic would be similar to those from the proposed action. Site 9 would be accessed directly from Route 19 or Fish Hatchery Road. As with the proposed action, approximately 10 permanent personnel and 24 POV trips would be at the proposed AFRC during normal weekday business hours. Although this would be an increase in trips to and from the site, additional traffic would be only a very small fraction of the existing weekday traffic at any of the intersections or roadways affected. On the typical weekend, the 288 trips would occur during off-peak periods and would have minor effect on nearby roadway segments or intersections adjacent to Site 9. These effects would be minor.

As with the proposed action, this alternative would have no effect on public transit, rail, bus, or air traffic in the area. Effects on parking would be similar to the proposed action.

4.10.2.3 No Action Alternative

No effects on transportation resources would result from implementing the No Action Alternative. Under the No Action Alternative, no land would be acquired, no facilities would be

constructed, and the land would remain in its current state. Current and future traffic would remain as described in section 4.10.1.

4.11 UTILITIES

4.11.1 Affected Environment

4.11.1.1 Potable Water Supply

The Huntsville Water Services Division is responsible for water production, treatment, and distribution for the city (City of Huntsville 2008). Potable water is provided in accordance with standards established and governed by EPA and TCEQ. The division operates seven water wells and two water production plants, and it maintains approximately 200 miles of water distribution lines in Huntsville and surrounding rural areas.

A water line runs along FM 1374 next to the east boundary of Site 8, and a water line crosses Route 19 about midway along the western boundary of Site 9 then follows the property line along Route 19 and FM 2821 (USACE 2008).

4.11.1.2 Wastewater System

The Huntsville Wastewater Services Division is responsible for collecting and treating the wastewater generated in Huntsville. The division provides its services in accordance with the guidelines of TCEQ, EPA, and local ordinances. Collected wastewater flows to and is treated at one of Huntsville's three wastewater treatment plants.

A sewer line crosses Veterans Memorial Parkway and runs parallel to Site 8 along the east boundary of the proposed property. On Site 9, a sewer line crosses Route 19, enters the site, and runs diagonally across it from northwest to southeast (USACE 2008).

4.11.1.3 Storm Water System

Being undeveloped, the proposed sites do not have dedicated storm sewer systems. Storm water runoff is overland to nearby streams, or storm water infiltrates the soil.

4.11.1.4 Energy Sources

Electricity: Entergy, Inc., provides electrical service to the Huntsville area. Electrical service is readily available at both Site 8 and 9 (ConnectUtilities 2009).

Natural Gas: Centerpoint Energy provides natural gas service to the Huntsville area. Site 8 and Site 9 are both within the natural gas service area in Huntsville (ConnectUtilities 2009).

4.11.1.5 Communications

Internet, telephone, and cable television service are provided to customers in Huntsville by AT&T and SuddenLink (ConnectUtilities 2009). All services are readily available at both Site 8 and Site 9 (USACE 2008).

4.11.1.6 Solid Waste

The Huntsville Solid Waste Services Division provides collection, disposal, and recycling services to the citizens of Huntsville and areas throughout Walker County (City of Huntsville 2008). Solid waste is collected and disposed of in accordance with standards established by TCEQ, EPA, and city ordinances. The city's Commercial Collection Division provides services for commercial customers. The Solid Waste Services Division operates the solid waste transfer station, which is the collection point for all municipal waste for the city and other areas throughout Walker County. The collected waste is transferred to the Polk County Solid Waste Management Center Facility.

4.11.2 Environmental Consequences

4.11.2.1 Proposed Action

No effects on utilities would be expected from implementing the proposed action. Construction and operation of a new AFRC in Huntsville is contingent upon closure of the Miller United States Army Reserve Center, also in Huntsville. In accordance with Army policy for constructing new facilities, this project would be designed to meet Leadership in Energy and Environmental Design Silver standards, or better, with a view toward enhanced sustainability and energy efficiency. It is expected that the new AFRC would be more energy efficient than the Miller facility and that no additional demand or a net reduction in demand on utilities would result from the combination of closing one facility and opening another.

Table 4-14 provides an estimate of the quantity of construction debris that would be generated during the AFRC's construction. Per the requirements in the Department of the Army's Assistant Chief of Staff for Installation Management memorandum dated February 6, 2006, a minimum of 50 percent of the estimated 137 tons of construction debris would be diverted from landfill disposal (ACSIM 2006). Landfills in Walker County and surrounding counties have adequate capacity to handle the estimated amount of waste.

Table 4-14
Estimates of construction and demolition debris generated
as a result of implementing the proposed action

Construction type	Admin area (ft ²)	C&D factor (lb/ft ²)	Estimated waste (lb)	Estimated waste (tons)
Construction	57,037	2.8 ^a	159,704	80
Amount recycled (50%)	N/A	N/A	79,852	40
Net total C&D debris generated	N/A	N/A	79,852	40

C&D = construction and demolition, ft² = square feet, lb = pound

^a EPA estimate for nonresidential construction debris generation.

4.11.2.2 Site 9 Alternative

No effects on utilities would be expected from implementing the Site 9 Alternative. The effects on utility systems demand would be the same regardless of which site was chosen for the AFRC.

4.11.2.3 No Action Alternative

No effects on utility systems would result from implementing the No Action Alternative. Under the No Action Alternative, no land would be acquired, no facilities would be constructed, and the land would remain in its current state.

4.12 HAZARDOUS AND TOXIC SUBSTANCES

4.12.1 Affected Environment

Site 8 is mostly undeveloped, and the preparers of the Site Survey Report (prepared in July 2008) observed no major environmental concerns (DA, HQ, 90th RRC 2008). Observations include a small building that has been used for truck maintenance for a dirt-hauling business. Some trash/debris was observed in the vicinity of the building, and possible areas of stressed vegetation to the north and east of the building were observed. Small amounts of trash (old tires, paint cans, oil containers) were observed along an access road from FM 1375 (DA, HQ, 90th RRC 2008).

Before site acquisition, the Army would prepare an Environmental Condition of Property (ECP) report. The ECP Report would be prepared to meet the Department of the Army's requirement to assess, determine, and document the environmental condition of transferable property and to determine whether the property is suitable for acquisition. The ECP would be prepared in accordance with Army Regulation 200-1 (AR 200-1), Section 15-5 c(6) *Environmental Protection and Enhancement*, and would comply with EPA's *All Appropriate Inquiry* rules under the Comprehensive Environmental Response, Compensation, and Liability Act. Additionally, the ECP would comply with the American Society for Testing and Materials Designation: E 1527-05, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* (ASTM 2005).

Site 9 is undeveloped, and no major environmental concerns have been observed on the site (DA, HQ, 90th RRC 2008). If the site was chosen for the AFRC, the Army would prepare an ECP Report before acquisition.

4.12.2 Environmental Consequences

4.12.2.1 Proposed Action

Long-term minor adverse effects related to hazardous materials and waste would be expected from implementing the proposed action. Activities at the AFRC would require the use of materials such as petroleum, oils, lubricants, solvents and paints. All hazardous materials and waste would be handled in accordance with local, state, and federal regulations and in accordance with established procedures. Any effects from hazardous material use, storage, and disposal would, therefore, be expected to be limited to those from small, incidental spills, such as from parked vehicles.

4.12.2.2 Site 9 Alternative

Long-term minor adverse effects related to hazardous materials and waste would be expected from implementing the Site 9 Alternative. The effects would be the same as those under the proposed action.

4.12.2.3 No Action Alternative

No adverse effects on hazardous and toxic substance use, storage, or disposal would result from implementing the No Action Alternative. Under the No Action Alternative, no land would be acquired, no facilities would be constructed, and the land would remain in its current state.

4.13 CUMULATIVE EFFECTS SUMMARY

The CEQ defines *cumulative effects* at 40 CFR 1508.7 as the “impacts on the environment which result 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.”

All construction projects in the area local to where the proposed action would occur would likely affect numerous resource areas, including land use, aesthetics, local air quality, the local noise environment, the availability of habitat, economic development, and the local transportation system. No specific construction projects or other activities that would contribute to cumulative effects were identified. Therefore, no significant adverse cumulative effects would be expected to result if one of the alternatives identified in the EA was implemented.

4.14 MITIGATION SUMMARY

Mitigation actions are used to reduce, avoid, or compensate for significant adverse effects. The EA determined that there would be no need for mitigation measures. Mitigation measures for wetlands applicable to either the proposed action or the Site 9 Alternative, if necessary, would be determined upon application to the USACE for a Clean Water Act Section 404 permit. Mitigation measures for cultural resources, if such resources were found during site development at either site (or on Site 9 upon completion of a cultural resources survey) would be determined in coordination with the Texas State Historic Preservation Office.

SECTION 5.0

FINDINGS AND CONCLUSIONS

This EA has been prepared to evaluate the potential effects on the natural and human environment from activities associated with implementation of the proposed action. The EA has examined the Army's Preferred Alternative, the Site 9 Alternative, and the No Action Alternative.

The EA has evaluated potential effects on land use, aesthetics and visual resources, air quality, noise, geology and soils, water resources, biological resources, cultural resources, socioeconomics (including environmental justice and protection of children), transportation, utilities, and hazardous and toxic materials.

5.1 FINDINGS

The evaluation of the proposed action, identified as the Army's Preferred Alternative, indicates that the physical and socioeconomic environments at Site 8 and in the ROI would not be significantly affected by the proposed action singularly or through any combination of direct, indirect, or cumulative effects. The predicted consequences on resource areas are briefly described below. Table 5-1 summarizes and compares the consequences of the proposed action, the Site 9 Alternative, and the No Action Alternative.

5.1.1 Consequences of the Proposed Action

5.1.1.1 Land Use

Long-term minor adverse effects on land use would be expected from implementing the proposed action. The closest occupied land use near the site is residences north of Site 8 across Veteran's Memorial Parkway and west of the site across Montgomery Road. A low-intensity commercial use adjacent to a residential use is considered a conflicting use and requires that a vegetated buffer be placed between them to minimize the conflict.

5.1.1.2 Aesthetics and Visual Resources

Long-term minor adverse effects on aesthetics and the visual environment would be expected from implementing the proposed action. The aesthetics of Site 8 would be changed from a natural site to a developed site, and though there are no other commercial establishments or residential areas nearby from which the view would be affected, the rural character of the immediate area would be affected.

5.1.1.3 Air Quality

Long-term minor adverse effects on air quality would be expected as a result of implementing the proposed action. The effects would be primarily from air emissions during facility construction and from creating new stationary sources of air emissions at the AFRC. Increases in emissions would not exceed applicability thresholds, be regionally significant, or contribute to a violation of any federal, state, or local air regulation.

Table 5-1
Summary of potential environmental and socioeconomic consequences

Resource Area	Environmental and socioeconomic effects		
	Proposed Action	Site 9 Alternative	No Action Alternative
Land use	Long-term minor adverse	Long-term minor adverse	No effect
Aesthetics and visual resources	Long-term minor adverse	Long-term minor adverse	No effect
Air quality	Long-term minor adverse	Long-term minor adverse	No effect
Noise	Short-term minor adverse	Short-term minor adverse	No effect
Geology and soils			
• Geology, topography	No effect	No effect	No effect
• Soils	Short-term minor adverse	Short-term minor adverse	No effect
• Prime farmland soils	No effect	No effect	No effect
Water resources			
• Surface water	Short-term minor adverse	Short-term minor adverse	No effect
• Groundwater	No effect	No effect	No effect
• Floodplains	No effect	No effect	No effect
• Coastal zone	No effect	No effect	No effect
Biological resources			
• Vegetation	Long-term minor adverse	Long-term minor adverse	No effect
• Wildlife	Long-term minor adverse	Long-term minor adverse	No effect
• Wetlands	Long-term minor adverse	No effect	No effect
• Sensitive species	No effect	No effect	No effect
Cultural resources	No effect	Unknown	No effect
Socioeconomics			
• Regional economic activity	Short-term minor beneficial	Short-term minor beneficial	No effect
• Population	No effect	No effect	No effect
• Housing	No effect	No effect	No effect
• Quality of life	No effect	No effect	No effect
• Environmental justice	No effect	No effect	No effect
• Protection of children	No effect	Short-term minor adverse	No effect
Transportation	Long-term minor adverse	Long-term minor adverse	No effect
Utilities	No effect	No effect	No effect
Hazardous and toxic substances	Long-term minor adverse	Long-term minor adverse	No effect

5.1.1.4 Noise

Short-term minor adverse effects on the noise environment would be expected from implementing the proposed action from using heavy equipment during construction. The effects would be temporary in nature and would end upon completion of construction. Noise from facility operations would be negligible.

5.1.1.5 Geology and Soils

Short-term minor adverse effects on soils would be expected from implementing the proposed action. Removal of vegetation, site grading, and exposure of soil during construction would lead to some soil erosion. No effects on geology, topography, or prime farmland soils would be expected.

5.1.1.6 Water Resources

Short-term minor adverse effects on water resources would be expected under the proposed action. Land disturbance and vegetation clearing during site development and construction could result in sediment runoff to surface waters and pollutants in groundwater. No long-term effects or effects on floodplains or coastal zone resources would be expected.

5.1.1.7 Biological Resources

Long-term minor adverse effects on vegetation, wildlife, and wetlands would be expected from implementing the proposed action. Development of Site 8 would require removal of trees and other vegetation and the wildlife habitat that it provides. The proposed layout of the AFRC and associated structures would impact the pond on Site 8. The Army would be required to obtain a Clean Water Act section 404 permit from the U.S. Army Corps of Engineers (USACE) before affecting wetlands and other waters of the United States. No adverse effects on protected species would be expected.

5.1.1.8 Cultural Resources

No adverse effects on cultural resources would be expected from implementing the proposed action. There are no NRHP-listed or eligible, archaeological or historic resources located within the APE for the proposed project area.

5.1.1.9 Socioeconomics

Short-term minor beneficial effects on economic development would be expected from implementing the proposed action. Expenditures and employment associated with construction of the AFRC and associated facilities would increase ROI sales volume, employment, and income. No effects on population, housing, public services, schools, family services, environmental justice, or the protection of children would be expected from implementing the proposed action.

5.1.1.10 Transportation

Long-term minor adverse effects on traffic would be expected from implementing the proposed action. The changes would be primarily contributable to construction vehicles and small changes

in localized traffic patterns from the additional personnel. The proposed action would have no effect on public transit, rail, bus, or air traffic in the area.

5.1.1.11 Utilities

No effects on utilities would be expected from implementing the proposed action. Construction and operation of a new AFRC in Huntsville would create demand on all local utility systems, but closure of the Miller United States Army Reserve Center, also in Huntsville, would more than likely offset any demand that would be created. Area landfills have adequate capacity to handle waste from facility demolition and construction.

5.1.1.12 Hazardous and Toxic Substances

Long-term minor adverse effects related to hazardous materials and waste would be expected from implementing the proposed action. Activities at the AFRC would require the use of materials such as petroleum, oils, lubricants, solvents and paints, and any effects from hazardous material use, storage, and disposal would be expected to be limited to those from small, incidental spills, such as from parked vehicles.

5.1.2 Consequences of the Site 9 Alternative

5.1.2.1 Land Use

Long-term minor adverse effects on land use would be expected from implementing the Site 9 Alternative. The closest occupied land use near Site 9 is a residential area east of the site along its southeastern boundary. Low-intensity commercial use of the site as an AFRC would be considered a conflicting use and requires that a vegetated buffer be placed between them to minimize the conflict.

5.1.2.2 Aesthetics and Visual Resources

Long-term minor adverse effects on aesthetics and the visual environment would be expected from implementing the Site 9 Alternative. The aesthetics of Site 9 would be changed from a natural site to a developed site, and the views of residents living east of the site across Ryans Ferry Road would be affected by the change in land use. Depending on site layout, the natural aesthetics of the area could be retained by leaving a buffer of trees between Ryans Ferry Road and the AFRC facilities.

5.1.2.3 Air Quality

Long-term minor adverse effects on air quality would be expected as a result of implementing the Site 9 Alternative. The total direct and indirect emissions associated with the Site 9 Alternative, permitting requirements, and non-permitting regulatory provisions would be the same as the proposed action.

5.1.2.4 Noise

Short-term minor adverse effects on the noise environment would be expected from implementing the Site 9 Alternative. The levels of noise associated with this alternative would be similar in both level and frequency as that outlined under the proposed action. As with the

proposed action, there are existing residences closer than 800 feet to Site 9 that would experience appreciable amounts of construction noise. Intermittent car and truck noise would be expected at the AFRC because of the proximity of Route 19 to Site 9. These events could be loud enough to interfere with speech outside the building but would not interfere with indoor operations.

5.1.2.5 Geology and Soils

Short-term minor adverse effects on soils would be expected from implementing the proposed action. Effects would be the same as those from implementing the proposed action.

5.1.2.6 Water Resources

Short-term minor adverse effects on water resources would be expected from implementing the Site 9 Alternative. Development of Site 9 could result in sediment runoff to surface waters and pollutants in groundwater. No long-term effects or effects on floodplains or coastal zone resources would be expected.

5.1.2.7 Biological Resources

Long-term minor adverse effects on vegetation and wildlife would be expected from implementing the Site 9 Alternative. The effects would be much the same as those described for the proposed action, except that no effects on wetlands would be expected. No effects on sensitive species would be expected.

5.1.2.8 Cultural Resources

Unknown effects on cultural resources would be expected from implementing the Site 9 Alternative. Site 9 was not included in the Phase I Cultural Resources Survey. If this alternative was chosen, a Phase 1 Cultural Resources Survey would be performed before construction could begin.

5.1.2.9 Socioeconomics

Effects would be the same as those stated above for the proposed action, with the exception of the protection of children. Short-term minor adverse effects on the protection of children would be expected from implementing the Site 9 Alternative. There are residential homes and a high school within a mile of the proposed Site 9. Demolition, renovation, and construction activity could pose an increased safety risk because construction sites can be enticing to children.

5.1.2.10 Transportation

Long-term minor adverse effects on traffic would be expected with the Site 9 Alternative. The effects of construction and AFRC operation on traffic would be similar to those from the proposed action. Although there would be an increase in trips on local roads after the AFRC was operational, the additional traffic would be only a very small fraction of the existing traffic. As with the proposed action, this alternative would have no effect on public transit, rail, bus, or air traffic in the area. Effects on parking would be similar to the proposed action.

5.1.2.11 Utilities

No effects on utilities would be expected from implementing the Site 9 Alternative. The effects on utility systems demand would be the same regardless of which site was chosen for the AFRC.

5.1.2.12 Hazardous and Toxic Substances

Long-term minor adverse effects related to hazardous materials and waste would be expected from implementing the proposed action. The effects would be the same as those under the proposed action.

5.1.3 Consequences of the No Action Alternative

No adverse effects on any resource area would be expected from implementing the No Action Alternative. Under the No Action Alternative, the Army would not construct an AFRC on the proposed site.

5.2 CUMULATIVE EFFECTS

All construction projects in the area local to where the proposed action would occur would affect numerous resource areas, including land use, aesthetics, local air quality, the local noise environment, the availability of habitat, economic development, and the local transportation system. No specific construction projects or other activities that would contribute to cumulative effects were identified. Therefore, no significant adverse cumulative effects would be expected to result if one of the alternatives identified in the EA was implemented.

5.3 MITIGATION MEASURES

The EA determined that there would be no need for mitigation measures. Mitigation measures for wetlands applicable to either the proposed action or the Site 9 Alternative, if necessary, would be determined upon application to the USACE for a Clean Water Act Section 404 permit. Mitigation measures for cultural resources, if such resources were found during site development at either site (or on Site 9 upon completion of a cultural resources survey) would be determined in coordination with the Texas State Historic Preservation Office.

5.4 CONCLUSIONS

On the basis of these analyses, the proposed action would have no significant direct or indirect effects on the natural or human environment. Preparation of an environmental impact statement is not required. Issuance of a FNSI would be appropriate.

SECTION 6.0

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SECTION 9.0
PERSONS CONSULTED

Dan Jones, Texas Parks and Wildlife Department, January 14, 2009.

APPENDIX A

**EMISSIONS CALCULATIONS AND
RECORD OF NON-APPLICABILITY**

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Table A-1 Construction Equipment Use

Equipment Type	Number of Units	Days on Site	Hours Per Day	Operating Hours
Excavators Composite	1	144	4	575
Rollers Composite	1	216	8	1730
Rubber Tired Dozers Composite	1	144	8	1150
Plate Compactors Composite	2	144	4	1150
Trenchers Composite	2	73	8	1160
Air Compressors	2	144	4	1150
Cement & Mortar Mixers	2	144	6	1725
Cranes	1	144	7	1006
Generator Sets	2	144	4	1150
Tractors/Loaders/Backhoes	2	288	7	4025
Pavers Composite	1	73	8	580
Paving Equipment	2	73	8	1160

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

Equipment	CO	NO _x	VOC	SO _x	PM ₁₀	PM _{2.5}	CO ₂
Excavators Composite	0.5828	1.3249	0.1695	0.0013	0.0727	0.0727	119.6
Rollers Composite	0.4341	0.8607	0.1328	0.0008	0.0601	0.0601	67.1
Rubber Tired Dozers Composite	1.5961	3.2672	0.3644	0.0025	0.1409	0.1409	239.1
Plate Compactors Composite	0.0263	0.0328	0.0052	0.0001	0.0021	0.0021	4.3
Trenchers Composite	0.5080	0.8237	0.1851	0.0007	0.0688	0.0688	58.7
Air Compressors	0.3782	0.7980	0.1232	0.0007	0.0563	0.0563	63.6
Cement and Mortar Mixers	0.0447	0.0658	0.0113	0.0001	0.0044	0.0044	7.2
Cranes	0.6011	1.6100	0.1778	0.0014	0.0715	0.0715	128.7
Generator Sets	0.3461	0.6980	0.1075	0.0007	0.0430	0.0430	61.0
Tractors/Loaders/Backhoes	0.4063	0.7746	0.1204	0.0008	0.0599	0.0599	66.8
Pavers Composite	0.5874	1.0796	0.1963	0.0009	0.0769	0.0769	77.9
Paving Equipment	0.0532	0.1061	0.0166	0.0002	0.0063	0.0063	12.6

Source: CARB 2007b

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

Equipment	CO	NO _x	VOC	SO _x	PM ₁₀	PM _{2.5}	CO ₂
Excavators Composite	0.1676	0.3809	0.0487	0.0004	0.0209	0.0209	34.3796
Rollers Composite	0.3755	0.7445	0.1149	0.0007	0.0520	0.0520	58.0007
Rubber Tired Dozers Composite	0.9177	1.8786	0.2095	0.0014	0.0810	0.0810	137.4857
Plate Compactors Composite	0.0151	0.0189	0.0030	0.0000	0.0012	0.0012	2.4804
Trenchers Composite	0.2946	0.4778	0.1073	0.0004	0.0399	0.0399	34.0583
Air Compressors	0.2175	0.4588	0.0708	0.0004	0.0324	0.0324	36.5742
Cement and Mortar Mixers	0.0386	0.0567	0.0097	0.0001	0.0038	0.0038	6.2515
Cranes	0.3024	0.8100	0.0895	0.0007	0.0360	0.0360	64.7356
Generator Sets	0.1990	0.4014	0.0618	0.0004	0.0247	0.0247	35.0708
Tractors/Loaders/Backhoes	0.8178	1.5588	0.2423	0.0016	0.1205	0.1205	134.4478
Pavers Composite	0.1704	0.3131	0.0569	0.0003	0.0223	0.0223	22.6014
Paving Equipment	0.0309	0.0615	0.0096	0.0001	0.0037	0.0037	7.3242
Total	3.55	7.16	1.02	0.0064	0.44	0.44	573.41

Table A-4 Painting

VOC Content	0.84	lbs/gallon	
Coverage	400	sqft/gallon	
Emission Factor	0.0021	lbs/sqft	
Building/Facility	Wall Surface	VOC [lbs]	VOC [tpy]
All Buildings Combined	114074	239.6	0.120
Total	114074	239.56	0.12

Table A-5 Delivery of Equipment and Supplies

Number of Deliveries	2						
Number of Trips	2						
Miles Per Trip	30						
Days of Construction	230						
Total Miles	27600						
Pollutant	CO	NO _x	VOC	SO _x	PM ₁₀	PM _{2.5}	CO ₂
Emission Factor (lbs/mile)	0.0219	0.0237	0.0030	0.0000	0.0009	0.0007	2.7
Total Emissions (lbs)	605.80	654.47	82.60	0.71	23.63	20.41	75056.4
Total Emissions (tpy)	0.30	0.33	0.04	0.0004	0.01	0.01	37.53

Source: CARB 2007a

Table A-6 Paving Off Gasses

VOC Emissions Factor	2.62	lbs/acre	
Building/Facility	Area [acres]	VOC [lbs]	VOC [tpy]
All Combined Parking	2.43	6.37	0.0032
Total	2.43	6.37	0.0032

Source: SQAQMD 1993

Table A-7 Surface Disturbance

TSP Emissions	80	lb/acre				
PM ₁₀ /TSP	0.45					
PM _{2.5} /PM ₁₀	0.15					
Period of Disturbance	30	days				
Capture Fraction	0.5					
Building/Facility	Area [acres]	TSP[lbs]	PM ₁₀ [lbs]	PM ₁₀ [tons]	PM _{2.5} [lbs]	PM _{2.5} [tons]
Construction	3.7	8980	4041	2.02	303	0.15
Total	3.7	8980	4041	2.02	303	0.15

Sources: USEPA 1995 and USEPA 2005

Table A-8 Worker Commutes

Number of Workers	30						
Number of Trips	2						
Miles Per Trip	30						
Days of Construction	230						
Total Miles	414000						
Pollutant	CO	NO _x	VOC	SO _x	PM ₁₀	PM _{2.5}	CO ₂
Emission Factor (lbs/mile)	0.0105	0.0011	0.0011	0.0000	0.0001	0.0001	1.1
Total Emissions (lbs)	5458.82	570.74	558.48	5.56	44.02	27.39	569007.9
Total Emissions (tpy)	2.73	0.29	0.28	0.0028	0.02	0.01	284.50

Source: CARB 2007a

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

Activity/Source	CO	NO _x	VOC	SO _x	PM ₁₀	PM _{2.5}	CO ₂
Construction Equipment	3.55	7.16	1.02	0.0064	0.44	0.44	573.41
Painting	0.00	0.00	0.12	0.0000	0.00	0.00	0.00
Delivery of Equipment and Supplies	0.38	0.41	0.05	0.0004	0.01	0.01	46.91
Paving Off Gasses	0.00	0.00	0.00	0.0000	0.00	0.00	0.00
Surface Disturbance	0.00	0.00	0.00	0.0000	2.02	0.15	0.00
Worker Commutes	2.73	0.29	0.28	0.0028	0.02	0.01	284.50
Total Construction Emissions	6.66	7.86	1.48	0.0096	2.50	0.62	904.82

Table A-10 Boiler Emissions

Gross Area	57037	sf				
Heating Requirements	99000	btu/sf				
Total Annual Heat Required	5647	MMBTU				
Heating Value	150	MMBtu/1000 Gallons				
Total #2 Oil Used	37.6	10 ³ Gallons				
Pollutant	CO	NO _x	VOC	SO _x	PM ₁₀	PM _{2.5}
Emission Factor (lb/1000 gal)	5	24	2.493	0.1	2	2
Total Emissions (tons)	0.09	0.45	0.05	0.00	0.04	0.04

1. Emission factors for all pollutants were obtained from U.S. EPA's AP-42, Section 1.3. Conservatively assume that PM₁₀ = PM.
2. Assumed sulfur concentration 1%
3. Heating requirements obtained from Commercial Buildings Energy Consumption Survey, DOE 2003

Table A-11 Emergency Generators

Pollutant	CO	NO _x	VOC	SO _x	PM ₁₀	PM _{2.5}		
Emission Factor [lb/hp-hr]	0.0055	0.024	0.000705	0.00809	0.0007	0.0007		
Generator Rating [kW]	Estimated Run Time (hr/yr)	Annual Power Output [kW-hr/yr]	CO	NO _x	VOC	SO _x	PM ₁₀	PM _{2.5}
700	100	70000	0.26	1.13	0.03	0.38	0.03	0.03
Total Emissions [tpy]			0.26	1.13	0.03	0.38	0.03	0.03

1. Emission factors for all pollutants were obtained from U.S. EPA's AP-42, Section 3.4 Stationary Diesel Engines

Table A-12 Worker Commutes

Number of Workers	10					
Number of Trips	2					
Miles Per Trip	30					
Days of Work	260					
Total Miles	156000					
Pollutant	CO	NO _x	VOC	SO _x	PM ₁₀	PM _{2.5}
Emission Factor (lbs/mile)	0.0105	0.0011	0.0011	0.0000	0.0001	0.0001
Total Emissions (lbs)	1645.56	172.05	168.35	1.68	13.27	8.26
Total Emissions (tons)	0.82	0.09	0.08	0.00	0.01	0.00

Source: CARB 2007a

Table A-13 Drill Weekend Commutes

Number of Workers	200					
Number of Trips	0.750987922					
Miles Per Trip	60					
Days of Training	24					
Total Miles	216285					
Pollutant	CO	NO _x	VOC	SO _x	PM ₁₀	PM _{2.5}
Emission Factor (lbs/mile)	0.0105	0.0011	0.0011	0.0000	0.0001	0.0001
Total Emissions (lbs)	2281.46	238.54	233.41	2.32	18.40	11.45
Total Emissions (tons)	1.14	0.12	0.12	0.00	0.01	0.01

Source: CARB 2007a

Table A-14 Total Operational Emissions (tons)

Activity/Source	CO	NO _x	VOC	SO _x	PM ₁₀	PM _{2.5}
Boiler Emissions	0.09	0.45	0.05	0.00	0.04	0.04
Emergency Generators	0.26	1.13	0.03	0.38	0.03	0.03
Worker Commutes	0.82	0.09	0.08	0.00	0.01	0.00
Drill Weekend Commutes	1.14	0.12	0.12	0.00	0.01	0.01
Total Operational Emissions	2.32	1.78	0.28	0.38	0.09	0.08

RECORD OF NON-APPLICABILITY

In Accordance with the Clean Air Act - General Conformity Rule for the Proposed Construction and Operation of an Armed Forces Reserve Center in Huntsville, Texas

6 March 2009

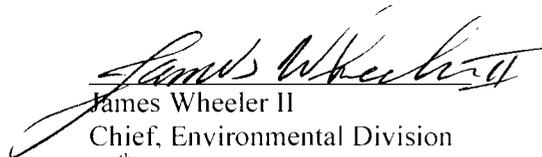
The Army proposes to construct and operate an Armed Forces Reserve Center (AFRC) in Huntsville, Texas. Primary facilities would include an AFRC building, Organizational Maintenance Shop, and organizational unit storage building. Buildings would be of permanent construction with heating, ventilation, air conditioning, plumbing, mechanical, security, and electrical systems. Supporting facilities would include land clearing, paving, fencing, general site improvements, and extension of utilities to serve the project. Force protection (physical security) measures would be incorporated into design of the facility, to include consideration of stand-off distance from roads, parking areas, and vehicle unloading areas. The proposed AFRC would provide training to the Army National Guard, Army Reserve, and Army Active Component soldiers to attain military education and proficiency.

General Conformity under the Clean Air Act, Section 176 has been evaluated according to the requirements of Title 40 of the *Code of Federal Regulations* Part 93, Subpart B. The requirements of this rule are not applicable to the proposed action or the alternatives because:

The highest total annual direct and indirect emissions from this proposed action have been estimated at 7.9 tons of oxides of nitrogen (NO_x) and 1.5 tons of volatile organic compounds (VOCs), which would be below the conformity threshold values 25 tons per year, and would not be *regionally significant*.

Supported documentation and emission estimates:

- Are attached
- Appear in the NEPA documentation
- Other (not necessary)


James Wheeler II
Chief, Environmental Division
90th RRC

13 Mar 2009
Date

APPENDIX B
SCIENTIFIC NAMES OF SPECIES

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Scientific names of species mentioned in the text

<i>Bignonia capreolata</i>	Cross vine
<i>Carya</i> sp.	Hickory
<i>Celtis laevigata</i>	Sugarberry
<i>Eupatorium</i> sp.	Joe pye weed
<i>Ligustrum sinense</i>	Chinese privet
<i>Liquidambar styraciflua</i>	Sweetgum
<i>Magnolia virginiana</i>	Sweetbay
<i>Pinus palustris</i>	Longleaf pine
<i>Pinus taeda</i>	Loblolly pine
<i>Pinus echinata</i>	Shortleaf pine
<i>Quercus</i> sp.	Oak
<i>Quercus marilandica</i>	Blackjack oak
<i>Quercus stellata</i>	Post oak
<i>Smilax</i> sp.	Greenbrier
<i>Solidago</i> sp.	Goldenrod
Various	Bluestem grasses
<i>Canis latrans</i>	Coyote
<i>Dasypus novemcinctus</i>	Nine-banded armadillo
<i>Mephitis mephitis</i>	Striped Skunk
<i>Myotis austroriparius</i>	Southeastern Myotis
<i>Odocoileus virginianus</i>	Whitetail deer
<i>Procyon lotor</i>	Common Raccoon
<i>Sciurus niger</i>	Eastern Fox Squirrel
<i>Archilochus colubris</i>	Ruby-throated hummingbird
<i>Chaetura pelagica</i>	Chimney swift
<i>Columba livia</i>	Rock dove
<i>Corvus brachyrhynchos</i>	American crow
<i>Cyanocitta cristata</i>	Blue jay
<i>Dendroica pinus</i>	Pine warbler
<i>Melanerpes carolinus</i>	Red-bellied woodpecker
<i>Parus bicolor</i>	Tufted titmouse
<i>Vireo griseus</i>	White-eyed vireo
<i>Zenaida macroura</i>	Mourning dove

Protected species in Walker County

Scientific name	Common name	Federal status	State status
<i>Charadrius melodus</i>	Piping plover	T	T
<i>Picoides borealis</i>	Red-cockaded woodpecker	E	E
<i>Canis rufus</i>	Red wolf	E	E
<i>Ursus americanus luteolus</i>	Louisiana black bear	T	T
<i>Pituophis ruthveni</i>	Louisiana pine snake	C	T

Note: C = candidate species; E = endangered; T = threatened

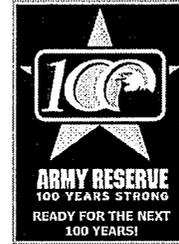
APPENDIX C
AGENCY COORDINATION LETTERS

[Note: Each letter sent included the three figures that follow the first letter in this appendix. The three figures, however, are not duplicated in this appendix for the other coordination letters.]

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DEPARTMENT OF THE ARMY
HEADQUARTERS, UNITED STATES ARMY 90TH REGIONAL READINESS COMMAND
CAPTAIN MAURICE L. BRITT UNITED STATES ARMY RESERVE CENTER
8000 CAMP ROBINSON ROAD
NORTH LITTLE ROCK, ARKANSAS 72118-2205



January 6, 2009

Reply to the Attention of the Environmental Office

Ms. Donna Phillips, Regional Director
Region 12, Houston
Texas Commission on Environmental Quality
5425 Polk Avenue, Suite H
Houston, TX 77023-1452

Dear Ms. Phillips:

The Defense Base Closure and Realignment Act of 1990 (Public Law 101-510), as amended, implements recommendations made in fall 2005 by the Defense Base Closure and Realignment Commission (BRAC Commission). One of the proposed BRAC actions is to close the Miller United States Army Reserve Center, Huntsville, Texas, and relocate units to a new Armed Forces Reserve Center (AFRC) in Huntsville, Texas, if the Army is able to acquire suitable land for the facility construction. The new AFRC would be able to accommodate Texas National Guard Units from the Texas Army National Guard Readiness Center in Huntsville, Texas (if the state decides to relocate those National Guard units).

After a review of nine potential locations in Huntsville, the Army has identified one preferred site (referred to as Site #8) and one alternate site (referred to as Site #9) as suitable for the construction of the AFRC (see Enclosure 1). Site #8 has about 11.5 acres and is at the southeast corner of the intersection of Montgomery Road (FM 1374) and Veterans Memorial Parkway, south of central Huntsville (see Enclosure 2). Site #8 is largely undeveloped and forested, with the exception of a single building along a dirt road in the northern portion of the site. Surrounding the site is more forested land, a small pond, the two bordering roads, and light residential development. Site #9 is roughly triangular and has about 53.7 acres, though the Army would acquire only about 15 acres of the property. The property is northeast of central Huntsville and is bounded on the west by Highway 19 (Loop 405), on the east by Ryans Ferry Road, and on the north by Fish Hatchery Road (FM 2821) (see Enclosure 3). Site #9 is undeveloped and mostly forested, and is zoned as agricultural land. Beyond the roads surrounding the site is forested land to the north, forested and open land to the west, and residential development to the east.

The U.S. Army Corps of Engineers, Mobile District, has contracted with Tetra Tech, Inc., to complete environmental studies of the AFRC site in compliance with the National

Environmental Protection Act, Clean Air Act, Clean Water Act, Noise Control Act, Resource Conservation and Recovery Act, Toxic Substances Control Act, and other regulations.

This letter is provided to notify you of the proposed action and to request your input regarding any environmental concerns you might have with respect to the action. Please provide your input within 30 days of receipt of this letter if you are interested in this matter. If you have questions or concerns about the project, please do not hesitate to call me at (501) 771-7992.

Sincerely,



James Wheeler II
Chief, Environmental Division
90th RRC

Enclosures



- LEGEND**
- ★ Contending Site
 - County Boundary
 - ∧ Road
 - National Forest
 - Surface Water

Location Map

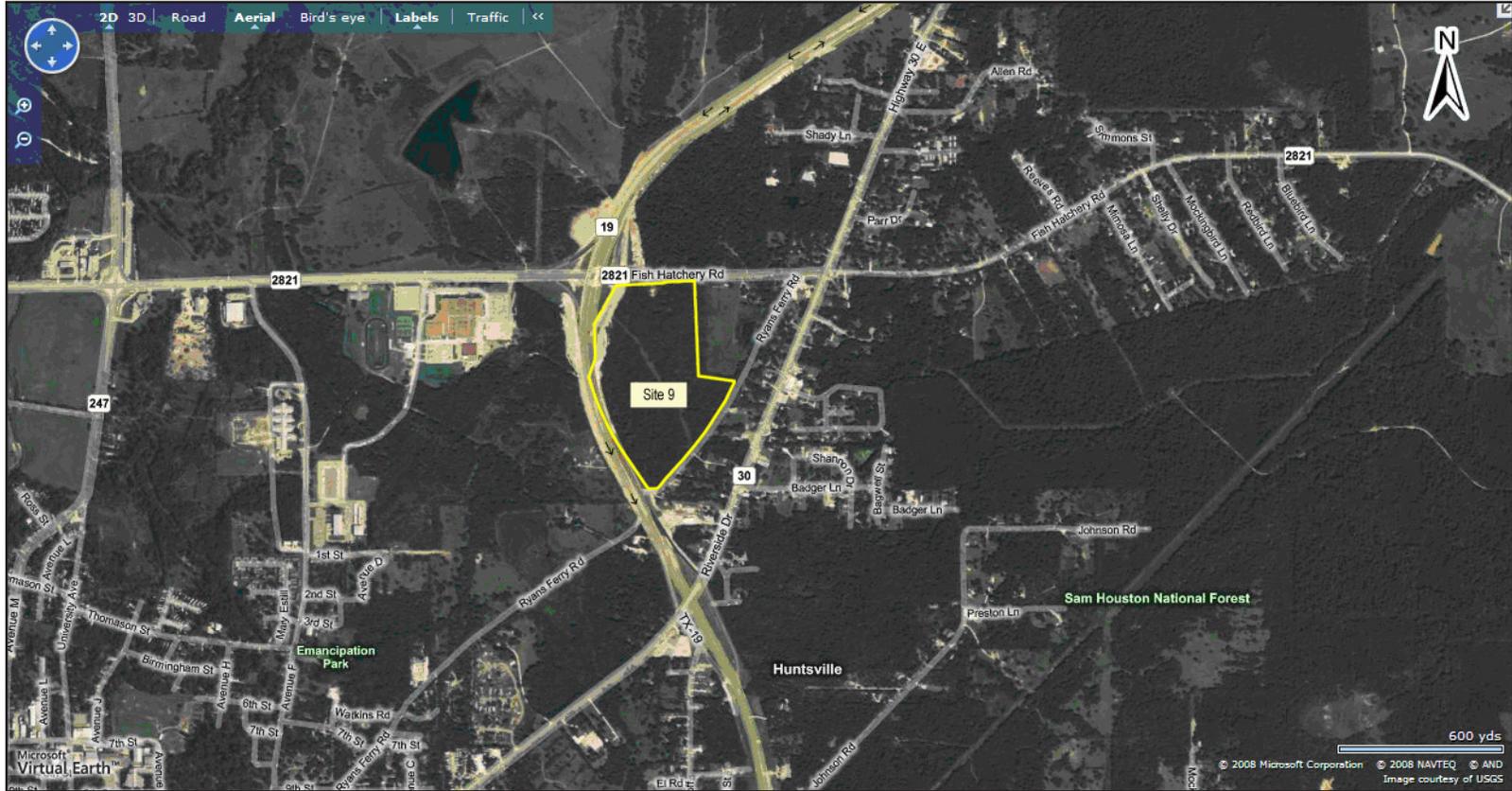
Enclosure 1



LEGEND
[Red Outline] Site Boundary

Site 8 (Preferred Alternative)

Enclosure 2



Legend

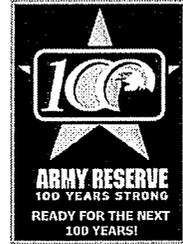
 Site Boundary

Site 9 (Alternative Location)

Enclosure 3



DEPARTMENT OF THE ARMY
HEADQUARTERS, UNITED STATES ARMY 90TH REGIONAL READINESS COMMAND
CAPTAIN MAURICE L. BRITT UNITED STATES ARMY RESERVE CENTER
8000 CAMP ROBINSON ROAD
NORTH LITTLE ROCK, ARKANSAS 72118-2205



January 6, 2009

Reply to the Attention of the Environmental Office

Ms. Kathy Boydson
Wildlife Diversity Program
Texas Parks and Wildlife Department
4200 Smith School Road
Austin, TX 78744-3218

Dear Ms. Boydson:

The Defense Base Closure and Realignment Act of 1990 (Public Law 101-510), as amended, implements recommendations made in fall 2005 by the Defense Base Closure and Realignment Commission (BRAC Commission). One of the proposed BRAC actions is to close the Miller United States Army Reserve Center, Huntsville, Texas, and relocate units to a new Armed Forces Reserve Center (AFRC) in Huntsville, Texas, if the Army is able to acquire suitable land for the facility construction. The new AFRC would be able to accommodate Texas National Guard Units from the Texas Army National Guard Readiness Center in Huntsville, Texas (if the state decides to relocate those National Guard units).

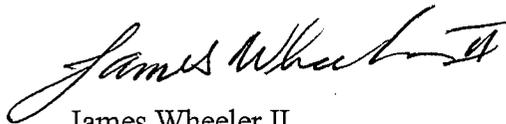
After a review of nine potential locations in Huntsville, the Army has identified one preferred site (referred to as Site #8) and one alternate site (referred to as Site #9) as suitable for the construction of the AFRC (see Enclosure 1). Site #8 has about 11.5 acres and is at the southeast corner of the intersection of Montgomery Road (FM 1374) and Veterans Memorial Parkway, south of central Huntsville (see Enclosure 2). Site #8 is largely undeveloped and forested, with the exception of a single building along a dirt road in the northern portion of the site. Surrounding the site is more forested land, a small pond, the two bordering roads, and light residential development. Site #9 is roughly triangular and has about 53.7 acres, though the Army would acquire only about 15 acres of the property. The property is northeast of central Huntsville and is bounded on the west by Highway 19 (Loop 405), on the east by Ryans Ferry Road, and on the north by Fish Hatchery Road (FM 2821) (see Enclosure 3). Site #9 is undeveloped and mostly forested, and is zoned as agricultural land. Beyond the roads surrounding the site is forested land to the north, forested and open land to the west, and residential development to the east.

The U.S. Army Corps of Engineers, Mobile District, has contracted with Tetra Tech, Inc., to complete environmental studies of the AFRC site in compliance with the National

Environmental Protection Act, Endangered Species Act, Bald and Golden Eagle Protection Act, and other wildlife protection laws and regulations.

This letter is provided to notify you of the proposed action and to request your input regarding any environmental concerns you might have with respect to the action. Please provide your input within 30 days of receipt of this letter if you are interested in this matter. If you have questions or concerns about the project, please do not hesitate to call me at (501) 771-7992.

Sincerely,

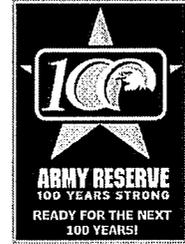
A handwritten signature in cursive script that reads "James Wheeler II".

James Wheeler II
Chief, Environmental Division
90th RRC

Enclosures



DEPARTMENT OF THE ARMY
HEADQUARTERS, UNITED STATES ARMY 90TH REGIONAL READINESS COMMAND
CAPTAIN MAURICE L. BRITT UNITED STATES ARMY RESERVE CENTER
8000 CAMP ROBINSON ROAD
NORTH LITTLE ROCK, ARKANSAS 72118-2205



January 6, 2009

Reply to the Attention of the Environmental Office

Mr. Lawrence Oaks
State Historic Preservation Officer
Texas Historical Commission
PO Box 12276
Austin, TX 78711-2276

Dear Mr. Oaks:

The Defense Base Closure and Realignment Act of 1990 (Public Law 101-510), as amended, implements recommendations made in fall 2005 by the Defense Base Closure and Realignment Commission (BRAC Commission). One of the proposed BRAC actions is to close the Miller United States Army Reserve Center, Huntsville, Texas, and relocate units to a new Armed Forces Reserve Center (AFRC) in Huntsville, Texas, if the Army is able to acquire suitable land for the facility construction. The new AFRC would be able to accommodate Texas National Guard Units from the Texas Army National Guard Readiness Center in Huntsville, Texas (if the state decides to relocate those National Guard units).

After a review of nine potential locations in Huntsville, the Army has identified one preferred site (referred to as Site #8) and one alternate site (referred to as Site #9) as suitable for the construction of the AFRC (see Enclosure 1). Site #8 has about 11.5 acres and is at the southeast corner of the intersection of Montgomery Road (FM 1374) and Veterans Memorial Parkway, south of central Huntsville (see Enclosure 2). Site #8 is largely undeveloped and forested, with the exception of a single building along a dirt road in the northern portion of the site. Surrounding the site is more forested land, a small pond, the two bordering roads, and light residential development. Site #9 is roughly triangular and has about 53.7 acres, though the Army would acquire only about 15 acres of the property. The property is northeast of central Huntsville and is bounded on the west by Highway 19 (Loop 405), on the east by Ryans Ferry Road, and on the north by Fish Hatchery Road (FM 2821) (see Enclosure 3). Site #9 is undeveloped and mostly forested, and is zoned as agricultural land. Beyond the roads surrounding the site is forested land to the north, forested and open land to the west, and residential development to the east.

The U.S. Army Corps of Engineers (USACE), Mobile District, has contracted with Tetra Tech, Inc., to complete environmental studies of the AFRC site in compliance with the National Environmental Protection Act (NEPA). Tetra Tech has subcontracted New South Associates to

complete a cultural resources survey of the site in accordance with NEPA and Section 106 of the National Historic Preservation Act.

This letter is provided to notify you of the proposed action and to request your input regarding any concerns you might have with respect to the action. If you are aware of any archaeological sites, historic structures, cultural landscapes, or Native American resources within or adjacent to the project area that should be considered during the NEPA process, please contact David Pugh of the USACE, Mobile District, at 109 St. Joseph Street, Mobile, Alabama 36602 and Dr. J. W. Joseph of New South Associates at 6150 East Ponce de Leon Avenue, Stone Mountain, Georgia 30083. Please provide your input within 30 days of receipt of this letter if you are interested in this matter. We thank you for time and consideration.

Sincerely,

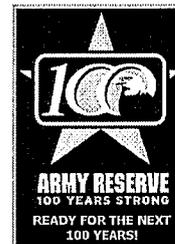
A handwritten signature in cursive script that reads "James Wheeler II".

James Wheeler II
Chief, Environmental Division
90th RRC

Enclosures



DEPARTMENT OF THE ARMY
HEADQUARTERS, UNITED STATES ARMY 90TH REGIONAL READINESS COMMAND
CAPTAIN MAURICE L. BRITT UNITED STATES ARMY RESERVE CENTER
8000 CAMP ROBINSON ROAD
NORTH LITTLE ROCK, ARKANSAS 72118-2205



January 6, 2009

Reply to the Attention of the Environmental Office

Mr. Steve Parrish, Field Supervisor
Clear Lake Ecological Services Field Office
U.S. Fish and Wildlife Service
17629 El Camino Real, Suite 211
Houston, TX 77058-3051

Dear Mr. Parrish:

The Defense Base Closure and Realignment Act of 1990 (Public Law 101-510), as amended, implements recommendations made in fall 2005 by the Defense Base Closure and Realignment Commission (BRAC Commission). One of the proposed BRAC actions is to close the Miller United States Army Reserve Center, Huntsville, Texas, and relocate units to a new Armed Forces Reserve Center (AFRC) in Huntsville, Texas, if the Army is able to acquire suitable land for the facility construction. The new AFRC would be able to accommodate Texas National Guard Units from the Texas Army National Guard Readiness Center in Huntsville, Texas (if the state decides to relocate those National Guard units).

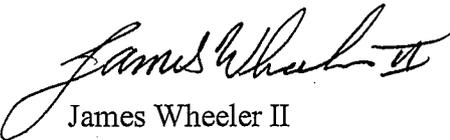
After a review of nine potential locations in Huntsville, the Army has identified one preferred site (referred to as Site #8) and one alternate site (referred to as Site #9) as suitable for the construction of the AFRC (see Enclosure 1). Site #8 has about 11.5 acres and is at the southeast corner of the intersection of Montgomery Road (FM 1374) and Veterans Memorial Parkway, south of central Huntsville (see Enclosure 2). Site #8 is largely undeveloped and forested, with the exception of a single building along a dirt road in the northern portion of the site. Surrounding the site is more forested land, a small pond, the two bordering roads, and light residential development. Site #9 is roughly triangular and has about 53.7 acres, though the Army would acquire only about 15 acres of the property. The property is northeast of central Huntsville and is bounded on the west by Highway 19 (Loop 405), on the east by Ryans Ferry Road, and on the north by Fish Hatchery Road (FM 2821) (see Enclosure 3). Site #9 is undeveloped and mostly forested, and is zoned as agricultural land. Beyond the roads surrounding the site is forested land to the north, forested and open land to the west, and residential development to the east.

The U.S. Army Corps of Engineers, Mobile District, has contracted with Tetra Tech, Inc., to complete environmental studies of the AFRC site in compliance with the National

Environmental Protection Act, Endangered Species Act, Bald and Golden Eagle Protection Act, and other wildlife protection laws and regulations.

This letter is provided to notify you of the proposed action and to request your input regarding any environmental concerns you might have with respect to the action. Please provide your input within 30 days of receipt of this letter if you are interested in this matter. If you have questions or concerns about the project, please do not hesitate to call me at (501) 771-7992.

Sincerely,



James Wheeler II
Chief, Environmental Division
90th RRC

Enclosures



DEPARTMENT OF THE ARMY
HEADQUARTERS, UNITED STATES ARMY 90TH REGIONAL READINESS COMMAND
CAPTAIN MAURICE L. BRITT UNITED STATES ARMY RESERVE CENTER
8000 CAMP ROBINSON ROAD
NORTH LITTLE ROCK, ARKANSAS 72118-2205

January 24, 2009

Reply to the Attention of the Environmental Office

Mr. Carlos Bullock, Council Chairman
Alabama-Coushatta Tribal Council
571 State Park Road
Livingston, TX 77351

Dear Chairman Bullock:

The Defense Base Closure and Realignment Act of 1990 (Public Law 101-510), as amended, implements recommendations made in fall 2005 by the Defense Base Closure and Realignment Commission (BRAC Commission). One of the proposed BRAC actions is to close the Miller United States Army Reserve Center, Huntsville, Texas, and relocate units to a new Armed Forces Reserve Center (AFRC) in Huntsville, Texas, if the Army is able to acquire suitable land for the facility construction. The new AFRC would be able to accommodate Texas National Guard Units from the Texas Army National Guard Readiness Center in Huntsville, Texas (if the state decides to relocate those National Guard units).

After a review of nine potential locations in Huntsville, the Army has identified one preferred site (referred to as Site #8) and one alternate site (referred to as Site #9) as suitable for the construction of the AFRC (see Enclosure 1). Site #8 has about 11.5 acres and is at the southeast corner of the intersection of Montgomery Road (FM 1374) and Veterans Memorial Parkway, south of central Huntsville (see Enclosure 2). Site #8 is largely undeveloped and forested, with the exception of a single building along a dirt road in the northern portion of the site. Surrounding the site is more forested land, a small pond, the two bordering roads, and light residential development. Site #9 is roughly triangular and has about 53.7 acres, though the Army would acquire only about 15 acres of the property. The property is northeast of central Huntsville and is bounded on the west by Highway 19 (Loop 405), on the east by Ryans Ferry Road, and on the north by Fish Hatchery Road (FM 2821) (see Enclosure 3). Site #9 is undeveloped and mostly forested, and is zoned as agricultural land. Beyond the roads surrounding the site is forested land to the north, forested and open land to the west, and residential development to the east.

The U.S. Army Corps of Engineers, Mobile District, has contracted with Tetra Tech, Inc., to complete environmental studies of the AFRC site in compliance with the National Environmental Protection Act (NEPA). Tetra Tech has subcontracted New South Associates to

complete a cultural resources survey of the site in accordance with NEPA and Section 106 of the National Historic Preservation Act.

This letter is provided to notify you of the proposed action and to invite your Tribe to participate in the cultural resources consultation during the NEPA process. The Army wishes to ensure that issues of concern to your Tribe are addressed, and welcomes any comments you may have about the proposed AFRC construction. If your Tribe, or members of your Tribe, have knowledge of traditional cultural properties, sacred sites, or burials on or near the proposed site of our project, please contact Mr. James Wheeler II, Environmental Manager, 90th Regional Readiness Command at (501) 771-7992, within 30 days of receipt of this letter. We thank you for time and consideration.

Sincerely,



Philip L. Hanrahan
Brigadier General, U.S. Army Reserve
Commanding

Enclosures



DEPARTMENT OF THE ARMY

HEADQUARTERS, UNITED STATES ARMY 90TH REGIONAL READINESS COMMAND
CAPTAIN MAURICE L. BRITT UNITED STATES ARMY RESERVE CENTER
8000 CAMP ROBINSON ROAD
NORTH LITTLE ROCK, ARKANSAS 72118-2205

January 24, 2009

Reply to the Attention of the Environmental Office

Mr. Robert Cast
Tribal Historic Preservation Officer
Caddo Nation of Oklahoma
P.O. Box 487
Binger, OK 73009

Dear Mr. Cast:

The Defense Base Closure and Realignment Act of 1990 (Public Law 101-510), as amended, implements recommendations made in fall 2005 by the Defense Base Closure and Realignment Commission (BRAC Commission). One of the proposed BRAC actions is to close the Miller United States Army Reserve Center, Huntsville, Texas, and relocate units to a new Armed Forces Reserve Center (AFRC) in Huntsville, Texas, if the Army is able to acquire suitable land for the facility construction. The new AFRC would be able to accommodate Texas National Guard Units from the Texas Army National Guard Readiness Center in Huntsville, Texas (if the state decides to relocate those National Guard units).

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This letter is provided to notify you of the proposed action and to invite your Tribe to participate in the cultural resources consultation during the NEPA process. The Army wishes to ensure that issues of concern to your Tribe are addressed, and welcomes any comments you may have about the proposed AFRC construction. If your Tribe, or members of your Tribe, have knowledge of traditional cultural properties, sacred sites, or burials on or near the proposed site of our project, please contact Mr. James Wheeler II, Environmental Manager, 90th Regional Readiness Command at (501) 771-7992, within 30 days of receipt of this letter. We thank you for time and consideration.

Sincerely,



Philip L. Hanrahan
Brigadier General, U.S. Army Reserve
Commanding

Enclosures



DEPARTMENT OF THE ARMY
HEADQUARTERS, UNITED STATES ARMY 90TH REGIONAL READINESS COMMAND
CAPTAIN MAURICE L. BRITT UNITED STATES ARMY RESERVE CENTER
8000 CAMP ROBINSON ROAD
NORTH LITTLE ROCK, ARKANSAS 72118-2205

January 24, 2009

Reply to the Attention of the Environmental Office

The Honorable Don Patterson
Tonkawa Tribe of Indians of Oklahoma
1 Rush Buffalo Road
Tonkawa, OK 74653-4449

Dear President Patterson:

The Defense Base Closure and Realignment Act of 1990 (Public Law 101-510), as amended, implements recommendations made in fall 2005 by the Defense Base Closure and Realignment Commission (BRAC Commission). One of the proposed BRAC actions is to close the Miller United States Army Reserve Center, Huntsville, Texas, and relocate units to a new Armed Forces Reserve Center (AFRC) in Huntsville, Texas, if the Army is able to acquire suitable land for the facility construction. The new AFRC would be able to accommodate Texas National Guard Units from the Texas Army National Guard Readiness Center in Huntsville, Texas (if the state decides to relocate those National Guard units).

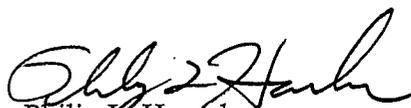
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This letter is provided to notify you of the proposed action and to invite your Tribe to participate in the cultural resources consultation during the NEPA process. The Army wishes to ensure that issues of concern to your Tribe are addressed, and welcomes any comments you may have about the proposed AFRC construction. If your Tribe, or members of your Tribe, have knowledge of traditional cultural properties, sacred sites, or burials on or near the proposed site of our project, please contact Mr. James Wheeler II, Environmental Manager, 90th Regional Readiness Command at (501) 771-7992, within 30 days of receipt of this letter. We thank you for time and consideration.

Sincerely,



Philip E. Hanrahan
Brigadier General, U.S. Army Reserve
Commanding

Enclosures



United States Department of the Interior FISH AND WILDLIFE SERVICE

Division of Ecological Services
17629 El Camino Real #211
Houston, Texas 77058-3051
281-286-8282 FAX: 281-488-5882



February 9, 2009

James Wheeler II
Department of the Army
Headquarters, United States Army 90th Regional Readiness Command
Captain Maurice L. Britt United States Army Reserve Center
8000 Camp Robinson Road
North Little Rock, Arkansas 72118-2205

Dear Mr. Wheeler:

Thank you for your January 6, 2009, letter concerning the proposed Defense Base Closure and Realignment Commission actions to close the Miller United States Army Reserve Center (AFRC) in Huntsville, Texas and to relocate the units to a new AFRC in Huntsville, Walker County, Texas. The Army has identified one preferred site (site #8) and one alternate site (site #9) as suitable for the construction of the AFRC.

You are requesting information from the U.S. Fish and Wildlife Service (Service) regarding any natural resource concerns within the study area for the proposed project. Based upon a review of aerial photographs, the area surrounding site 9 is more developed and the habitat is more fragmented than at site 8. If this observation is confirmed through on the ground evaluations of the two sites, then development of site 9 may have less of an impact on fish and wildlife resources.

Fragmentation on a broad geographic scale has been shown to result in declines of songbird species. Studies have shown that the occurrence of most forest-dependent species is correlated with forest size, and that contiguous forests of 100 to 300 acres are needed by long-distance, insectivorous neotropical migrants, such as flycatchers, vireos, and wood warblers. The consequences of habitat fragmentation may include loss of interior or area-sensitive species (e.g., sharp-shinned hawk, Cooper's hawk, Swainson's warbler, red-cockaded woodpecker).

A review of Service files and your project map indicates that populations of the endangered Red-cockaded woodpecker (RCW) (*Picoides borealis*) occur to the south of these locations on the Sam Houston National Forest; however, no information specific to your project sites were located. Therefore, we recommend that all areas of suitable nesting and foraging habitat within the project area be surveyed by a qualified individual for the presence or absence of RCWs. Information on suitable RCW habitat and the recommended survey protocol can be found in the *Recovery Plan for the Red-cockaded Woodpecker (Picoides borealis), Second Revision*, available online at http://www.fws.gov/rcwrecovery/recovery_plan.html. The Service's East Texas Office may be contacted for additional information on RCWs at (936) 639-8546.



James Wheeler II
Department of the Army
February 9, 2009
Page 2

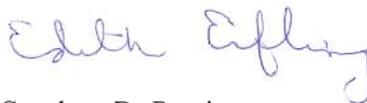
According to Section 7(a)(2) of the Endangered Species Act and the implementing regulations, it is the responsibility of each federal agency to ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of any federally listed species. Based upon an inventory of listed species and other current information, the federal action agency determines if any endangered or threatened species may be affected by the proposed action. The Service's Consultation Handbook (<http://endangered.fws.gov/consultations/s7hndbk/s7hndbk.htm>) is available online for further information on definitions and process.

Effective August 8, 2007, the bald eagle was removed from the list of threatened or endangered species under the authority of the Endangered Species Act of 1973, as amended. However, the bald eagle continues to be protected under the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act. Additional information on eagles and the provisions of the BGEPA is available on the Service's bald eagle website, which can be accessed at <http://www.fws.gov/migratorybirds/baldeagle.htm>

Since the number of bald eagles nesting in Texas is increasing and often the locations of their nests are not known, there may be bald eagle nests located along your project route. Therefore, we recommend ensuring that all work crew members be informed that bald eagles may be in the area and that they all know what bald eagles and bald eagle nests look like. There should also be one point of contact in each crew that will be notified should anyone working on that crew observe an eagle. If a bald eagle is seen or bald eagle nest is located in the project area, especially during the eagle nesting season (October 1 – May 30), you should determine whether or not your project may affect or disturb the bald eagles.

At this time, the Service is providing comments in accordance with the provisions of the Endangered Species Act of 1973 (87 Stat. 884, as amended; (16 U.S.C. 703 et seq.) and of the Bald and Golden Eagle Protection Act, as amended (16 U.S.C. 668-668d). If you have any questions, or if we can be of further assistance, please contact Charrish Stevens at 281/286-8282.

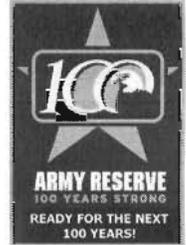
Sincerely,



Stephen D. Parris
Field Supervisor, Clear Lake ES Field Office



DEPARTMENT OF THE ARMY
HEADQUARTERS, UNITED STATES ARMY 90TH REGIONAL READINESS COMMAND
CAPTAIN MAURICE L. BRITT UNITED STATES ARMY RESERVE CENTER
8000 CAMP ROBINSON ROAD
NORTH LITTLE ROCK, ARKANSAS 72118-2205



March 20, 2009

Reply to the Attention of the Environmental Office

Mr. Steve Parrish, Field Supervisor
Clear Lake Ecological Services Field Office
U.S. Fish and Wildlife Service
17629 El Camino Real, Suite 211
Houston, TX 77058-3051

Re: Armed Forces Reserve Center, Huntsville, Texas

Dear Mr. Parrish:

Thank you for your letter of February 9, 2009, concerning the proposed action to construct an Armed Forces Reserve Center on a site in Huntsville, Texas. In your letter you recommend "that all areas of suitable nesting and foraging habitat within the project area be surveyed by a qualified individual for the presence or absence of RCWs."

Mr. Charles W. Seyle, a biologist from the U.S. Army Corps of Engineers, Mobile District, attended the site visit when the property was first being investigated as a potential site for the AFRC. He has extensive experience reviewing sites and projects for potential impacts on the RCW and concluded that the proposed site does not support suitable nesting and foraging habitat for the RCW. The Army, therefore, maintains in its environmental assessment that the project will not impact sensitive species.

A copy of the environmental assessment will be sent to your office during the public review period. Please provide any further input you might have within 30 days of receipt of the environmental assessment at that time. If you have questions or concerns about the project, please do not hesitate to call me at (501) 771-7992.

Sincerely,

James Wheeler II
Chief, Environmental Division
90th RRC



Life's better outside.™

February 19, 2009

James Wheeler II
Commander, 90th Regional Readiness Command
ATTN: ARRC-CAR-ENE (Mr. Wheeler)
8000 Camp Robinson Road
North Little Rock, AR 72118-2205

RE: Proposed BRAC closure of Miller United States Army Reserve Center, Huntsville, Texas and the relocation of units to a new Armed Forces Reserve Center in Huntsville, Walker County, Texas.

Dear Mr. Wheeler:

The Texas Parks and Wildlife Department (TPWD) has received your request for information regarding potential impacts to threatened and endangered species and for information on other issues of concern relating to the project referenced above. Under section 12.0011 of the Texas Parks and Wildlife Code, TPWD is charged with "providing recommendations that will protect fish and wildlife resources to local, state, and federal agencies that approve, permit, license, or construct developmental projects" and "providing information on fish and wildlife resources to any local, state, and federal agencies or private organizations that make decisions affecting those resources."

The proposed project entails the closure of the Miller United States Army Reserve Center and the relocation of units to a new Armed Forces Reserve Center (AFRC) in the city of Huntsville, Texas. Two potential locations for construction of AFRC have been identified. Site #8 consists of approximately 11.5 acres and is at the southwest corner of the intersection of Montgomery Road (FM 1374) and Veterans Memorial Parkway, south of central Huntsville. Site #8 is largely undeveloped and forested, with the exception of a single building along a dirt road in the northern portion of the site. Surrounding the site is more forested land, a small pond, the two bordering roads, and light residential development. Site #9 is roughly triangular and has about 53.7 acres, though the Army would only acquire about 15 acres of the property. Site #9 is undeveloped and mostly forested, and is zoned as agricultural land. Site #9 is also within close proximity to the Sam Houston National Forest.

Project Information

Due to the lack of information regarding the fish and wildlife impacts of the proposed project, it is not possible to adequately assess the potential impacts of this project upon fish and wildlife resources. TPWD recommends that the

- Commissioners
- Peter M. Holt
Chairman
San Antonio
- T. Dan Friedkin
Vice-Chairman
Houston
- Mark E. Bivins
Amarillo
- J. Robert Brown
El Paso
- Ralph H. Duggins
Fort Worth
- Antonio Falcon, M.D.
Rio Grande City
- Karen J. Hixon
San Antonio
- Margaret Martin
Boerne
- John D. Parker
Lufkin
- Lee M. Bass
Chairman-Emeritus
Fort Worth

Carter P. Smith
Executive Director

Department of the Army utilize the site that requires the least amount of clearing of vegetation. Ideally the project should be constructed in a previously disturbed area. However, based on the potential locations identified, TPWD recommends that Site #8 be the site chosen to have the least amount of impacts fish and wildlife resources and the Sam Houston National Forest.

Vegetation Impacts

The project description does not include a summary of potentially impacted vegetation. However, after review of aerial imagery and review of the project information, the proposed project would impact large amounts of woody vegetation at both tracts #8 and #9.

Recommendations: TPWD recommends that clearing of mature, native trees be avoided. Loss of vegetation should be minimized by using site planning and construction techniques designed to avoid and preserve existing trees, shrubs, grasses, and forbs. For impacts that are unavoidable, TPWD recommends transplanting the existing trees or replacing them at a ratio of 3 saplings for every tree lost. Whether transplanted or replaced, a survival of 85% should be achieved. TPWD recommends that native plant and forage species that are beneficial to wildlife endemic to the area be used in mitigation and landscaped areas.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) provides for a year round closed season for non-game birds and prohibits the taking of migratory bird nests and eggs, except as permitted by the U.S. Fish and Wildlife Service.

Recommendations: Construction activities such as, but not limited to, tree felling as well as vegetation clearing, trampling, or maintenance should occur outside the April 1- July 15 migratory bird nesting season of each year the project is authorized and lasting for the life of the project. To comply with the MTBA, the proposed site should be surveyed for migratory bird nest sites prior to construction or future maintenance activities. Since raptors nest in late winter and early spring, all construction activities as identified above should be excluded from a minimum zone of 100 meters around any raptor nest during the period of February 1- July 15.

Mr. James Wheeler II
February 19, 2009
Page 3 of 5

Please contact the U.S. Fish and Wildlife Service Southwest Regional Office (Region 2) at (505) 248-6879 for further information.

Wetland Impacts

The Clean Water Act (CWA) sets the basic regulatory framework for regulating discharges of pollutants to U.S. waters. Section 404 of the CWA establishes a federal program to regulate the discharge of dredged and fill material into waters of the U.S., including wetlands. The U.S. Army Corps of Engineers (USACE) and the Environmental Protection Agency (EPA) are responsible for making jurisdictional determinations and regulating wetlands under Section 404 of the CWA. The COE also makes jurisdictional determinations under Section 10 of the Rivers and Harbors Act of 1899.

Recommendations: TPWD recommends the wetland impact areas be actively restored rather than relying on them to recover on their own. Allowing areas to revegetate naturally encourages the establishment of invasive and/or exotic species, which once established are difficult to control or eradicate. Therefore any restoration/mitigation plan should incorporate revegetation to grade with naturally occurring, native wetland species. The restoration/mitigation plan should also include a maintenance plan for 70-80% aerial wetland cover after 2 years. Please provide information regarding the impact and the restoration/mitigation plan to TPWD for review and comment.

Coordination of all impacts to the aquatic resources should be coordinated with Jaime Schubert with our Coastal Program; he can be reached at 281-534-0135.

Rare and Protected Species

According to the Texas Natural Diversity Database (TXNDD) no known occurrences of threatened or endangered species have been recorded near (within 1.5 miles) of the proposed project.

The TXNDD is intended to assist users in avoiding harm to rare species or significant ecological features. Absence of information in an area does not imply that a species is absent from that area. Given the small proportion of public versus private land in Texas, the TXNDD does not include a representative inventory of rare resources in the state. Although it is based on the best data available to

Mr. James Wheeler II
February 19, 2009
Page 4 of 5

TPWD regarding rare species, *the data from the TXNDD do not provide a definitive statement as to the presence, absence or condition of special species, natural communities, or other significant features within your project area.* These data are not inclusive and **cannot be used as presence/absence data.** They represent species that could potentially be in your project area. This information cannot be substituted for on-the-ground surveys. The TXNDD is updated continuously; as your project progresses and for future projects, please contact Dorinda Scott at (512) 389-8723 or txnndd@tpwd.state.tx.us for the most current and accurate information.

Determining the actual presence of a species in a given area depends on many variables including daily and seasonal activity cycles, environmental activity cues, preferred habitat, transiency and population density (both wildlife and human). The absence of a species can be demonstrated only with great difficulty and then only with repeated negative observations, taking into account all the variable factors contributing to the lack of detectable presence. If encountered during construction, measures should be taken to avoid impacting wildlife.

Recommendation: Please review the most current TPWD county lists for Walker County, as other rare species could be present depending upon habitat availability. These lists are now available on-line at http://www.tpwd.state.tx.us/landwater/land/maps/gis/ris/endangered_species.p.html. If during construction, the project area is found to contain rare species, natural plant communities, or special features, TPWD recommends that precautions be taken to avoid impacts to them. The FWS should be contacted for additional species occurrence data, guidance, permitting, survey protocols, and mitigation for federally listed species. For the FWS rare species lists please visit <http://www.fws.gov/southwest/es/EndangeredSpecies/lists/>.

Revegetation

Recommendations: TPWD recommends that disturbed soils be reseeded with a mixture of grasses and forbs native to Walker County. To enhance native grasses available to wildlife in the project area, TPWD recommends that Bermuda grass be avoided to the extent possible in reseeded efforts, though TPWD understands that slopes may require certain grasses to control erosion.

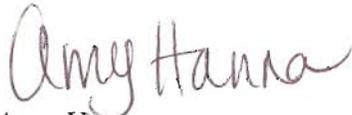
Mr. James Wheeler II
February 19, 2009
Page 5 of 5

For assistance in determining the best native seed mix for the project area, please contact our staff. Runoff control measures should be maintained until native plants have been reestablished on disturbed areas.

TPWD strives to respond to requests for project review within the 45 day comment period. Responses may be delayed due to workload and lack of staff. Failure to meet the 45 day review timeframe does not constitute concurrence from TPWD that the proposed project will not adversely impact fish and wildlife resources.

TPWD advises review and implementation of these recommendations. If you have any questions, please contact me at (361) 576-0022.

Sincerely,

A handwritten signature in cursive script that reads "Amy Hanna".

Amy Hanna
Wildlife Habitat Assessment Program
Wildlife Division

/ajh:13721



TEXAS
HISTORICAL
COMMISSION

The State Agency for Historic Preservation

RPC: 17 FEB 2009
DUE

RICK PERRY, GOVERNOR

JOHN L. NAU, III, CHAIRMAN

F. LAWRENCE OAKS, EXECUTIVE DIRECTOR

February 12, 2009

David W. Pugh
SAM/PD-M
Rm 5025
109 Saint Joseph St.
Mobile, AL. 36602

Re: Project review under Section 106 of the National Historic Preservation Act of 1966
BRAC, Miller US Army Reserve Center, Huntsville, Site 8 and 9 (ARMY)

Dear Mr. Pugh:

Thank you for your correspondence describing the above referenced federal undertaking. This letter serves as comment on the proposed undertaking from the Executive Director of the Texas Historical Commission and the State Historic Preservation Officer.

Section 106 of the National Historic Preservation Act requires federal agencies, or their designated representatives, to take into account the effects of their undertakings on historic properties. Federal agencies, or their designated representatives, must request the comments of this office when they are considering an action, or if they are assisting, permitting, or licensing an action that may affect archeological sites or historic buildings.

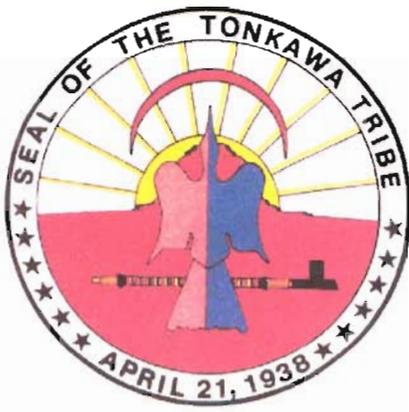
The Texas Historical Commission needs additional information to identify historic properties. Specifically, a structure exists on Site 8 that also appears on the 7.5' USGS quadrangle. Thus, it is likely to be more than 50 years old. Please submit photographs of the building from at least two angles or provide information that demonstrates the construction date is less than 50 years ago so that we may complete our review.

We look forward to further consultation with your office and hope to maintain a partnership that will foster effective historic preservation. Thank you for your cooperation in this federal review process, and for your efforts to preserve the irreplaceable heritage of Texas. **If you have any questions concerning our review or if we can be of further assistance, please contact Bill Martin at 512/463-5867.**

Sincerely,

for
F. Lawrence Oaks, State Historic Preservation Officer

FLO/wam



TONKAWA TRIBE OF OKLAHOMA
TONKAWA TRIBAL COUNCIL

• 1 RUSH BUFFALO ROAD, TONKAWA, OKLAHOMA 74653 •
• PHONE (580) 628-2561 • FAX: (580) 628-3375 •
WEB SITE: www.tonkawatribe.com

Department of the Army
ATTN: Environmental Office
Headquarters, United States Army 90th Regional Readiness Command
Captain Maurice L. Britt United States Army Reserve Center
8000 Camp Robinson Road
North Little Rock Road
North Little Rock, AR 72118-2205

Date: February 4, 2009

Dear Phillip L. Hanrahan:

In response to the letter from your office dated January 24, 2009 regarding potential environmental impacts to cultural resources that may result from the construction of the Defense Base Closure and Realignment Act of 1990, we submit the following: The Tonkawa Tribe has no specifically designated historical or cultural sites identified in the above listed project area. However if any human remains, funerary objects, or other evidence of historical or cultural significance is inadvertently discovered then the Tonkawa Tribe would certainly be interested in proper disposition thereof.

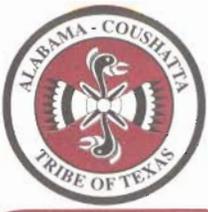
We appreciate notification by your office of the many projects on-going, and as always the Tonkawa Tribe is willing to work with your representatives in any manner to uphold the provisions of NAGPRA to the extent of our capability.

Respectfully,

NAGPRA Representative

Concurrence:

Tonkawa Tribe Business Committee



ALABAMA-COUSHATTA TRIBE OF TEXAS

571 State Park Rd 56 • Livingston, Texas 77351 • (936) 563-1100

February 19, 2009

James Wheeler II
Environmental Manager
90th Regional Readiness Command
8000 Camp Robinson Rd
North Little Rock, AR 72118-2205

Dear Mr. Wheeler:

On behalf of Chief Oscola Clayton Sylestine and the Alabama-Coushatta Tribe of Texas, our appreciation is expressed on your agency's effort to consult with us regarding the proposed Defense Base Closure and Realignment actions for the Miller U.S. Army Reserve Centers in Huntsville, Texas.

As a federally recognized Tribe, we maintain ancestral associations throughout the state of Texas despite the absence of written documentation to completely identify Tribal activities, villages, trails, or burial sites. However, it is our objective to ensure significances of Native American ancestry, especially of the Alabama-Coushatta Tribe, are administered with the utmost considerations.

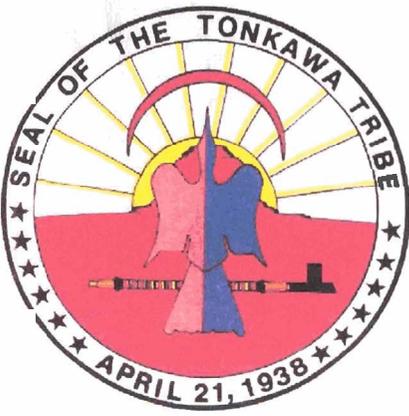
Regarding the January 24, 2009 letter submitted to our Tribe, a determination of immediate impact to religious, cultural, or historical assets of the Alabama-Coushatta Tribe could not be ascertained. This region is believed to contain migratory routes and temporary habitation sites utilized by ancestral Tribal members wherein specific information is currently unavailable.

Nevertheless, we do maintain an interest in ground disturbances in this region and would appreciate notification of inadvertent discoveries of human remains and/or archaeological artifacts associated with this proposal. Should you require additional assistance, please do not hesitate to contact us.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Bryant J. Celestine".

Bryant J. Celestine
Historic Preservation Officer



TONKAWA TRIBE OF OKLAHOMA
TONKAWA TRIBAL COUNCIL

• 1 RUSH BUFFALO ROAD, TONKAWA, OKLAHOMA 74653 •
• PHONE (580) 628-2561 • FAX: (580) 628-3375 •
WEB SITE: www.tonkawatribe.com

Department of the Army
ATTN: Environmental Programs
Headquarters, United States Army 90th Regional Readiness Command
Captain Maurice L. Britt United States Army Reserved Center
8000 Camp Robinson Road
North Little Rock, AR. 72118-2205

Date: March 30, 2009

Dear Mr. James Wheeler II:

In response to the letter from your office dated March 20, 2009 regarding potential environmental impacts to cultural resources that may result from the closure of the Miller United States Army Reserve Center, Huntsville, Texas, and relocation of units into a new AFRC in Huntsville, we submit the following: The Tonkawa Tribe has no specifically designated historical or cultural sites identified in the above listed project area. However if any human remains, funerary objects, or other evidence of historical or cultural significance is inadvertently discovered then the Tonkawa Tribe would certainly be interested in proper disposition thereof.

We appreciate notification by your office of the many projects on-going, and as always the Tonkawa Tribe is willing to work with your representatives in any manner to uphold the provisions of NAGPRA to the extent of our capability.

Respectfully,

NAGPRA Representative

Concurrence: Tonkawa Tribe Business Committee



TEXAS
HISTORICAL
COMMISSION

The State Agency for Historic Preservation

Rec 13 APR 09

RICK PERRY, GOVERNOR

JOHN L. NAU, III, CHAIRMAN

F. LAWRENCE OAKS, EXECUTIVE DIRECTOR

April 7, 2009

David W. Pugh
USACE/SAM/PD-M
P.O. Box 2288
Mobile Alabama, 36628-0001

Re: Project review under Section 106 of the National Historic Preservation Act of 1966
Draft Report: *Phase I Cultural Resource Survey of the Proposed Armed Forces Reserve Center in Huntsville Armed Forces Reserve Center Site.* (COE-Mobile)

Dear Mr. Pugh:

Thank you for allowing us to review the above referenced report. This letter serves as comment on the federal undertaking from the State Historic Preservation Officer, the Executive Director of the Texas Historical Commission.

The review staff, led by Bill Martin, has examined the document. We note that there is no documentation included that discusses the history of the tract or its past uses. In particular, we are concerned that the concrete structures behind the modern building could be more than 50 years old. Please provide a revised report that documents past use of the tract and identifies the age and function of the concrete structures.

Thank you for your cooperation in this federal review process, and for your efforts to preserve the irreplaceable heritage of Texas. **If you have any questions concerning our review or if we can be of further assistance, please contact Bill Martin at 512/463-5867.**

Sincerely,

A handwritten signature in cursive script, appearing to read "William A. Martin".

for

F. Lawrence Oaks, State Historic Preservation Officer

FLO/wam

APPENDIX D
ECONOMIC IMPACT FORECAST SYSTEM

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ECONOMIC IMPACT FORECAST SYSTEM (EIFS) MODEL

SOCIOECONOMIC IMPACT ASSESSMENT

Socioeconomic impacts are linked through cause-and-effect relationships. Military payrolls and local procurement contribute to the economic base for the ROI. In this regard, construction of an AFRC and associated facilities in Huntsville, Texas, would have a multiplier effect on the local and regional economy. With the proposed action, direct jobs would be created (e.g., construction jobs), generating new income and increasing personal spending. This spending generally creates secondary jobs, increases business volume, and increases revenues for schools and other social services.

THE ECONOMIC IMPACT FORECAST SYSTEM

The U.S. Army, with the assistance of many academic and professional economists and regional scientists, developed EIFS to address the economic impacts of NEPA-requiring actions and to measure their significance. As a result of its designed applicability, and in the interest of uniformity, EIFS should be used in NEPA assessments. The entire system is designed for the scrutiny of a populace affected by the actions being studied. The algorithms in EIFS are simple and easy to understand, but still have firm, defensible bases in regional economic theory.

EIFS was developed under a joint project of the U.S. Army Corps of Engineers, the U.S. Army Environmental Policy Institute, and the Computer and Information Science Department of Clark Atlanta University. EIFS is implemented as an on-line system supported by the U.S. Army Corps of Engineers, Mobile District. The system is available to anyone with an approved user identification and password. U.S. Army Corps of Engineers staff is available to assist with the use of EIFS.

The databases in EIFS are national in scope and cover the approximately 3,700 counties, parishes, and independent cities that are recognized as reporting units by federal agencies. EIFS allows the user to define an economic ROI by identifying the counties, parishes, or cities to be analyzed. Once the ROI is defined, the system aggregates the data, calculates multipliers and other variables used in the various models in EIFS, and prompts the user for forecast input data.

THE EIFS MODEL

The basis of the EIFS analytical capabilities is the calculation of multipliers that are used to estimate the impacts resulting from Army-related changes in local expenditures or employment. In calculating the multipliers, EIFS uses the economic base model approach, which relies on the ratio of total economic activity to basic economic activity. Basic, in this context, is defined as the production or employment engaged to supply goods and services outside the ROI or by federal activities (such as military installations and their employees). According to economic base theory, the ratio of total income to basic income is measurable (as the multiplier) and sufficiently stable so that future changes in economic activity can be forecast. This technique is especially appropriate for estimating aggregate impacts and makes the economic base model ideal for the EA and EIS process.

The multiplier is interpreted as the total impact on the economy of the region resulting from a unit change in its base sector; for example, a dollar increase in local expenditures due to an expansion

of its military installation. EIFS estimates its multipliers using a location quotient approach based on the concentration of industries within the region relative to the industrial concentrations for the nation.

The user inputs into the model the data elements which describe the Army action: the change in expenditures, or dollar volume of the construction project(s); change in civilian or military employment; average annual income of affected civilian or military employees; the percent of civilians expected to relocate due to the Army's action; and the percent of military living on-post. Once these are entered into the EIFS model, a projection of changes in the local economy is provided. These are projected changes in sales volume, income, employment, and population. These four indicator variables are used to measure and evaluate socioeconomic impacts. Sales volume is the direct and indirect change in local business activity and sales (total retail and wholesale trade sales, total selected service receipts, and value-added by manufacturing). Employment is the total change in local employment due to the proposed action, including not only the direct and secondary changes in local employment, but also those personnel who are initially affected by the military action. Income is the total change in local wages and salaries due to the proposed action, which includes the sum of the direct and indirect wages and salaries, plus the income of the civilian and military personnel affected by the proposed action. Population is the increase or decrease in the local population as a result of the proposed action.

The BRAC action in Huntsville would require construction of an AFRC training building, OMS, storage building, military and privately owned vehicle parking area, and supporting facilities such electrical and mechanical systems, water, sewer, HVAC, plumbing, and force protection measures. The current working estimate for the cost of construction of these facilities (\$16,000,000) over an estimated 1-year development period was entered in the EIFS model as the change in expenditures.

THE SIGNIFICANCE OF SOCIOECONOMIC IMPACTS

Once model projections are obtained, the Rational Threshold Value (RTV) profile allows the user to evaluate the significance of the impacts. This analytical tool reviews the historical trends for the defined region and develops measures of local historical fluctuations in sales volume, income, employment, and population. These evaluations identify the positive and negative changes within which a project can affect the local economy without creating a significant impact. The greatest historical changes define the boundaries that provide a basis for comparing an action's impact on the historical fluctuation in a particular area. Specifically, EIFS sets the boundaries by multiplying the maximum historical deviation of the following variables:

		Increase	Decrease
Sales Volume	X	100%	75%
Income	X	100%	67%
Employment	X	100%	67%
Population	X	100%	50%

These boundaries determine the amount of change that will affect an area. The percentage allowances are arbitrary, but sensible. The maximum positive historical fluctuation is allowed with expansion because economic growth is beneficial. While cases of damaging economic growth have been cited, and although the zero-growth concept is being accepted by many local planning groups, military base reductions and closures generally are more injurious to local economics than are expansion.

The major strengths of the RTV are its specificity to the region under analysis and its basis on actual historical data for the region. The EIFS impact model, in combination with the RTV, has proven successful in addressing perceived socioeconomic impacts. The EIFS model and the RTV technique for measuring the intensity of impacts have been reviewed by economic experts and have been deemed theoretically sound.

The following are the EIFS input and output data for construction and the RTV values for the ROI. These data form the basis for the socioeconomic impact analysis presented in Section 4.9.2.1.

EIFS REPORT

PROJECT NAME

Huntsville, TX BRAC AFRC EA

STUDY AREA

48471 Walker County, TX

FORECAST INPUT

Change In Local Expenditures	\$16,000,000
Change In Civilian Employment	0
Average Income of Affected Civilian	\$0
Percent Expected to Relocate	0
Change In Military Employment	0
Average Income of Affected Military	\$0
Percent of Military Living On-post	0

FORECAST OUTPUT

Employment Multiplier	1.85	
Income Multiplier	1.85	
Sales Volume – Direct	\$16,000,000	
Sales Volume – Induced	\$13,600,000	
Sales Volume – Total	\$29,600,000	3.01%
Income – Direct	\$2,727,513	
Income - Induced	\$2,318,386	
Income – Total (place of work)	\$5,045,898	0.57%
Employment – Direct	90	
Employment – Induced	76	
Employment – Total	166	0.60%
Local Population	0	
Local Off-base Population	0	0.00%

RTV SUMMARY

	Sales Volume	Income	Employment	Population
Positive RTV	13.46%	9.90%	8.33%	7.79%
Negative RTV	-11.13%	-9.95%	-3.48%	-3.56%

RTV DETAILED**SALES VOLUME**

Year	Value	Adj_Value	Change	Deviation	%Deviation
1969	40697	177846	0	0	0
1970	45452	187717	9871	-6379	-3.4
1971	52865	209345	21629	5379	2.57
1972	61674	236211	26866	10616	4.49
1973	70441	254292	18081	1831	0.72
1974	82641	268583	14291	-1959	-0.73
1975	93926	279899	11316	-4934	-1.76
1976	109948	310053	30154	13904	4.48
1977	123518	326088	16034	-216	-0.07
1978	145392	357664	31577	15327	4.29
1979	160342	354356	-3308	-19558	-5.52
1980	180630	350422	-3934	-20184	-5.76
1981	209099	368014	17592	1342	0.36
1982	267495	444042	76027	59777	13.46
1983	293759	472952	28910	12660	2.68
1984	324753	500120	27168	10918	2.18
1985	374729	558346	58227	41977	7.52
1986	368522	538042	-20304	-36554	-6.79
1987	399549	619301	81259	65009	10.5
1988	406922	553414	-65887	-82137	-14.84
1989	412558	532200	-21214	-37464	-7.04
1990	437147	537691	5491	-10759	-2
1991	435119	513440	-24250	-40500	-7.89
1992	455885	519709	6268	-9982	-1.92
1993	482312	535366	15657	-593	-0.11
1994	514544	555708	20341	4091	0.74
1995	533546	560223	4516	-11734	-2.09
1996	553093	564155	3932	-12318	-2.18
1997	625774	625774	61619	45369	7.25
1998	676790	663254	37480	21230	3.2
1999	708060	679738	16483	233	0.03
2000	750373	697847	18109	1859	0.27

INCOME

Year	Value	Adj_Value	Change	Deviation	%Deviation
1969	54008	236015	0	0	0
1970	62067	256337	20322	-2692	-1.05
1971	72361	286550	30213	7199	2.51
1972	84502	323643	37093	14079	4.35
1973	96964	350040	26397	3383	0.97
1974	120297	390965	40925	17911	4.58
1975	130891	390055	-910	-23924	-6.13
1976	154002	434286	44230	21216	4.89
1977	174470	460601	26315	3301	0.72
1978	209485	515333	54732	31718	6.15
1979	240749	532055	16722	-6292	-1.18
1980	276195	535818	3763	-19251	-3.59
1981	317880	559469	23650	636	0.11
1982	389454	646494	87025	64011	9.9
1983	423977	682603	36109	13095	1.92
1984	462741	712621	30018	7004	0.98
1985	515824	768578	55957	32943	4.29
1986	512773	748649	-19929	-42943	-5.74
1987	541555	839410	90762	67748	8.07
1988	552130	750897	-88513	-111527	-14.85
1989	577779	745335	-5562	-28576	-3.83
1990	602938	741614	-3721	-26735	-3.6
1991	624393	736784	-4830	-27844	-3.78
1992	652750	744135	7351	-15663	-2.1
1993	683289	758451	14316	-8698	-1.15
1994	717937	775372	16921	-6093	-0.79
1995	754887	792631	17259	-5755	-0.73
1996	788074	803835	11204	-11810	-1.47
1997	887342	887342	83507	60493	6.82
1998	954085	935003	47661	24647	2.64
1999	984375	945000	9997	-13017	-1.38
2000	1045660	972464	27464	4450	0.46

EMPLOYMENT

Year	Value	Change	Deviation	%Deviation
1969	8639	0	0	0
1970	8790	151	-456	-5.19
1971	9597	807	200	2.08
1972	10278	681	74	0.72
1973	11151	873	266	2.39
1974	11769	618	11	0.09
1975	12335	566	-41	-0.33
1976	13029	694	87	0.67
1977	14078	1049	442	3.14
1978	15199	1121	514	3.38
1979	15417	218	-389	-2.52
1980	15910	493	-114	-0.72
1981	16698	788	181	1.08
1982	18877	2179	1572	8.33
1983	19506	629	22	0.11
1984	20753	1247	640	3.08
1985	22301	1548	941	4.22
1986	22028	-273	-880	-3.99
1987	23158	1130	523	2.26
1988	22693	-465	-1072	-4.72
1989	22684	-9	-616	-2.72
1990	23003	319	-288	-1.25
1991	23046	43	-564	-2.45
1992	23117	71	-536	-2.32
1993	23668	551	-56	-0.24
1994	25039	1371	764	3.05
1995	25817	778	171	0.66
1996	26151	334	-273	-1.04
1997	27651	1500	893	3.23
1998	27317	-334	-941	-3.44
1999	27877	560	-47	-0.17
2000	28077	200	-407	-1.45

POPULATION

Year	Value	Change	Deviation	%Deviation
1969	27142	0	0	0
1970	27985	843	-237	-0.85
1971	29801	1816	736	2.47
1972	33490	3689	2609	7.79
1973	35609	2119	1039	2.92
1974	37014	1405	325	0.88
1975	35562	-1452	-2532	-7.12
1976	36031	469	-611	-1.7
1977	36630	599	-481	-1.31
1978	38320	1690	610	1.59
1979	40158	1838	758	1.89
1980	42067	1909	829	1.97
1981	43053	986	-94	-0.22
1982	46011	2958	1878	4.08
1983	47650	1639	559	1.17
1984	49043	1393	313	0.64
1985	49833	790	-290	-0.58
1986	50746	913	-167	-0.33
1987	51321	575	-505	-0.98
1988	51697	376	-704	-1.36
1989	51211	-486	-1566	-3.06
1990	51020	-191	-1271	-2.49
1991	52522	1502	422	0.8
1992	53899	1377	297	0.55
1993	55053	1154	74	0.13
1994	56097	1044	-36	-0.06
1995	57383	1286	206	0.36
1996	58128	745	-335	-0.58
1997	59118	990	-90	-0.15
1998	60350	1232	152	0.25
1999	61476	1126	46	0.07
2000	61687	211	-869	-1.41

***** End of Report *****

ACRONYMS AND ABBREVIATIONS

AFRC	Armed Forces Reserve Center
APE	Area of Potential Effect
AQCR	Air-Quality Control Regions
AR	Army Regulation
ARNG	Army National Guard
BRAC Commission	Base Closure and Realignment Commission
CEQ	Council on Environmental Quality
CFR	<i>Code of Federal Regulations</i>
CO	carbon monoxide
dB	decibels
dBA	A-weighted decibel
DNL	Day-night Average Sound Level
DoD	Department of Defense
EA	environmental assessment
ECP	Environmental Condition of Property
EIFS	Economic Impact Forecast System
EO	Executive Order
EPA	U.S. Environmental Protection Agency
FNSI	finding of no significant impact
L_{eq}	Equivalent Sound Level
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NO _x	nitrous oxides
NRHP	National Register of Historic Places
PCPI	per capita personal income
PM ₁₀	fine particulate matter
PM _{2.5}	very fine particulate matter
POV	personal operating vehicles
ROI	region of influence
RTV	rational threshold value
SHPO	State Historic Preservation Officer
SO ₂	sulfur dioxide
TCEQ	Texas Commission on Environmental Quality
USACE	U.S. Army Corps of Engineers
U.S.C.	United States Code