
FINAL ENVIRONMENTAL IMPACT STATEMENT

**Disposal and Reuse
Of
Fort McClellan, Alabama**

August 1998

ENVIRONMENTAL IMPACT STATEMENT ORGANIZATION

This Environmental Impact Statement (EIS) describes the anticipated impacts of the disposal and reuse of Fort McClellan, Alabama. It identifies and describes the proposed actions, alternatives to these actions, and related environmental effects as required by the President's Council on Environmental Quality regulations, the National Environmental Policy Act and Army Regulation 200-2. The main body of the EIS consists of one volume (Volumes I). In addition, Volume II contains appendices that include supporting documents and other relevant information. A summary of the contents of Volumes I and II is provided below.

VOLUME I

EXECUTIVE SUMMARY provides an overview of the information presented in the EIS but is not intended to replace the detailed evaluation presented in the body of the document.

- Section 1 **PURPOSE, NEED AND SCOPE** describes the base closure and realignment decision-making process, why the EIS is being prepared, the scope of the document, and the EIS public involvement process.
- Section 2 **OVERVIEW OF THE PROPOSED ACTION** describes relevant background information associated with the proposed action and an overview of the proposed action analyzed in the EIS.
- Section 3 **ALTERNATIVES** provides a discussion of how the EIS study alternatives were developed, and a description of alternatives to be evaluated in the EIS.
- Section 4 **AFFECTED ENVIRONMENT** describes the existing physical, social and economic characteristics of Fort McClellan and its environs.
- Section 5 **ENVIRONMENTAL CONSEQUENCES** provides an analysis of the environmental and socioeconomic effects of the proposed action and alternatives.
- Section 6 **LIST OF PREPARERS** identifies the professional and technical staff responsible for the preparation of the EIS, and provides a summary of their qualifications.
- Section 7 **DISTRIBUTION LIST** identifies public officials, public agencies, public interest groups, organizations, and individuals that received copies of the EIS.
- Section 8 **INDEX** provides an alphabetical list of topics addressed in the EIS.
- Section 9 **REFERENCES** provides a listing of materials used in the development of the EIS.
- Section 10 **PERSONS CONSULTED** identifies public agencies, public interest groups, organizations, and individuals that were consulted during the development of the EIS.

LIST OF ACRONYMS AND ABBREVIATIONS provides a fold out list of abbreviations and acronyms used in the EIS.

VOLUME II

TECHNICAL APPENDICES includes materials that support the development of the EIS. The appendices are:

APPENDIX A:	SCOPING MEETING, DEIS COMMENTS and COMMENT RESPONSES
APPENDIX B:	AGENCY COORDINATION
APPENDIX C:	MOUNTAIN LONGLEAF PINE FOREST ECOSYSTEM
APPENDIX D:	ECONOMIC IMPACT FORECAST SYSTEM (EIFS)
APPENDIX E:	ENVIRONMENTAL JUSTICE
APPENDIX F:	FMDC REUSE PLAN - SUMMARY
APPENDIX G:	AIR QUALITY SUPPORTING DOCUMENTATION

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FINAL ENVIRONMENTAL IMPACT STATEMENT
DISPOSAL AND REUSE
FORT McCLELLAN, ALABAMA

Prepared by:

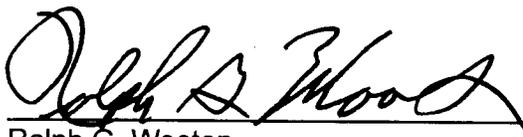
U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT



J. David Norwood
Colonel, Corps of Engineers
Commanding

Reviewed by:

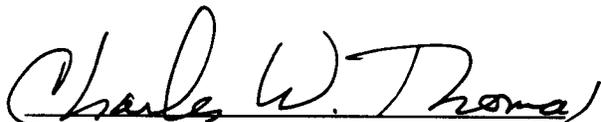
U.S. ARMY CHEMICAL AND MILITARY
POLICE CENTER AND FORT McCLELLAN



Ralph G. Wooten
Major General, U.S. Army
Commanding General

Recommended for Approval by:

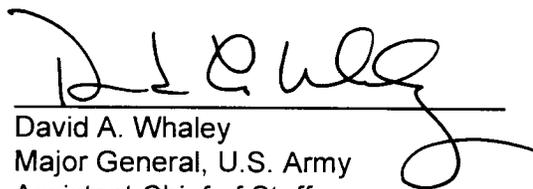
U.S. ARMY
TRAINING AND DOCTRINE COMMAND



Charles W. Thomas
Major General, U.S. Army
Chief of Staff

Recommended for Approval by:

DEPARTMENT OF THE ARMY



David A. Whaley
Major General, U.S. Army
Assistant Chief of Staff
for Installation Management

Approved by:

Office of the Secretary of the Army



Raymond J. Fatz
Deputy Assistant Secretary of the Army
(Environment, Safety, and Occupational Health)

FINAL ENVIRONMENTAL IMPACT STATEMENT

LEAD AGENCY: Department of the Army, Training and Doctrine Command (TRADOC)

TITLE OF PROPOSED ACTION: Disposal and Reuse of Fort McClellan, Alabama

AFFECTED JURISDICTION: Counties of Calhoun, Cleburne, Randolph, Clay, Talledega, St. Clair, Etowah, and Cherokee, Alabama.

PREPARED BY: Mobile District, Corps of Engineers

APPROVED BY: Office of the Secretary of the Army

ABSTRACT: The primary Army action analyzed in this Environmental Impact Statement (EIS) is the disposal of approximately 18,520 acres of excess property at Fort McClellan. In addition, this document analyzes impacts associated with potential reuse activities as a secondary action to be accomplished by other (non-Army) entities.

Two disposal alternatives (encumbered and unencumbered) are presented and evaluated in this EIS, as are three reuse scenarios representing medium-high, medium, and medium-low intensity reuse. In addition to the proposed action, a no action alternative, with property remaining in caretaker status, is evaluated. The effects of the proposed action on the environment and on social and economic systems are analyzed in this document. The EIS identifies the encumbered disposal alternative as the preferred Army action. Implementation of the proposed action would expect to result in beneficial as well as adverse impacts on land use, air quality, infrastructure, biological resources, economics, and quality of life under the disposal and reuse alternatives.

REVIEW PERIOD: Public comments may be provided to Mr. Curtis Flakes at the Corps of Engineers, Mobile District (ATTN: PD), 109 Saint Joseph Street, Mobile, Alabama 36628-0001, or by facsimile at 334-690-2727. Comments on this Final EIS must be received within 30 days of publication of the Notice of Availability in the Federal Register.

Executive Summary

ES.1 INTRODUCTION

Recommendations of the 1995 Defense Base Closure and Realignment Commission (Commission) made in conformance with the provisions of the Base Closure and Realignment Act of 1990 (1990 Base Closure Act), Public Law 101-510, as amended, require the closure of Fort McClellan (FMC), Alabama. Property at FMC that is excess to Army military need will be disposed of according to applicable laws, regulations, and national policy. Pursuant to the National Environmental Policy Act of 1969 (NEPA) and its implementing regulations, the Army has prepared this Environmental Impact Statement (EIS), which addresses the environmental and socioeconomic impacts of the disposal and reuse of the property at FMC, including reasonable, foreseeable reuse alternatives.

ES.2 FORT McCLELLAN SETTING/BACKGROUND

FMC is located in Calhoun County, in northeast Alabama. FMC includes three main bodies of government-owned land in the foothills of the Appalachian Mountains:

- The Main Post, consisting of approximately 18,929 acres, adjoins Anniston, Alabama, and extends six miles to the northeast towards Jacksonville, Alabama, in the valley west of the Choccolocco Mountains. Approximately 12,000 acres of the Main Post are characterized by undeveloped mountains.
- To the east, the Choccolocco Corridor (consisting of approximately 4,488 acres leased from the State of Alabama) connects FMC with the Talladega National Forest. Within the National Forest, approximately 100,000 acres of woodlands are accessible for training in the event of national emergency or with the approval of the U.S. Department of Agriculture — Forest Service (USDA-FS). The Choccolocco Corridor lease will not be renewed and the land will remain with the State of Alabama.
- Pelham Range, consisting of approximately 22,245 acres, is located approximately eight miles due west of FMC's Main Post cantonment area. Pelham Range is used for maneuvers, firing ranges, and field training. The entire Pelham Range will remain as Army property, but will be licensed by the U.S. Army to the Alabama Army National Guard.

BRAC 95 recommendations included the retention of a Reserve Component Enclave. Accordingly, the Army plans to retain 409 acres of land within the Main Post, and the entire Pelham Range area for this purpose. In addition, there are 1,160 acres in three parcels located along the eastern boundary of the Main Post which are public domain lands withdrawn from the Bureau of Land Management (BLM). The Army has notified the BLM of the closure and that these lands will be relinquished. BLM is expected to

leave these lands with the Army for disposal. Including the public domain lands there are approximately 18,520 acres available for disposal and reuse (18,929 total Main Post acres less 409 acres to be maintained for reserve training).

ES.3 PROPOSED ACTION

The primary Army action analyzed in this EIS is the disposal of approximately 18,520 acres of excess property at Fort McClellan. In addition, this document analyzes impacts associated with potential reuse activities as a secondary action to be accomplished by other (non-Army) entities.

ES.4 DISPOSAL PROCESS

Methods available to the Army for property disposal include: transfer to another federal agency; public benefit conveyance; economic development conveyance; negotiated sale; and competitive sale. The method of disposal is determined, in part, by the following three-step screening procedure that assesses the demand for the facilities by the Department of Defense (DOD), other federal agencies, homeless assistance providers, and state and local agencies/organizations.

- **DOD and Federal Agency Screening.** The first screening offers the property to other DOD and federal agencies. The DOD or another federal agency indicating an initial interest must follow up with a firm proposal for use of the property. Under the 1994 Defense Authorization Act, the DOD and federal screening is completed within six months after the date of approval of the BRAC recommendation.
- **FMDC (FMRRA) Screening.** Pursuant to the Base Closure Community Redevelopment and Homeless Assistance Act of 1994 (BCCRHA), which amended the Defense Base Closure and Realignment Act of 1990 (BRAC, 1990), property that is surplus to the Federal Government's needs is to be screened by the Fort McClellan Development Commission (FMDC) and its predecessor, the Fort McClellan Reuse and Redevelopment Authority (FMRRA), through the solicitation of notices of interest from state and local governments, representatives of the homeless, and other interested parties.
- **Formal State and Local Screening.** The formal state and local screening process required by the Federal Property Management Act is managed by the U.S. Army Corps of Engineers (USACE). The formal state and local screening process does not commence until the Department of Housing and Urban Development (HUD) approves the FMDC's final adopted redevelopment plan. HUD approval includes being satisfied that the plan meets the provisions of the BCCRHA on a community-wide basis for homeless assistance.

The process leading to the transfer of excess Army property also includes certification that properties are suitable for disposal, and that environmental cleanup is conducted to a level that is protective of human health and the environment with potential special risk management considerations given to incorporate future reuses of the property.

The BRAC formal screening process has not been completed. DOD and federal screening is complete and FMDC has received expressions of interests. However, Army's formal state and local screening was delayed pending HUD's approval of FMDC's Reuse Plan. There were no DOD or federal requests for properties and approximately 409 acres are being retained by the Army for reserve training. Approximately 18,520 acres will be available for transfer or conveyance to FMDC or others. The FMDC is responsible for the planning of the redevelopment of the reuse area.

The FMDC Plan provides for a balance of public and private reuses for the excess property, including residential, office, retail, industrial, training/education, recreation and open space uses; and, retention of certain community facilities. Approximately one-half of the existing 6,083,000 square feet (SF) of building space is proposed for retention, including the Post Headquarters and adjacent administration buildings; the Military Police School and Chemical School facilities; selected instructional, recreational and housing facilities; the DOD Dependent School; and the Commissary. An additional 3,000,000 to 3,500,000 SF of

new construction is also proposed. Approximately 7,200 acres of the 18,520 acres comprising the disposal area is proposed for development (including highway improvements associated with the Eastern Bypass), with the remaining area reserved for passive recreation, development reserve, and open space. The Army is considering the FMDC reuse plan as the primary reuse determinant in defining the reuse alternatives analyzed in this EIS.

ES.5 ALTERNATIVES

Immediately following closure, planned for September 30, 1999, the Army will place the property to be disposed of in caretaker status until transfer or conveyance. Under this No Action Alternative, Army caretaker operations will continue until disposal.

Two disposal alternatives (encumbered and unencumbered) are presented and evaluated in this EIS. The Encumbered Disposal (ED) Alternative involves an Army-imposed or legal constraint to be imposed on future owners as a condition of disposal and reuse of the property. Encumbrances maintain legal responsibilities and sustain environmental values, which may restrict future uses. Encumbrances applicable to FMC include wetlands; environmental remediation; asbestos and lead-based paint; unexploded ordnance (UXO); threatened and endangered species; archaeological/historic resources; and utilities interdependencies. The Unencumbered Disposal (UD) Alternative involves transfer or conveyance of the property with either no Army-imposed encumbrances, or the Army removes the causes for the encumbrances, prior to disposal, thereby allowing certification that the property is available for transfer without encumbrances.

Unencumbered disposal of FMC is not reasonable based upon anticipated adverse environmental impacts and the interests of the Army. Therefore, the Encumbered Disposal Alternative is the preferred Army action. This action will result in disposal actions that are timely, support Army requirements, and are compatible with the FMDC Reuse Plan.

Three reuse alternatives (medium low, medium, and medium high intensity) based upon the FMDC Plan are discussed and evaluated. These reuse alternatives represent the full range of reasonably foreseeable redevelopment alternatives. The reuse alternative most closely reflecting the FMDC Plan is the Medium High Intensity Reuse (MHIR) Alternative. Two other reuse alternatives, Medium Intensity Reuse (MIR) and Medium Low Intensity Reuse (MLIR), have also been developed from the FMDC Plan. These alternatives maintain the reuse concepts of the FMDC Plan, but include different reuse intensities which are broad enough to encompass the community's reuse plan.

The reuse alternatives include redevelopment concepts for 1) the main cantonment area and adjoining developed areas that have relatively few environmental restrictions and high reuse potential, and 2) the current undeveloped training areas of FMC which may have reuse limitations associated with unexploded ordnance (UXO) which may be present at some locations in this area. The extent, location, and type of UXO present, and specific cleanup/removal recommendations will be identified by a process that is separate from NEPA called an Engineering Evaluation/Cost Analysis (EE/CA). The EE/CA process also involves regulators, provides for public participation, and allows the communities' concerns and priorities to be addressed.

ES.6 ENVIRONMENTAL CONSEQUENCES

Impacts to all resource categories under each alternative are presented in Section 5 of this Final Environmental Impact Statement (FEIS). Impacts to major resource groups are summarized in the following paragraphs:

NO ACTION ALTERNATIVE. No Action, or caretaker status, has either no impact or minor impacts (adverse and beneficial) on most resource areas. In general, the longer the period of caretaker status, the greater the impacts will be. This is particularly true for the Mountain Longleaf Pine (MLP) ecosystem which could be adversely affected under a long term caretaker period if an effective prescribed burn

management program is not maintained. Significant adverse impacts on the local economy would also occur as caretaker status will not enable economic redevelopment of FMC excess lands.

DISPOSAL ALTERNATIVES. Disposal alternatives include encumbered and unencumbered disposal. Unencumbered disposal is not selected based upon the anticipated significant adverse environmental impacts anticipated to biological resources, water resources, soils (geology), UXO, and solid waste (infrastructure), as well as adverse impacts to other resources on FMC (Table ES.1). Unencumbered disposal eliminates the protection afforded natural resources and requires extensive UXO and hazardous waste cleanup prior to disposal which would have adverse ecological impacts. UXO clearance/removal activities, required for unencumbered disposal, are expected to have significant adverse impacts to soils and biological resources. Removal of all UXO may not be feasible from a technical standpoint, and the costs of certain removal options may be prohibitive. UXO which cannot be removed without significant adverse ecological damage may result in certain parcels remaining under federal ownership. Therefore, the ED Alternative is the preferred Army action. This action will result in disposal actions that are timely, support Army requirements, and are compatible with the FMDC Reuse Plan.

REUSE ALTERNATIVES. The environmental consequences of the implementation of each of the three reuse alternatives are discussed and evaluated. The magnitude of the impacts vary with reuse intensity. Impacts to all resource categories under each reuse alternative are presented in subsection 5.4 of this DEIS. Impacts to major resource groups are summarized in the following paragraphs:

- **Land Use.** Under the MHIR and MIR alternatives, adverse impacts to land use can be expected as the disposal area would be developed more intensely than under baseline conditions. The total square footage of built floor space would increase as would the floor area ratio (FAR), and employee density. Some areas currently left in open space or very low intensity uses would be converted to more intense land use types, such as residential, commercial and industrial uses. No adverse impacts are anticipated under the MLIR Alternative as increases in built floor space would be minimal compared to baseline conditions.
- **Air Quality.** Fort McClellan is located in an area that is currently in attainment for all air pollutants. Activities under the all three reuse alternatives would be expected to produce various emission sources associated with industrial operations (long term) and construction activity (short term). Once the reuse areas are occupied by the various residential, commercial, and industrial tenants, an increase in vehicle traffic would generate additional mobile source emissions in the local Air Quality Control Region that could cause significant adverse impacts. The impacts, although significant under all the reuse alternatives, would be highest under the MHIR Alternative and lowest under the MLIR Alternative.
- **Infrastructure (Utilities).** Utility demands associated with the MHIR Alternative would require substantial additions, expansions and extensions of existing utility systems resulting in an adverse impact. The alterations will involve reconfiguration of the distribution and collection systems, and adjustments to meet the increased utility demands at some parcels. The impacts, although applicable

Table ES.1 Fort McClellan Disposal and Reuse Impacts Summary*

Army's Preferred Alternative is Encumbered Disposal **	No Action		Disposal				Reuse						Cumulative		
	Caretaker - Direct	Caretaker - Indirect	Encumbered** - Direct	Encumbered** - Indirect	Unencumbered - Direct	Unencumbered - Indirect	MHIR*** - Direct	MHIR - Indirect	MIR*** - Direct	MIR - Indirect	MLIR*** - Direct	MLIR - Indirect	MHIR***	MIR***	MLIR***
Resource Areas															
Land Use	/	3	●	3	●	3	3	3	3	3	/	/	3	3	3
Air Quality	●	/	●	3	●	3	■	3	■	3	■	3	■	■	■
Noise	●	●	●	3	●	3	3	3	3	3	3	3	3	3	3
Water Resources															
Surface Water	/	●	/	3	■	■	3	3	3	3	3	3	3	3	3
Floodplains	/	/	3	3	■	■	3	3	3	3	3	3	3	3	3
Ground Water	/	●	3	3	●	3	3	3	3	3	3	3	3	3	3
Geology	/	●	3	●	■	/	3	3	3	3	3	3	3	3	3
Infrastructure															
Utilities	3	3	/	/	3	3	3	3	3	3	3	3	/	/	/
Solid Waste	●	●	/	/	■	3	/	3	●	3	●	3	/	/	/
Transportation System	/	●	/	●	/	3	■	3	■	3	■	3	3	3	3
Ordnance & Explosives	●	3	3	3	■	■	3	3	3	3	3	3	3	3	3
Hazardous & Toxic Mats.	●	/	/	/	●	●	/	/	/	/	/	/	/	/	/
Permits & Reg. Auths.	/	/	/	/	3	3	/	/	/	/	/	/	/	/	/
Biological Resources															
Fish & Wildlife	●	●	/	●	3	■	3	3	3	3	3	3	3	3	3
Veg./Plant Resources	●	3	/	●	■	■	3	3	3	3	3	■	3	3	■
Wetlands	/	●	3	●	3	■	3	3	3	3	3	3	3	3	3
Federal T & E Species	●	●	/	●	3	3	/	/	/	/	/	/	/	/	/
Species of Concern	●	3	3	●	■	■	/	3	/	3	/	■	/	/	3
Int. Nat Res Mang.	3	3	/	3	■	●	●	3	3	3	3	3	3	3	3
Cultural Resources	3	3	●	3	3	3	/	/	/	/	/	/	/	/	/
Sociological Environment	3	3	●	/	3	/	3	3	/	/	/	/	/	3	3
Economic Development	●	■	3	●	3	●	●	●	●	●	●	●	●	●	●
Quality of Life	/	3	/	/	/	/	3	3	/	/	/	/	3	/	/
Installation Agreements	3	3	/	3	3	/	/	/	/	/	/	/	/	/	/

* Represents most adverse impact whenever multiple impacts have been identified.

***MHIR = Medium High Intensity Reuse Alternative

***MIR = Medium Intensity Reuse Alternative

***MLIR = Medium Low Intensity Reuse Alternative

Direct Impact = Impact caused by the proposed action and occurs at the same time and place.

Indirect Impact = Impact caused by the proposed action but is later in time or more removed in distance.

Impacts Legend:

● Beneficial (minor) ● Beneficial (significant)

3 Adverse (minor) ■ Adverse (significant)

/ No impact (effect) on resource attribute or attribute not present

under all the reuse alternatives, would be highest under the MHIR Alternative and lowest under the MLIR Alternative.

- **Infrastructure (Transportation).** Additional traffic generated as a result of the reuse of FMC would impact the local and regional roadway system. Significant adverse impacts are anticipated under all three implementation alternatives (MHIR, MIR, and MLIR alternatives). The MHIR Alternative would generate an estimated 87,750 average daily vehicle trips, or an increase of 425 percent over baseline conditions. MIR Alternative traffic would increase by 250 percent and the MLIR Alternative by 164 percent over baseline conditions. All of this traffic would be directly distributed onto State Highway 21.
- **Ordinance.** DOD guidelines for UXO removal include the completion of an Engineering Evaluation and Cost Analysis (EE/CA) prior to the transfer of property. The EE/CA will determine the extent of UXO throughout the disposal area and present recommendations concerning the reuse activities that can be supported within the disposal area and clearance/removal recommendations. The environmental impacts of UXO clearance activities, associated with the reuse of FMC disposal property, will be directly associated with the extent of UXO clearance activities. Therefore, it is anticipated that the environmental impacts associated with reuse will be highest in the MHIR Alternative and lowest in the MLIR Alternative. These impacts are principally associated with the loss of habitat as a result of UXO clearance and vegetation removal and the subsequent development of parcels.
- **Biological Resources.** In general, impacts associated with reuse within the FMDC redevelopment area (Area 1) will be similar among the three reuse alternatives since: 1) much of this area is already developed as it contains the current FMC cantonment area and 2) the general type of reuse is the same under each reuse alternative, with differences associated with the intensity of use. Consequently, the reuse impacts to the biological resources in this portion of FMC will be similar among the reuse alternatives. Impacts to biological resources within the FMDC passive recreation area (Area 2) vary among the three reuse alternatives since the type and extent of the management activities and public access are different under each alternative.

Fish & Wildlife. Impacts to fish and wildlife will result in adverse impacts to Neotropical Migratory Birds (NTMB) due to a decrease in forest habitat, increased forest fragmentation, and increased traffic noise, that would be associated with implementation of the MHIR Alternative. Short-term adverse impacts associated with construction of new projects would occur to aquatic species due to soil erosion. It is anticipated that the environmental impacts associated with reuse will be highest in the MHIR Alternative and lowest in the MLIR Alternative.

Vegetation/Plant Resources. Impacts to vegetation and plant resources associated with reuse would occur due to loss of forest habitat, including unfragmented, fragmented and interior forest habitats. Overall forest habitat loss will be highest in the MHIR Alternative and lowest in the MLIR Alternative. However, under the MLIR Alternative, significant adverse impacts to the MLP ecosystem will occur as forestry management practices will not include the continuation of prescribed burns. Without range fires or a prescribed burn program, long-term significant adverse impacts to the MLP ecosystem are expected to occur at FMC.

Wetlands. Impacts to wetlands could occur as a result of redevelopment activities. Development in or adjacent to wetlands could have a direct adverse impact to wetland areas. Adverse indirect impacts to wetlands could occur as a result of runoff from industrial areas and other impervious surfaces. Impacts to wetlands could be minimized through adherence to Section 404 requirements and through the development of effective stormwater management systems.

Threatened & Endangered Species. Adverse effects to Federal T&E species are not expected to occur under any of the reuse alternatives. Pursuant to Section 7 of the Endangered Species Act (ESA), FMC has completed a Biological Assessment (BA) under informal consultation with the U.S. Department of the Interior — Fish and Wildlife Service (USFWS). The BA identifies project design features (PDFs) to avoid adverse effects to the gray bat.

Species of Concern. Impacts to other species of concern would be primarily related to the loss of unfragmented forest habitat and the encroachment into interior forest habitat under the MHIR and MIR alternatives. Under the MLIR Alternative significant adverse impacts to the species associated with the MLP ecosystem will occur since forestry management practices will not include the continuation of prescribed burns. Fire is needed to maintain the long-term viability of the MLP ecosystem and the unique habitats it harbors. The white fringeless orchid (WFO) occurs within seep communities that would be dominated by deciduous shrub species without periodic fire. State ranked herbaceous species such as sky blue aster, pale coneflower, eastern purple coneflower, and Fraser's loosestrife would also be adversely impacted. Potential impacts to Pearson's hawthorn, a species thought to be extinct but which may be present at FMC (studies are ongoing to verify recent preliminary field identifications), could exist under all three reuse alternatives.

Integrated Natural Resources Management. Impacts associated with recreational hunting, fishing and related activities would be variable and associated with the reuse alternative. Under the MHIR Alternative beneficial impacts are anticipated since inactive range areas would allow more areas to be available for outdoor recreation users. Conversely, under the MIR and MLIR alternatives, adverse impacts are anticipated as a result of restrictions on the recreational use of some areas of FMC.

- **Sociological Environment.** Potential adverse impacts could occur as related to the population increase associated with the 9,584 new jobs created under the MHIR Alternative. The total daytime population of the reuse area, including employees and residents, would almost double to over 17,600 from the current level of approximately 9,000. The extra demands placed on housing, schools and public services could adversely impact these resources if development occurs over a short period of time. Under the MIR and MLIR alternatives the increases in population will adversely impact the socioeconomic environment.
- **Economic Development.** Short and long-term significant beneficial impacts would occur under all of the reuse alternatives. Direct long-term impacts resulting from employment and expenditures associated with the reuse activities include the creation of additional new jobs in the retail, service and industrial sectors; the generation of additional annual income as a result of the jobs directly created; and, an increase in annual regional sales (business) volume. However, these increases in economic activity would occur over an extended period of time and represent the level of impact at full build-out. Local government revenues would increase under the reuse alternatives, with the enhanced tax base from reuse resulting in increased real property tax revenue. In addition, sales tax revenue would increase. It is anticipated that the economic benefits associated with reuse will be highest in the MHIR Alternative and lowest in the MLIR Alternative.

CUMULATIVE IMPACTS. The cumulative impacts of past, present and reasonably foreseeable actions within and around FMC are analyzed in this FEIS. The results of this analysis are presented in subsection 5.5. In general, the cumulative impacts are similar to those detailed under the encumbered reuse alternatives. Impacts of the proposed action may be significant on an individual resource category within the confines of the analysis area; however, these impacts may become less than significant on a regional cumulative impacts analysis basis (e.g. the impacts of the proposed action may be significant on existing transportation system at several selected sites within the analysis, but these same impacts are not significant to the regional transportation network). The analysis includes an evaluation of the impacts associated with encumbered reuse in conjunction with foreseeable actions such as regional roadway improvements and forest management in the Talledega National Forest.

ES.7 MITIGATION RESPONSIBILITY AND PERMIT REQUIREMENTS

Mitigation for impacts associated with the No Action Alternative, the Encumbered Disposal Alternative, and the Reuse Alternative are summarized below.

NO ACTION. The longer FMC were to remain in caretaker status, the greater would be the potential for the predicted adverse impacts to affect various resources. The Army would implement the following mitigation measures to reduce or avoid adverse impacts associated with caretaker status as they might occur.

- Conduct installation security and maintenance operations to the extent provided by Army policies and regulations for the duration of the caretaker period, and transfer responsibilities for these functions to non-Army entities as soon as practicable to minimize disruption of service.
- Identify clean or remediated portions of the installation for disposal and reuse and prioritize restoration and cleanup activities to ensure timely disposal and reuse of remaining portions. Recycle solid wastes and debris where practicable.
- Utilize natural attenuation for environmental remediation at appropriate sites wherever there is no imminent threat to human health or the environment.
- Retain federal ownership of property where UXO clearance would cause significant adverse and unacceptable ecological damage.
- Continue natural resources management programs including, endangered species management plan provisions, integrated natural resources management plan provisions, land management, pest control, forest management, and erosion control, but at reduced levels. Additionally, agreement with other Agencies would be sought to maintain the MLP ecosystem through the continuation of prescribed burns and other management procedures. Continue close coordination with other federal agencies such as the U.S. Department of Interior — Fish and Wildlife Service (USFWS) and state agencies.
- Actively support interim leasing arrangements, where environmental restoration efforts permit, to provide for job creation, habitation and maintenance of structures, and rapid reuse of the installation.
- Prior to final disposal, conduct complete cultural resources surveys of FMC property to the maximum extent possible so as to ensure no adverse effects on the resource that might be present, and finalize the Programmatic Agreement with the State Historic Preservation Officer.

DISPOSAL. To avoid, reduce, or compensate for adverse impacts that might occur as a result of encumbered disposal, the Army would:

- Transfer property with deed covenants, restrictions and notices, as appropriate, for residual environmental contamination, lead base paint, asbestos, UXO clearance actions, protection of historic and cultural resources, and protection of gray bat habitat.
- Continue required cleanup process and remedial actions.
- Complete EE/CA and any necessary UXO investigations to delineate the extent of UXO on excess FMC property and provide recommendation/notification regarding removal actions and use restrictions.
- Retain federal ownership of property where clearance/removal of UXO would cause significant adverse and unacceptable ecological damage.
- Continue to work with the FMDC to ensure that, to the maximum extent feasible, encumbered disposal transactions are consistent with the adopted community reuse plan and implementation strategy.

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- Conduct complete cultural resources surveys prior to formal disposal of FMC property.
 - Maintain installation buildings, infrastructure, and natural resources in caretaker status to the extent provided by Army policy and regulations until disposal (or lease).
 - Notify future owners of the property, in conveyance documents, of particular obligations that would be imposed as a result of the Army's determination of the applicability of an encumbrance. Conveyance documents would include obligations concerning natural and cultural resources; identify past hazardous substance activities at each site, as required by Comprehensive Environmental Response and Liability Act (CERCLA) and Community Environmental Response Facilitation Act (CERFA); and identify restrictions associated with non-CERCLA hazards such as radon and lead based paint.

REUSE. The Army does not propose the implementation of specific mitigation actions for intensity-based reuse scenarios. This is appropriate because reuse planning and execution of redevelopment actions are a responsibility of non-Army entities. The following identifies general mitigation actions that could be implemented by other parties for the reduction, avoidance, or compensation of impacts resulting from their reuse actions. Potential mitigation actions are suggested for those resource areas most likely to be affected by adverse impacts as a result of reuse. Additional details pertaining to these mitigative measures can be found in subsection 5.6.3.

- **Land Use (Land Development Controls).** Appropriate measures to mitigate any potential adverse impacts associated with development of FMC to an intensity level equal to MHIR including the application of land development controls and planning/design standards by the appropriate governing jurisdiction, whether it be the City of Anniston or Calhoun County.
- **Land Use (Slope and Soil Stability).** Reuse restrictions on the development of areas with steep slopes and/or highly erodible soils would reduce direct and indirect impacts associated with redevelopment activities where soils are disturbed in association with construction, demolition, site remediation or UXO clearance activities. Since large portions of FMC contain steep slopes and highly erodible soils, restrictions on the development within these areas would mitigate impacts associated with soil erosion, siltation, and habitat loss.
- **Air Quality.** The air permit process established by the Clean Air Act (CAA) and the Alabama Department of Environmental Management provides effective controls over new stationary sources. Adherence to the provisions of the CAA and State Regulations would prevent any significant adverse impacts from stationary sources.

Application of best management practices could be used to control fugitive dust (particulate) during construction. Two potential approaches to control construction dust include applying water or dust suppressants and/or planting of plants and grass to the disturbed areas.

For mobile sources, a comprehensive air quality analysis should be conducted for each highway/road expansion and for each existing highway/road that experiences a significant increase in Average Daily Traffic. The goal is to reduce vehicle miles traveled and to reduce congestion during peak hours. The air quality analysis should include dispersion modeling using an approved model to determine if a National Ambient Air Quality Standards (NAAQS) will be exceeded. All air quality analyses should be coordinated with both the Alabama Department of Environmental Management and the Alabama Department of Transportation. Additional possible mitigation measures include implementing trip reduction plans, promoting car and van pooling, using economical vehicles, improving highways, and revising work schedules. Other measures include using public transportation, improving road intersection control, and constructing bicycle paths.

- **Water Resources.** Application of best management practices to reduce sediment loading to surface waters could aid in reducing impacts on water quality. Construction of storm water detention/retention systems could help mitigate impacts associated with storm water runoff from impervious surfaces.

-
- **Geology.** Disturbance of highly erodible soils, especially those soils associated with the steep slopes on the eastern portions of FMC, should be avoided wherever possible. Should these or other soil types be disturbed, desilting basins, sediment traps, silt fences, straw barriers, and other erosion control measures could be constructed.
 - **Ordnance and Explosives.** Implement the recommendations from the EE/CA regarding UXO removal activities and land use restrictions.
 - **Hazardous and Toxic Materials.** Implement the recommendations of the BRAC Cleanup Plan (BCP) and Remedial Investigations/Feasibility Studies (RI/FS) regarding the extent and type of remedial activities required and the need for any land use restrictions.
 - **Biological Resources (General).** Adverse impacts on biological resources would occur primarily as a result of construction. Two principal measures for conservation of significant biological resources are ensuring consultation with natural resources experts and regulatory agencies prior to initiating actions and implementing best management practices in association with approved construction projects. Operational controls could also be applied to minimize any adverse effects of noise and light on sensitive biological resources.
 - **Biological Resources (Threatened & Endangered Species).** Adverse impacts to the gray bat are not expected based upon ongoing informal consultation with the USFWS and the implementation of project design features (PDFs) included in the Biological Assessment (BA) completed for the disposal and reuse of FMC.
 - **Biological Resources (Mountain Longleaf Pine Ecosystem).** Adverse impacts to the Mountain Longleaf Pine (MLP) community could be mitigated via the implementation of a management program. The principal element of the plan would include the use of prescribed burns to assure the continued long-term viability of this ecosystem. The prescribed burn program will need to provide a fire regime similar to that occurring at FMC under preclosure conditions (i.e. the prescribed burns will require fires of sufficient frequency, intensity, duration, season, and geographic extent to equate to the fires historically caused by the training activities and the prescribed burn program at FMC).
 - **Biological Resources (Other Species of Concern).** Management practices that would maintain populations of other species of concern could include the establishment of buffer areas around special interest natural areas (SINAs) and known populations. For the WFO populations, prescribed burns for the MLP ecosystem and watershed protection to maintain the recharge area for the seeps will benefit the WFO.
 - **Socioeconomic Resources.** No mitigation is necessary. Mitigation of any potential adverse impacts would be partially accomplished through phased implementation of the development of the reuse area. A 20-year build-out period is anticipated for the reuse area, which will result in gradual development of the area.

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Purpose, Need, and Scope

1.1 PURPOSE AND NEED

The Department of the Army (DA) is reducing its force structure in response to changing global security requirements. As the size of the Army is reduced, fewer installations are needed and activities are being relocated and consolidated at installations that will ultimately provide maximum capability to project and sustain military combat power in support of national military objectives.

Recommendations of the 1995 Defense Base Closure and Realignment Commission (Commission) made in conformance with the provisions of the Defense Base Closure and Realignment Act of 1990 (BRAC 90), Public Law 101-510, as amended, require the closure of Fort McClellan (FMC), Alabama. Property at FMC that is excess to Army military need will be disposed of according to applicable laws, regulations, and national policy. Pursuant to the National Environmental Policy Act of 1969 (NEPA) and its implementing regulations, the Army has prepared this Environmental Impact Statement (EIS), which addresses the environmental and socioeconomic impacts of disposing of the property at FMC, and reasonable, foreseeable reuse alternatives.

The military services used criteria established by the Secretary of Defense and accepted by Congress, and a force structure plan provided by the Joint Chiefs of Staff, to identify closure and realignment actions. These criteria considered military value, return on investment from cost savings, environmental features of potential closing and gaining installations, and socioeconomic impacts. A consolidated Department of Defense (DOD) list of recommended actions was submitted by the Secretary of Defense to the bipartisan Commission on February 28, 1995. The Commission completed their evaluation of the Secretary of Defense's recommendations on June 22, 1995, and forwarded their recommendations to the President on July 1, 1995. The President approved the recommendations and forwarded them to Congress on July 13, 1995. The 1990 Base Closure Act stipulated that once forwarded to Congress, the recommendations would be implemented unless Congress disapproved them within 45 Congressional working days. No disapproval was issued, and the Commission's recommendations became law on September 28, 1995. The Commission's recommendations for base realignment and closure made in 1995 are commonly referred to as BRAC 95.

In accordance with Public Law 101-501, the closure must be completed no later than the end of the six-year period beginning on the date the President transmitted the BRAC report to Congress. The President transmitted the BRAC report to Congress on July 13, 1995; therefore, the closure must be completed by midnight July 12, 2001. The Army's current plans are to complete the relocation of, or discontinue active Army missions, by September 30, 1999; thereby completing the closure of FMC as required by the Base Closure Act. However, the Base Closure Act did not specify a time requirement for disposal of excess FMC land.

Following closure, the Army proposes to dispose of approximately 18,520 acres since the property will be excess to Army needs. The purpose of the proposed action, as described more fully in Section 2, is to dispose of excess property resulting from the implementation of the BRAC 95 decision to close FMC.

1.2 SCOPE AND LIMITATIONS

1.2.1 Scope

This EIS evaluates the direct, indirect, and cumulative impacts of the alternative actions associated with the disposal and reuse of excess property at FMC.

All of FMC's lands are located in Calhoun County, Alabama. Impacts associated with implementation of BRAC 95 actions at FMC are generally expected to be limited to areas within the "Main Post" portion of the installation (as described in subsection 2.2). However, this EIS evaluates all actions (individually and on a cumulative basis), to determine the potential for and extent of any impacts that may affect surrounding communities and land areas.

Two disposal alternatives (encumbered and unencumbered) are presented and evaluated in this EIS, as are three reuse alternatives (medium low, medium, and medium high intensity), which encompass the local community's preferred reuse plan. The environmental effects of "no action", with the property remaining in caretaker status, are also evaluated.

1.2.2 Limitations

The 1990 Base Closure Act specifies that NEPA does not apply to actions of the President, the 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."

The 1990 Base Closure Act further specifies that in applying the provisions of NEPA to the process, the Secretary of Defense and the secretaries of the military departments concerned shall 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 installation alternatives to those recommended or selected."

The Commission's deliberation and decision, as well as the need for closing or realigning a military installation, are exempt from NEPA (Public Law 101-510, Sec. 2905(c)(2)). Accordingly, this EIS does not address the need for closure or realignment. NEPA does, however, apply to property disposal as a direct Army action, and to reuse of such property as an indirect effect of disposal; therefore, those actions are addressed in this document.

1.3 PUBLIC INVOLVEMENT

1.3.1 General Public Involvement Process

The Army invites full public participation in the NEPA process, and promotes both open communication between the public and the Army and better decision making. All persons and organizations that have a potential interest in the proposed action, including minority, low-income, disadvantaged, and Native American groups, are urged to participate in the NEPA environmental analysis process.

Public participation opportunities, with respect to the proposed action that is the subject of this EIS, are guided by the President's Council on Environmental Quality (CEQ) regulations, E.O. 12898, and Army Regulation 200-2, *Environmental Effects of Army Actions*. These regulations provide for six major

elements of public participation available in conjunction with preparation of this EIS including: 1) Notice of Intent; 2) scoping; 3) public review of the Draft EIS (DEIS); 4) public hearing on the DEIS; 5) public release of the Final EIS (FEIS) and 30-day waiting period; and 6) publication of the Record of Decision (ROD). Each of these public participation elements is discussed below. Related, but separate, public involvement procedures, that are applicable to contaminated site remediation and unexploded ordnance (UXO) removal are also discussed.

1.3.2 Notice of Intent

The Notice of Intent (NOI) is the first formal step in the NEPA public involvement process. The public was initially notified of the U.S. Army's intent to prepare this EIS for the disposal and reuse of FMC through the publication of a NOI in the September 22, 1995 issue of the *Federal Register*. This NOI included all actions to be evaluated by the Army in association with the 1995 Commission's recommendations. Details regarding the Commission's recommendations for FMC are provided in Section 2.

1.3.3 Scoping Process

The scoping process was designed to solicit public comment on issues or concerns that should be addressed early in the EIS process. Public comments, from persons thought to be potentially interested or affected by the planned action were solicited through mailings, media advertisements, and both agency and public scoping meetings. These items were developed to ensure the public was informed and given the opportunity to participate in the decision-making process. While informal comments were welcome at any time throughout the process, the scoping period and scoping meeting provide formal opportunities for public participation in, and comment on, the environmental impact analysis process.

1.3.3.1 Project Mailing List. An initial project mailing list was developed to solicit public input throughout the scoping process. The initial list included over 750 names and included members of the general public who had expressed interest in prior environmental documents prepared by FMC; special interest groups; Federal, state and local agencies and elected officials; minority, disadvantaged, and Native American groups; public repositories (libraries); and regional, state and local media outlets (television, radio and newspaper). This list is maintained and updated throughout the EIS process, and any additional individuals or organizations that express interest in the process are added to the list. The mailing list is used to distribute project notices and information, as appropriate, throughout the EIS process.

1.3.3.2 Public Scoping Process. The public was initially notified of the Army's intent to prepare an EIS by publishing a NOI in the September 28, 1995 issue of the *Federal Register*. Subsequently published was a legal notice for a public scoping meeting to be held on August 6, 1996. This legal notice was published in the *Oxford Independent* (July 26 & August 2, 1996); *Jacksonville News* (July 24 & July 31, 1996); and the *Anniston Star* (July 20 & 21, 1996). In addition, press releases inviting the public to express their views at the referenced scoping meeting were distributed to seventeen local/regional newspapers, television stations and radio stations.

Announcements or "scoping fliers" were mailed to public agencies, public interest groups and organizations, political representatives, and individuals known, or thought to have, an interest in the disposal and reuse of FMC. The fliers consisted of a one-page description of the purpose of the meeting, with an invitation to attend the meeting and/or submit written comments identifying key issues that should be considered as part of the EIS. A separate comment sheet, with return mailing address, was included with the flier. More than 750 notices were mailed on July 19, 1996, approximately two weeks prior to the scheduled scoping meeting.

The public scoping meeting was held on August 6, 1996, at 7:00 p.m. at the FMC Post Theater, Building 2101, Fort McClellan, Alabama. An informational flyer, comment sheet, and registration card were provided to all attendees at the public scoping meeting. A total of 30 individuals completed registration cards, with total attendance of approximately 40.

1.3.3.3 Scoping Results. A total of 32 responses (9 oral and/or written comments received at the public meeting, and 23 written comments received during the 30 day comment period) were received.

As detailed in Appendix A, responses were received from a variety of agencies, organizations, and individuals, including:

- 6 Federal Agencies;
- 5 State Agencies;
- 10 Special Interest Groups/Organizations; and
- 8 Individuals.

1.3.3.4 Summary of Major Scoping Issues Identified. The following paragraphs provide a summary of major issues identified through the scoping process.

Key Areas of Concern to Federal and State Agencies:

- **U.S. Department of Agriculture - Forest Service.** US Department of Agriculture — Forest Service (USDA-FS) listed a variety of issues that should be considered in the EIS including the need to consider the potential impacts to: land-use; socio-economic impacts; threatened, endangered, and sensitive species; wetlands; cultural/historical resources; air quality; water quality; vegetative community effects and restoration; hazardous waste; visual quality; and special uses (i.e. power line rights-of-way crossing National Forest land). The USDA-FS elaborated on each of these issues in its comment letter.
- **U.S. Department of Agriculture - Natural Resources Conservation Service.** U.S. Department of Agriculture - Natural Resources Conservation Service (NRCS) indicated that the EIS should discuss erosion control methods and that planning for the future prevention of erosion on the land should include on-site and off-site effects of erosion on the environment.
- **U.S. Department of the Interior - Fish and Wildlife Service.** U.S. Department of the Interior — Fish and Wildlife Service (USFWS) raised a variety of preliminary issues. The main subjects of concern included the possible impacts of disposal and reuse on endangered and rare species and unique habitats. USFWS noted that the mountain longleaf pine (MLP) ecosystem, found on large parts of the Main Post, may be the best remaining example of MLP ecosystem in the world. The quality of this system is attributed to the periodic fires (associated with military activities) and the lack of development in the area; moreover, the MLP ecosystem is important to neotropical birds and other avifauna in the area. Additionally, USFWS noted concern over any development of natural lands within the Main Post, including the impact of unexploded ordnance removal and development of the area on the local stream systems (i.e. fish and mollusc populations in particular) as well as effects to the terrestrial systems and wildlife.
- **Alabama Cooperative Extension System.** Alabama Cooperative Extension System (ACES) indicated two areas of concern as they relate to the reuse of FMC. These included disposal of ordnance and the location/disposition of waste disposal facilities.
- **Alabama Department of Conservation and Natural Resources - Alabama Natural Heritage Program.** Alabama Department of Conservation and Natural Resources - Alabama Natural Heritage Program (ADCNR - ANHP) identified six areas of concern relevant to the FMC EIS. These include the following: 1) Sensitive fauna and flora including 11 plant species (two are former candidates for federal listing), and three animal species (the endangered red-cockaded woodpecker, and two former candidate invertebrates - a snail and a butterfly species) are dependent upon the integrity of the local forest; 2) The MLP ecosystem of the Main Post represents the best remaining example of this community on a landscape scale; 3) the maintenance of the MLP ecosystem at the Fort requires periodic fires; 4) reuse alternatives that require the clearing of the forests and the excavation of the

mountainsides would: destroy the integrity of the natural ecosystem; pose erosional hazards on the steep terrain; and increase siltation of streams and seeps which harbor sensitive wildlife; 5) the importance of contiguous forests in the areas for neotropical birds; and 6) Eleven Special Interest Natural Areas (SINA) have been identified on the Post. The most important SINA is the 12,000-acre MLP ecosystem which also maintains the smaller SINA's in the area. These SINA's and the sensitive, rare, and endangered species they support should be protected.

- **Alabama Department of Conservation and Natural Resources - Game and Fish Division.** Alabama Department of Conservation and Natural Resources - Game and Fish Division's (ADCNR - GFD's) concerns centered on the Department's interest in obtaining title to suitable undeveloped areas of FMC adjacent to the Choccolocco Wildlife Management Area for multiple uses, including hunting, hiking, birdwatching, photography, camping, and fishing. A request for title transfer for specific portions of the installation was submitted to the Fort McClellan Reuse and Redevelopment Authority (FMRRA) on January 12, 1996.
- **Alabama Forestry Commission.** Alabama Forestry Commission (AFC) provided oral and written comments. AFC would like to acquire approximately 17,000 acres of available FMC forest land to manage as a multiple use forest. AFC prepared a proposal describing their management strategy. Additionally, AFC referenced concerns regarding potential impacts to threatened and endangered species, forest resources (forest fragmentation), migratory birds, and the MLP ecosystem, and stated that these resources would continue to be protected if the AFC manages these lands in the future.

Key Areas of Concern to the Public and Special Interest Groups:

- **Preservation of the Disposal Area.** Many comments were received expressing a desire to preserve the disposal area as natural habitat. The method and extent of preservation varied in the comments. The majority of these comments stressed designation of the area for nature conservation; several respondents would prefer the area to be untouched, while others preferred to have it managed for multiple use recreational purposes.
- **Biological Resources.** Concerns were identified regarding potential impacts to biological resources that exist within the disposal area. The majority of these comments were associated with the potential development of the area. Concerns focused on: unique habitats (MLP ecosystem, unfragmented forest areas, natural areas); Federally-listed threatened and endangered species; state-listed species; neotropical migratory birds; and general wildlife populations and vegetation in the area.
- **Use of the Area for Recreation.** The future use of the area for recreation, specifically hunting and fishing, was identified as a concern. These respondents did not want any development of the disposal area and wanted to have the area transferred to a state or federal agency for management as a wildlife management area or recreational area. Several comments mentioned hunting, fishing, hiking, picnicking, and other recreational pursuits as activities that should occur in the disposal area.
- **Unexploded Ordnance.** Several comments were provided regarding the issue of unexploded ordnance in the disposal area. Concerns included public safety, but most focused on the potential for environmental impacts (associated with the removal process) to occur if this ordnance is removed.
- **Hazardous Wastes.** Several comments mentioned the issue of hazardous wastes and materials occurring on the installation and the need to conduct remediation of any contaminated areas in a responsible manner.
- **Reuse of the Fort.** The public identified concerns regarding the future use of the disposal area. As stated above, most scoping respondents wanted the natural/forested area to remain undeveloped. Suggestions for reuse of the cantonment/developed areas of the disposal area were varied. Specific

suggestions included an environmental education center, correctional facility, automobile plant, shopping mall, and landfill.

- **Other Issues.** Additional concerns included the use of the historic buildings on the installation, the status of archeological sites, and the social and economic impacts associated with the closure of FMC.

1.3.4 Draft Environmental Impact Statement (DEIS)

Copies of the DEIS were made available for public review and comment. A Notice of Availability (NOA) was published in the *Federal Register* on December 19, 1997 to inform the public that the DEIS had been released. A similar notice was also placed in the legal section of local Anniston area newspapers (*Oxford Independent* - December 19 and 26, 1997; *Jacksonville News* - December 24 and 31, 1997; and the *Anniston Star* - December 19, 21, and 31, 1997). These notices identified a point of contact to obtain more information regarding the EIS process, and listed several public libraries where the DEIS could be reviewed. A 45-calendar-day review period (starting with the publication of the NOA in the *Federal Register*) was established to provide all agencies, organizations and individuals with the opportunity to comment on the DEIS.

Copies of the DEIS were located at the following repositories.

<p>Abrams (Fort McClellan Community) Library 2102 Traffic Circle Fort McClellan, Alabama 36205-5020</p> <p>Contact: Joyce Waybright (205) 848-4151</p>	<p>Anniston - Calhoun County Public Library 108 E. 10th Street Anniston, Alabama 36202</p> <p>Contact: Mr. Tom Mullins (205) 237-8503 (Special Collections - Alabama Room)</p>
<p>Cole Library Jacksonville State University 700 Pelham Road, North Jacksonville, Alabama 36265-1602</p> <p>Contact: Ms. Mary Beris (205) 782-5758</p>	<p>Fischer Library U.S. Army Chemical School Fifth Avenue, Building 1081 Fort McClellan, Alabama 36205-5020</p> <p>Contact: Mr. Richard Pastorett (205) 848-4414</p>
<p>Jacksonville Public Library 200 Pelham Road, North Jacksonville, Alabama 36205</p> <p>Contact: Ms. Kathryn Childress (205) 435-6332</p>	<p>Oxford Public Library 213 Choccolocco Street Oxford, Alabama 36203</p> <p>Contact: Ms. Irene Sparks (205) 831-1750</p>
<p>Mobile District, Army Corps of Engineers 109 Saint Joseph Street P.O. Box 2288 Mobile, Alabama 36628</p> <p>Contact: Mr. Curtis Flakes (334) 690-2777</p>	<p>Ramsey Library U.S. Army Military Police School Building 3181 Fort McClellan, Alabama 36205-5020</p> <p>Contact: Ms. Carolyn Floyd (205) 848-3737</p>

1.3.5 Public Meeting

A public meeting was held at the Anniston City Meeting Center on January 15, 1998 beginning at 7:00 p.m. (during the 45-day DEIS review period) to receive oral and written comments, on the DEIS, from those desiring to present them in a public forum. A complete transcript of the public meeting is presented in Appendix A.

Written and oral comments received at the public meeting were considered, along with other written comments received during the 45-day comment period, in the development of the FEIS.

1.3.6 Final Environmental Impact Statement (FEIS)

The Army assessed and considered comments, both individually and collectively, provided by members of the interested public and Federal, State, and local agencies. The FEIS incorporates changes suggested by comments on the DEIS, as appropriate, and contains responses (see Appendix A) to all comments received during the DEIS review period. A Notice of Availability (NOA) will be published in the *Federal Register* and the newspapers identified in subsection 1.3.4 above to inform the public that the FEIS has been released. These notices will identify a point of contact to obtain more information regarding the EIS process and note the public repositories (same as in subsection 1.3.4) where the FEIS is available for review.

1.3.7 Record of Decision (ROD)

Following a 30-day waiting period from the date of the FEIS NOA, a ROD will be prepared by the Army and published in the *Federal Register*. Comments received during the FEIS 30-day waiting period will be considered by the decision-maker in reaching the final decision on this action. The ROD will describe the Army's decision regarding the disposal of FMC excess property, identify encumbrances to disposal, explain Army uncertainties, and identify the type and extent of impacts that may occur from disposal and reuse of these lands by other entities. The ROD will also describe actions or encumbrances to disposal to be taken by the Army to reduce or mitigate any significant adverse impacts associated with the Army's disposal action, and explain any Army uncertainties involved in the disposal process.

1.3.8 Contaminated Site Remediation Public Review Process

Remediation or cleanup of contaminated sites under the Army's Base Realignment and Closure environmental program also includes public involvement where closure and disposal are involved. This program is separate from, but often confused with, the EIS process because the actions occur simultaneously during disposal of installation property. Remedial actions under the Comprehensive Environmental Response and Liability Act (CERCLA) include formal opportunities for public participation in reviewing documents and attending public meetings. This EIS discusses sites under investigation by describing the general nature and extent of contamination and identifying the remedial studies that will be completed prior to disposal of affected properties. The public will be kept informed about site remediation studies as they become available and will be invited to participate in public meetings associated with them.

The Army's approach to public involvement in base cleanup include the local community in the installation cleanup program by making information available, providing opportunities for comment, and establishing and seeking active participation on a Restoration Advisory Board (RAB). The RAB is composed of an Army representative, U.S. Environmental Protection Agency (USEPA) representative, Alabama Department of Environmental Management representative, and members of the local community. The RAB is jointly chaired by the Base Realignment and Closure (BRAC) Environmental Coordinator (BEC) at FMC and a member of the Board. The RAB reflects the diverse makeup of the community and gives all stakeholders the opportunity to participate in the cleanup process and make their views known to decision makers. The intent of the RAB is to serve as a forum for the early and continued exchange of cleanup information among the community, installation, and regulatory agencies. To meet this objective, all RAB members responsibilities include: providing advice on environmental restoration issues to the BRAC Cleanup Team (BCT); reviewing, evaluating and commenting on cleanup documents; identifying cleanup project requirements; recommending priorities and sequencing among sites or projects; participating in the initial development and/or reassessment of relative risk evaluations; and identifying applicable standards and (consistent with Section 121 of CERCLA), proposed cleanup levels consistent with planned land use. The RAB conducts regular meetings that are open to the public and maintains mailing lists of stakeholders who wish to receive information on the cleanup program. The BCT will fully consider advice from RAB members, along with the approved reuse plan of the local redevelopment authority and its

priorities and other management issues, in making cleanup decisions. The Fort McClellan Web Page includes a "port" which is designed to provide ready access to remediation related information, as well as applications for candidate members.

1.3.9 Unexploded Ordnance Removal Public Review Process

Over the life of a military range, the types and quantities of ordnance/explosives (OE), including military munitions and other constituents, expended in training have varied greatly due to changes in mission, technology, and training needs. As technology improves and weapons systems are replaced, new types of OE are developed and employed. Because of limited land availability and safety requirements, new ranges are often constructed on top of old ranges. Thus a variety of OE, including unexploded ordnance (UXO), may exist on a military range because of the different types of weapons that have been employed on a particular range during its life cycle.

The cleanup of UXO at closed, transferred and transferring ranges will be handled through an administrative process that includes public involvement similar to the procedures specified under CERCLA. The process is being formalized in a DOD proposed Range Rule (Federal Register Volume 62, Number 187, Pages 50795-50843, September 26, 1997) which is currently being reviewed by the public (note: written comments on this rule were accepted until December 26, 1997). Finalization of the Range Rule is not anticipated to occur prior to late 1998. As currently proposed, Range Rule activities will include public involvement, along with the involvement of other Federal and state regulatory agencies, during the review of alternatives available for the mitigation of OE at closed, transferred and transferring ranges. Pending adoption of the proposed Range Rule, OE issues will be addressed during the Engineering Evaluation/Cost Analysis (EE/CA) process which will incorporate anticipated Range Rule requirements.

Additionally, as noted in the proposed Range Rule, DOD is never fully relieved of its obligations to address public safety and environmental risks caused by OE. If at some future date a problem is discovered at a range where DOD completed the range response process, then DOD will conduct an appropriate response to address the problem. This response typically will be handled as an explosives or military munitions emergency response; however, if the typical circumstances indicate a need for a more detailed response, then DOD will reopen the range response process and conduct any appropriate actions. In the proposed Range Rule, DOD also has stated that if technology limits the range response and the use of the land is restricted, but later, cost effective improvements in technology allow for the removal of such a restriction, then DOD is responsible for conducting a later response, if doing so is consistent with the land transfer agreement and reasonably anticipated land uses that were originally identified.

1.4 IMPACT ANALYSIS PERFORMED

The EIS identifies, documents, and evaluates the effects of disposal and reuse of FMC property. Several other related processes occur in conjunction with the Army's preparation of the property for closure and disposal. These associated processes and their time frames are shown in Figure 1-1.

An interdisciplinary team of environmental scientists, biologists, planners, economists, engineers, archaeologists, historians, and military specialists performed the impact analysis. The team identified resources and topical areas, analyzed the proposed action against the existing conditions, and determined the relevant beneficial and adverse effects associated with the action. Section 4 "Affected Environment" generally describes the conditions of the affected resources and other areas of special interest at FMC as of mid-1995 (prior to the BRAC Commission's recommendation). Along with information presented in the no action alternative, these conditions constitute the baseline for the analysis of effects of disposal and reuse. These effects are described in Section 5 "Environmental and Socioeconomic Consequences".

The document analyzes direct impacts (those caused by the proposed action and occurring at the same time and place) and indirect impacts (those caused by the proposed action but occurring later in time or farther removed in distance but still reasonably foreseeable). Cumulative effects are also addressed. Mitigation measures are identified where appropriate. The socioeconomic effects of disposal and reuse

are assessed by use of the Economic Impact Forecast System (EIFS), developed by the U.S. Army Construction Engineering Research Laboratory (USACERL). The region of socioeconomic influence (ROI) consists of eight counties. Calhoun County, containing Anniston and FMC, is the center of the region. Other counties in the ROI include Cherokee, Etowah, St. Clair, Cleburne, Talladega, Clay and Randolph counties. The rationale for selection of this area as the ROI is provided in subsection 4.13.1.2.

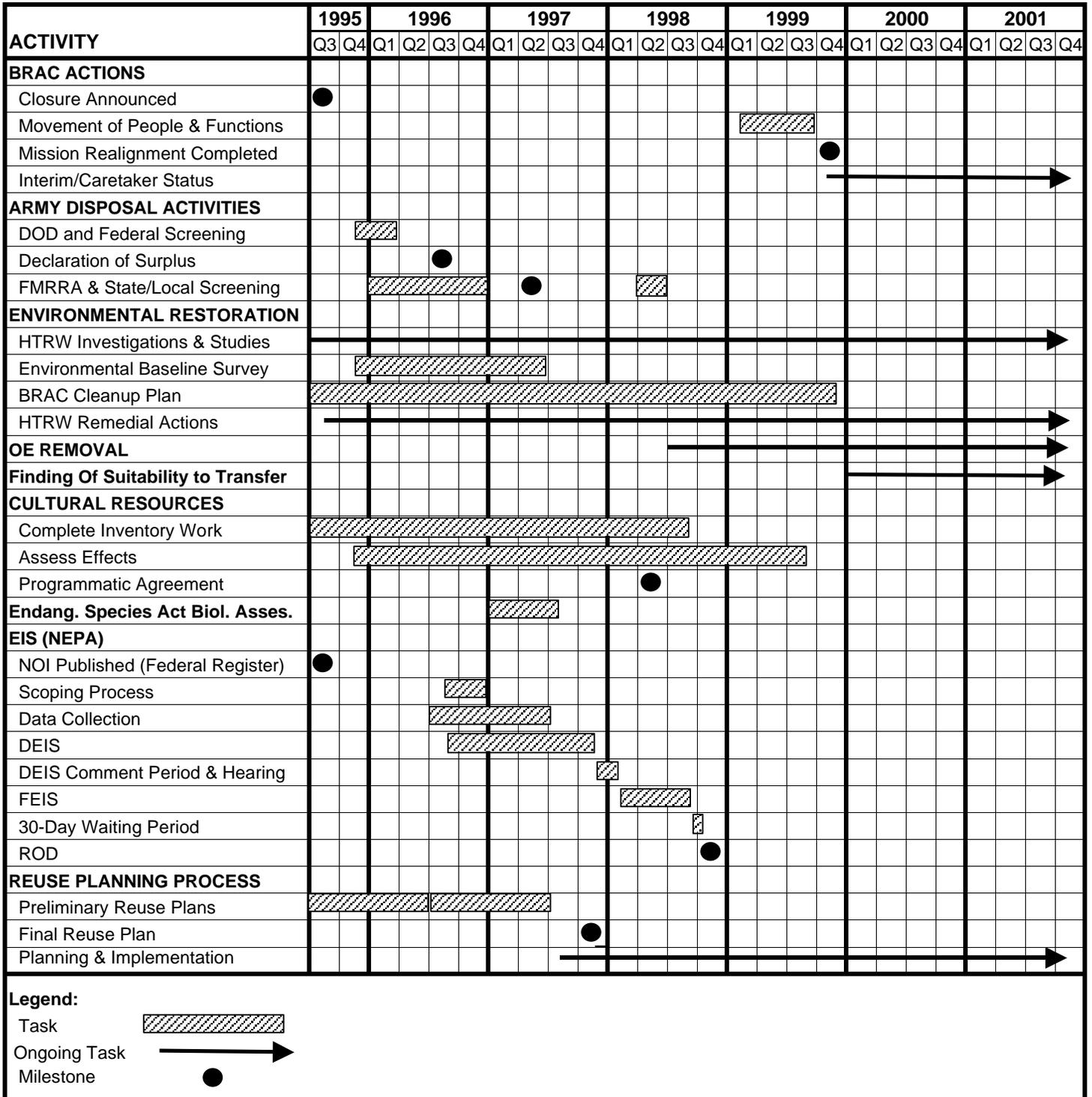
1.5 FRAMEWORK FOR DISPOSAL

Compliance with the 1990 Base Closure Act requires consideration of numerous other statutes and directives. The Army must abide by rules pertaining to transfer of federal property, as well as executive branch policies. There are also concerns associated with the identification and protection of significant installation assets through the disposal process consistent with applicable statutory and regulatory guidance. These issues are discussed further below.

1.5.1 BRAC Procedural Requirements

1.5.1.1 Statutory Provisions. The disposal process is governed by the Defense Base Closure and Realignment Act of 1990 (Public Law 101-510, as amended) and the Federal Property and Administrative Services Act of 1949 (40 U.S.C. 471 et seq., as amended). The latter is implemented by the Federal Property Management Regulations at Title 41 Code of Federal Regulations, Subpart 101-47. The disposal process is also governed by 32 CFR Part 90 (Revitalizing Base Closure Communities) and 32 CFR Part 91 (Revitalizing Base Closure Communities - Base Closure Community Assistance), regulations issued by DOD to implement BRAC law, the Pryor Amendment (Title XXIX of Public Law 103-160, Base Closure Communities Assistance Act), and the President's Five-Part Plan.

**Figure 1-1
Fort McClellan, Alabama
Disposal and Reuse Processes and General Implementation Timelines**



Source: Parsons ES/HBA based on data provided by the TRADOC Base Realignment and Closure Office, Fort Monroe

1.5.1.2 Excess Property Screening Process. Having been recommended for closure, certain portions of FMC have been determined to be excess to Army needs. These excess lands are subject to specific procedures designed to identify potential subsequent public sector users. The formal property screening process and its results to date are discussed in subsection 2.7.1.

1.5.1.3 The President's Five-Part Plan. On July 2, 1993, the President announced a major new program to speed the economic recovery of communities near closing military installations. The President pledged to give top priority to early use of each closing installation's most valuable assets. A principal goal of the initiative is to provide for rapid redevelopment and creation of new jobs. In announcing the program, the President outlined the five parts of his community revitalization plan:

- Jobs-centered property disposal that puts local economic redevelopment first.
- Fast-track environmental cleanup that removes delays while protecting human health and the environment.
- Appointment of transition coordinators at installations slated for closure.
- Easy access to transition and redevelopment help for workers and communities.
- Larger economic development planning grants to base closure communities.

The Army is fully committed to the President's Five-Part Plan. A Base Transition Coordinator has been appointed for FMC, and the Army has taken an active role in providing assistance to the local community.

1.5.1.4 The Pryor Amendment. Congress endorsed the President's plan by enacting Title XXIX of Public Law 103-160, Base Closure Communities Assistance Act, popularly known as the "Pryor Amendment" in recognition of its principal legislative sponsor. Title XXIX, as amended, provides legal authority to carry out the President's plan by granting conveyances of real and personal property at or below fair market value to local redevelopment authorities. Title XXIX creates a new transfer authority, the economic development conveyance (EDC). An EDC can help induce a market for the property and thereby enhance economic recovery and generate jobs. Flexibility is given to the military departments and the communities to negotiate the terms and conditions of the EDC. A detailed application, including the approved community redevelopment plan, serves as the basis for a determination of whether a Local Reuse Authority (LRA) will be eligible for an EDC. The DOD's final rule implementing the Pryor Amendment appears at 32 CFR Parts 90 and 91. The EDC is further described in subsection 2.8.

1.5.2 Relevant Statutes and Executive Orders

Several statutes and Executive Orders are applicable to the disposal and reuse of FMC property. The following discussions note their relevance to the disposal and reuse process.

1.5.2.1 Relevant Statutes.

- **Comprehensive Environmental Response, Compensation, and Liability Act.** The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), better known as Superfund, addresses cleanup of past hazardous waste sites that pose threats to human health or the environment. The Superfund Amendments and Reauthorization Act of 1986 (SARA) expanded applicability of this law to federal facilities. SARA provides procedures to clean up toxic or hazardous substances at closed or abandoned hazardous waste sites.

Procedures for conducting cleanup are governed by the National Oil and Hazardous Substances Pollution Contingency Plan. Major steps in the cleanup process include preliminary assessment and site investigations of hazardous substance releases, remedial investigation and preparation of feasibility studies for cleanup, a ROD for selecting among cleanup alternatives, and design of

remedial measures and implementation of remedial action. The process includes creation and maintenance of an administrative record for public review and notices to the public for review and comment at major junctures.

Army compliance with the National Oil and Hazardous Substances Pollution Contingency Plan occurs through the Installation Restoration Program (IRP). The IRP is conducted at locations having past hazardous waste sites requiring remediation.

- **Community Environmental Response Facilitation Act.** In October 1992, Congress amended Section 120(h) of CERCLA with the Community Environmental Response Facilitation Act (CERFA), Public Law 102-426. CERFA established requirements for contamination assessment, cleanup, and regulatory agency notification and concurrence for federal facility transfers.

CERFA requires federal agencies to identify uncontaminated parcels, with regulatory concurrence, and it allows transfer by deed of remediated parcels at the point when successful operation of an approved remedy has been demonstrated to USEPA.

CERFA requires that the identification consider petroleum products as well as CERCLA hazardous substances. For property that is part of a facility listed on the National Priorities List, the identification cannot be considered complete until concurrence is received from the USEPA Administrator. For real property not on the National Priorities List, the identification cannot be considered complete until state concurrence is achieved.

The law requires a transferring agency to provide a covenant that any response action or corrective action found necessary due to the Army's past actions will be undertaken by the United States. The deed for such parcels must also provide for a right of access to perform any additional response action, including appropriate investigations. Although CERFA does not mandate that the Army transfer real property identified as immediately available, it is the first step in satisfying the objective of identifying real property where no CERCLA-regulated hazardous substances or petroleum products were stored, released, or disposed of. The procedures mandated by CERFA will be observed in property disposal actions at FMC.

- **Resource Conservation and Recovery Act.** Under the Resource Conservation and Recovery Act (RCRA), USEPA defines those wastes which are hazardous and regulates their generation, treatment, storage, transportation, and disposal. USEPA also establishes technical and performance requirements for hazardous waste management units and exercises responsibility over a permit system for hazardous waste management facilities. RCRA is also the source for regulations pertaining to solid waste management and underground storage tank management. Hazardous waste activities at FMC are subject to the provisions of RCRA.
- **Clean Air Act.** The Clean Air Act (CAA) controls the emission of pollutants into the atmosphere. Under the CAA, USEPA has established national air standards. These standards, which express concentrations of designated pollutants, are called the National Ambient Air Quality Standards (NAAQS). The NAAQS, uniformly applied throughout the Nation, are time-averaged concentrations of the specified pollutants that cannot be exceeded in the ambient air more than a specified number of times. Standards have been established for the pollutants sulfur dioxide, carbon monoxide, ozone, nitrogen oxides, lead, and inhalable particulate matter. The NAAQS are to be achieved by the states through State Implementation Plans, which provide for limitations, schedules, and timetables for compliance with NAAQS by stationary sources and transportation control plans for mobile sources.

Amendments to the CAA in 1990 introduced, at Section 1.76(c) of the Act, a requirement that "No department, agency, or instrumentality of the Federal Government shall engage in, support in any way, or provide financial assistance for, license or permit, or approve any activity which does not conform to an implementation plan approved or promulgated. The assurance of conformity shall be an affirmative responsibility of the head of such department, agency, or instrumentality." Conformity to

an implementation plan means conformity to an implementation plan's purpose of eliminating or reducing the severity and number of violations of the NAAQS and achieving expeditious attainment of such standards. It further refers to conducting activities so that they will not cause or contribute to any new violation of any standard in any area, increase the frequency or severity of any existing violation of any standards in any area, or delay timely attainment of any standard of any required interim emission reductions or other milestone in any area. Regulations regarding determining conformity of general federal actions to implementation plans appear at 40 CFR Parts 51 and 93. As discussed in subsection 4.3, operational activities at FMC are subject to the provisions of the Clean Air Act.

- **Clean Water Act.** Since major amendments in 1977, the Federal Water Pollution Control Act has been known as the Clean Water Act (CWA). This statute, which seeks to restore and maintain the chemical, physical, and biological integrity of the Nation's waters, identifies certain pollutants and sets required treatment levels for those pollutants. The CWA addresses both point source and nonpoint source discharges. Point sources are distinct entities that discharge wastewater into rivers or lakes through distinct conveyances such as pipes, ditches, or canals. Nonpoint sources are those which do not discharge wastewater from a discrete conveyance (e.g., agricultural lands, construction sites, parking lots, streets).

Section 402 of the CWA establishes the National Pollutant Discharge Elimination System (NPDES) program. NPDES permits are required for all point source discharges to waters of the United States, including discharges of stormwater associated with industrial activities. CWA provisions apply to FMC with respect to operations at the installation's wastewater treatment facility and industrial facilities, which are subject to the NPDES permitting provisions.

Sections 401 and 404 of the CWA contain provisions for the protection of wetlands. The CWA establishes a permitting and water quality certification process for both Federal and private activities having potential effects on wetland areas.

- **National Historic Preservation Act.** The National Historic Preservation Act of 1966 (NHPA) protects buildings, sites, districts, structures, and objects that have significant scientific, historic, or cultural value. The act establishes affirmative responsibilities of federal agencies to preserve historic and prehistoric resources. Effects on properties that are on, or eligible for, the National Register of Historic Places (NRHP) must be taken into account in planning and operations. Any property that may qualify for inclusion on the NRHP must not be inadvertently transferred, sold, demolished, substantially altered, or allowed to deteriorate.

National Register of Historic Places criteria are those qualities of significance in American history, architecture, engineering, archaeology, and culture present in districts, sites, buildings, structures, and objects of state, local, regional, or national importance. These properties possess integrity of location, design, setting, materials, workmanship, feeling, and association.

Fulfillment of the purposes of the NHPA is assisted through consultation with the Advisory Council on Historic Preservation (ACHP) and with each State Historic Preservation Officer (SHPO). Prior to final disposal action, the Army must ensure that NHPA Section 106 consultations are complete and that appropriate considerations have been afforded FMC properties which are on or eligible for the National Register.

- **Archaeological Resources Protection Act.** The Archaeological Resources Protection Act (ARPA) prohibits the removal, sale, receipt, and interstate transportation of archaeological resources obtained illegally (without permits) from public or Indian lands and authorizes the agency to promulgate permit procedures for investigations of archaeological resources on public lands under the agency's control. Limited surveys at FMC to date reveal the potential presence of archaeological resources subject to the protection afforded by the ARPA.

The law states that the Secretaries of the Interior, Agriculture, and Defense and their respective employees and agents shall develop plans for surveying the lands under their control. Their task is to determine the nature and extent of archaeological resources and prepare a schedule for surveying those lands which are likely to contain the most scientifically valuable archaeological resources and develop documents for reporting suspected violations of the ARPA. The ARPA requires the issuance of permits for authorized professional excavation or removal of archaeological resources. The ARPA imposes civil and criminal penalties for unauthorized excavation, removal, damage, alteration, or defacement of archaeological resources or attempt to perform such unauthorized acts. Implementing regulations of the ARPA are contained in 18 CFR Part 1312, 32 CFR Part 229, 36 CFR Part 296, and 43 CFR Part 7.

- **American Indian Religious Freedom Act.** The American Indian Religious Freedom Act of 1978 (AIRFA) states the policy of the United States to protect and preserve for American Indians, Eskimos, Aleuts, and native Hawaiians their inherent rights of freedom to believe, express, and exercise their traditional religions. These rights include, but are not limited to, access to sites, use and possession of sacred objects, and freedom to worship through ceremony and traditional rites. They also include the right of tribal leadership to be consulted by federal agencies before burial sites that appear to relate to tribal ancestors are disturbed by agency projects. Regulations implementing AIRFA are located at 43 CFR Part 7.
- **Endangered Species Act.** Under the Endangered Species Act (ESA), federal agencies are required to conserve biological and wildlife species that have been federally listed as endangered or threatened. All federal agencies must consult with the U.S. Fish and Wildlife Service (USFWS) to ensure that any actions authorized, funded, or carried out by the agencies are not likely to jeopardize the continued existence of any endangered or threatened species or to result in the destruction of or substantial damage to its critical habitat. This consultation, deriving from Section 7 of the act, is often referred to as the Section 7 consultation process, and may include either *formal* or *informal* consultations. Section 7(a) of the ESA requires *formal* consultation with the US Fish and Wildlife Service (USFWS) or the National Marine Fisheries Service (NMFS) whenever an action may affect (beneficially or adversely) a listed species or critical habitat. *Informal* consultation with the USFWS or NMFS is always appropriate to clarify if an action is likely to affect a listed species or critical habitat, and should be initiated to proactively and positively address potential issues. While this consultation is in progress, an agency must not make an irretrievable commitment of resources to its project. In connection with disposal of FMC, consultation with the USFWS is required to ensure thorough consideration of potential effects on endangered and threatened species.

The ESA prohibits the taking of endangered fish and wildlife species. Under the ESA, *take* is defined as "...to harass, harm, pursue, hunt, shoot, wound, kill, track, capture, or collect (or attempt to engage in any such conduct) a species." The definition of *take* has been expanded to include effects to the species resulting from impacts to their habitat. With respect to the *taking* of endangered plants, it is prohibited to remove or seize any listed species.

Amendments to the ESA in 1982 allow the Secretary of the Interior to approve "incidental" taking of listed species if, after notice and comment, the Secretary finds that the taking will be incidental, the applicant will exert maximum effort to minimize and mitigate the effects of taking, the applicant will ensure adequate funding for the plan, and the taking will not appreciably reduce the likelihood of survival and recovery of the species in the wild.

- **Migratory Bird Treaty Act.** The Migratory Bird Treaty Act (MBTA) makes it unlawful for anyone (federal or private individuals) to pursue, hunt, take, capture, kill, possess, sell, purchase, or transport any migratory bird as defined by the Act. FMC lands are known to support numerous birds afforded protection under the provisions of this act. Therefore, the provisions of the act must be considered in evaluation of disposal and reuse alternatives.

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- The **National Flood Insurance Act** and **Flood Disaster Protection Act** regulate and preserve the natural and beneficial values of floodplains. The two acts apply to both federal and private activities within designated floodplains and floodways.

1.5.2.2 Executive Orders. Seven Executive Orders (EO) address topics relevant to the Army's disposal of FMC. These EO's are described below:

- **Executive Order 11988, Floodplain Management.** Issued on May 24, 1977, EO 11988 requires federal agencies to take action to reduce the risk of flood loss, to minimize the impacts of floods on human safety, health, and welfare, and to restore and preserve the national and beneficial values served by floodplains in carrying out their responsibilities for managing and disposing of federal lands. Before taking action, an agency must determine whether the proposed action will occur in a floodplain; if so, consideration must be made of alternatives to avoid adverse effects and incompatible development in floodplains.
- **Executive Order 11990, Protection of Wetlands.** Issued on May 24, 1977, EO 11990 requires federal agencies to take action to minimize the destruction, loss, or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands in carrying out the agency's responsibilities for managing and disposing of federal lands and facilities. For any proposal for lease, easement, right-of-way, or disposal to nonfederal public or private parties, the federal agency is to reference in the conveyance document those uses which are restricted under federal, state, or local wetland regulations and to attach other appropriate restrictions to the uses of properties by the grantee or purchaser and any successor, except where prohibited by law, or withhold such properties from disposal. The presence of wetlands at FMC makes this EO relevant to resource protection and land use planning at the installation.
- **Executive Order 12088, Federal Compliance with Pollution Control Standards.** Issued on October 13, 1978, EO 12088 provides that federal agencies are to comply with all federal, state, and local environmental requirements. In the context of property to be disposed of at FMC, these requirements will continue as long as the Army retains ownership of the property, including the period during which any portion of the property would be held in caretaker status prior to disposal.
- **Executive Order 12580, Superfund implementation.** Issued on January 23, 1987, EO 12580 delegates to agency heads several decision-making authorities under CERCLA. In the context of FMC, certain responsibilities related to environmental restoration may not be transferred to other parties.
- **Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations.** Issued on February 11, 1994, EO 12898 requires that federal agencies conduct their programs, policies, and activities that substantially affect human health or the environment in a manner that ensures that such programs, policies, and activities do not have the effect of excluding persons (including populations) from participation in, denying persons (including populations) the benefits of, or subjecting persons (including populations) to discrimination under such programs, policies, and activities because of their race, color, or national origin. Compliance must be consistent with Title VI of the Civil Rights Act. On February 11, 1994, the President also issued a memorandum for heads of all departments and agencies, directing that USEPA, whenever reviewing environmental effects of proposed actions pursuant to its authority under Section 309 of the CAA, ensure that the involved agency has fully analyzed environmental effects on minority communities and low-income communities, including human health, social, and economic effects.

The essential purpose of the EO is to ensure the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment

means that no groups of people, including racial, ethnic, or socioeconomic groups, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies.

- **Executive Order 13007, Indian Sacred Sites.** Issued on May 24, 1996, EO 13007 requires that, to the extent practicable, federal agencies accommodate access to and ceremonial use of Indian sacred sites by Indian religious practitioners and avoid adversely affecting the physical integrity of such sacred sites. This EO pertains to FMC disposal and reuse planning in light of the potential for there being Native American sacred sites at the installation.
- **Executive Order 13045, Protection of Children from Environmental Health and Safety Risks.** Issued on April 21, 1997, EO 13045 requires federal agencies, to the extent permitted by law and mission, to identify and assess environmental health and safety risks which may disproportionately affect children. The Order further requires federal agencies to ensure that its policies, programs, activities, and standards address these disproportionate risks. The Order defines environmental health and safety risks as "risks to health or to safety that are attributable to products or substances that the child is likely to come in contact with or ingest (such as the air we breath, the food we eat, the water we drink and use for recreation, the soil we live on, and the products we use or are exposed to."

1.5.3 Other Reuse Regulations and Guidance

The DOD's Office of Economic Adjustment published its *Community Guide to Base Reuse* in May 1995. The guide describes the base closure and reuse processes that have been designed to help with local economic recovery and summarizes the many assistance programs administered by DOD and other agencies. DOD's Office of the Assistant Secretary of Defense published the DOD Base Reuse Implementation Manual in July 1995. This volume serves as a handbook for the successful execution of reuse plans. DOD and the Department of Housing and Urban Development have published in 32 CFR Part 175 guidance required by Title XXIX of the National Defense Authorization Act for fiscal year 1994. The guidance establishes policies and procedures, assigns responsibilities, and delegates authority to implement the President's Program to Revitalize Base Closure Communities, July 2, 1993.

1.6 MAJOR AREAS OF COMMENT ON THE DEIS AND CHANGES IN THE FEIS

As outlined in the Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act (40 CFR 1503.4(5) dated July 1, 1986), comments received on the Draft EIS have been attached to this FEIS. Appendix subsection A.5 documents all DEIS review comments and provides responses to all substantive comments. Comments received on the DEIS were organized into one of the four following categories:

- Comments that were noted (no additional response required) and that will be forwarded to the Decision Maker for consideration;
- Comments that required clarification of text and information that was provided in the DEIS;
- Comments that required the expansion of the DEIS in order to fully address the issue(s) raised; and
- Comments that warranted additional analysis and incorporation of results and conclusions in the FEIS.

The principal changes that have been made in the FEIS in response to comments on the DEIS are summarized below.

- The FEIS provides additional information regarding the creation of the Department of Justice, National Center for Domestic Preparedness (NCDP) proposed to be established at FMC.

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- The FEIS provides updated information regarding the proposed Mountain Longleaf Pine (MLP) National Wildlife Refuge to be established by the USFWS, in partnership with the ADCNR - GFD, at FMC.
 - The FEIS includes information on the potential presence of Pearson's Hawthorne, a plant species previously thought to be extinct, within Area 2 of the FMC disposal area.
 - The FEIS includes a clarification of baseline mobile source air emissions values.
 - The FEIS includes a clarification and re-evaluation of baseline traffic volume at FMC.
 - The FEIS incorporates elements of the Final Reuse Plan (FMRRA, 1997d & e) prepared by FMDC whenever the Final Reuse Plan differed substantially from the June 1997 Phase II Reuse Plan (FMRRA, 1997c) used in the preparation of the DEIS.
 - The FEIS incorporates the findings of the Biological Assessment which was prepared in consultation with the USFWS to address impacts to the gray bat, a federally-listed endangered species known to forage at FMC.
 - Appendix A of the FEIS has been restructured to include scoping comments as well as the DEIS public meeting transcript, comments on the DEIS, and responses to DEIS comments.
 - Appendix B of the FEIS has been restructured to include the Biological Assessment (BA), BA correspondence, the cultural resources Programmatic Agreement (PA), and correspondence associated with the establishment of a National Wildlife Refuge at FMC by the USFWS.

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Description of the Proposed Action

2.1 INTRODUCTION

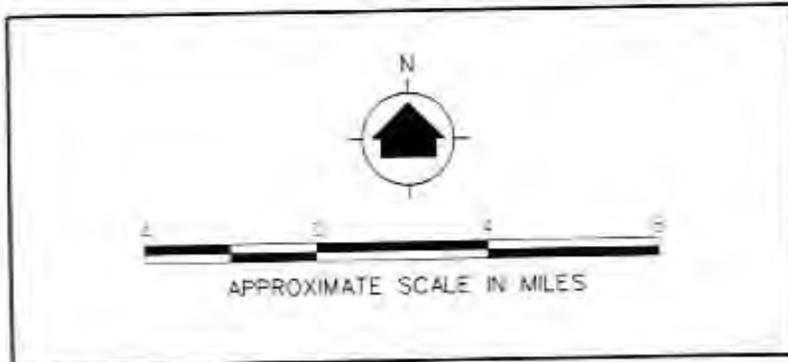
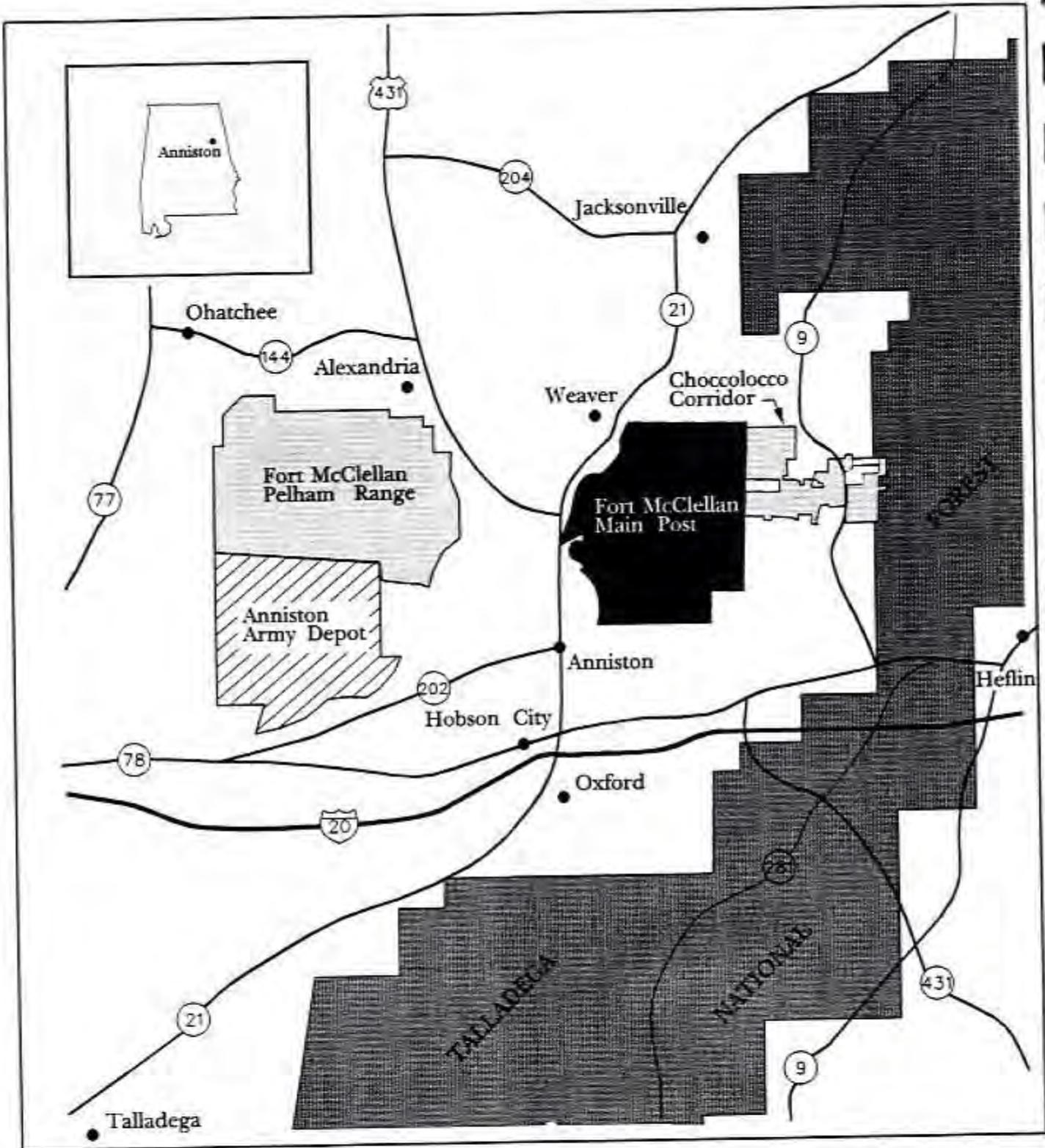
Under provisions of the Base Closure and Realignment Act of 1990 (Public Law 101-510), the 1995 Commission recommended the closure of Fort McClellan (FMC) except for land and facilities required for a Reserve Component enclave, and minimum essential facilities as required to provide auxiliary support to the chemical demilitarization operation at Anniston Army Depot, Alabama. The Chemical Defense Training Facility (CDTF) will operate at FMC until such time as the capability to operate a replacement facility at Fort Leonard Wood, Missouri (FLW), is achieved. The Commission also recommended the relocation of the U.S. Army Military Police School and the U.S. Army Chemical School to FLW and the relocation of the Defense Polygraph Institute to Fort Jackson, South Carolina. In accordance with Public Law 101-501, the closure must be completed no later than July 12, 2001.

The proposed action (Army primary action) is the disposal of excess property at FMC resulting from implementing the BRAC 1995 decision to close FMC. It is Department of Defense (DOD) policy to dispose of property no longer needed by DOD. Consequently, as a result of the mandated closure of FMC, the Army proposes to dispose of excess property of FMC where feasible. Planning for the reuse of the property to be disposed is a secondary action resulting from the disposal. Reuse planning is the responsibility of the Fort McClellan Development Commission (FMDC) and its predecessor, the Fort McClellan Reuse and Redevelopment Authority (FMRRA). The Army's current plans are to complete the relocation of or discontinue active Army missions by September 30, 1999; thereby completing the closure of FMC as required by the Base Closure Act.

2.2 LOCATION OF FORT MCCLELLAN

FMC is located in Calhoun County, in northeast Alabama contiguous to the city of Anniston and approximately 65 miles east of Birmingham, Alabama (Figure 2-1). FMC includes three main bodies of government-owned land in the foothills of the Appalachian Mountains:

- The Main Post, consisting of approximately 18,929 acres, adjoins Anniston, Alabama, and stretches six miles to the northeast towards Jacksonville, Alabama, in the valley west of the Choccolocco Mountains. Approximately 12,000 acres of the Main Post are characterized by undeveloped mountains.



 PARSONS ES PARSONS P&J ST. LOUIS, MISSOURI	 MOBILE DISTRICT US ARMY CORPS OF ENGINEERS MOBILE, ALABAMA
ENVIRONMENTAL IMPACT STATEMENT	
DISPOSAL AND REUSE OF FORT McCLELLAN, ALABAMA	
GENERAL LOCATION OF FORT McCLELLAN	
DATE: AUG., 1998	FIGURE NO. 2-1

- To the east, the Choccolocco Corridor (consisting of approximately 4,488 acres leased from the State of Alabama) connects FMC with the Talladega National Forest. Within the National Forest, approximately 100,000 acres of woodlands are accessible for training in the event of national emergency or with the approval of the U.S. Department of Agriculture, Forest Service (USDA-FS). The Choccolocco Corridor lease will not be renewed and the land will remain with the State of Alabama.
- Pelham Range, consisting of approximately 22,245 acres, is located approximately eight miles due west of FMC's Main Post cantonment area. Pelham Range, which adjoins Anniston Army Depot ½ mile west of US Highway 431, is used for maneuvers, firing ranges, and field training. The Pelham Range will remain as Army property, but will be licensed by the U.S. Army to the Alabama Army National Guard.

2.3 DISPOSAL AND REUSE AREA

The FMC disposal area comprises approximately 18,520 acres (18,929 total Main Post acres less 409 to be maintained for reserve training).

BRAC 95 recommendations included the retention of a Reserve Component Enclave. Accordingly, the Army plans to retain 409 acres of land within the Main Post, and the entire Pelham Range area for this purpose. The Main Post enclave area will include 10 discrete parcels as summarized on Table 2.1 and illustrated on Figure 2-2. In addition, there are 1,160 acres in three parcels located along the eastern boundary of the Main Post which are public domain lands withdrawn from the Bureau of Land Management (BLM). The Army has notified the BLM of the closure and that these lands will be relinquished. BLM is expected to leave these lands with the Army for disposal. These lands are illustrated on Figure 2.2.

The disposal area of 18,520 acres, including the public domain lands, includes the heavily developed area in the flat northwestern portion of FMC. Cane Creek and its tributaries flow west through the Main Post area. The Main Post's administrative, housing and community service facilities are generally located along the northern and southern banks of Cane Creek. FMC's firing ranges are located north, east, and south of the developed area and are generally oriented toward the Choccolocco Mountains. The Choccolocco Mountains contain large portions of undeveloped, forested tracts throughout the remainder of FMC that have been historically utilized for training and recreational activities.

The FMC Main Post cantonment area (that portion of the installation that has been developed) contains a wide variety of buildings including administration, transportation, maintenance, family housing, barracks, libraries, museums, a post office, banks, recreational facilities, community facilities, an auto craft shop, and health care centers. These buildings vary in condition, size, and reuse potential.

Concurrent with the disposal of FMC excess property, the Army will negotiate the transfer of existing utility systems to appropriate providers. The Army prefers to dispose of each utility system as an entity, conditioned to provide services to the Federal organizations remaining on the property at scheduled rates and services acceptable to the government. Existing utilities and infrastructure at FMC are summarized below and described in more detail in subsection 4.7. It is anticipated that right-of-ways (ROWs) would be established for roadways at FMC. Those ROWs would be transferred to an appropriate governing body such as a municipality, the county, or state for ownership and maintenance responsibility. Utilities not lying within a public ROW would require the establishment of easements to be deeded to the corresponding utility by the owner of the affected parcels.

Table 2.1 Fort McClellan Main Post Property to be Retained by the Army*		
Map Location #	Area Description	Size of area (acres)

Table 2.1 Fort McClellan Main Post Property to be Retained by the Army*

Map Location #	Area Description	Size of area (acres)
Property to be retained for the National Guard Bureau (NGB) or Department of Justice (DOJ)**		
5	CDTF**	27
Property to be retained for the Alabama Army National Guard (ALARNG)		
1	1000 Area, Battalion HQ, Parking	24
2	2200 Area and Triangle	60
3	Operations and Maintenance Shop # 10 (OMS) and Armory Training Area	5
4	Military Operations in Urbanized Terrain Training (MOUT) Site	8
6	1600 /1700 / 1800 Area	258
7	Range Control / Emergency Operations Center (EOC) / Chemical Stockpile Emergence Preparedness Program (CSEPP)	2
Property to be retained for the U.S. Army Reserve Command (USARC)		
8	US Army Reserve Enclave	18
Property to be retained by the U.S. Army		
9	Post Cemetery	3
10	POW Cemetery	4
TOTAL		409

Notes * Areas 1-10 are located within the Main Post area of Fort McClellan as shown on Figure 2-2. In addition, the entire Fort McClellan Pelham Range area will be maintained for Reserve Component activities.

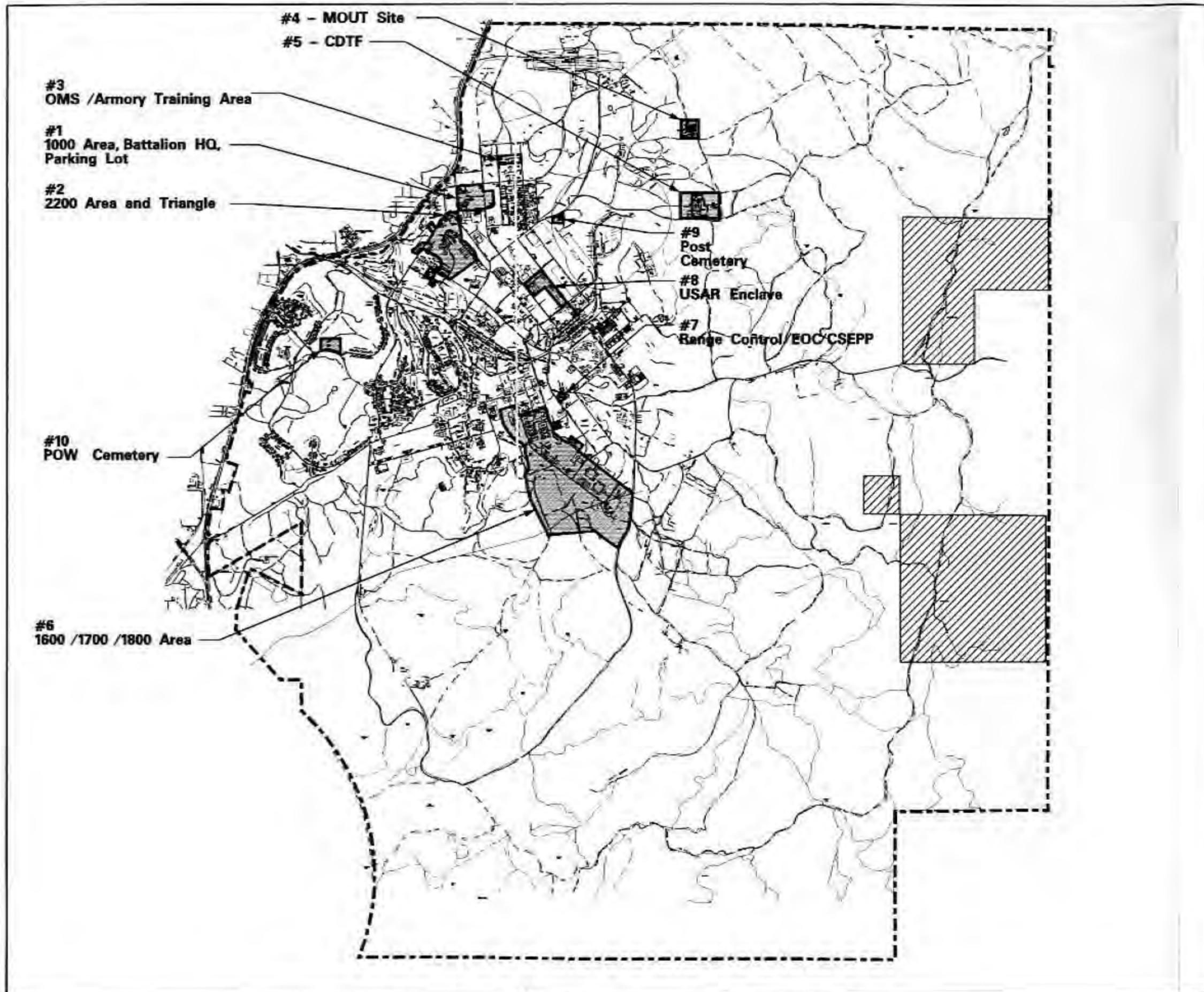
** The CDTF is anticipated to be used for chemical agent protective purposes training by the DOJ for the NCDP. NGB may also use the facility for training in responding to the use of weapons of mass destruction. CDTF is approved for retention in the RC enclave, but ownership and responsibility for operation could pass to DOJ.

Source: Fort McClellan, Directorate of Environment

- **Roads.** FMC has approximately 112 miles of unsurfaced roads, 99 miles of surfaced roads, and 49 bridges (FMRRA, 1996; FMC 1997d). Streets within the cantonment area are paved and adequately maintained. Hard-surface roadways and unnamed gravel roads provide access to more isolated training areas, ranges and recreation areas. It is anticipated that ownership and maintenance of the roadways will be transferred to an appropriate governing body such as a municipality, the county, or state.
- **Wastewater.** The wastewater management system includes an extensive network of gravity collection sewers, force mains, three pumping stations, and a recently improved wastewater treatment plant. The collection network consists of approximately 338,000 lineal feet (LF) of sanitary sewer pipe and 300 LF of industrial waste pipe (FMRRA, 1996; FMC 1997d). An estimated 75 percent of the network has been sliplined to reduce infiltration and inflow. The wastewater treatment plant has a capacity of 2.2 million gallons per day (mgd) through its secondary treatment facility.

It is anticipated that the wastewater treatment plant, pump stations and collections systems will be

transferred to a single utility provider for ownership and maintenance. Ownership of individual service connection lines may be transferred to the parcel owner. Main lines crossing an individual parcel would require that an easement be deeded to the sanitary sewer utility provider.



LEGEND

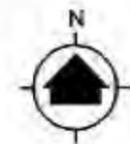
-  RESERVATION BOUNDARY
-  PROPOSED NATIONAL GUARD/ RESERVE ENCLAVE AREA
-  REAL PROPERTY AVAILABLE FOR DISPOSAL AND REUSE
-  PUBLIC DOMAIN LAND AVAILABLE FOR DISPOSAL AND REUSE

NOTE:

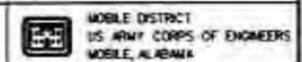
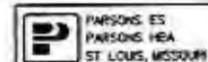
IN ADDITION, THE ARMY WILL MAINTAIN ALL OF THE PELHAM RANGE AREA TO SUPPORT RESERVE OPERATIONS.

SOURCE:

FORT McCLELLAN DIRECTORATE OF ENVIRONMENT



SCALE IN FEET



ENVIRONMENTAL IMPACT STATEMENT

DISPOSAL AND REUSE OF
FORT McCLELLAN, ALABAMA

**ARMY NATIONAL GUARD/
RESERVE COMPONENT ENCLAVE**

DATE: AUG., 1998

FIGURE NO. 2-2

-
- **Water.** The potable water supply system provides supply sources, storage capacity, and a distribution network. The primary water source provider is the Anniston Water Works and Sewer Board. A 1.5 million gallon aboveground steel tank provides the current storage capacity. Water distribution occurs through a system of approximately 513,000 LF of pipeline ranging in size from 4-inch to 12-inch in diameter.

It is anticipated that ownership and maintenance of the water distribution network and the 1.5 million gallon steel tank will be transferred to a single utility provider. Ownership of individual service connection lines may be transferred to the parcel owner. Main lines crossing an individual parcel would require that an easement be deeded to the water utility provider.

- **Stormwater.** The FMC stormwater management system consists of storm water inlets, pipes, channels, waterways, and streams. Cane Creek is the primary stream draining most of the western portion of the installation. In addition, approximately 256,000 LF of storm sewer conveys stormwater runoff collected from inlets throughout FMC (FMRRA, 1996; FMC 1997d). Some FMC facilities lie within the 100-year floodplain boundary of Cane Creek.

Ownership and maintenance of stormwater conveyance systems lying within public right-of-ways are anticipated to become the responsibility of the corresponding governing body such as a municipality, the county, or state. Ownership of some main stormwater conveyance sewers may also become the responsibility of the same governing agency. However, the owner of each parcel will typically be responsible for maintaining the collection systems within their individual parcel.

- **Natural Gas.** Natural gas is supplied to FMC by Alabama Gas Corporation (ALAGASCO). FMC also has a facility consisting of five 30,000 gallon propane storage tanks to supplement the natural gas during peak demand periods. The natural gas distribution system consists of approximately 187,000 LF of pipelines initially installed in 1965 (FMRRA, 1996; FMC, 1997d).

It is anticipated that the gas distribution system and the peak shaving plant will be transferred to a single utility provider for ownership and maintenance. Ownership of individual service connection lines may be transferred to the parcel owner. Main lines crossing an individual parcel would require that an easement be deeded to the natural gas utility provider.

- **Electric.** Electrical power is supplied to FMC by the Alabama Power Company (APCO) to a substation and distributed through a combination of above and below ground lines. APCO currently supplies 14,730 kilovolt-amperes (kVA) and has the capability for making 42,400 kVA available to the installation. The distribution network consists of approximately 857,000 LF of overhead electrical lines and approximately 108,000 LF of underground electrical lines. In addition, some facilities, such as the hospital, have generators capable of sustaining their power during a power outage.

It is anticipated that the electrical substation and distribution systems will be transferred to a single utility provider for ownership and maintenance. Ownership of individual service connection lines may be transferred to the parcel owner. Main lines crossing an individual parcel would require that an easement be deeded to the electrical utility provider.

- **Steam Systems.** Heat and chilled water is supplied by four central boiler plants within the cantonment area that have a rated output above 3,500,000 British Thermal Units per hour (BTU/hr). All of the plants are high pressure, steam boiler plants except one (Plant #4) which is a high temperature, hot water plant. Plant #1 serves the 3100 Block area; Plant #2 serves the 2200 Block area and hospital (Buildings 292 and 295). Plant #3 serves the 1000 Block area but has been off-line for approximately 2 years. The 1000 Block area can also be backfed from Plant #2 as it is currently. Plant #4 serves the 1600 and 1800 Block areas. Plant #3 is within the reserve enclave and will be retained by the DOD. It is anticipated that ownership of the remaining three plants will be transferred to the new owner of the parcel where the boiler plants are housed. Continuation of operations at these three plants will be at the discretion of the new

owner. The new owner may continue operation as a utility provider or under some type of cooperative agreement with the facilities served by their boiler plant. Ownership of the distribution lines are anticipated to transfer to the owner of the parcel. If the boiler plants continue operation, ownership and maintenance responsibilities of these distribution lines could be transferred to the boiler plant owner. If the boilers do not continue operation, owners of individual parcels previously served by the boiler plants will have to make alternate arrangements for their heating and chilled water needs.

- **Telecommunication Systems.** The telecommunications system at FMC includes an extensive standard (copper) cable network, limited fiber optic cable, and related switching equipment that are connected to an off-post service provider. Bell South Company provides telecommunications services to FMC. FMC has approximately 266,000 feet of copper cable divided into 14 branch cables. Approximately 50% of the wire pairs are currently in use; an estimated 8% of the wire pairs are considered defective. FMC has approximately 5,000 feet of twelve-pair fiber optic cable, with two pairs currently in use.

It is anticipated that the telecommunication systems will be transferred to a single provider for ownership and maintenance. Ownership of individual service connection lines may be transferred to the parcel owner. Main lines crossing an individual parcel would require that an easement be deeded to the telecommunication provider.

In association with the disposal of utilities, infrastructure, and property, the new owners of the utility systems will be required to provide services to the retained Army enclave at rates negotiated between the Army and the new service providers.

2.4 COMMUNITY REUSE PLAN

At FMC, redevelopment is expected to occur based upon the Fort McClellan Development Commission's (FMDC, previously known as the FMRRRA) approved reuse plan. The Army fully supports community planned reuse of the facilities and recognizes that determining specific reuses is beyond its direct responsibility or control. The basic goals of the FMDC are to:

- serve as a community point of contact for input and information relating to the reuse of available property at FMC;
- develop and adopt a comprehensive reuse plan for property to be disposed of;
- develop procedures to market available properties based on long-term reuse potential; and
- promote the creation of new, permanent jobs in Calhoun County and the surrounding areas as a result of planned reuse activities.

Consistent with these goals, the FMDC has completed final plans for the reuse of FMC lands that are included in the Army's disposal action. The FMDC reuse plan, as illustrated on Figure 2-3, focuses on the reuse/redevelopment of approximately 7,200 acres in the western part of the Main Post area of FMC. This area has been historically used to develop most of the supporting facilities at FMC due to the relatively flat land at this location. The remaining 11,000 acres of FMC are mountainous areas that comprise a passive recreation / development reserve area in the FMDC reuse plan.

The FMDC reuse plan consists of a variety of proposed land use types emphasizing a mixed-used development, and a balance of public and private uses. Key features of the FMDC Reuse Plan are described below (FMRRRA, 1997d & e).

- A mix of uses, with a majority of the proposed residential areas south of Cane Creek, and the majority of the commercial and industrial areas north of Cane Creek.

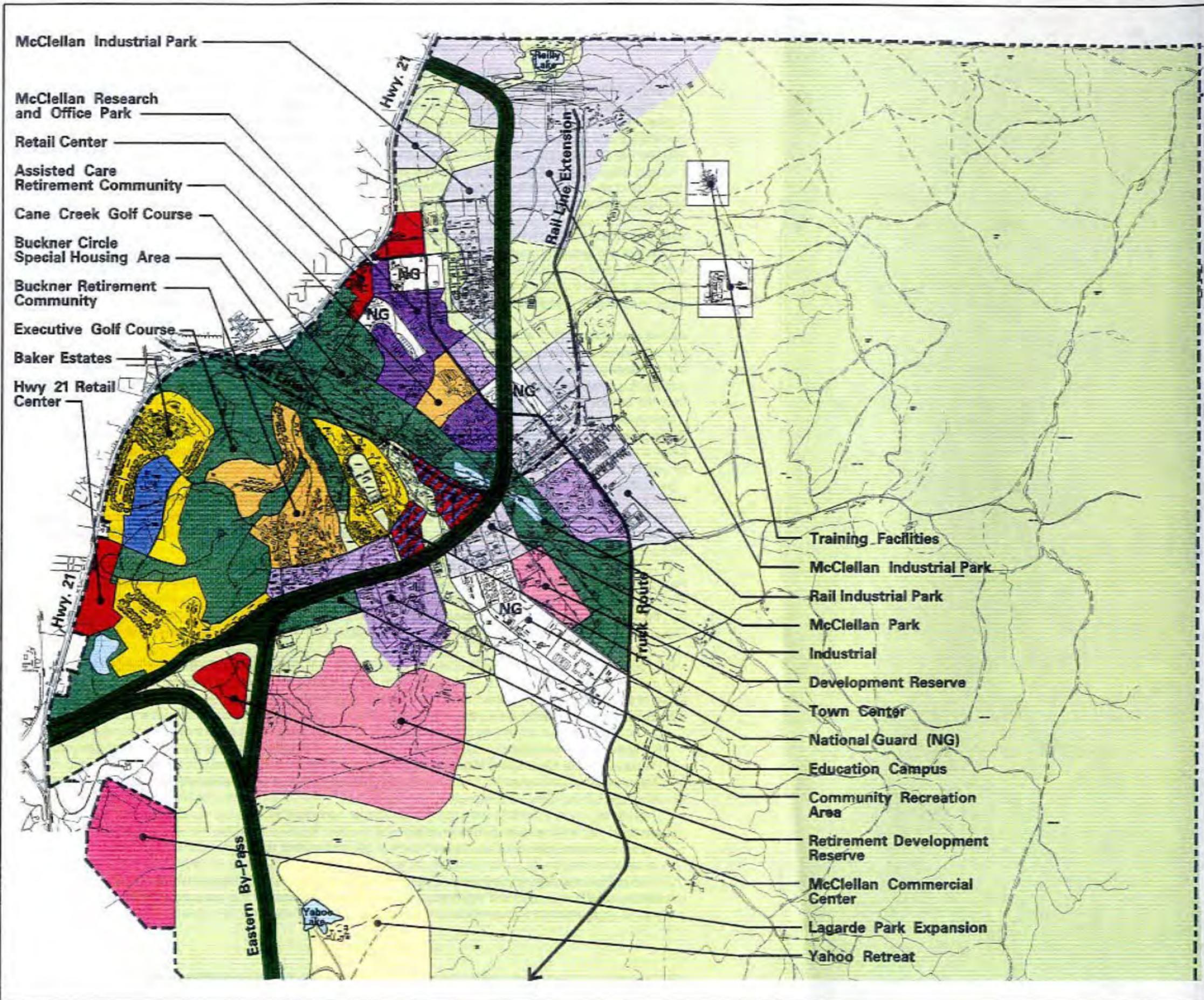
-
- The creation of a series of living, working, learning and shopping neighborhoods that comprise a mixed-use community.
 - An open space network that links the various neighborhoods and provides a valuable community amenity.
 - A major new parkway (McClellan Parkway), primarily along the existing roadway network, that connects to the proposed Eastern Bypass.
 - Access points to the property at five locations along State Highway 21.
 - An upgrading of the rail line and its extension to the north to provide rail access to many of the industrial sites.
 - Construction of the Eastern Bypass and associated interchanges is an integral element associated with the redevelopment of FMC.

Following is a summary of the primary components of the FMDC reuse plan (FMRRRA 1997d & e).

Residential (823 acres). Approximately 398 acres are proposed for conventional detached single family housing, and 425 acres are proposed for a variety of attached and detached retirement housing types. A total of 1,060 retirement units and 515 conventional residential units are included in the plan, resulting in an overall density ranging from one to approximately two units per acre. Buckner Circle, which includes the historic Officers Quarters; Summerall; and Baker Estates have been identified as continuing residential areas. A planned retirement community forms an important component of the residential element of the plan. Two new retirement villages - Buckner Retirement Community and the McClellan Retirement Golf Community - are proposed immediately north and south respectively of Summerall Gate Road in the western portion of the disposal area. The Buckner Retirement Community includes the use of sixty existing single story housing units, with the potential to construct an additional 440 units. The McClellan Retirement Community is a proposed high quality single-family residential community built around a new, custom-designed golf course. In addition, an Assisted Care Retirement housing area is proposed for an area focusing on the hospital.

Training/Education (202 acres). A training area centered around the current Military Police School and the Department of Defense Polygraph School is proposed in the reuse plan and is intended to provide special training and conference facilities.

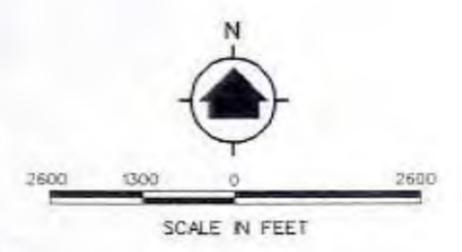
Office (141 acres). Office uses, comprising approximately 1,000,000 square feet (SF) of floor area, are proposed for an area north of Cane Creek between Baltzell Gate Road and the Galloway Gate entrance in the north-west portion of the disposal area. General office uses would comprise the majority of this area, with approximately 25 acres proposed for an office and research park (McClellan Office and Research Park).



LEGEND

- RESERVATION BOUNDARY
- RETAIL
- OFFICE
- RESIDENTIAL
- RETIREMENT
- INDUSTRIAL
- EDUCATION/TRAINING
- PUBLIC USE
- ACTIVE RECREATION
- PASSIVE RECREATION
- CULTURAL
- NATIONAL GUARD
- RETREAT
- DEVELOPMENT RESERVE
- LAKE
- TOWN CENTER

SOURCE:
 FMRRR NOVEMBER, 1997d
 (FORT McCLELLAN COMPREHENSIVE REUSE PLAN, IMPLEMENTATION STRATEGY)



PARSONS ES PARSONS SBA ST LOUIS, MISSOURI	MOBILE DISTRICT US ARMY CORPS OF ENGINEERS MOBILE, ALABAMA
ENVIRONMENTAL IMPACT STATEMENT	
DISPOSAL AND REUSE OF FORT McCLELLAN, ALABAMA	
FMRRR REUSE PLAN	
DATE: AUG., 1998	FIGURE NO. 2-3

Retail/Commercial (228 acres). The reuse plan reflects a combination of small-scale service retailing and larger-scale regional shopping facilities comprising a total of approximately 500,000 SF of floor area. A new “town center,” consisting of a variety of community (i.e. post office, meeting hall, commercial recreation) and retail uses, is proposed for that portion of the disposal area focusing on the existing commercial area around the Post Exchange and commissary. In addition to two sites along State Highway 21, a series of retail sites are proposed throughout the reuse area to serve the proposed neighborhoods. A large site, located at the intersection of the proposed Eastern Bypass and the McClellan Parkway, is proposed as a commercial complex to serve a wider market area.

Industrial (924 acres). Three separate areas are proposed for general and light industrial uses focusing on the existing industrial and warehousing areas in the disposal area. A total of approximately 4,500,000 SF of industrial floor area are proposed for development. These areas include several large industrial parcels north of the office and research park adjacent to the proposed McClellan Parkway and extended rail line, and the McClellan Rail Industrial Park east of the McClellan Parkway.

Active Recreation (771 acres). Three golf courses, including the existing Cane Creek Golf Course and two additional courses proposed to complement new residential development, comprise the major components of the active recreation element of the reuse plan. Other active recreation uses proposed include the existing Guillion Recreation Fields which are intended to serve as a major recreation area for both the proposed new neighborhoods as well as the surrounding communities.

Other Recreation/Open Space. Additional recreation uses proposed in the plan include a “town center park” and potentially a small lake within a 98 acre park parcel adjacent to the proposed “town center”, and two other parks, including Reilly Lake Park and Buckner Circle Park.

Other proposed recreational uses, comprising an additional 500 acres, include the reservation of 135 acres for the expansion of Lagarde Park; 350 acres for Yahoo Lake and an associated retreat center; and the retention of 15 acres for the Women’s Army Corps (WAC) Foundation. A series of trails are proposed for connecting the various open spaces and neighborhoods.

Passive Recreation/Development Reserve/Wildlife Refuge. The remainder of the reuse area is proposed for passive recreational uses and open space. Included in this land use category are wetlands, and the steep forested areas characterizing the eastern three-fifths of the disposal area. Large portions of this area are under consideration for a wildlife refuge.

The proposed Mountain Longleaf National Wildlife Refuge (FMRRA, 1997d) is anticipated to be developed and maintained by the USFWS in partnership with the ADCNR - GFD on approximately 10,000 to 12,000 acres of unique habitat within the FMC disposal area. Although the boundaries of the proposed wildlife refuge have not been determined, the objectives of the refuge include:

- Preserve and enhance the natural MLP ecosystem;
- Help perpetuate Neotropical Migratory Bird resources;
- Preserve the natural diversity and abundance of fauna and flora of the area with special emphasis on endangered and threatened species;
- Provide compatible, wildlife-dependent recreational opportunities such as hunting, fishing, wildlife observation, photography, hunter education, etc.; and
- Promote an understanding and appreciation of fish and wildlife ecology.

DOI/USFWS, as the federal proponent for the Mountain Longleaf Wildlife Refuge would be responsible for completing NEPA analysis. USFWS’s analysis would need to consider the environmental and economic impacts of establishment and operation of the refuge.

National Center for Domestic Preparedness. The FMDC Final Reuse Plan (FMRRA, 1997d) includes the establishment of a National Center for Domestic Preparedness (NCDP) for training first responders to

domestic terrorists acts (FMRA, 1997d) (NCDP became Department of Justice Center for Domestic Preparedness (DOJ CDP) on June 1, 1998; for FEIS NCDP and DOJ CDP are synonymous). The focus of the training would be to prepare relevant State and local first responders to deal with terrorist acts involving weapons of mass destruction. The Department of Justice (DOJ) is designated in Senate Report 105-48 as the agency charged with directing and coordinating activities at the Center. DOJ is working with the Army and FMDC on proposals and detailed plans of staffing, instruction program, and facility needs, including the use of the CDTF. The establishment of the NCDP at FMC and the development of training is proposed to occur in stages and is expected to incorporate the following elements:

- Initial establishment of NCDP planning cell by DOJ at FMC. This was accomplished on June 1, 1998 as a tenant activity of FMC.
- Partnership of public and private organizations providing quality, cost effective training for first responder professionals and their communities.
- Three initial training courses will be established; Awareness; Operations; and Incident Command. Initial first responder classes will be initiated between August 1998 and post-closure using existing training facilities that have excess capacity and supported by FMC garrison on a reimbursable basis.
- Provide world-class operational and technical environment (facilities/personnel) to evaluate concepts, doctrine, and equipment; to conduct training, assessment and sustainment; to conduct exercises; and to assist responder professionals and their communities.
- NCDP training proposes to utilize a variety of FMC facilities including the: Chemical Defense Training Facility (CDTF); Military Operations in Urbanized Terrain Training (MOUT) facility; Security Operational Test Site (SOTS); Emergency Operations Center (EOC); billeting rooms; classroom(s); Reilly Airfield; and Hospital Emergency Room area.

The DOJ, as the federal proponent for the NCDP, would be responsible for completing NEPA analysis. DOJ's analysis would need to consider the environmental and economic impacts of establishment and operation of the NCDP at FMC, including the continued use of the CDTF and its source of chemical agents. DOJ has developed an Environmental Assessment (EA) for the conduct of training prior to closure and is preparing NEPA analysis for post-closure training.

2.5 FRAMEWORK FOR EIS ANALYSIS

The BRAC process of property disposal includes predisposal activities and real estate disposal, which in turn will allow for subsequent reuse and development. **Predisposal activities** include contaminated site cleanup, ordnance and explosives removal, protection of significant cultural resources, provision for interim use (as applicable), and implementation of caretaker operations for vacated lands and facilities after closure but prior to property transfer to new owners. **Disposal activities** include a real estate screening process that identifies potential reuse entities, including federal, state, and local organizations and homeless assistance providers.

Property disposal can be accomplished with or without "**encumbrances**". Encumbered disposal involves transferring the property with conditions imposed by the Army. These conditions might be required to protect Army interests, such as easements to ensure access to a retained piece of property in order to address on-site contamination problems or reuse restrictions designed to limit certain types of future activities based on the past uses of a particular parcel. Encumbrances (in the form of notifications, deed restrictions, deed covenants, etc.) may also be appropriate to preserve or protect federally protected resources such as jurisdictional wetlands, significant cultural resources, or federally listed threatened or endangered species. Unencumbered disposal would result in transferring property with no Army-imposed conditions. Encumbered and unencumbered disposal alternatives are further described in Section 3.

Reuse development, a secondary effect of disposal, requires extensive community involvement. The local community has established the FMDC to produce a reuse development plan for the surplus property to be made available to the community.

2.6 PREDISPOSAL ACTIVITIES

2.6.1 Cleanup of Contaminated Sites and Ordnance/Explosives

The process leading to the transfer of excess Army property includes certification that properties are suitable for disposal, and that environmental cleanup of contaminated sites is accomplished to the degree required by proposed future uses, and are protective of human health and the environment.

2.6.1.1 Hazardous, Toxic, and Radiological Waste (HTRW). Environmental restoration activities at FMC will focus on mitigating identified hazardous contamination caused by past training and waste disposal practices. To address the potential dangers of contamination, the DOD has implemented an Installation Restoration Program (IRP) at all installations. At FMC, the responsibility for the completion of the IRP is coordinated by the FMC Directorate of Environment. The U.S. Environmental Protection Agency (EPA) Region IV, the Alabama Department of Environmental Management (ADEM), and the Army have already formed the BRAC Cleanup Team (BCT), which will be responsible for the development and oversight of the cleanup decisions and activities at FMC.

The IRP includes three major phases: 1) Preliminary Assessment/Site Inspection (PA/SI) - the early investigatory stage, 2) Remedial Investigation/Feasibility Study (RI/FS) - the detailed investigatory stage at contaminated sites, and 3) Remedial Design/Remedial Action (RD/RA) - this phase includes the design of the selected cleanup alternative and the actual cleanup of the site (remedial action). To date the IRP process (and related studies) at FMC has included:

- Completion of Preliminary Assessment phases.
- Completion of some SI phase studies, and initiation of additional SI phase studies.
- Initiation of some RI/FS phase investigations including regional geologic studies in cooperation with the U.S. Geological Survey (USGS).
- Remediation activities include: the closure of the sanitary waste portion of Landfill #4; asbestos remediation and radon abatement; underground & above ground storage tank investigations and remediations; and radiological investigations and remediations.

In compliance with base closure requirements, FMC will undergo additional IRP investigations and remediations. The goal of this work is to facilitate the transfer and redevelopment of portions of the land to the local community. To facilitate environmental restoration, the installation BRAC Environmental Coordinator (BEC) formed a BRAC Cleanup Team (BCT) composed of the BEC, a representative of the USEPA Region IV, and a representative of ADEM. In accordance with DOD guidance (DOD, 1993a), the BCT is involved in the decision making process for the cleanup under BRAC.

Public participation in the environmental restoration process is separate and distinct from the process for this EIS. A Restoration Advisory Board (RAB) has been established which provides one of the avenues of input and recommendations from the communities to the BRAC Cleanup Team (BCT), regarding cleanup priorities to surplus property. As shown in Figure 1-1, the total restoration process will extend well beyond the timeline established for the completion of this EIS.

Under the Community Environmental Response Facilitation Act (CERFA), federal agencies are required to expeditiously identify real property offering the greatest opportunity for immediate reuse and redevelopment. Although CERFA does not mandate that the Army transfer real property so identified, the first step in satisfying the objective is the requirement to identify real property where Comprehensive Environmental Response and Liability Act (CERCLA) regulated hazardous substances or petroleum products were known to have been released or disposed of. To these ends, the Army has completed an

Environmental Baseline Survey (EBS) to identify areas at FMC where storage, release, or disposal of hazardous substances or petroleum products or their derivatives has occurred.

The EBS also identifies: non-CERCLA-related environmental or safety issues (i.e. asbestos, lead-based paint, radon, polychlorinated biphenyls (PCBs), radionuclides, and unexploded ordnance) that would limit or preclude the transfer of property for unrestricted use; completed or ongoing removal actions taken at the installation; and possible contamination on adjacent properties that could migrate to the FMC real property.

The EBS serves as a database describing all environmental conditions related to remediation issues. It also will be a contributing factor in formulation of the Base Cleanup Plan. Finally, the EBS is a major source of information in developing a Finding of Suitability to Lease (FOSL) for interim leases and a FOSL for leases in furtherance of conveyance following completion of National Environmental Policy Act (NEPA) analysis and Finding of Suitability for Transfer (FOST).

2.6.1.2 Ordnance and Explosives. Throughout its history, FMC Main Post has been used for artillery, crew-served, small arms, and other weapons training. Based upon historic uses, large portions of FMC may contain unexploded ordnance.

The presence of unexploded ordnance (UXO) on a BRAC parcel is primarily considered to be a safety hazard (In rare instances, constituents associated with UXO and ordnance training can result in CERCLA type contamination. In the event that such contamination is found at FMC, cleanup will be completed as described in subsection 2.6.1.1). The clean-up/removal of UXO is both a safety and ecological concern. All UXO concerns are addressed on a case by case basis. All land transfers involving UXO concerns will be reviewed by the Department of Defense Explosive Safety Board (DDESB) as required by AR 385-64 (USAEC, 1995b). The DDESB approval process for property transfer plans includes an evaluation of:

- The intended end use of the property;
- Characterization of residual UXO;
- Degree of investigation and/or remedial action of UXO;
- The extent of safe use without further removal action; and
- Environmental/Ecological impacts associated with UXO investigations and removal.

DDESB approval of UXO removal plans is required for all UXO removal programs specifically undertaken to prepare a property for reuse. DOD guidelines for UXO removal includes the completion of an Engineering Evaluation/Cost Analysis (EE/CA) prior to the transfer of property. The EE/CA will determine the extent of UXO throughout the disposal area and present recommendations concerning the reuse type's that can be supported within the disposal area and cleanup/removal recommendations. The EE/CA process also includes public participation which allows the communities concerns and priorities to be addressed.

It is anticipated that FMC excess property will be disposed of by a number of smaller parcels versus disposal of the entire installation at one time. Therefore, specific UXO investigations and removal actions will be accomplished over a period of several years based on disposal priorities, planned reuse, complexity of proposed removal actions, removal technology, funding availability/costs, environmental impacts, and other pertinent factors. Specific areas pertaining to UXO and ordnance usage at FMC are discussed in greater detail in Section 4, (Affected Environment) of this EIS.

2.6.2 Cultural Resources.

Buildings, structures, landmarks, and other areas or features of historical significance or interest are protected under the National Historic Preservation Act of 1966 (NHPA). The property to be disposed of at FMC includes a number of significant cultural resources. "Significant" cultural resources are defined as any prehistoric or historic district, site, building, structure, landscape, or object that meets the criteria established for listing on the National Register of Historic Places (NRHP). The Army is proceeding with inventories and assessments of FMC property to identify cultural resources that have the potential for eligibility to the NRHP. The status of these studies is summarized in subsection 4.12 of this EIS.

It was not possible to complete the inventory and evaluation of FMC National Register eligible properties within the time-frame of this EIS.

A site-specific Programmatic Agreement on the disposal of properties at FMC has been developed in association with the Advisory Council on Historic Preservation and the Alabama State Historic Preservation Officer. This Programmatic Agreement (PA) is included in Appendix B of this EIS. The Army will assure NHPA Section 106 compliance before transfer or sale of property.

2.6.3 Interim Uses.

Prior to disposal, the Army may execute leases to facilitate state and local economic adjustment efforts and to encourage economic redevelopment. Pending issuance of a ROD regarding the NEPA analysis for disposal and reuse of FMC, the Army may not make commitments that would significantly affect the quality of the human environment or irreversibly alter the environment in a way that would preclude a reasonable alternative for disposal of the property. Hence, leases in furtherance of conveyance prior to completion of the NEPA analysis of disposal and reuse and issuance of a ROD will not be considered. The Army may, however, enter into an interim lease having a duration beyond the expected completion date of the NEPA analysis of disposal and reuse of the installation. In such a case, the Army would consult with the FMDC prior to entering into the lease. Such interim leases could only allow limited use of the property and facilities such that no reasonable reuse options would be foreclosed prior to the publication of the basewide disposal NEPA analysis conclusions. Prior to granting any lease, the Army would comply with NEPA requirements relevant to the lease and would prepare a Finding of Suitability to Lease (FOSL) to document the environmental condition of the property.

2.6.4 Caretaker Status.

Existing facilities and support equipment and systems at FMC represent a major asset to encourage and facilitate reuse after the Army completes its disposal action. Following closure, FMC facilities and equipment will be subject to caretaker operations until transfer or conveyance to new owner(s) occurs. Under caretaker status, the Army will conduct minimal maintenance procedures as required to preserve and protect those facilities and items of equipment to the extent allowed by regulation and available funding.

In consultation with the FMDC, the Army will determine the duration and required levels of maintenance for the installation's facilities and equipment, in accordance with DOD guidance. Initial levels of maintenance would not exceed the standard of maintenance in effect on the date of closure approval; would not be less than the maintenance required to be consistent with government standards for excess and surplus properties; and would not require any property improvements, including construction, alteration, or demolition, except when the demolition would be required for health, safety, or environmental purposes, or would be economically justified in lieu of continued maintenance expenditures.

In the event the Army completes its NEPA analysis of disposal and reuse prior to the planned closure date (September 30, 1999), the time period for the initial levels of maintenance would normally be no longer than one year after closure of the installation. In the event the Army does not complete its NEPA analysis of disposal and reuse prior to the planned closure date, the time period for the initial levels of maintenance and repair would normally be 180 days after the Secretary of the Army approves the NEPA analysis. The Army may extend the time period for the initial levels of maintenance of property still under its control for an additional period if it determines that the FMDC is actively implementing its redevelopment plan and that such levels of maintenance are justified.

Once the time period for the initial or extended levels of maintenance elapses, the Army would reduce maintenance to levels consistent with federal government standards for excess and surplus properties (i.e., 41 CFR Part 101-47.402 and Part 101-47.4913). Initiation of indefinite caretaker status would result in continued use of minimal facilities needed to ensure the appropriate levels of safety, security, and health standards for the entire installation. Maintenance activities would occur on the entire installation or those portions not yet transferred or conveyed.

Typical maintenance activities that would continue while in caretaker status include the maintenance of fenced areas to ensure adequate security, mowing and weed control on grounds within the cantonment area for aesthetics and fire protection, and trimming and maintenance of trees and brush to avoid interference with roadways, fences, or buildings. Diseased trees and vegetation would be identified and removed as appropriate within the cantonment area. Irrigation and erosion control would be addressed as required. Natural resources management, hunting, and wildlife management would also be continued, but at reduced levels. Security at FMC would be conducted as in the town and county jurisdictions within the surrounding area.

2.7 DISPOSAL PROCESS

Real estate disposal for Army BRAC properties is governed by the 1990 Base Closure Act, as amended; the Federal Property and Administrative Services Act of 1949, as amended; the Surplus property Act of 1944 (50 U.S.C. 162); and Federal Property Management Regulations. In disposing of property, the Army must also comply with the 1994 Defense Authorization Act, the Base Closure Community Redevelopment and Homeless Assistance Act of 1994 (24 CFR 581; 41 CFR 101-47; 45 CFR 12a), and other laws and regulations (including Title 10 of the U.S. Code and Army regulations) affecting the disposition of federal real property.

The Army's real estate disposal process, as it will be applied at FMC, is described in the following subsections.

2.7.1 Real Estate Screening Process & Results.

The method of disposal is determined, in part by a three-step screening procedure that assesses the demand for the facilities by the DOD, other federal agencies, homeless assistance providers, and state and local agencies/organizations.

- **DOD and Federal Agency Screening.** The screening first offers the property to other DOD and federal agencies. A DOD or other federal agency indicating an initial interest must follow up with a firm proposal for use of the property. Under the 1994 Defense Authorization Act, DOD and federal screening is completed within six months after the date of approval of the BRAC recommendation. Federal screening has been completed for FMC and no formal requests for FMC property were received.

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- **Local Redevelopment Authority (LRA) Screening.** Pursuant to the Base Closure Community Redevelopment and Homeless Assistance Act of 1994 (BCCRHAA), which amended the Defense Base Closure and Realignment Act of 1990, property that is surplus to the Federal Government's needs is to be screened via an LRA's soliciting notices of interest from state and local governments, representatives of the homeless, and other interested parties. An LRA's outreach efforts to potential users or recipients of the property include working with the Department of Housing and Urban Development (HUD), and other federal agencies that sponsor public benefit transfers under the Federal Property and Administrative Services Act. Incorporating the notices of interest submitted to it, the LRA (FMDC) then prepares a redevelopment plan identifying the overall reuse strategy for the installation.

Expressions of interest were received from 32 local agencies/organizations. These expressions of interest, received by FMDC, are summarized on Table 2.2.

- **Formal State and Local Screening.** The formal state and local screening required by the Federal Property Management regulations is managed by the U.S. Army Corps of Engineers (USACE). The formal state and local screening process does not commence until HUD approves the FMDC's final adopted redevelopment plan. HUD approval includes being satisfied that the plan meets the provisions of the Base Closure Community Redevelopment and Homeless Assistance Act of 1994 (BCCRHAA) and the McKinney Act on a community-wide basis for homeless assistance.

State and local entities and other public agencies may pursue two options to acquire property via the state and local screening process: public benefit conveyance or negotiated sale. Public-benefit conveyances include use restrictions and are typically granted for public purposes such as aviation, education, health, parks and recreation and historic monuments. A public benefit must be sponsored by a federal agency to be considered for transfer. Some public benefit transfers may be at less than fair market value. Negotiated sales are for public purposes and are at fair market value.

Additionally, an implementation LRA will be formed, separate from the current FMDC (the planning LRA), which will have the authority to obtain property via an economic development conveyance (EDC). An EDC is made only to the implementing LRA approved by the DOD Office of Economic Adjustment.

2.7.2 Disposal as a Package versus Disposal by Parcels.

Upon completion of all required hazardous waste cleanup activities and cleanup that may be required for other environmental conditions such as fuel, unexploded ordnance or other substances, property subject to disposal under BRAC will generally be disposed of by parcels based on 1) recipient, 2) type of transfer, 3) availability of property, and 4) ability to complete FOST. However, the covenant assuring completion of hazardous waste cleanup under CERCLA, discussed in subsection 2.6.1.1, applies to conveyances of property from the Army to any non-federal entity. To assist the FMDC in achieving its reuse objective of job creation, the Army may identify substantial areas or discrete parcels within the disposal area that require no further action under CERCLA. These parcels may appropriately be conveyed following completion of the EIS process, determination that the parcels are not required for on-going military missions, and the transfer is consistent with the approved FMDC reuse plan.

Table 2.2 Expressions of Interest Received by FMDC

Organization	Facilities of Interest
Alabama Dept. of Conservation and Natural Resources	Acreage and Facilities
Alabama Dept. of Corrections	Facilities and Personal Property
Alabama Dept. of Public Health	Personal Property (Dentistry)
Alabama Dept. of Public Safety	Facilities and Personal Property
Alabama Dept. of Transportation	Real Estate (Eastern By Pass)
Alabama Forestry Commission	Acreage and Personal Property
Alabama Institute for Deaf and Blind	Facilities
Anniston City Schools	Facilities, Acreage, and Personal Property
Anniston Water & Sewer Board	Acreage, Treatment Plant System, and Personal Property
Ayer's State Technical College	Acreage, Facilities, and Personal Property
Calhoun County Area Alliance and Social Interest	Housing, Facilities, Engineer Facilities, Acreage, and Personal Property
Calhoun County Board of Education	Facilities, Library, Acreage, and Maintenance Shop
Calhoun County Commission	Acreage, Facilities, and Personal Property
Calhoun County Economic Development Council	Facilities, Acreage, and Personal Property
Calhoun County Health Department	Personal Property (Dentistry)
Calhoun County Sheriff	Personal property and Facilities
Calhoun County Soil and Water Conservation District	Acreage
Central Church of Christ	Facilities
City of Anniston	Facilities, Personal Property, Golf Course, Acreage, and Athletic Facilities
City of Anniston & East Alabama Regional Planning and Redevelopment Commission	Maintenance Facility and Personal Property
City of Ohatchee	Facilities, Acreage, Ranges, Facilities, and Landfill
City of Piedmont	Personal Property
City of Weaver	Acreage, Facilities, and Personal Property
Community Enabler Developer	Facility
Educational Consortium	Facilities and Personal Property
Jacksonville Day Care Center	Child Development Center
National Association of Letter Carriers	Facility and Personal Property
NE Alabama Business Incubator System	Facilities and Personal Property
New South Investment and Property Management	Residential Areas and Personal Property
Opportunity Center Foundation of NE Alabama	Facilities and Personal Property

Table 2.2 Expressions of Interest Received by FMDC

Organization	Facilities of Interest
Oxford City Board of Education	Portable Facilities and Personal Property
Women's Army Corps Foundation	Facilities and Personal Property

Source: FMRRA, August 1997

2.8 DISPOSAL METHODS

Methods available to the Army for property disposal include transfer to another federal agency, public benefit conveyance, economic development conveyance, negotiated sale, and competitive sale. The following is a description of each method.

- **Transfer to another Federal Agency.** The Army would transfer the real property to another federal agency.
- **Public-Benefit Conveyance.** State or local government entities and other qualified public agencies may obtain property (at or below fair market value) when sponsored by a federal agency for uses that would benefit the public such as health and education, parks and recreation, wildlife conservation, or public health.
- **Economic Development Conveyance (EDC).** The 1994 Defense Authorization Act provides for conveyance of property to a redevelopment authority at or below fair market value using flexible payment terms. The EDC is intended to promote economic development and job creation in the local community. An EDC is not intended to supplant other federal disposal authorities and cannot be used if the proposed reuse can be accomplished through another authority. To qualify for this conveyance a local redevelopment authority (LRA) must submit a request to the Department of the Army describing its proposed economic development and job creation program. The FMDC (and its predecessor, the FMRRA) has been recognized by the DOD as the planning LRA for FMC. An implementing LRA, which has the authority to obtain property via an EDC, has not yet been approved by DOD. It is anticipated that an approved implementing LRA will be recognized prior to the closure of FMC.
- **Negotiated Sale.** The Army would negotiate the sale of the property to state or local agencies or private entities at fair market value.
- **Competitive Sale.** Sale to the public would occur through either an invitation for bids, an auction, or Request for Proposals (RFP).

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Alternatives



3.1 INTRODUCTION

This section describes alternatives to the primary Army action (property disposal) and to the secondary action (property reuse) to be accomplished by other parties. Disposal alternatives have been structured to assist the Army in deciding whether to dispose of the property with or without restrictions, or “encumbrances” as they will be referenced in this Environmental Impact Statement (EIS). Encumbered versus unencumbered disposal alternatives will be evaluated along with a no action alternative.

Future reuse of excess Fort McClellan (FMC) property is analyzed in the context of land use intensity levels as defined in subsection 3.4. Alternatives based on land-use intensity have been formulated to inform Army decision-makers and the public of environmental impacts expected to occur given the reasonable range of reuses future property owners might implement. The Fort McClellan Development Commission (FMDC) reuse plan was a primary factor considered in developing the reuse alternatives for the effects analysis in the Army’s National Environmental Policy Act (NEPA) review process for the disposal action. Use of the reuse plan in this manner meets the requirement that the reuse plan be treated as part of the proposed federal action. The alternatives evaluation process is shown in Figure 3-1.

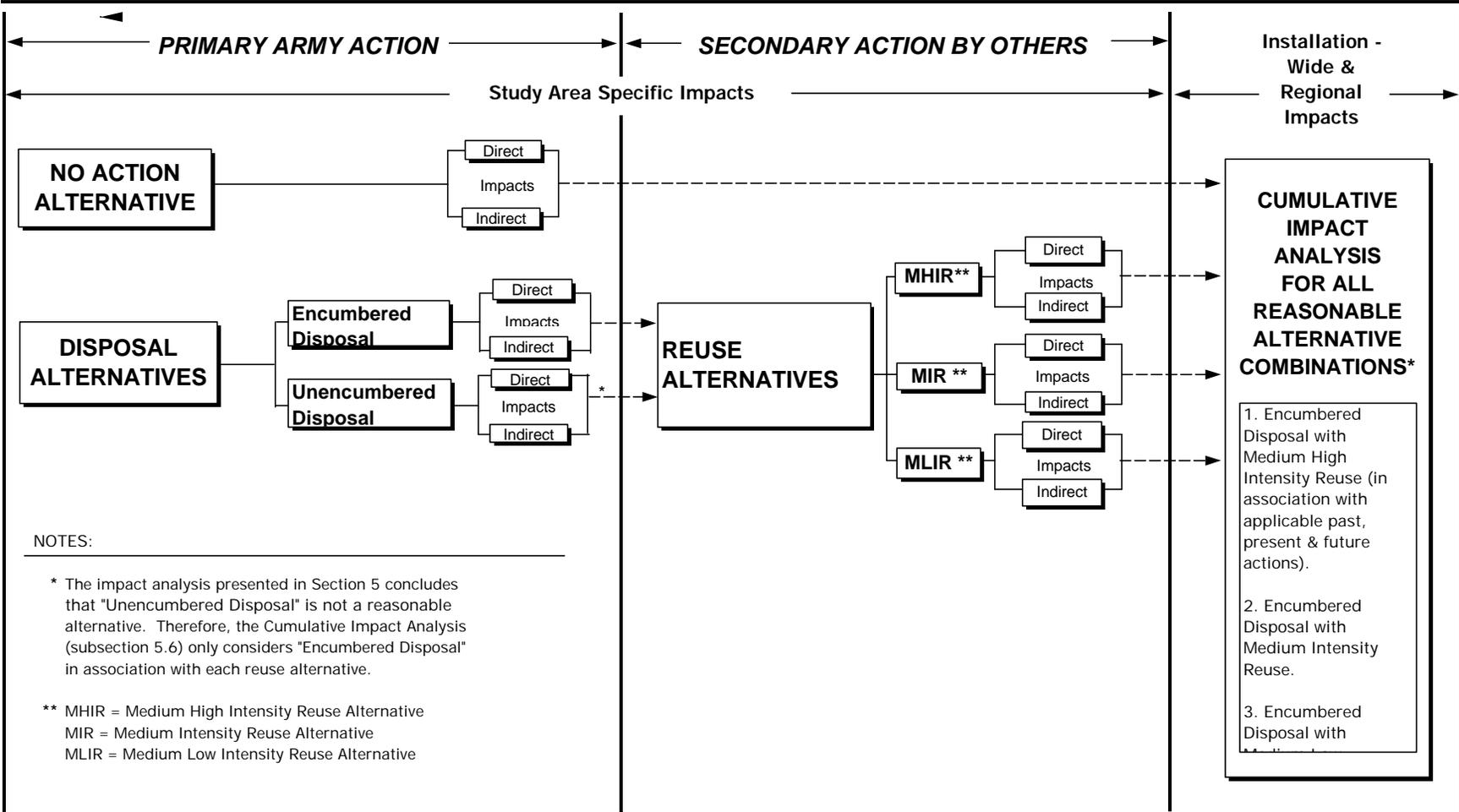
The Army’s preferred disposal alternative is encumbered disposal, as described in Section 2. The Army expresses no preference with respect to reuse alternatives since that decision will be made by others.

3.2 NO ACTION ALTERNATIVE

Under the No Action Alternative, the Army would not dispose of the property but would maintain it in caretaker status. Since the specific dates for disposal are presently unknown, the duration of caretaker status cannot be predicted; it could continue for an indefinite period. Maintenance activities would be reduced to the general level described in subsection 2.6.4. Caretaker services may be provided directly by the Army or maybe contracted to a provider organization. One option available to the Army is the potential of FMDC providing the caretaker services under a Community Caretaker Agreement. Regardless of who directly provides the services, Caretaker Services would include the following activities.

- Inspection, maintenance, and use of utility systems, telecommunications, and roads to the extent necessary for caretaker operations and funding availability.

Figure 3 - 1
Alternative Evaluation Process
Fort McClellan Disposal and Reuse FIS



Source: Parsons ES/HBA

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- Periodic maintenance of landscaping around unoccupied structures, as necessary, to protect them from fires or nuisance conditions.
 - Maintenance of access to permit servicing of publicly owned or privately owned utility or infrastructure systems.
 - Maintenance of security patrols, security systems, fire prevention, and protection services.
 - Continuation of natural resources management programs including land management, pest control, forest management, and erosion control, but at reduced levels. Additionally, agreement with other Agencies would be sought to maintain the mountain longleaf pine (MLP) ecosystem through the continuation of prescribed burns and other management procedures.
 - The Army would continue remediation or cleanup of contaminated sites under the Army's Installation Restoration Program (as discussed in subsections 1.3.8 and 2.6.1.1) and the cleanup of unexploded ordnance (UXO) at closed, transferred and transferring ranges as outlined in the Department of Defense (DOD) proposed Range Rule (as discussed in subsections 1.3.9 and 2.6.1.2).

3.3 DISPOSAL ALTERNATIVES

Pursuant to the Defense Base Closure and Realignment Act of 1990 and the BRAC 95 recommendations pertaining to FMC, continuation of operations at FMC is not feasible. There is no alternative to closure without further legislative direction. As discussed in Section 2, the Army is acting to implement BRAC 95 by closing FMC. Additionally, it is DOD policy to dispose of excess property no longer needed by DOD when it is feasible to do so. Consequently as a result of the mandated closure of FMC, the Army proposes to dispose of excess property at FMC. Interim actions include cleaning up hazardous waste contamination and removing UXO, caring for vacated facilities, and, as circumstances arise, making interim leasing arrangements. Disposal alternatives analyzed in this EIS are referenced as the "Encumbered Disposal Alternative", and "Unencumbered Disposal Alternative". The following subsections describe these alternatives in order to provide the basis for evaluation of potential impacts in Section 5, Environmental Consequences.

3.3.1 Encumbered Disposal

The Army BRAC NEPA methodology is designed to facilitate the reuse and redevelopment of excess property, and is accomplished in a manner that is consistent with the protection of significant environmental resources. Therefore, the process focuses on the identification of cultural, natural and manmade resources that must be used wisely or protected after ownership is transferred to non-Federal control. This is considered, in part, by preparing environmental baseline information during the initial stages of the NEPA process, and providing this information to the local redevelopment authority with the recommendation that this data be considered in formulating various reuse alternatives. The methodology uses the term "encumbrances" to describe valuable resources and any other constraints that influence reuse, such as retention of real estate easements, preservation of historical properties, protection of threatened or endangered species, or an extended property cleanup process. This methodology assists the local reuse authority to develop a reuse plan that satisfies community economic development goals, while protecting critically important resource values.

The Army may determine from the encumbrances identified that it may be necessary to impose legal constraints to future reuse as part of the property ownership transfer documents to: protect or preserve environmental values; promote human health and safety; comply with Federal law; reflect the results of negotiations with regulatory agencies; or to meet specific Army needs (e.g., easements to ensure access to a retained piece of property).

Typical encumbrances include such items as protection and preservation of threatened and endangered species, jurisdictional wetlands, regulatory floodplains, critical habitat, historic properties and sites, archaeological sites, provision of access to remediation and UXO clearance sites, and retention of

property easements and utility/infrastructure rights-of-way. Other types of advisory notices that may be identified by the Army for consideration by the local redevelopment authority include steep slope areas, soils that have development limitations, and the need to incorporate the results of the property screening process.

The presence of special materials, such as asbestos containing material (ACM), lead-based paints (LBP), polychlorinated biphenyls (PCBs), and radiological material require specific handling or disposition similar to those required for contaminated site cleanup. However, the presence of these special materials is usually handled as a restriction or notification during the property transfer process with any necessary actions being the responsibility of the new owner.

Encumbrances and their effects on reuse may vary, depending on the planned reuse. For example, a parcel that is underlain by contaminated groundwater may be considered encumbered for uses that would require the use of groundwater from the contaminated aquifer. The same encumbrance, however, would probably not adversely affect use for recreation that did not rely on groundwater use, as long as soil contamination was not also present.

The Army prefers to dispose of property with minimum encumbrances to future use and development. Consequently under this alternative disposal plan, not all parcels would necessarily have similar encumbrances, and some parcels may be transferred without any encumbrances.

Encumbrances Identified at FMC. The following encumbrances can be expected to apply at the time of transfer or conveyance of FMC property.

- **Wetlands.** As discussed in subsection 4.11.3 FMC includes a variety of wetland communities. Sections 401 and 404 of the Clean Water Act, and Executive Order (EO) 11990, Protection of Wetlands, contain provisions for the protection of wetlands (see subsection 1.5.2.2 for more detail). The protection to wetlands provided by the Clean Water Act (CWA) applies to both governmental and private users; consequently, in order to ensure the continued protection of wetland resources, the Army will notify the new owners of the responsibility to comply with the Clean Water Act if development is planned in or near wetlands.
- **Regulatory Floodplains.** As discussed in subsection 4.5.4, FMC includes a number of regulatory (100-year) floodplain areas. Protection of these floodplains (and procedures designed to ensure that flooding hazards are not significantly increased) are ensured by the requirement for any future owner to comply with the provisions of the National Flood Insurance Act and Flood Disaster Protection Act since these acts apply to both federal and private activities within designated floodplains and floodways. In addition, the Army must comply with the provisions of EO 11988, Floodplain Management, as part of the property disposal process. This requires the Army to determine whether the proposed action will occur in a floodplain; if so, consideration must be made of alternatives to avoid adverse effects and incompatible development in floodplains. Ultimately, the Army may impose restrictive covenants prohibiting land uses within regulatory floodplains to ensure compliance with EO 11988.
- **Threatened and Endangered Species.** As discussed in subsection 4.11.4 FMC does support or provide habitat for certain federally-listed endangered species (gray bat - endangered). Threatened and endangered species are protected under the Endangered Species Act (ESA). The disposal of FMC is considered to be a Federal agency action. Therefore, pursuant to Section 7 of the ESA, a Biological Assessment (BA) was prepared, in consultation with the U.S. Department of Interior — Fish and Wildlife Service (USFWS), for the listed species (gray bat) known to occur on the installation. The BA details the status of the gray bat on FMC and presents Project Design Features (PDF's) to reduce adverse impacts to the species. The PDF's include deed restrictions to be conveyed to future land owners that are protective of the gray bat and its habitat.
- **Cultural Resources.** FMC contains three historic districts (administrative, industrial, and ammunition storage districts), which contain 89 buildings which are eligible for nomination to the National Register

of Historic Places (NRHP) (see subsection 4.12). A Phase IIA archaeological study will occur to delineate the boundaries of the sites which are potentially eligible for the NRHP. Those sites which appear to meet eligibility criteria after the Phase IIA will be subject to Phase IIB. At that time, measures for the treatment of archaeological sites which are eligible for the NRHP will be negotiated. An encumbrance requiring protection of any properties found to be eligible for the NRHP would be passed on to new owner(s) as a condition of sale or transfer. To lessen or remove the deed restrictions requiring preservation, the deed would delineate a process for the new owner to consult with the State Historic Preservation Officer (SHPO) to arrive at a mutually agreeable and appropriate measure for mitigating the adverse effects of a proposed action.

- **Utility System Interdependencies.** Four boiler plants operate as central source of steam heat and domestic hot water to serve three areas that include multiple facilities at FMC. Such utilities operated as single system create interdependencies with future owners unless individual heating systems are provided to separate facilities. FMC's primary potable water source is provided by two non-federal suppliers. FMC owns the wastewater treatment plant that serves installation facilities, but this plant is currently operated by Operations Technologies, Inc. under a contract. These, and other utility systems, are described in detail in subsection 4.7. An encumbrance exists wherever a parcel's or facility's use depends on a common or intermediary provider of these services. As described in subsection 2.3, conveyance of the property assumes that the utility systems will be transferred in their current condition to independent providers that would continue providing service to existing facilities.
- **Access Easements.** Existing easements at FMC include those allowing use of property for utility distribution systems and allowing access to those utilities by the utility providers for maintenance and repairs. Existing easements represent an encumbrance on the future use of property, and would be transferred or conveyed to new owners. Easements could also be imposed on FMC excess property conveyed to future owners to provide access by the National Guard and Army Reserves to areas that would be transferred to them. Additionally easements could be imposed to provide future access to remediation sites.
- **Remedial Activities.** Operations at FMC, over its decades of existence, have resulted in localized hazardous waste contamination. The contaminants and substances of concern include volatile organic compounds, semi-volatile organic compounds, metals, dioxin, and other CERCLA contaminants. For the most part, details of site-specific contamination and site-specific remedial actions remain to be determined. As indicated in subsection 4.9, a variety of buildings and areas at FMC will be subject to some level of cleanup activity. In general, the level of cleanup provided at these buildings and areas will be consistent with the currently planned use for the building or area and will be protective of human health and the environment with potential special risk management considerations given to incorporate future reuse of the property. For example, industrial areas will be cleaned to established industrial standards, while residential facilities (including dependent schools) will be cleaned to residential standards. In conjunction with the remedial activities that might be required during an interim lease or upon conveyance, the Army would retain a right to conduct investigations and surveys; to have Government personnel and contractors conduct remediation field activities; and to construct, operate, maintain, or undertake any other response or remedial action as required.
- **Lead-Based Paint.** The Residential Lead-Based Paint Hazard Reduction Act of 1992 (Public Law 102-550) applies to buildings constructed prior to 1978 and transferred for residential use. Residential structures built before 1978 are assumed to have lead-based paint (LBP) and LBP hazards (as defined by the Act). Any results of the inspections by the Army are provided to prospective purchasers of the property who are allowed to conduct their own inspections. For buildings constructed before 1960, LBP hazards must be abated by the government or the new owner if the building is going to be used for residential purposes such as an individual residence, child care facility, community center, dependent school, etc. An appropriate notice is given to the prospective owners. The presence of unabated LBP or LBP hazards may preclude occupancy by some portions of the population. Upon transfer or conveyance, with respect to buildings constructed between 1960 and 1978, the Army will provide appropriate notice to the prospective owners.

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- **Friable Asbestos.** The presence of damaged, friable asbestos or asbestos containing material (ACM) may preclude occupancy of buildings by some portions of the population. Asbestos inspections are conducted and the results of the inspection are provided to the prospective owner. Any damaged, friable asbestos that is a threat to human health or the environment will either be remediated by the government or by the new owner. Asbestos remaining in excess buildings will be transferred or conveyed without removal, and the Army will provide appropriate notice to the prospective owners.
 - **Unexploded Ordnance (UXO).** There are numerous sites, at FMC, known or suspected of having UXO (see subsection 4.8). Together, these sites represent a large portion of the installation. The presence of UXO could present a hazard to numerous kinds of reuse activities such as construction, intrusive investigation of hazardous waste site contamination, and most types of agriculture or silviculture operations. If the UXO is not fully removed, restrictive covenants would be placed in transfer or conveyance documents to prohibit future owners from terrain-disruptive activities and to impose other requirements to ensure safety and protection of human health and the environment. The level of restrictive covenants will be determined following the more detailed Engineering Evaluation/Cost Analysis (EE/CA) which includes public participation and allows the community's concerns and priorities to be addressed.
 - **Other Unique or Sensitive Resources.** In addition to the resource factors described as encumbrances above, there are a variety of other natural resources that are of interest to the local community, regulatory agencies, special interest groups, and other interested parties. For example, the existence of the mountain longleaf pine (MLP) ecosystem represents a unique resource at FMC that warrants special consideration. However, since there are no federal or state laws that mandate protection of these other resource types, the Army does not intend to formally "encumber" or mandate future owners to protect these resources. Rather, the Army, through the preparation of this EIS, will fully inform the FMDC, the public and future owners of these other unique or sensitive resources, and encourage future owners to protect and preserve these resources to the maximum practicable extent. In essence, it is up to the local community, through the decisions made by the FMDC (or other authorized Local Reuse Authority (LRA)), to develop reuse plans that seek to balance the need for economic development with the protection of natural and cultural resources that exist on these lands. If the lands are obtained by the LRA or other public agencies, they could impose covenants or other institutional control to protect these resources.

3.3.2 Unencumbered Disposal

Unencumbered disposal would involve transfer or conveyance of the property with no conditions on its future use imposed by the Army or other agencies, or with the Army's having removed encumbrances that can be removed. Under this concept, the Army would convey property without an ability to: 1) protect human health and safety; 2) retain real estate easements for utility systems and roadways; 3) continue efforts to preserve historical properties; 4) provide protection to threatened or endangered species; 5) provide protection to other species; or 6) provide access required to support property cleanup processes. In order to eliminate potential encumbrances while at the same time protecting human health and safety, and the environment, the Army would need to remove all potential encumbrances. In theory, this would require the Army to remove all UXO, remediate all sites (including industrial sites) to residential standards, and restore all groundwater to either natural conditions or drinking water standards. Even these actions however, could not ensure protection of archaeological, historical or biological resources that may be found within the area being disposed of. Additionally, removal of certain encumbrances, is either infeasible or impracticable due to the need to: 1) continue to provide essential public services; 2) comply with statutory regulations; 3) meet the continued needs of the Army; 4) avoid unacceptable environmental damage; or 5) encourage fiscal stewardship. For example, elimination of utility easements could result in the loss of essential services such as water and electricity distribution, and sewage collection and treatment, etc.

The Army examines the potential for removal of encumbrances to determine feasibility, costs, and other issues that could be involved in transfer or conveyance of property in an unencumbered status. Removal of encumbrances (or creation or retention of them) are considered in light of land use planning flexibility, market value, environmental concerns, potential increased management burdens on subsequent owners, and the potential for future property owners to be liable for failure to comply with encumbrance-related requirements.

Subsection 5.3 provides a discussion regarding impacts associated with both the encumbered and unencumbered disposal alternatives as it applies to each of the resource categories evaluated in this EIS.

3.4 REUSE ALTERNATIVES

Upon the closure of activities at FMC, much of the land and facilities at FMC will become excess to Army requirements, and as noted in subsection 3.3 it is DOD policy to dispose of excess property. Consequently, the Army plans to dispose of the excess property at FMC where feasible. Depending upon numerous factors, including information presented in this EIS, disposal of the excess property at FMC might occur as a single event, or as a series of transactions involving the same or several new owners over an extended period of time. Regardless of the method of disposal, timing, or identity of new owners, reuse of the excess property at FMC is reasonably foreseeable. Consistent with statutory requirements, this EIS treats the reuse plan as the primary factor in developing, and as part of, the proposed action and alternatives.

The President's Council on Environmental Quality (CEQ) regulations require evaluation of reasonably foreseeable actions and evaluation of associated environmental impacts, without limitation on the party conducting the evaluation. Accordingly, reuse of the property is evaluated as an action secondary in time, following the Army's primary action of closing FMC and disposing of the excess facilities and land. The following subsections discuss the methodology used to define the reuse alternatives. This EIS analyzes reuse of FMC, which is expected to occur. However, the nature of reuse cannot be identified precisely. The Army considers the FMDC Reuse Plan as the primary factor in defining the reuse alternatives to be considered, and evaluates that reuse plan for potential environmental effects.

3.4.1 Development of Reuse Alternatives

Reuse planning for FMC consists of establishing reuse objectives, planning for compatible land uses that support the community's needs, and marketing among potential public and private-sector entities to obtain interest in use of the property. The reuse planning process is dynamic and often dependent on market and general economic conditions beyond the control of the reuse planning authority.

In recognition of the dynamics inherent to reuse planning, the Army uses intensity-based probable reuse scenarios to identify the range of reasonable reuse alternatives required by NEPA and DOD implementing directives. That is, instead of speculatively predicting exactly what will occur at a site, the Army establishes ranges or levels of activity that reasonably *might* occur. These levels of activity, referred to as intensities, provide a flexible framework capable of reflecting the different kinds of uses that could result at a location. The evaluation of these intensity-based reuse alternatives is also based on consideration of encumbrances that the Army expects to impose on future owners.

3.4.2 Land Use Intensity Categories Described

The Army has established five intensity-based levels that may be considered in formulating an appropriate range of reuse alternatives for any given disposal site and to support the evaluation of potential effects of facility redevelopment (DOA, 1995). These intensity use levels are referenced as: 1) low intensity reuse (LIR), 2) medium low intensity reuse (MLIR), 3) medium intensity reuse (MIR), 4) medium high intensity reuse (MHIR), and 5) high intensity reuse (HIR). At any given installation, analysis of all five levels of intensity might not be appropriate due to historical usage, physical limitations, or other reasons.

The five levels of reuse intensity can be viewed as a continuum. At the low end of the scale is the LIR which represents a minimal level of activity, such as might be found in undeveloped lands or in uses not requiring substantial building or infrastructure improvements (e.g., parks or open-space recreation areas).

At the high end of the scale is the HIR which approximates the maximum amount of activity that could occur over a given area. There are several "indicators" of intensity which can be used to measure and compare impacts. These indicators include the density of people at a location (i.e. employees or residents per acre), the amount of building floor space per acre (identified as the floor area ratio or "FAR"), and overall development ratio (based on the amount of developed property in relation to the total amount of property subject to land use planning at a given location). Other intensity indicators include the potential number of vehicle trips generated as a result of the type and density of the activity; rates of utility consumption (electricity, natural gas, water); and, the percent of impervious surface (i.e., buildings, parking lots, streets) associated with a particular land use type and density.

Development of intensity parameters that are appropriate for any given site is based on several sources, including: existing land use plans, zoning regulations and development standards for various types of projects and planning jurisdictions; land use planning reference materials; and, prior Army BRAC land use planning experience. As a result of evaluating various types of intensity indicators in light of their applicability to Army lands subject to BRAC action, the Army has selected five representative and illustrative intensity parameters that may be used to support alternative reuse plan formulation. These parameters are:

- **Residential Density.** This intensity parameter indicates the number of dwelling units per acre, which subsequently can be used to estimate resident population, traffic generation and utility consumption demand.
- **Employee Density (General Space).** This parameter identifies the number of square feet of building space (office, commercial, industrial) available per employee, which can be used to estimate total employment and traffic generation.
- **Employee Density (Warehouse and Storage Space).** This parameter indicates the number of square feet available per employee engaged in warehouse or storage activities at an installation. Only built, fully enclosed, and covered storage space is calculated, with shed or open storage areas excluded from this computation. In describing Army uses of facilities, estimates of the number of employees engaged in warehouse or storage operations are used to determine the portion of the installation workforce in this employee density category.
- **Floor Area Ratio (FAR).** This ratio reflects the magnitude or intensity of building development on a site, and is the ratio of building space to total site area. For example, a 4-story building having a 5,000-square-foot footprint on a 1-acre site would represent a FAR of 0.46 (20,000 square feet of floor space divided by 43,560 square feet (1 acre) of land area).
- **Development Ratio.** This indicator of intensity is based on the amount of developed property in relation to the total amount of property subject to land use planning at a given location. Developed property includes the acreage of not only those specific sites on which structures have been erected, but also immediately adjacent areas capable of being easily served by existing infrastructure elements such as roadways, electrical service, water and sewer, natural gas, heating steam, and telecommunications systems. For purposes of this ratio, developed property includes buildings, roadways, parking lots, and other structures such as storm water retention basins. The developed property indicator is expressed as the ratio of acres of developed property to the whole acreage within a particular planning unit. This indicator is useful to provide a general estimate of the degree of buildout, or potentially full development, that has occurred at a location.

3.4.3 Application of Intensity Categories

Based on conditions at FMC at the time that the BRAC 95 closure decision was announced, the overall use of FMC is characterized as low to medium low intensity. The total floor area of all facilities is approximately 6,083,000 square feet (565,124 square meters) (EDAW, 1996) distributed over 18,520 acres (7,476 hectares), resulting in a FAR of 0.008. This floor space consists of approximately 3,002,000 square feet (278,892 square meters) of housing, and 3,081,000 square feet (286,232 square meters) of non-residential uses (training, industrial, office/administration, commercial, medical, recreation and community uses). The 4,405 installation employees (including permanent party military, DOD and other civilians) occupying the 3,081,000 square feet of general space results in an employee density of 700 square feet per employee. There are 8,955 housing units (including 7,968 enlisted barracks spaces) at FMC, resulting in an overall residential density of 0.46 units per acre. The overall development ratio for the excess property area is approximately 0.08.

3.4.4 Local Reuse Plan and Development of Reuse Alternative Intensities

DOD policy states that the local community's reuse plan (to the extent that it is available and timely) will be used to define the proposed reuse action, and serve as a basis for the required NEPA analysis of reuse options. In August 1997, the Fort McClellan Reuse and Redevelopment Authority (FMRRA) (the predecessor of the FMDC) made available to the Army their Fort McClellan Comprehensive Reuse Plan, Phase 2 Report Preferred Land Use Plan, June 1997 (FMRRA, 1997b). This version of the reuse plan was used to prepare the Reuse Alternatives in the Draft EIS and Final EIS. In December, 1997 the FMDC made available to the Army their final reuse plan entitled "Fort McClellan Comprehensive Reuse Plan, Implementation Strategy", dated November 1997 (FMRRA, 1997d). This final reuse plan (November 1997) was evaluated by the Army and compared to the June 1997 version used in the preparation of the EIS. The development intensities and acreages between the June 1997 and November 1997 plans are similar and both are consistent with the Medium High Reuse Alternative (MHIR) presented later in this subsection. The Implementation Strategy completed in November, 1997 (similar to its predecessor plan the Preferred Land Use Plan completed in June, 1997) describes their final plan for adoption and action by the Commission. The FMDC Plan provides a framework for the reuse and development of FMC through the year 2020 and beyond. The Plan seeks to balance the many interests of the local community with the realities of the market, site, and the existing infrastructure. The Plan's redevelopment focus is on the western part of the installation and includes the NCDP, residential development, a planned retirement community, retailing, a variety of types of employment activity, training facilities, recreation, and areas devoted to several special uses with a majority of the living areas south of Cane Creek and the majority of the working area north of Cane Creek. The general land use categories and acreage presented in the FMDC reuse plan, and utilized in the development of the reuse alternatives evaluated in the EIS, are summarized in Table 3.1 and Figure 2-3. Summary elements of the FMDC (FMRRA) Final Plan are presented in Appendix F. The FMDC Plan does not represent the highest level of development intensity possible, but rather a more probable and attainable intensity level based upon FMDC analysis of the existing market and its ability to absorb additional development, public and private investment requirements, and environmental impacts.

Table 3.1 Summary of FMDC Preferred Land Use Plan Acreage*

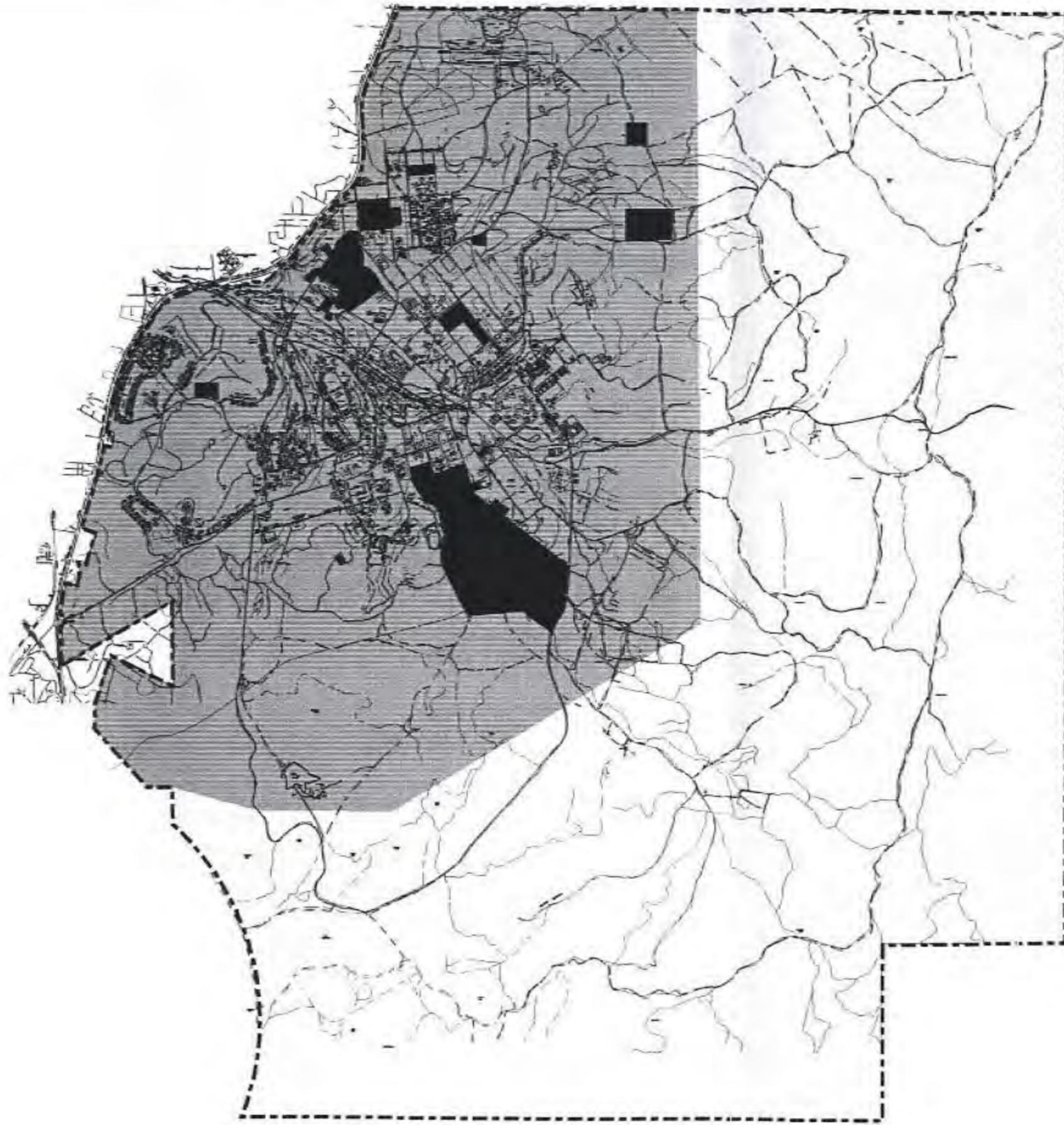
Land Use for FMDC Redevelopment Area (Area 1) of FMC	
Land Use Category	Acreage
Residential and Retirement	823 acres
Training/Education	202 acres
Office	141 acres
Retail/Commercial	228 acres
Industrial	924 acres
Roads & Infrastructure	2000 acres
Active Recreation	771 acres

Passive Recreation/Open Space	2109 acres
Area 1 Subtotal	7,198 acres (approximately 7,200 acres)
Land Use for FMDC Passive Recreation Area (Area 2) of FMC	
Land Use Category	Acreage
Passive Recreation and Open Space	11,322 acres
Area 2 Subtotal	11,332 acres (approximately 11,000 acres)
TOTAL FMC DISPOSAL AREA	18,520
* The overall acreage by reuse category is similar between the June 1997 and November 1997 reuse plans. The principal difference between the two plans involves the categorization of roads & infrastructure which were not separated from the other reuse categories in the final plan (November, 1997).	
Source: 1) FMRRA, 1997c (FMRRA Preferred Land Use Plan) 2) FMRRA, 1997a (Fort McClellan Reuse Study - Development Program Summary)	

The acreages and development intensities of the FMDC Preferred Land Use Plan (June, 1997) were used as the template to establish three reuse intensity alternatives. Each of the three reuse intensity alternatives is based upon the concepts presented in the FMDC Plan. The variations in the three reuse alternatives evaluated in this EIS are variations in the intensity of the redevelopment/reuse of the disposal area. The FMDC reuse plan focuses on the redevelopment of approximately 7,200 acres within the western one-third of FMC Main Post. The remaining two-thirds of FMC are categorized as passive recreation in the final reuse plan. Based upon this redevelopment plan, the EIS establishes two areas (Area 1 and Area 2) which correspond to the 7,200 acre portion slated for redevelopment (Area 1) and the 11,000 acre portion slated as passive recreational area (Area 2). Areas 1 and 2 are depicted in Figure 3-2. A summary of each alternative plan follows, with reuse intensity attributes/characteristics presented on Table 3.2.

3.4.4.1 Area 1 - Redevelopment Area

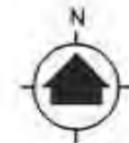
The Area 1 Redevelopment Area, consists of approximately 7,200 acres and encompasses the area focused on by the FMDC for redevelopment. As detailed in subsection 2.4 and illustrated on Figure 2-3, this area includes the western one-third of FMC including the cantonment area.



LEGEND

- RESERVATION BOUNDARY
- ▨ AREA 1 - APPROXIMATELY 7200 ACRES
- AREA 2 - APPROXIMATELY 11,000 ACRES
- ARMY RETAINED LAND (409 ACRES)

* BOUNDARIES BETWEEN AREA 1 AND AREA 2 ARE APPROXIMATE.



PARSONS ES
PARSONS H&A
ST. LOUIS, MISSOURI

MOBILE DISTRICT
US ARMY CORPS OF ENGINEERS
MOBILE, ALABAMA

ENVIRONMENTAL IMPACT STATEMENT

DISPOSAL AND REUSE OF
FORT McCLELLAN, ALABAMA

**APPROXIMATE BOUNDARIES OF
ALTERNATE REUSE PLAN AREAS ***

DATE: AUG., 1998

FIGURE NO. 3-2

Table 3.2 DEIS Reuse Alternative's Attributes

Development Parameters for Area 1 (FMDC Redevelopment Area)				
Reuse Characteristic	MHIR Alternative	MIR Alternative	MLIR Alternative	Remarks
Residential Population ¹	3,665	2,894	2,600	
Employee Population ¹	13,989	8,992	6,052	
Building Floor Area (SF)	7,190,000	5,857,000	4,858,000	Commercial, Industrial, & Institutional Areas
Employee Density ¹ (SF/employee)	514	650	800	Total square feet of non-residential floor area divided by total number of employees.
Floor Area Ratio (FAR) ¹	0.014 (0.04)	<0.01 (0.03)	<0.01 (0.03)	Based on floor area development divided by total acreage in disposal area, less roads/infrastructure. (Based on floor area development divided by Area 1 acreage, less roads/infrastructure).
Development Percentage	25 (60)	23 (55)	22 (52)	Developed property divided by total disposal area acreage (Developed property divided by Area 1 acreage)
Management Practices Established for Area 2 (FMDC Passive Recreation Area)²				
Reuse Characteristic	MHIR Alternative	MIR Alternative	MLIR Alternative	Remarks
Safety Controls	YES	YES	YES	See subsection 3.4.4.2
Fish & Wildlife Management	YES	YES	NO	See subsection 3.4.4.2
Plant Resources Management	YES	YES	NO	Management Includes Prescribed Burns for MLP Ecosystem (See subsection 3.4.4.2)
Wetlands Protection	Proactive	Proactive	Passive	Wetlands protected per CWA Section 404 (See subsection 3.4.4.2)
Federal Threatened & Endangered Species Protection	Proactive	Proactive	Passive	The gray bat is the only federal listed species at FMC. See subsection 3.4.4.2
Other Species of Concern Management	YES	YES	NO	See subsection 3.4.4.2
Hunting & Fishing	Allowed	Restricted	Restricted	See subsection 3.4.4.2

Timber Management	YES	Limited	NO	See subsection 3.4.4.2
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- Note:
- 1 Calculations are based upon application of multipliers established for each intensity indicator to the proposed land use types, locations and acreage specified by the FMDC (FMRRA) Preferred Land Use Plan.
 - 2 Passive recreational use of the approximately 11,000-acre area under the three reuse alternatives involves:
 - MHIR Alternative approximates the current level of resource management and public access (See subsection 3.4.4.2.1).
 - MIR Alternative incorporates a nature preserve concept with limited public access (See subsection 3.4.4.2.2).
 - MLIR Alternative incorporates a revert to natural processes concept (See subsection 3.4.4.2.3).

Source: FMDC (FMRRA) and Parsons Engineering Science, Inc.

3.4.4.1.1 Medium High Intensity Reuse (MHIR) Alternative. The MHIR Alternative directly reflects the land use patterns and use intensity factors that are included in the FMDC Final Land Use Plan (Implementation Strategy) as presented in Appendix F of this EIS. Of the three alternatives considered in this EIS, the MHIR Alternative represents the highest intensity reuse concept for the disposal area. Since the FMDC Plan is based on higher-growth scenarios and will require substantial incentives to achieve, it represents the highest potential level of development that is likely to occur at FMC in the foreseeable future. The two additional EIS alternative reuse plans, as presented below, reflect lower increments of development that could occur.

The FMDC Plan provides for a balance of public and private reuses for the excess property, including residential, office, retail, industrial, training/education, recreation and open space uses; and, retention of certain community facilities. Approximately one-half of the existing 6,083,000 square feet of building space is proposed for retention, including the Post Headquarters and adjacent administration buildings; consolidated maintenance facility; warehouse district; Noble Army Hospital; the Military Police School facility; Chemical School facilities; selected instructional, recreational and housing facilities; the Dependent School; the Post Exchange and Commissary. Less than 7,200 of the 18,520 acres comprising the BRAC disposal area are proposed for development, with the remaining area reserved for passive recreation and open space.

The intent of the MHIR Alternative is to create a mixed-used development with a series of identifiable neighborhoods, and a diversified employment base. The alternate includes 1,575 housing units of which approximately two-thirds are proposed as retirement units; 590,000 square feet of retail space; 1,000,000 square feet of office space; 1,100,000 square feet of training and education space; 4,500,000 square feet of industrial space; and large expanses of open space. Some of the existing family housing would be retained, including the historic officers quarters around Buckner Circle. All of the existing residential areas are proposed for continued residential use, with an area reserved for a future residential retirement community north of Yahoo Lake. Passive and active recreation areas, including three golf courses, are principally associated with the residential neighborhoods in the area south of Cane Creek.

Creation of an employment base is an important goal of the FMDC Plan. Implementation of the MHIR Alternative would generate approximately 14,000 jobs, including a mixture of retail, office, service and industrial jobs. A new "town center" is proposed for the central portion of the reuse area focusing on the existing commercial area around the Post Exchange and Commissary. Other new retail and commercial centers are proposed along and near Highway 21. The approximate 900 acres proposed for industrial development are concentrated in the interior of the cantonment area, centering around the installation's existing industrial and warehouse area. An education complex is proposed in the central portion of the cantonment area focusing on the existing Military Police School and adjacent facilities along Summerall Gate Road.

There are several constants under all three EIS reuse alternatives. For example, the eastern portion of the disposal area (approximately 11,000 acres) is proposed for "open space" uses, with provisions also

made for the expansion of Lagarde Park in the western cantonment. In addition, separate sites totaling 409 acres are reserved for the Alabama National Guard and Army Reserve , specific sites are listed on Table 2.1. Each of the reuse alternatives includes provisions to accommodate the programmed and partially funded eastern highway by-pass which would transect the western portion of the cantonment and connects Highway 21 and Highway 431 to I-20. The environmental impacts associated with the construction of this by-pass are being evaluated by a separate NEPA analysis being performed by the Alabama Department of Transportation. Another major interior roadway, which partially follows the course of Summerall Gate Road and connects with Highway 21 north of Galloway Gate, is also proposed in each reuse alternative.

3.4.4.1.2 Medium Intensity Reuse (MIR) Alternative. The MIR Alternative is based on application of the same land use location patterns and acreage allocations as defined under the MHIR Alternative and are consistent with the land uses in the FMDC Plan. Under this alternative the number of housing units would decrease to 1,248. All other land uses would also be developed at a lower density, which results in total employment within the reuse area decreasing to approximately 9,000 as a result of lower employee density and FAR.

3.4.4.1.3 Medium Low Intensity Reuse (MLIR) Alternative. The MLIR Alternative is also based on the same land use location patterns and acreage allocations as defined under the MHIR and MIR alternatives. Under this alternative the number of housing units decrease to 1,150. All other land uses would also be developed at a lower density, which results in total employment within the reuse area decreasing to approximately 6,000 as a result of lower employee density and FAR.

3.4.4.2 Area 2 - Passive Recreation Area

The Area 2 Passive Recreation Area, consists of approximately 11,000 acres and encompasses the area east of the FMDC redevelopment area as illustrated on Figure 2-4 and described on Table 3.2. The FMDC Preferred Land Use Plan has designated this entire area for passive recreation. Passive recreational activities can include a wide variety of activities. Three levels of passive recreational reuse of this parcel, which represent reasonably foreseeable future actions, are evaluated in this EIS. These three reuse intensity alternatives are incorporated as part of the overall MHIR, MIR, and MLIR reuse alternatives.

FMDC Final Reuse Plan includes the establishment of a wildlife refuge within Area 2. USFWS is working with FMDC and the Army and plans to establish an ecosystem refuge within Area 2. The proposed Mountain Longleaf National Wildlife Refuge is anticipated to be developed and maintained by the USFWS in partnership with the ADCNR - GFD on approximately 10,000 - 12,000 acres of unique habitat within the FMC disposal area. Although the boundaries and operational details of the proposed wildlife refuge have not been determined, the development of the wildlife refuge is expected to be consistent with the MHIR and MIR alternatives for Area 2 detailed in the following paragraphs. The National Wildlife Refuge may include some of the passive recreation areas in FMDC's reuse plan that are reflected in Area 1 of Figure 3-2.

3.4.4.2.1 Medium High Reuse (MHIR) Alternative. The MHIR Alternative for the passive recreation area (Area 2) includes human safety management, biological resources management and public access levels similar to those currently in place at FMC. Management activities will include:

- **Human Safety Management.** The area will be managed to facilitate the safe use of the area and surrounding areas. Examples of safety management include: 1) natural or incidental fires occurring in the area would be controlled to prevent damage to surrounding areas, and 2) exposed UXO, in public use areas will be disposed of properly by trained Explosive Ordnance Disposal (EOD) personnel.

-
- **Fish & Wildlife Management.** Fish and wildlife management practices will be comparable with current procedures as presented in the FMC Integrated Natural Resource Management Plan (FMC, 1991).
 - **Plant and Vegetation Management.** The forest and plant communities will be actively managed to promote the health and well being of the plant communities. In particular, a prescribed burn program will be instituted/continued to maintain the Mountain Longleaf Pine (MLP) ecosystem located in portions of this area.
 - **Wetlands Management.** Wetlands management will focus on the protection and enhancement of wetland communities in the area. Existing installation management procedures would be continued.
 - **Endangered Species Management.** Federal threatened and endangered species (gray bat) may forage in this area of FMC and foraging habitat will be actively managed, using procedures similar to those detailed in the current FMC Endangered Species Management Plan (FMC, 1996a).
 - **Other Species of Concern Management.** Species of concern, including state listed species as well as “Special Interest Natural Areas”, will be actively managed in consultation with the Alabama Department of Conservation and Natural Resources — Alabama Natural Heritage Program (ADCNR-ANHP), using procedures similar to those detailed in the current FMC Endangered Species Management Plan (FMC, 1996a).
 - **Hunting & Fishing Activities.** Public hunting, fishing, hiking and related activities will be allowed in all areas determined to be safe for such uses.
 - **Timber Management.** Timber management activities, including the regulated harvest of timber, will continue. Forestry operations will adhere to Alabama’s Best Management Practices for forestry and will use procedures similar to those established in the FMC Integrated Natural Resource Management Plan which includes the use of prescribed burning in the MLP community (FMC, 1991).

3.4.4.2.2 Medium Reuse (MIR) Alternative. The MIR Alternative for the passive recreation area (Area 2) includes human safety management and biological resources management at levels similar to those currently in place at FMC. The area would be managed as a nature preserve area with limited public access. Management activities will include:

- **Human Safety Management.** The area will be managed to facilitate the safe use of the area and surrounding areas. Examples of safety management include: 1) natural or incidental fires occurring in the area would be controlled to prevent damage to surrounding areas, and 2) exposed UXO, in public use areas will be disposed of properly by trained EOD personnel. As illustrated on Table 3.2, this level of management will be similar to the level of management provided under the MHIR Alternative as discussed in subsection 3.4.4.2.1.
- **Fish & Wildlife Management.** Fish and wildlife management practices will be comparable with current procedures as presented in the FMC Integrated Natural Resource Management Plan (FMC, 1991). As illustrated on Table 3.2, this level of management will be similar to the level of management provided under the MHIR Alternative as discussed in subsection 3.4.4.2.1.
- **Plant/Vegetation Management.** The forest and plant communities will be actively managed to promote the health and well being of the plant communities. In particular, a prescribed burn program will be instituted/continued to maintain the Mountain Longleaf Pine (MLP) ecosystem located in portions of this area. As illustrated on Table 3.2, this level of management will be similar to the level of management provided under the MHIR Alternative as discussed in subsection 3.4.4.2.1.

-
- **Wetlands Management.** Wetlands management will focus on the protection and enhancement of wetland communities in the area. As illustrated on Table 3.2, this level of management will be similar to the level of management provided under the MHIR Alternative as discussed in subsection 3.4.4.2.1.
 - **Endangered Species Management.** Federal threatened and endangered species (gray bat) may forage in this area of FMC and foraging habitat will be actively managed, using procedures similar to those detailed in the current FMC Endangered Species Management Plan (FMC, 1996a). As illustrated on Table 3.2, this level of management will be similar to the level of management provided under the MHIR Alternative as discussed in subsection 3.4.4.2.1.
 - **Other Species of Concern Management.** Species of concern, including state listed species as well as “Special Interest Natural Areas”, will be actively managed in consultation with the ADCNR - ANHP, using procedures similar to those detailed in the current FMC Endangered Species Management Plan (FMC, 1996a). As illustrated on Table 3.2, this level of management will be similar to the level of management provided under the MHIR Alternative as discussed in subsection 3.4.4.2.1.
 - **Hunting & Fishing Activities.** Public hunting, fishing, hiking, and related activities would not be allowed on most portions of this area. As illustrated on Table 3.2, this level of management will be different than the level of management provided under the MHIR Alternative as discussed in subsection 3.4.4.2.1.
 - **Timber Management.** Active timber management activities would be limited but would still include the use of prescribed burning in the management of the MLP community. As illustrated on Table 3.2, this level of management will be different than the level of management provided under the MHIR Alternative as discussed in subsection 3.4.4.2.1.

3.4.4.2.3 Medium Low Reuse (MLIR) Alternative. The MLIR Alternative for the passive recreation area (Area 2) includes human safety management, with no active biological resources management and limited public access. Public use areas would be primarily roads transacting the area. The management activities would focus on a revert to natural processes concept with limited human intervention. Management activities will include:

- **Human Safety Management.** The area will be managed to facilitate the safe use of the area and surrounding areas. Examples of safety management include: 1) natural or incidental fires occurring in the area would be controlled to prevent damage to surrounding areas, and 2) exposed UXO, in public use areas will be disposed of properly by trained EOD personnel. As illustrated on Table 3.2, this level of management will be similar to the level of management provided under the MHIR Alternative (as discussed in subsection 3.4.4.2.1) and the MIR Alternative (as discussed in subsection 3.4.4.2.2).
- **Fish & Wildlife Management.** Active fish and wildlife management practices would cease and the area would be left to natural processes. As illustrated on Table 3.2, this level of management will be different than the level of management provided under the MHIR Alternative (as discussed in subsection 3.4.4.2.1) and the MIR Alternative (as discussed in subsection 3.4.4.2.2).
- **Plant and Vegetation Management.** Active forest and plant management activities would cease and the area would be left to natural processes. No prescribed burn program would be implemented. As illustrated on Table 3.2, this level of management will be different than the level of management provided under the MHIR Alternative (as discussed in subsection 3.4.4.2.1) and the MIR Alternative (as discussed in subsection 3.4.4.2.2).
- **Wetlands Management.** Wetlands protection will focus on adhering to Section 404 requirements of the CWA. As illustrated on Table 3.2, this level of management will be different than the level of management provided under the MHIR Alternative (as discussed in subsection 3.4.4.2.1) and the MIR Alternative (as discussed in subsection 3.4.4.2.2).

-
- **Endangered Species Management.** Federal threatened and endangered species known to occur in this area of FMC (gray bat) will be protected in accordance with the ESA; however management of these species would be accomplished through more passive management activities. These more passive activities would not include the more pro-active features detailed in the current FMC Endangered Species Management Plan (FMC, 1996a). As illustrated on Table 3.2, this level of management will be different than the level of management provided under the MHIR Alternative (as discussed in subsection 3.4.4.2.1) and the MIR Alternative (as discussed in subsection 3.4.4.2.2).
 - **Other Species of Concern Management.** Active management for Species of concern including state listed species as well as “Special Interest Natural Areas” will cease and the area would be left to natural processes. As illustrated on Table 3.2, this level of management will be different than the level of management provided under the MHIR Alternative (as discussed in subsection 3.4.4.2.1) and the MIR Alternative (as discussed in subsection 3.4.4.2.2).
 - **Hunting & Fishing Activities.** Public hunting, fishing, hiking, and related activities would not be allowed on most portions of this area. As illustrated on Table 3.2, this level of management will be different than the level of management provided under the MHIR Alternative (as discussed in subsection 3.4.4.2.1), but similar to the level of management provided in the MIR Alternative (as discussed in subsection 3.4.4.2.2).
 - **Timber Management.** Active timber management activities would not occur and no prescribed burning to maintain the MLP community would occur. As illustrated on Table 3.2, this level of management will be different than the level of management provided under the MHIR Alternative (as discussed in subsection 3.4.4.2.1), and different than the level of management provided in the MIR Alternative (as discussed in subsection 3.4.4.2.2).

3.5 ALTERNATIVES NOT ADDRESSED IN DETAIL

High Intensity Reuse (HIR) Alternative. The High Intensity Reuse Alternative (as noted in subsection 3.4.2) is not considered to be feasible for implementation at FMC considering the size of the total disposal area; the physical limitations of major portions of this land area; the ability of the region to accommodate and absorb new development based on economic conditions; the high cost of UXO removal and environmental remediation considerations involved in more intense development; and site development constraints based upon natural resources constraints such as soil types and condition, geology, and slopes. Application of use levels contemplated under a HIR Alternative could potentially jeopardize other existing and potential development projects, and general local and regional economic conditions.

Low Intensity Reuse (LIR) Alternative. This EIS does not consider a Low Intensity Reuse (LIR) Alternative, since a major goal of the FMDC is to provide employment opportunities and an economic base to replace that which is lost through the closure of FMC. The LIR Alternative would result in a large number of potential development areas not being used, which would result in the total amount of redevelopment at FMC failing to meet the desired and anticipated level of economic redevelopment planned by the FMDC. In addition, considering the size of the FMC disposal area, and the extent of lands that have already been developed within the existing cantonment area, there is sufficient land available for the provision of open space and other low intensity uses under all three of the reuse alternatives that are addressed in this EIS.

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Affected Environment

4.1 INTRODUCTION

This section describes the existing natural, cultural, manmade and socioeconomic environments at Fort McClellan (FMC Main Post), Alabama as they existed in 1995. These conditions, which are described by resource group, serve as a baseline for the subsequent identification and evaluation of the environmental and socioeconomic impacts resulting from the proposed action as discussed in Section 5.

4.2 LAND USE

This section describes the installation in terms of regional geographical setting and location, land and air space use on the installation and within the surrounding region.

4.2.1 Regional Geographic Setting and Location

FMC Main Post, noted as FMC throughout this document, consists of approximately 18,929 acres located in the heart of Calhoun County, Alabama, adjacent to the City of Anniston and Alabama Highway 21. Two other adjacent military functions include Pelham Range and Anniston Army Depot. The regional location and surrounding vicinity of FMC are illustrated in Figure 2-1. On a regional scale, FMC is within a two-hour drive of several metropolitan areas, including Gadsden and Huntsville to the north, Montgomery to the south, Atlanta to the east, and Birmingham to the west. FMC adjoins the City of Anniston to the south and west, and extends 6 miles to the northeast toward Jacksonville, Alabama, along the Choccolocco Mountain Range. The cantonment area is surrounded on its southern and eastern sides by the Choccolocco Mountains. The remaining acreage on FMC consists of ranges, training areas, and bivouac sites. Lateral ridges extend from the main range in a westerly direction, rising from 700 to 2,063 feet above sea level.

4.2.2 Installation Land and Airspace Use

Overall land use at FMC is tabulated in Table 4.1. The largest portion of FMC is used for training and maneuvers with approximately 10,700 acres, or 56.7 percent of the installation, being set aside for these purposes. The second largest portion of FMC is devoted to range and impact areas consisting of 5,400 acres, or 28.5 percent of the installation.

The cantonment area contains approximately 2,500 acres, or 13.2 percent of the total land area at FMC. Land use in the cantonment area is divided into the following eight functional categories: 1) training and operations; 2) supply, storage and public works; 3) community facilities; 4) administration; 5) troop

housing; 6) family housing; 7) recreation; and 8) open space. Existing cantonment area land use is portrayed in Table 4.2. The remaining land at FMC consists of lake recreational areas, a former landfill, and the Reilly Airfield (closed).

Table 4.1 Land Use, Fort McClellan

Areas	Approximate Area (acres)	Percent of Total Area
MAIN CANTONMENT AREA *	2,500	13.2
RANGE AND IMPACT AREA	5,400	28.5
TRAINING AND MANEUVER AREA	10,619	56.1
OTHER AREAS		
Landfills (Landfill 1, 2, and 3 closed; 4 open)	150	0.8
Reilly Airfield (closed)	45	0.2
Reilly Lake Rec. Area	35	0.2
Yahoo Lake Rec. Area	180	0.9
TOTAL	18,929	100.0

Note: * See Table 4.2 for detailed land use in this area.

Source: FWEC, 1996

Table 4.2 Cantonment Area Land Use, Fort McClellan

Land Use Category	Approximate Area (acres)	Percent of Total Area
Family Housing/Officer Quarters	175	7.0
Troop Housing	162	6.5
Commercial Services	60	2.4
Community Facilities	85	3.4
Administration	45	1.8
Training and Operations	250	10.0
Supply, Storage, and Public Works	231	9.2
Recreation Facilities	365	14.6
Open Space	955	38.2
Lakes	10	0.4
Leased Area (Alabama Army National Guard/Alabama Military Academy)	162	6.5
TOTAL	2,500	100.0

Source: FWEC, 1996.

The main administrative complex in the cantonment area is located on "The Hill" and consists of the post headquarters and many of the administrative support functions. Officer housing is concentrated around Buckner Circle adjacent to the north of the post headquarters, with family housing and other officers quarters located between the post headquarters and Highway 21. Training and education comprise a major land use consisting of: the Military Police School, the Chemical School, the DOD Polygraph Institute and the Training Brigade. Recreational uses, including the Cane Creek Golf Course, and open space comprise one-half of the cantonment area with a major outdoor recreation area along Summerall

Gate Road. Other major uses include community facilities and commercial services, which focus on the Commissary/Exchange complex located in the central portion of the cantonment.

FMC also contains the Reilly Airfield (closed), located north of cantonment area, which is no longer used for fixed-or-rotary winged aircraft operations. The airfield, which was closed prior to 1988 by the Federal Aviation Administration (FAA) because of inadequate glide ratio, is currently used for defensive driving training by the Military Police School. Although FMC does not have a FAA designated Military Operations Area, the installation does have some restricted airspace, since the FAA prohibits civilian aircraft from flight over portions of the installation. For example, overflight of the Chemical Defense Training Facility, which is located east-southeast of Reilly Airfield, is prohibited to all aviation units training under the operational control of supported units at FMC. Currently, there are four authorized helicopter landing zones on FMC (FTM Regulation, 350-2).

4.2.3 Surrounding Land and Airspace Use

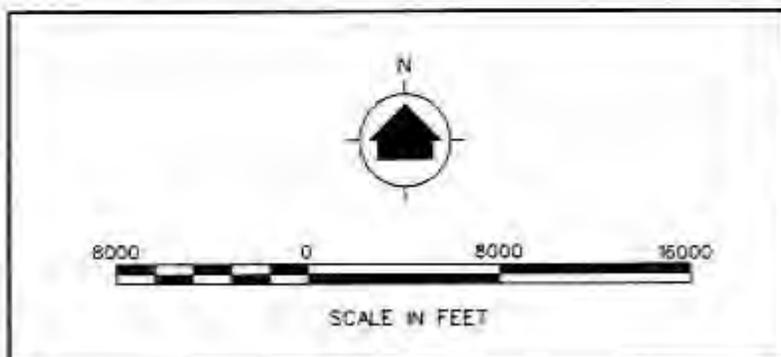
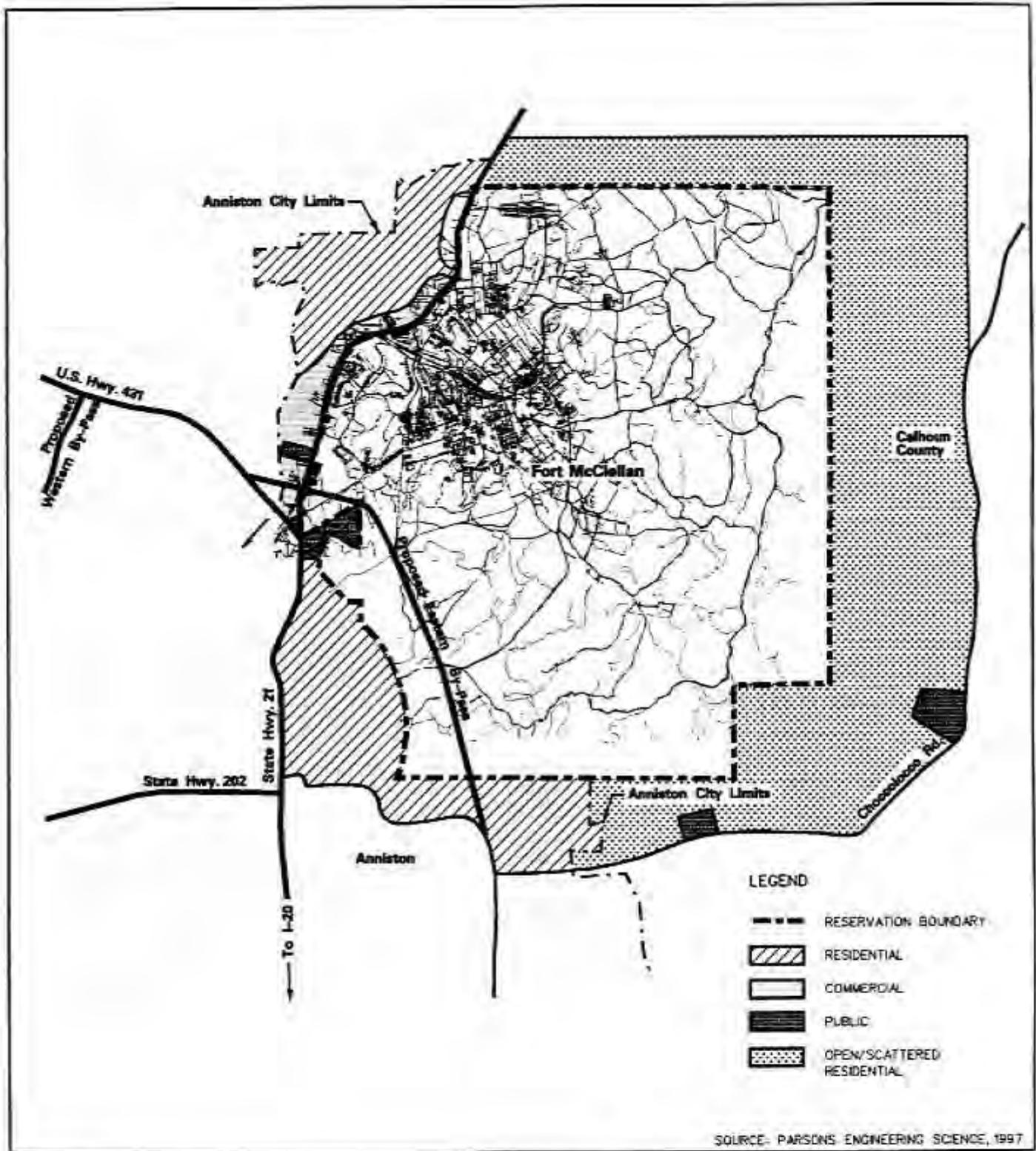
Land Uses. FMC is bordered by the City of Anniston to the south and west, and by unincorporated Calhoun County to the north and east (Figure 4-1). State Highway 21 borders the installation on the west from Summerall Gate northward. Land use adjacent to the west of the installation along Highway 21 is dominated by a variety of commercial uses on the west side of the highway, including the Lenlock Shopping Center. Other major uses along the west side of Highway 21 include the Anniston Middle School and Calhoun County Board of Education which are located near the Summerall Gate. The few private parcels on the east side of Highway 21 bordering the installation are used for community facilities, including: Lagarde Park/Lenlock Community Center, Anniston Museum of Natural History, a City of Anniston fire station and the Coosa Valley Juvenile Detention Center.

Low density single family residential and developing residential areas characterize land use adjacent to the south of the installation in the City of Anniston. Areas to the east and north within Calhoun County are characterized by rural uses, dominated by agricultural and open space uses with scattered residential development. The Talladega National Forest borders a leased portion of the installation (Choccolocco Corridor) to the east.

The Anniston Land Use Plan was prepared by the East Alabama Regional Planning and Development Commission (EARPDC), which is the Metropolitan Planning Organization for portions of Calhoun and Talladega Counties and is responsible for regional planning for the surrounding seven county area. Economic, transportation, demographic and other studies are prepared by the agency on their own accord or by special request. The Land Use Plan, prepared in the latter 1980s, consists of six individual neighborhood plans and an executive summary. The Plan notes that the Golden Springs Neighborhood, which borders the majority of the southern boundary of FMC, is the fastest growing residential area of the city. The land use plan for this neighborhood reflects a continuation of orderly, low density residential development with recognition of the natural development constraints (steep slopes) within the area (EARPDC, 1987). *Envision 2010*, a more recent strategic plan prepared for the city, contains strategies for achieving community goals in respect to economic development, downtown preservation, neighborhood preservation, public safety and environmental quality (Anniston, 1992).

Present and approved future land use developments within the immediate surrounding area are discussed in the cumulative impact analysis in subsection 5.5, Cumulative Impacts.

Zoning. The City of Anniston has a zoning ordinance, subdivision ordinance and Comprehensive Plan in effect, while Calhoun County has no zoning/subdivision regulations nor land use planning in force. State enabling legislation provides for municipal extra-territorial subdivision and code enforcement powers within a 5-mile radius of a municipality's boundaries. However, enabling legislation does not provide for municipal extra-territorial planning and zoning powers. Thus, zoning and planning are not in effect within those unincorporated areas of Calhoun County bordering the installation. Recent State legislation (SB. 639) establishing the Fort McClellan Development Commission does not include zoning enforcement among the powers of the commission.



PARSONS ES PARSONS H&A ST. LOUIS, MISSOURI	MOBILE DISTRICT US ARMY CORPS OF ENGINEERS MOBILE, ALABAMA
ENVIRONMENTAL IMPACT STATEMENT	
DISPOSAL AND REUSE OF FORT MCCLELLAN, ALABAMA	
GENERALIZED ADJACENT LAND USE	
DATE: AUG., 1998	FIGURE NO. 4-1

Anniston's Zoning Ordinance contains 18 zoning districts, ranging from Agricultural and Conservation Districts to Residential, Commercial and Industrial Districts. Land adjacent to the south of the installation within Anniston is primarily zoned "R-1" Residential District (Figure 4-2), which allows low-density, single family dwelling units with a minimum lot size of 12,750 square feet. The area fronting the west side of Highway 21 is zoned primarily "A.S.C.", Area Shopping Center District (Anniston, 1981).

The City of Oxford, located adjacent to Anniston on the south, has zoning and subdivision ordinances in effect, but no land use plan. Located along the I-20 corridor, Oxford has experienced more rapid growth and development than Anniston during the last decade.

Airports. The only airport in the county which had regularly scheduled commercial air service was the Anniston-Calhoun County Airport located four miles south of Anniston between I-20 and Highway 21 (This service has been discontinued.). This airport, with a 7,000-foot lighted runway, serves as the general aviation airport for the area. Other airports in the area include Gadsden Municipal Airport, Talladega Municipal Airport, and one small airport - McMinn, south of Weaver.

4.2.4 Fort McClellan Main Post Training Areas

The mission of the U.S. Army Chemical and Military Police Center and FMC is to train individuals in common soldier tasks and both basic and advanced tactical skills required for Chemical Corps and Military Police personnel. FMC also provides this training to DOD personnel from all branches of the service, other government agencies, and members of international nation's Armed Forces.

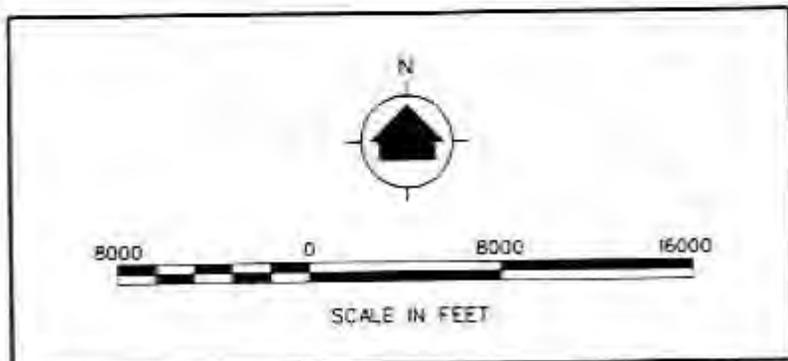
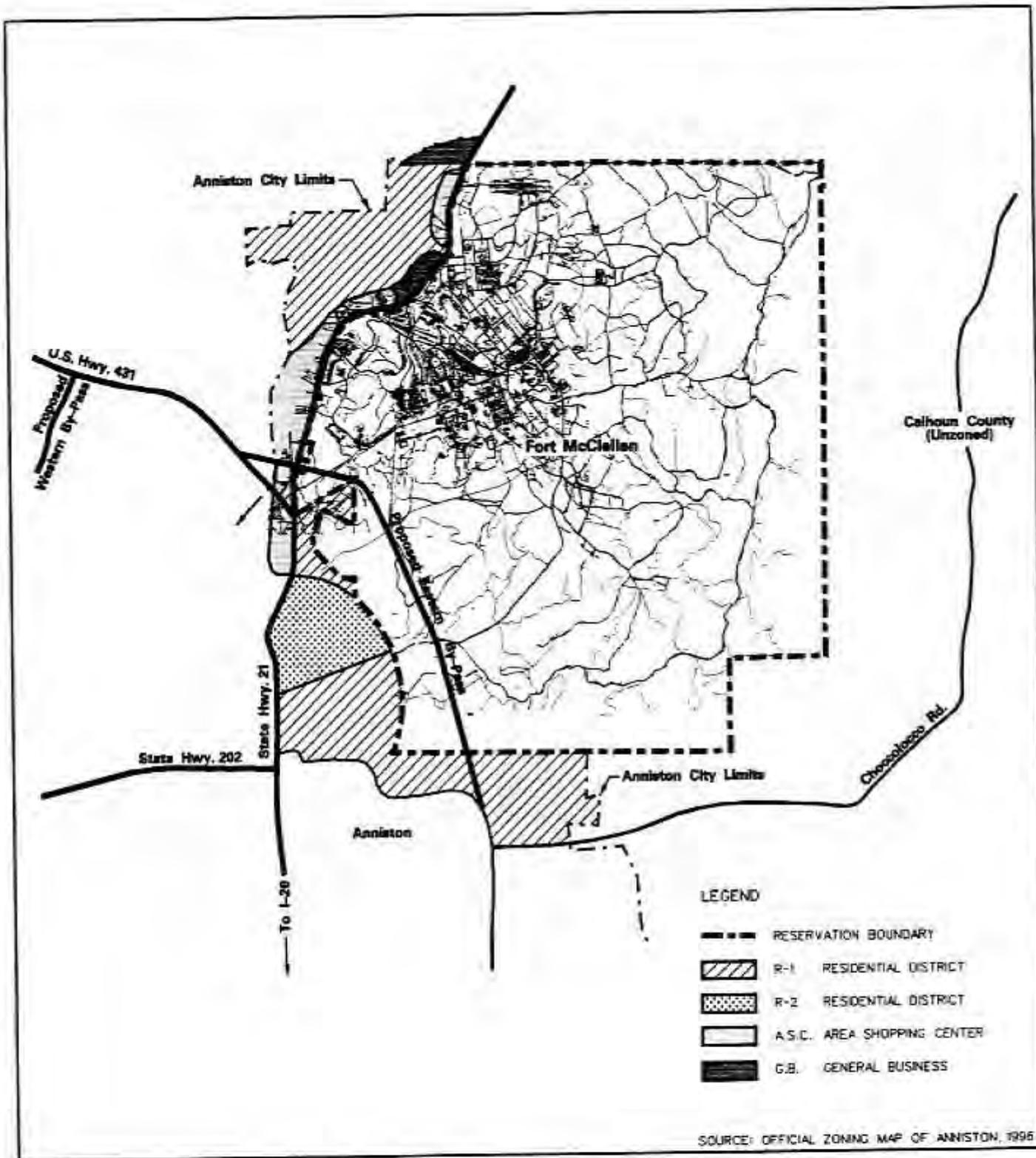
To accomplish this mission, FMC uses both classroom instruction and "hands-on" training in the field. This field training is performed at ranges, training areas, and bivouac sites located throughout FMC. FMC currently has 15 active ranges, 20 active training areas, and 8 active bivouac sites to support this mission. The locations of the ranges, training areas, and bivouac areas on FMC are depicted on Figure 4-3.

The Directorate of Plans, Training, Mobilization, Security, and Reserve Components (DPTMSEC&RCS), Headquarters, FMC is responsible for overall control of all the ranges, training areas, and bivouac sites at both FMC and Pelham Range. All unit assignments of and use of these areas must be approved by DPTMSEC&RCS. The DPTMSEC&RCS is the proponent for FMC Regulation (FTM Reg) 350-2, Training: Range and Terrain. This regulation defines the roles and responsibilities relating to ranges and training areas and the procedures that must be followed for scheduling, safety, firing activities, and lists specific limitations and requirements for each area.

Every range, training area, and bivouac site at FMC is classified as a restricted area in FTM Reg 350-2. The use and access of each of these areas is strictly controlled and all individuals or units must request and receive prior approval of DPTMSEC&RCS prior to entering or using any of these areas.

4.2.4.1 Active Ranges

There are 15 active ranges on FMC. The DPTMSEC&RCS defines a range as a location where live ordnance is expended. This ordnance can be grouped in the following general categories: ball ammunition from direct fire weapon systems such as rifles, pistols, and machine guns; explosive ordnance from direct fire weapon systems such as 40mm grenades, M-72 LAW, and AT-4s; detonation of explosives such as C-4/TNT, detonation cord, and M-4 bursters; tactical generation of smokes and obscurants; and indirect firing points for weapons systems such as artillery and mortars. Several ranges are defined as multi-purpose and can be used for both explosive and non-explosive ordnance. Table 4.3 lists the active ranges at FMC (FTM Reg 350-2, 195).



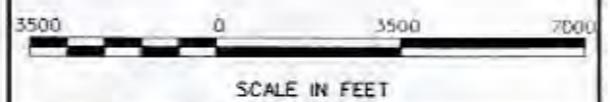
 PARSONS ES PARSONS JBA ST. LOUIS, MISSOURI	 MOBILE DISTRICT US ARMY CORPS OF ENGINEERS MOBILE, ALABAMA
ENVIRONMENTAL IMPACT STATEMENT	
DISPOSAL AND REUSE OF FORT McCLELLAN, ALABAMA	
GENERALIZED ADJACENT ZONING	
DATE: AUG., 1998	FIGURE NO. 4-2



LEGEND

- RESERVATION BOUNDARY
- ▨ IMPACT AREA
- TRAINING/RANGE AREA BOUNDARY
- ⋯ TOXIC TRAINING AREA BOUNDARY

SOURCE: FORT McCLELLAN MAY, 1996



 PARSONS ES
 PARSONS H&A
 ST LOUIS, MISSOURI
  MOBILE DISTRICT
 US ARMY CORPS OF ENGINEERS
 MOBILE, ALABAMA

ENVIRONMENTAL IMPACT STATEMENT

DISPOSAL AND REUSE OF
FORT McCLELLAN, ALABAMA

TRAINING AREAS AND RANGES
MAIN POST

DATE: AUG., 1998 FIGURE NO. 4-3

Table 4.3 Active Ranges, FMC Main Post

Range	Proponent	Weapons Used	Purpose
Range 12 Competitive Pistol	ALARNG	Pistol: .22-cal; .38-cal; .45-cal; 9mm Rifle: .22-cal Machine Gun: Machine gun (1960's) Shotgun: 12 gauge--no slugs	Weapons familiarization and qualification
Range 13 Qualification Pistol (USMC) Range	USMC	Pistol: .22-cal; .38-cal; .45-cal; 9mm Shotgun: 12 gauge--no slugs	Weapons qualification
Range 18 Down Range Feedback Range	Training Brigade	Rifle: M-16, day/night phase, tracer, M-103 Springfield, and M-1 Grenade Machine Gun: machine gun.	Weapons familiarization and qualification; tactical skills training
Range 19 Qualification Pistol Range	USAMPS	Pistol: .22-cal; .38-cal; .45-cal; 9mm Shotgun: 12 gauge--no slugs	Weapons qualification
Range 20 Infiltration Course	Training Brigade	Pistol: .22-cal; .38-cal; .45-cal; 9mm Rifle: M-60 with tracer Shotgun: 12 gauge--no slugs Other: dynamite, TNT, and C4	Individual tactical skills training
Range 21 Field Fire Range (Dry Fire, Protective Mask and Night Fire)	ALARNG	Rifle: M-16 with tracer	Individual tactical skills training
Range 22 Zero Range (25m)	Training Brigade	Rifle: M-16 with tracer	Weapons zero prior to qualification
Range 23 Trainfire Range (Record, M-16 Qualification, NBC and Night Fire)	ALARNG	Rifle: M-16 with Tracer Other: Misc artillery (date unknown)	Individual tactical skills training
Range 24a Multi-Purpose Range (Smoke, Demolition, and Flame Field Expedient (FFE))	USACMLS	Rifle: M-14, M-16, and other rifles including tracer round) Machine Gun: machine guns (including tracer rounds) Other: C4, TNT, M-4 burster, blasting caps, simulators, trip flares, detonation cords, & smoke-producing munitions/ equipment	Individual skills training; open detonation; smoke generation training
Range 25 Known Distance Range (100-600 yards)	ALARNG	Rifle: M-14, M-16, and M-1 (including tracer rounds) Machine Gun: M-60 (including tracer rounds) Other: Artillery rounds.	Individual weapons training
Range 26 Live Fire and Maneuver Range	Training Brigade	Rifle: M-16 (since 1983) Other: Possible historical use of large caliber fused ordnance and large caliber weapons	Individual and small unit tactical skills training
Range 27 Special Operations Range (Stress Pistol and Shotgun)	USAMPS	Pistol: 9mm; .38-cal; .45-cal Rifle: M-16 (1983-1989) Machine Gun: M-60 and other Machine Guns Shotgun: 12 gauge (no slugs)	Advance MP training

Table 4.3 Active Ranges, FMC Main Post

Range	Proponent	Weapons Used	Purpose
		(1989 to present)	
Range 29 Weapons Demonstration and U.S. Weapons Range	Training Brigade	Pistol: .38-cal; .45-cal; 9mm Rifle: M-16 Machine Gun: M-60 Other: C-4, TNT, AT-4 Rocket, M-136, M-203, smoke, M-72 LAW, as well as the potential for historical use of fused ordnance	Demonstrations of weapon systems
Range 32 Hand Grenade Range	Training Brigade	Other: Hand grenades (practice and live)	Individual weapons training
Skeet Range	Skeet club	Rifle: Shotgun: .410; .28; .20; .12 gauges	Recreational shooting

Source: FTM Reg. 350-2, 20 October 1995

4.2.4.2 Active Training Areas

There are currently a total of 20 active training areas. These training areas are diverse in nature, each structured to train and test individual and unit tactical skills, operations, and capabilities. Many of the training areas offer force-on-force tactical training that include the use of blank ammunition and artillery simulators. Others are used in a non-tactical mode, such as the confidence course, the gas chamber, and the basic compass course. Table 4.4 lists the active training areas and their primary use for FMC.

Table 4.4 Active Training Areas, FMC Main Post

Training Area	Proponent	Purpose
TA-8 End-of-Cycle Testing	Training Brigade	Tests individual knowledge of basic soldier skills
TA-9 Military Operations in Urbanized Terrain (MOU)	USAMPS	Classroom instruction and practical exercises in military operations in cities; clear and secure buildings
TA-10 Compass Course	USAMPS	Individual training in land navigation
TA-11 Gas Chamber	USACMLS	Nuclear, Biological, and Chemical (NBC) training and protective mask confidence course
TA-15 MP Land Navigation	USAMPS	Individual training in basic land navigation
TA-16B MP Land Navigation	USAMPS	Individual and small group training in orienteering
TA-16C USMC NBC Defense	USMC	Individual and unit training in NBC defensive operations
TA-16G Offensive Tactics and Combat Indoctrination Course	ALARNG	Individual and unit training in offensive operations
TA-19B Chemical NCO Academy	Chemical NCO Acad.	NBC situational training
TA-25 Physical Security	USAMPS	Individual training in establishing physical security of a site

Table 4.4 Active Training Areas, FMC Main Post

Training Area	Proponent	Purpose
TA-28 Individual Tactical Training Blank Fire and Maneuver Range	Training Brigade	Individual and unit training on using Fire and Maneuver tactics in a tactical scenario. Blank M-16 rounds used.
TA-32 Chickasaw Range-NBC	Training Brigade	Training of NBC operations
Leadership Reaction Course	DPTMSEC	Ten situational events to test and develop leadership skills
Confidence Course	DPTMSEC	Confidence building and physical conditioning training
Mock Confinement Facility	USAMPS	Training MPs in the procedures for processing/handling military prisoners
Obstacle Course	DPTMSEC	Physical fitness and conditioning training
POW Compound	DPTMSEC	Training MPs in the procedures for processing/handling enemy prisoners-of-war
Chemical Defense Training Facility	USACMLS	Chemical defense training
Reilly Airfield	DPTMSEC	Evasive driving; Air Force radiological survey training
End-of Cycle Testing (Chemical)	USACMLS	Tests individual knowledge of basic soldier skills
Bayonet Assault Course	DPTMSEC	Individual bayonet training

Source: FTM Reg. 350-2, 20 October 1995

On those training areas where blank ammunition is used, a potential exists for unfired blanks to be present in those areas. Those blanks will primarily be 7.62mm and 5.56mm. While blank ammunition does not have a projectile, they are considered dangerous to a range of 20 feet when fired from a weapon due to the round's wadding (FTM Reg 350-2). Those blanks could pose a potential threat to personnel if detonated in an unauthorized manner, such as being placed in a fire.

Many of the training areas are used for Nuclear, Biological, and Chemical (NBC) training with at least two sites, the gas chamber and TA-32, using tear gas (CS). Live chemical agents are only used in the Chemical Defense Training Facility (CDTF) under strict security and operational controls; they are not currently (see subsection 4.9 on historical use) used on ranges or in training areas (ESE, 1998b). Simulants are used in training to cause positive readings on tactical instrumentation/test kits used by soldiers in NBC detection and decontamination training.

4.2.4.3 Bivouac Sites

There are 8 active bivouac sites on FMC. These sites vary in capacity from one company to a battalion size element. Table 4.5 lists the bivouac sites and the capacities of each site.

Table 4.5 Bivouac Sites at FMC

BIVOUAC Sites	Proponent	Capacity	Primary Use
B-25	ALARNG	Company (+)	National Guard training site
B-30	ALARNG	Battalion	Multi-purpose
B-31/FTX	ALARNG	Battalion	National Guard training site; field training exercises
B-32/FTX	ALARNG	Battalion	National Guard training site; field training exercises
B-41	Training Brigade	Company	Training Brigade; multi-purpose

Table 4.5 Bivouac Sites at FMC

BIVOUCAC Sites	Proponent	Capacity	Primary Use
B-42/FTX	Training Brigade	2-Companies	Training Brigade; field training exercises
B-43/FTX	Training Brigade	Company	Training Brigade; field training exercises
Trench Hill	ALARNG	2-Companies	Multi-purpose

Source: FTM Reg. 350-2, 20 October 1995

Four of the bivouac sites on FMC are also classified as a Field Training Exercise (FTX) areas. Old fighting positions (foxholes) could be expected in these areas, as well as old field latrines and garbage burial pits. A potential would also exist for unfired blank small arms ammunition used in the FTX areas.

4.2.4.4 Inactive Ranges And Training Areas

Several of the ranges and training areas are no longer in use. These include Ranges 16, 17, and 28. DPTMSEC&RCS personnel stated that Ranges 16 and 17 had a high concentration of unexploded ordnance (UXO), both surface and subsurface.

The FTM Reg 350-2 also identifies permanent dud impact areas within certain ranges. These sites are marked by red and black-on-white signs and entry is strictly prohibited. The regulation also identifies contaminated areas relating to ranges and training areas. These areas are at the backside of Range 24-A (surrounded by a 10-foot fence), Reservoir Ridge in area 16-D (fenced area), and the area behind and between Ranges 16 and 18 (FTM Reg 350-2).

4.3 AIR QUALITY

4.3.1 National Issues

The Clean Air Act (CAA) of 1963, as amended, has authorized the U.S. Environmental Protection Agency (USEPA) to develop and implement programs to protect human health and enhance the air quality. Through this authorization, USEPA has developed and implemented many programs. The most important program has been the establishment of National Ambient Air Quality Standards (NAAQS) which set specific acceptable concentrations for six criteria pollutants (sulfur dioxide, carbon monoxide, ozone, nitrogen oxides, lead, and inhalable particulate matter). For each of these six pollutants, USEPA has set health-based or "primary" standards to protect public health, and welfare-based or "secondary" standards to protect the environment (crops, vegetation, wildlife, buildings and national monuments, visibility, etc).

USEPA is required by the CAA to review the health and welfare-based standards at least once every five years to determine whether revisions to the standards are necessary to continue to protect public health and the environment. An area which meets the NAAQS for a pollutant is classified as an "attainment" area for that pollutant, whereas an area which does not meet the NAAQS for a pollutant is classified as a "nonattainment" area for that pollutant. Fort McClellan is located in an attainment area for all criteria pollutants.

Compliance with these NAAQS is a continuing goal of the additional programs implemented by USEPA. The programs most relevant to the proposed action include: the Prevention of Significant Deterioration (PSD) program, designed to allow growth in areas while maintaining good air quality in attainment areas where pollutant concentrations are below the NAAQS; the New Source Performance Standards (NSPS) program designed to ensure that new sources of air pollution are well controlled; and, the Title V - Federal Operating Permit program designed to ensure consistency through a national air permitting program.

Through the CAA, Congress has stated that the prevention and control of air pollution belongs at the state and local level. USEPA has delegated enforcement of the PSD, NSPS and Title V programs to the State of Alabama. The State of Alabama has adopted the NAAQS by reference. The Alabama Department of

Environmental Management (ADEM) has implemented the Title V Operating Permit program through ADEM Administrative Codes 335-3-15 and 335-3-16.

On November 27, 1996 the USEPA announced a proposal for two new regulations regarding the NAAQS, one for ozone and one for particulate matter. The proposal for particulate matter includes adding a category of 2.5 microns or less (PM_{2.5}) to the current category of 10 microns or less (PM₁₀). A court order required USEPA to finalize a particulate matter standard by mid-July of this year, and USEPA committed to a court to do the same for ozone. On July 16, 1997 USEPA administrator Carol M. Browner announced the revised standards for ozone (smog) and particulate matter. President Bill Clinton, also on July 16, 1997, signed a memorandum approving the issuance of the new air quality standards and directing the USEPA to complete their rulemaking by December 31, 1998 (see Appendix G).

4.3.2 Regulatory Compliance and Classification

Under the authority of the Alabama Administrative Code, Division 355-3, the ADEM requires that an annual air emissions inventory be submitted. The air emissions inventory is used initially to determine if additional air pollution sources require permitting and to assess fees. A comprehensive Air Pollution Emission Statement was developed for Fort McClellan as required by ADEM by CH2M Hill for the base year 1995. Actual emissions for 1995 are provided in Table 4.6. It should be noted that the required air emissions inventory is for stationary sources only and does not include mobile sources. A mobile source emissions inventory has never been conducted at Fort McClellan (For impact analysis purposes, the baseline mobile source emissions were estimated based upon a total baseline traffic volume of approximately 29,375 ADT; see subsection 4.7.5).

Based on the stationary emissions inventory, the predicted potential to emit for sulfur oxide (SO_x) and nitrogen oxide (NO_x) exceed the major source threshold of 100 tons per year (CH2M Hill, 1997). In addition, Fort McClellan's potential emissions are above the 25 tons per year (TPY) threshold for hazardous air pollutants (HAPS). It should be noted that fugitive sources are not used to determine if a facility is a "major" source. They are only included for determining fees for "major" sources.

Table 4.6 Fort McClellan 1995 Summary of Stationary Source Air Emissions

Source	Criteria Pollutants (TPY)					Total HAPS (TPY)
	PM ₁₀	SO ₂	NO _x	CO	VOCs	
Boilers (Commercial)	0.18	0	1.52	0.32	0.058	0.008
Boilers (Industrial)	0.68	0	6.91	1.73	0.137	0.019
Generators and Pumps	0.08	0.38	3.18	2.05	0.24	0.005
Miscellaneous Heating Units	1.01	1.38	8.5	1.79	0.45	0.06
Incinerators	0.083	0.009	0.11	0.051	0.007	0.14
Fuel Storage	0	0	0	0	6.34	0.089
Painting Operation	0.0064	0	0	0	1.21	0.11
Degreasing	0	0	0	0	0.138	0
Woodworking	0.453	0	0	0	0	0
Sterilizer	0	0	0	0	0.0082	0.0082
Welding	0.052	0	0.002	0.002	0	<0.001
Plastic Forming	0	0	0	0	0.32	0.32
Cooling Towers	2.11	0	0	0	0	0
Fugitive Sources						

Table 4.6 Fort McClellan 1995 Summary of Stationary Source Air Emissions

Source	Criteria Pollutants (TPY)					Total HAPS (TPY)
	PM ₁₀	SO ₂	NOx	CO	VOCs	
Chemical Usage	0	0	0	0	17.4	2.27
Chlorine	0	0	0	0	0	3.68
Pesticides/Herbicides	0	0	0	0	0.39	0.039
Landfill	12.3	0	0	0	1.92	0.111
Firefighter Training	1.22	0.076	0.46	6.46	2.28	0
Prescribed Burning	293	0	45	3,938	78.8	0
Wastewater Treatment	0	0	0	0	0.45	0
Fog Oil Generators	2.42	0.016	0.203	10.2	239	0.031
Total Emissions (including fugitives)	313	1.86	66	3,960	349	6.89
Total Emissions (excluding fugitives)	4.66	1.77	20.2	5.9	8.91	0.759

Note: Data presented is limited to stationary source air emissions. Mobile source baseline data is presented in subsection 4.3.2.

Source: CH2M Hill

4.3.3 Permits

ADEM Admin Code 335-3-15-.02-10 (effective 10 Dec 96) states that a facility that is a "major" source based on potential to emit, but whose actual emissions (excluding fugitive sources) are less than 50% of the "major" source thresholds will be considered a Synthetic Minor Source. The rule does not require a separate permit, but does require documentation to be made available on request to prove compliance. All previously issued permits will continue to be enforced. This ruling reduces paperwork for facilities that are unlikely to become actual "major" sources in the near future. FMC would be classified as a "major" source based on potential emissions; however, since their actual emissions are less than 50% of the "major" source thresholds, they are considered a Synthetic Minor Source.

4.3.4 Emission Sources

The air emissions inventory identified permitted emission sources at Fort McClellan. Table 4.7 lists these sources.

Table 4.7 Air Emission Sources with Permits at Fort McClellan

Source Description	Number of Units	Building Number	Permit Number
Boiler (Gas-Oil Fired)	3	1076	301-0017-Z001
	2	2278	301-0017-Z002
	4	3176	301-0017-Z008
Propane Storage Tank	5	3217	301-0017-Z005
Incinerator	1	CDTF	301-0017-Z007

Fuel Oil Storage Tank	2	1076	301-0017-X009
	2	1076	301-0017-X010
	1	3176	301-0017-X011
	1	3176	301-0017-X012
Gasoline Dispensing	4	265	301-0017-Z013
	4	2109	301-0017-Z014
Bulk Storage Plant	4	263	301-0017-Z015

Source: Air Pollution Emission Statement, Reisz Engineering, January, 1995

4.3.5 Notices Of Violation

At the submittal time of the 1995 Air Pollution Emissions Statement, Fort McClellan was operating in compliance with Federal and State Regulations and had no Notices of Violation (NOVs) or other outstanding non-compliance air issues. Table 4.7 lists air pollution permits issued by ADEM to Fort McClellan as of June 1994.

4.3.6 Conformity Determination

Under the authority of the CAA and resultant regulations, the USEPA has divided the country into geographical regions known as Air Quality Control Regions (AQCRs) to evaluate compliance with the NAAQS. There are primary NAAQS for protection of public health and there are secondary NAAQS for the protection of public welfare. Fort McClellan is under the jurisdiction of the USEPA Region IV and is located within Calhoun County in the East Alabama Intrastate AQCR. The East Alabama Intrastate AQCR is classified as attainment for all criteria pollutants.

There are two independent legal requirements which are used to determine air quality impacts. The first governing requirement is the National Environmental Policy Act (NEPA) and the second is the General Conformity Provision per the CAA, Section 176. Fulfillment of one requirement does not fulfill the other requirement, nor does the exemption of one automatically exempt the other. NEPA requires consideration of the direct and indirect effects of an action on the environment through a prescribed documented process. Completion of this EIS fulfills the NEPA air quality analysis requirements.

Federal Regulations (40 CFR, Part 51, Subpart W) establish General Conformity requirements for Federal facilities to ensure that activities do not adversely affect the State Implementation Plan goals. Conformity is aimed at preventing a Federal action from contributing or causing a violation of the NAAQS, from increasing the frequency of an existing violation, or delaying the timely attainment of a standard. At one time, USEPA considered implementing conformity requirements for attainment areas, however; the National Highway System Designation Act of 1995, Section 305 (Public Law 104-59) modified the CAA, Section 176 preventing the applicability of General Conformity to attainment areas. Since Fort McClellan is located in an attainment area for all criteria pollutants, the General Conformity Rule does not apply.

4.4 NOISE

Environmental noise at FMC is largely produced as a result of training activities involving tanks, helicopters, artillery, mortars, machine guns, small arms, grenades, and other explosives. The heavy artillery ranges are located on the more isolated, adjacent Pelham Range, while small arms ranges are located on both Pelham Range and FMC. Units using these ranges include the Chemical School, Military Police School, Training Center Command, 722nd Ordnance Disposal Company, Alabama Army National Guard, U.S. Army Reserves, and the U.S. Navy.

The Installation Compatible Use Zone (ICUZ) program was developed as a mechanism to protect military installation missions through identification and mitigation of noise impacts on installations and surrounding communities. The program relies on noise contour maps developed through the use of computer models with confirmatory noise monitoring to identify areas where incompatible uses could occur. Cooperation

between the military installation and local authorities effectively restricts development within such areas, through the zoning and permitting process, to uses that would be compatible with expected noise levels. Figure 4-4 illustrates the noise contour lines for FMC.

Noise Zones are classified into three levels for different types of land use:

Zone I is an area where the day-night sound level (DNL) is less than 65 decibels, A-weighted (dBA). This classification indicates that this area has minimal to moderate noise exposure. Generally less than 15 percent of the population would be highly annoyed by Zone 1 noise disturbances. Areas classified as Zone 1 are acceptable for noise-sensitive land uses including residential, medical, and educational facilities. Most of FMC is classified as Zone 1, being within 0-55 dBA.

Zone II is an area where the DNL is between 65 and 75 dBA. This classification indicates that this area has significant noise exposure. On the average, 15 to 39 percent of the population is highly annoyed by Zone II noise disturbances. Areas classified as Zone II are normally unacceptable for noise-sensitive land uses. Only 2 percent of FMC is classified as Zone II, primarily over the range impact areas.

Zone III is an area where the DNL is greater than 75 dBA. This classification indicates that this area has severe noise exposure and is unacceptable for noise-sensitive activities. Greater than 39 percent of the population would be highly annoyed by Zone III noise disturbances (ESE, 1996b). Zone III noise levels were not identified for FMC.

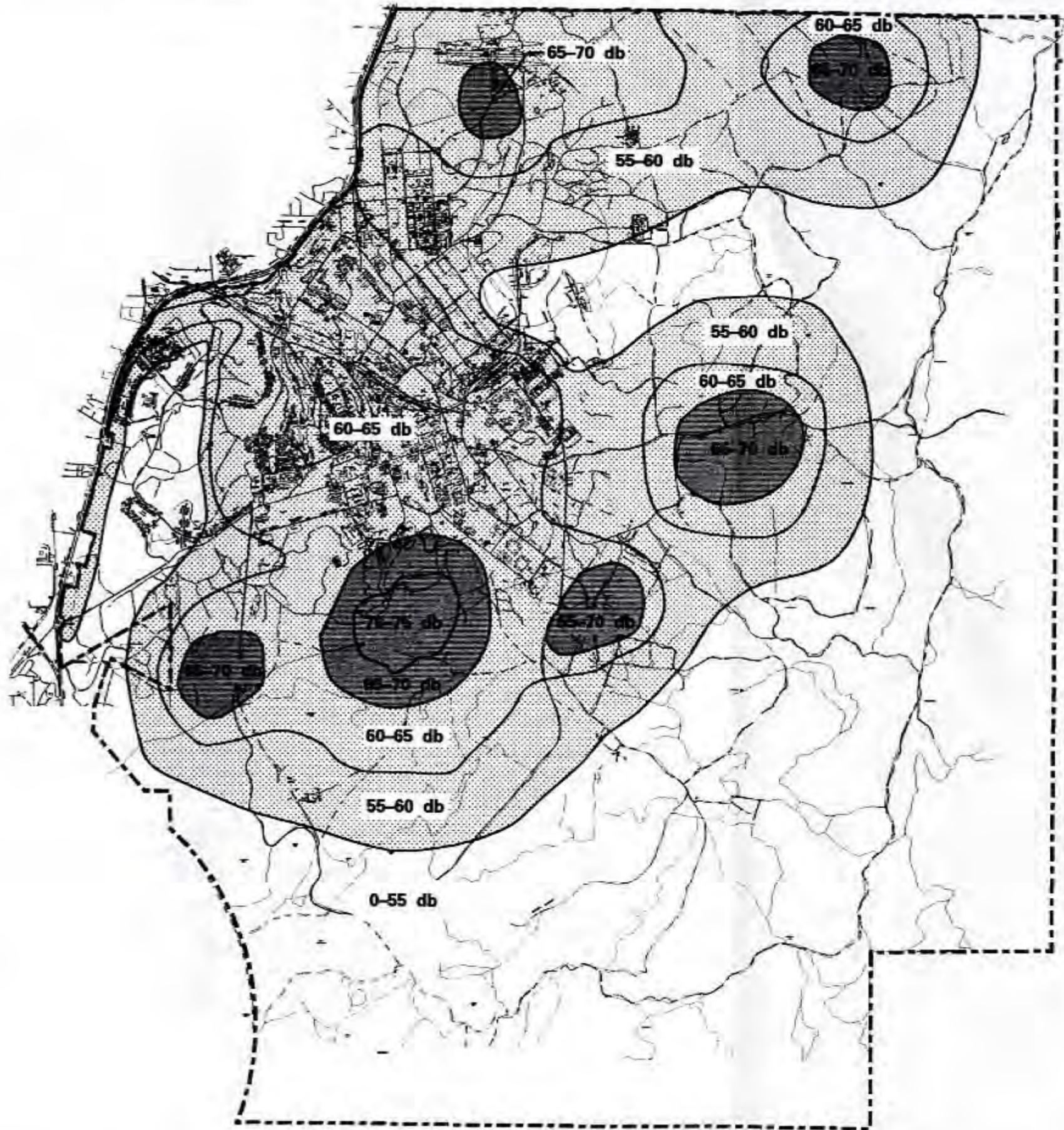
The Public Affairs Office (PAO) is designated as the central point of contact for handling noise complaints. Incoming complaints to FMC are transferred to the community relations department of the PAO. Community relations office personnel log the name, telephone number, and reason for complaint from the person calling. The Chief of Community Relations investigates the report of a noise disturbance and calls the complainant back with an explanation. The PAO office keeps a record of the number of complaints received per quarter. Table 4.8 presents the noise complaint data for the period July 1995 through the last quarter of Fiscal Year 1996 (Baker, 1996).

Table 4.8 Noise Complaint Data

Time Frame	July - September 1995	October - December 1995	January - March 1996	April - June 1996	July - September 1996*
Complaints	7	3	4	8	9

Note: * as of August 7, 1996

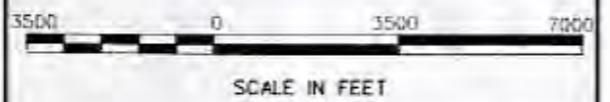
Source: FWEC, 1996 b



LEGEND

-  RESERVATION BOUNDARY
-  ZONE I
-  ZONE II

SOURCE: FWEC, 1996



 PARSONS ES PARSONS H&A ST LOUIS, MISSOURI	 MOBILE DISTRICT US ARMY CORPS OF ENGINEERS MOBILE, ALABAMA
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ENVIRONMENTAL IMPACT STATEMENT

DISPOSAL AND REUSE OF
 FORT McCLELLAN, ALABAMA

NOISE CONTOURS

DATE: AUG., 1998	FIGURE NO. 4-4
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4.5 WATER RESOURCES

4.5.1 Physiography and Surface Drainage

All but the eastern-most portion of FMC lies within the Valley and Ridge physiographic province of the Appalachian Highlands. The portion of FMC west of Choccolocco Creek lies within the Piedmont province. The lower elevations (700 feet above mean sea level (MSL)) occur along Cane Creek, near Baltzell Gate Road, while the maximum elevations (2,063 feet above MSL) occur on Choccolocco Mountain, which traverses the installation and the area in a north-south direction, with the steep easterly slopes grading abruptly into Choccolocco Valley. The western slopes are more continuous, with the southern extension maintaining elevations up to 900 feet above MSL near the western installation boundary. The northern extension decreases in elevation in the vicinity of Reilly Army Airfield. The central portion of FMC is characterized by flat to gently sloping land (SAIC, 1995a).

The Choccolocco Mountains, located in the eastern portion of FMC, form a major surface water divide. Choccolocco Creek and its tributaries drain this portion of FMC and flow southward to the Coosa River (SAIC, 1993). FMC west of the drainage divide is drained by three creek systems, Cane, Choccolocco, and Tallasseehatchee creeks. Major watersheds, hydrography and flood prone areas are shown in Figure 4-5.

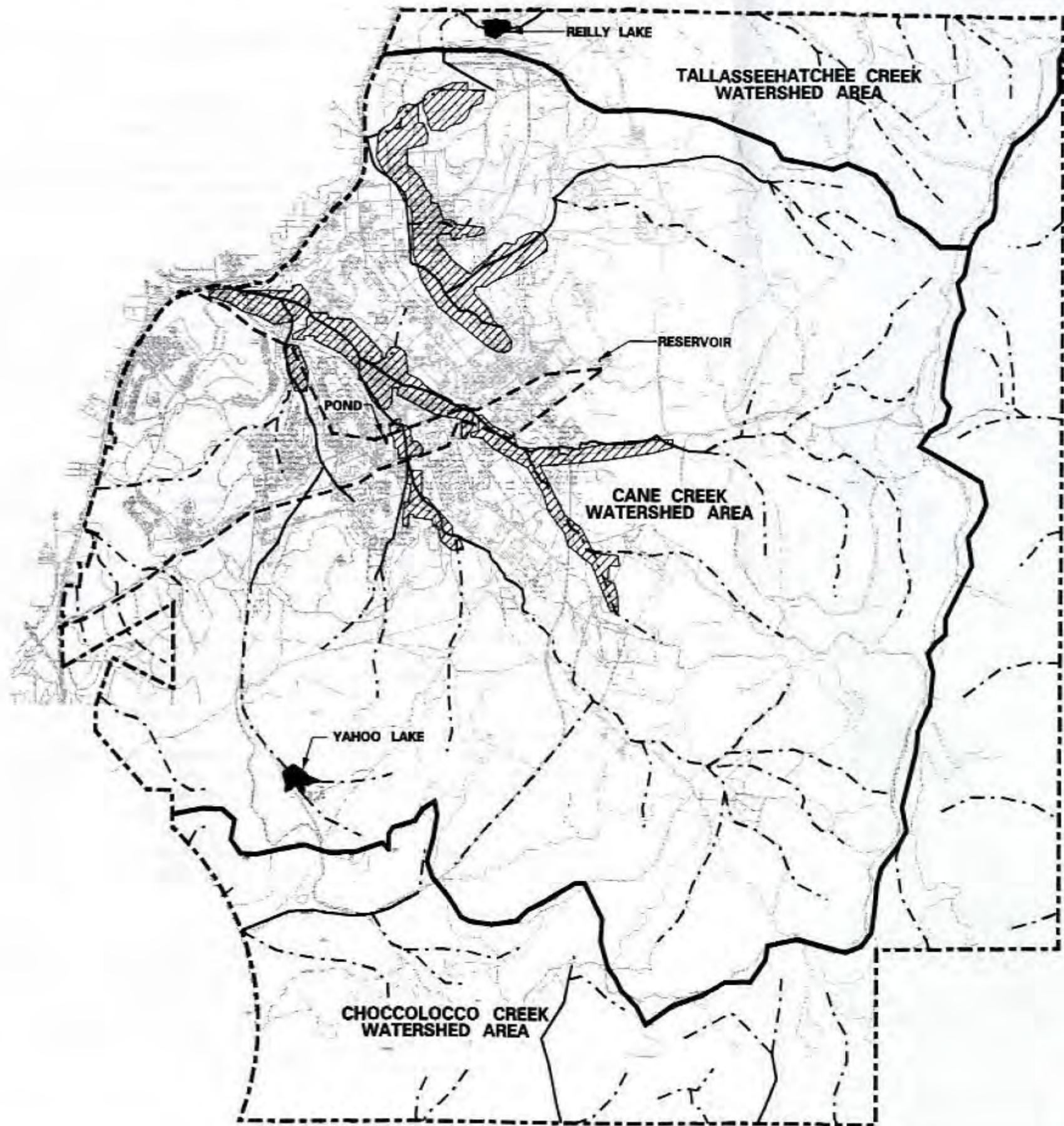
4.5.2 Surface Water

The Cane Creek watershed is among six major watersheds occurring within Calhoun County. Cane Creek, with its tributaries (Cave, Remount, South Branch, and Ingram Creeks), originates on FMC. Cane Creek flows across the length of FMC and drains the majority of the installation (approximately 20 square miles). South Branch receives runoff from the south-central portion, then joins Cane Creek before leaving the reservation on the western boundary. Cane Creek receives surface runoff from the central portion. The north-central portion of FMC is drained by Cave Creek, which leaves FMC on the northwestern boundary (SAIC, 1993). A small portion of the area along the northern installation boundary and north of the Cave Creek watershed, drains into the Tallasseehatchee Creek watershed (including its southern tributaries, Little Tallasseehatchee, Weaver's and Dothard Creeks). Dothard Creek has headwaters originating both on and off the installation and drains the area around Reilly Lake. These creek systems originate on the western side of the Choccolocco Mountains and flow west through FMC. They are fed by springs originating from underlying limestone strata.

Choccolocco Creek occurs to the east of the Choccolocco Mountains, passing along the eastern and southern portions of FMC. The Choccolocco Creek drainage includes three small tributaries originating near the southern boundary (Faison, Davis-Silver, and Royal-Davis Creeks).

Surface water features other than streams and creeks within FMC include Lake Yahoo (13.5 acres), Reilly Lake (8.5 acres), Cappington Ridge (0.3 acres), and Duck Pond (0.5 acre). Surface drainage is collected in small, independent networks that drain areas varying from 20 to 60 acres (SAIC, 1993).

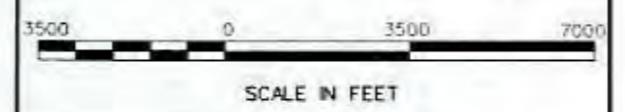
Freshwater springs occur throughout Calhoun County, often appearing along the trace of thrust faults (Moser and DeJarnette, 1992). On FMC, the springs appear as seeps and include the Marcheta Orchid Seep, Bains Gap Seep, Cave Creek Seep, and Marcheta Hill Crow Poison Seep. Unmapped springs and seeps potentially occur over much of the FMC area. Karst features, including developed caves and sinkholes, have been identified in the area of FMC (USACE, 1992). Weaver Cave interrupts the drainage of Cave Creek from FMC prior to its reemergence approximately 1,300 feet downstream (SAIC, 1995a).



LEGEND

-  RESERVATION BOUNDARY
-  INTERMITTENT STREAM
-  PERENNIAL STREAM
-  AQUEDUCT
-  MAJOR WATERSHED BOUNDARY
-  FLOODPLAIN AREAS

SOURCE: FWEC, 1996



 PARSONS ES PARSONS M&A ST LOUIS, MISSOURI	 MOBILE DISTRICT US ARMY CORPS OF ENGINEERS MOBILE, ALABAMA
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ENVIRONMENTAL IMPACT STATEMENT

DISPOSAL AND REUSE OF
FORT McCLELLAN, ALABAMA

**MAJOR WATERSHEDS AND FLOODPLAINS
FORT McCLELLAN**

DATE: AUG., 1998

FIGURE NO. 4-5

4.5.3 Surface Water Quality

The State has classified streams in this area as suitable for fish and wildlife use. Water quality surveys over the past 20 years have shown good water quality at most locations surveyed.

A survey conducted by the U.S. Army Environmental Hygiene Agency (USAEHA) and published in 1976 found the streams of FMC to be of good chemical quality and in good biological condition. In this study, averaged profiles at FMC sampling stations had average water temperatures of 17.8°C, dissolved oxygen levels at 9.3 ppm and average pH values of 7.5 (USAEHA, 1976).

Environmental Science and Engineering (ESE) conducted a water quality study in 1980, in conjunction with another study at FMC. Surface water quality was investigated at four sites. Data indicated that the water had no unusual concentrations of organic or inorganic constituents. Dissolved oxygen was at or near saturation (range 7.8 to 12.1 mg/l), and specific conductance was very low for all samples (range 18 to 21 µmhos/cm). Zinc and hydrocarbon concentrations were also low (range of <0.01 to 0.02 mg/l and 0.27 to 1.0 mg/l, respectively) (Ogden, 1992). Two sampling sites were located on Cane Creek, which drains FMC, including the golf course, the wastewater treatment plant, and urbanized areas surrounding Anniston, Jacksonville, and Pelham Range. The creek was found to be highly mineralized and the specific conductivity was elevated (range of 215 to 270 µmhos/cm).

Surface water quality data was collected concomitant with the recent biological surveys (Weninegar, 1993). Parameters examined included ammonia, carbon dioxide, chloride, dissolved oxygen, hardness, nitrites, pH, temperature, and turbidity. Concentrations tended to be highest in the fall at the stations closest to the mouth and were higher in the winter at the headwater stations. Ammonia concentrations ranged from 0.0 to 0.1 mg/l. Carbon dioxide levels varied from a low of 5 mg/l to a high of 20 mg/l. Chloride concentrations varied from lows of 15 mg/l at several stations to a high of 30 mg/l at an effluent dumpsite several meters below the Highway 21 bridge. Dissolved oxygen values found were from a low of 6 mg/l to highs of 11.0 mg/l at the two stations closest to the headwaters. Nitrite values were low and ranged from 0.0 mg/l at several locations to a high of 1.2 mg/l. Values for pH were usually alkaline (7.4 to 8.2 pH units) at all stations except the one closest to the headwaters where the waters were slightly acidic (6.3 to 6.5 pH units). Temperatures ranged from 11.0° to 21.1°C. Only one station, that was closest to the mouth, had any measurable turbidity with a concentration of 1.0 NTU (Weninegar, 1993).

Additional surface water quality data was collected as part of a multifaceted study done to characterize the geochemical signature of mineralized and highly altered rocks at FMC (Tucker et. al., 1995). A summary of the results of this study is provided in Table 4.9. Results show the streams sampled to generally be of good water quality. Several of the springs sampled had slightly alkaline, mineralized water. One spring, on Range 21 had slightly elevated lead and copper values averaging about 16 and 6.1 parts per billion (ppb), respectively (USGS, 1995). The study also stated that high levels of heavy metals could be a natural result of mineralization of the rocks and soils of the area. The study concluded that since springs and seeps are particularly influenced by the chemical composition of associated rocks and soils, high lead values at some sites could be the result of these nonanthropogenic processes (USGS, 1995).

4.5.4 Floodplains

High flow periods on the waterways in and around FMC generally occur in spring (March through May). However flash flooding can occur throughout the year as a result of intense rainfall events associated with thunderstorms or cyclonic events. Areas within the 100-year floodplain have been determined for all major waterways on FMC. Floodprone areas on FMC include regions along Cane Creek, Remount Creek, Lenlock Branch, Cave Creek, Ingram Creek, and South Branch of Cane Creek (see Figure 4-5). These areas are designated on the 1985 Flood Insurance Rate Maps for Calhoun County as issued by the Federal Emergency Management Agency (FEMA, 1985).

Table 4.9 Summary of Inorganic Constituents from Stream and Spring Waters Collected from Fort McClellan

Sample	Place	UTM FN	Con d		pH	Tem p		PPM ¹							
			M/S			C		Ca	Na	K	Mg	Cl	S O ₄	NO ₃	Alk
FMW 07	brook, Range 24A	1506 2752	18	7.3	18	1.4	0.87	1.9	0.6	1.1	3.1	<0.2	<10	0.07	11
FMW 08	spring, Range 21	1550 3083	14	6.7	19	1.3	0.83	1.5	0.4	0.98	1.6	<0.2	<10	0.08	13
FMW 09	brook, Bain Gap	1774 3126	17	6.6	19	1.5	0.72	1.6	0.6	0.99	2.8	<0.2	<10	<0.1	11
FMW 10	brook, Truitt Hill	1690 3476	15	7	18	1.1	0.6	0.77	0.7	1	3.4	<0.2	<10	<0.1	6
FMW 11	stream, north FM	1532 3475	20	7.4	18	2.2	0.66	0.85	1.1	1.1	2.6	<0.2	<10	0.03	7
dup ICP	stream, north FM	1532 3475	n/a ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
FMW 12D	duplicate of W11	1532 3475	20	7.4	18	2.2	0.65	0.85	1.1	1.1	2.6	<0.2	<10	0.02	7
FMW 13	brook, French Hill	1647 3476	15	6.3	18	1.3	0.63	0.3	0.6	1.1	1.8	<0.2	<10	0.05	6
FMW 14	stream, Res Ridge	1360 3335	13	6.7	20	1.4	0.62	0.55	0.7	1.1	2.3	<0.2	<10	0.03	7
FMW 15	brook, Twin Peaks	1160 2660	15	6.7	18	1.4	0.64	1.1	0.7	1	2.4	<0.2	<10	0.02	8

		PPB														
Sample	Place	Cu	Pb	Zn	Mo	Mn	Co	Ni	Y	Ba	Rb	Sr	Sb	La	Ce	Al
FMW 07	brook, Range 24A	<0.7	<0.5	3	<0.2	7.6	<0.1	0.4	<0.1	19	2	6	<0.1	0.2	0.2	<.1
FMW 08	spring, Range 21	6.1	16	4	<0.2	5.5	0.2	<0.3	<0.1	13	2.3	4.6	0.5	0.1	0.2	<.1
FMW 09	brook, Bain Gap	<0.6	<0.5	<3	<0.2	2.3	<0.1	<0.3	0.1	22	2.1	8.9	<0.1	0.2	0.2	<.1
FMW 10	brook, Truitt Hill	<0.6	<0.5	3	<0.2	10	<0.1	0.3	0.2	24	1.2	7.6	<0.1	<0.1	0.2	<.1
FMW 11	stream, north FM	<0.6	<0.5	<3	<0.2	29	0.3	0.5	0.2	28	1.7	6.7	<0.1	0.2	0.3	<.1
dup ICP	stream, north FM	<0.6	<0.5	<3	<0.2	26	0.2	1.1	0.2	27	1.6	6.6	<0.1	0.2	0.2	n/a ²
FMW 12D	duplicate of W11	<0.6	<0.5	<3	<0.2	27	0.2	0.5	0.2	29	1.4	5.9	<0.1	0.1	0.2	<.1
FMW 13	brook, French Hill	<0.6	<0.5	3	<0.2	54	0.1	2.4	0.7	20	0.6	6	<0.1	0.2	0.6	<.1
FMW 14	stream, Res Ridge	2.4	2	4	<0.2	15	0.2	0.4	0.3	20	0.9	8.9	0.3	0.2	0.4	<.1
FMW	brook, Twin	<0.6	<0.	<3	<0.	10	0.1	<0.	0.1	19	1.7	6.3	0.2	0.1	0.2	<.1

15	Peaks		5	2		3								
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Note: 1 The following elements were not detected at the 0.1 ppb level unless noted, number in parentheses is the detected limit or the sample where the element was detected and the value: Ag, As (0.6), Au, Be (1), Bi (1), Cd (0.9), Cs (W2 and W6 at 0.2), Dy, Er, Eu, Ga (0.3), Ge (0.4), Hf, Ho, Li (2), Nb (0.2 and W2 at 0.6), Pr (W2 at 0.2), Re, Sm, Sn (1), Ta, Tb, Te (2), Ti (1), Th (0.8), Tl (0.6), Tm, U (0.2), V (0.2, W1 and W3 at 0.2, W2 and W4 at 0.3), W, Yb, Zr, (W2 at 0.3).

2 information not available

Source: FWEC, 1996 & USGS, 1995.

The 100-year floodplain for stream drainage on FMC includes the following features and facilities: formerly used Landfills 2 and 3, Landfill 4, Alabama Military Academy facilities, portions of the golf course area, training aids and temporary Military Police academic facilities, transportation motor pool yard, industrial storage areas along Baltzell Gate Road, Directorate of Logistics warehouses, and Directorate of Engineering facilities (Weston, 1990). It also includes facilities along Seventh Avenue, 21st Street, 22nd Street and the main training ranges within the Ingram Creek drainage area (SAIC, 1993).

Table 4.10 lists the building numbers for those structures that are within or immediately adjacent to the 100-year floodplain. These data were derived by using the Federal Emergency Management Agency (FEMA), Flood Insurance Rate Map, Calhoun County, February 1993 to compare the base elevations for buildings in or immediately adjacent to the floodplain boundary. Those structures or appurtenances that were partially or entirely at or below the flood elevation were included.

T-204	256	T-931	1223	T-1321	T-1997
205	T-257	T-933	1234	T-1322	T-2116
206	T-258	T-948	1271	T-1323	2247
207	T-260	T-961	1298	T-1324	2248
208	T-261	T-964	T-1302	T-1358	3139
209	T-262	1095	T-1303	T-1359	3146
211	T-263	1096	T-1307	T-1360	3147
212	264	1097	T-1308	T-1361	3148
T-213	T-265	1212	T-1309	T-1362	3149
214	266	1213	T-1310	1370	3295
229	339	1214	T-1311	T-1379	3301
230	502	1216	T-1317	T-1396	5700
242	504	1217	T-1318	1399	5714
251	546	1218	T-1319	T-1898	T-5715
252	T-928	1220	T-1320	T-1899	

Source: FWEC, 1996b

4.5.5 Stormwater

The FMC stormwater management system consists of storm water inlets, pipes, channels, waterways, and streams. Cane Creek is the primary stream draining most of the western portion of the installation. In addition, 253,954 LF of storm sewer conveys stormwater runoff collected from inlets throughout FMC (FMRRA, 1996).

A comprehensive study of FMC's storm drainage system entitled, *Design Analysis for Storm Drainage*, was done in 1977 (HBA, 1990). The study cited several improvements that could be made to the system.

FMC has a NPDES permit (No. AL0055999) for stormwater runoff at 14 industrial sites and one process water discharge site. The outfalls monitored under the permit are listed in Table 4.11. FMC prepared a Stormwater Pollution Prevention Plan (SWPPP) in July 1997 that covers the permitted sites. Detailed information on each outfall, outfall locations, outfall sampling results and generic Best Management Practices (BMPs) are included in the information presented in the SWPPP.

Table 4.11 Permitted Stormwater Outfalls
DSN 001 Fog Oil Storage Area on Range 24A, FMC
DSN 002 Fog Oil Storage Area on Training Area 4A, Pelham Range
DSN 003 Vehicle Wash Rack and Vehicle Maintenance Facility at Pelham Range, Facility # 8422 and 8424
DSN 004 Motor Pool, 11 th Chemical Company, Facility # 3298 and 3299
DSN 009-010 Motor Pool, Subpool, Facility # 3138
DSN 011 Motor Pool, 209 th Military Police, Facility T-1997
DSN 012-017 Active Landfill # 4
DSN 018-019 Inactive Landfill 1
DSN 020 Inactive Landfill 2
DSN 021-024 Inactive Landfill 3
DSN 025-027 DRMO
DSN 028 OB/OD Site Pelham Range
DSN 029-030 Aboveground Storage Tank Farm, Facility # 296 (Tanks Removed. Permit modification to be requested.)
DSN 031-032 DOL Outdoor Storage Yard, near facility # 241
DSN 033 Smoke Line Pad, Range 24A
Note: * The landfill remains open as an Industrial Landfill for the receipt of construction and demolition debris. The sanitary portion was closed in 1994.
Source: USGS, 1995

4.5.6 Groundwater

Precipitation in the form of rainfall and subsequent infiltration is the primary source of groundwater recharge in the area of FMC. In unconsolidated materials, the groundwater occurs within the intergranular pores. Most of the consolidated units in the FMC area do not contain open pore spaces. In these units groundwater storage and movement occurs through discontinuities in the rock. The discontinuities may result from fracturing (i.e. joints and fault zones) or as flow along bedding planes. In units that contain appreciable quantities of limestone or dolomite, these openings can become enlarged through the material dissolving into the groundwater. The dissolution process, known as karst, is very slow, but over long periods of time, the dissolution can result in openings that allow substantial storage of groundwater and rapid groundwater flow rates. Shallow groundwater on FMC occurs principally in the residuum developed from weathering of underlying rock units in alluvial sediments along the larger creeks and rivers. Aquifers in the vicinity of FMC are developed in residuum derived from bedrock decomposition, in fractured bedrock along fault zones, and in karst flow systems. The flow of groundwater is generally toward major surface water features. However, the impacts of differential weathering, variable fracturing, and the potential for conduit flow development may lead to local variation in the groundwater flow pattern. Because of the heterogeneity of the hydrogeologic parameters, the extension of groundwater elevation contours over distance on the size scale of FMC may provide only a general indication of groundwater flow direction in the absence of closely spaced control points.

Groundwater intersection with the ground surface has resulted in the occurrence of numerous springs in the area which act as important sources of discharge and water supply in the region. Continuous discharge from many springs results in the formation of standing surface water bodies that do not exhibit significant low-flow water level reduction (SAIC, 1995a).

Groundwater generally moves southward along the eastern side of the Choccolocco Mountains and then southwesterly at the southern end of the mountains. Under the cantonment area, movement is in a west-northwesterly direction toward the Coosa River. Groundwater flows across FMC occur in a northwesterly direction under an average hydraulic gradient of 0.02 foot/foot based on average groundwater elevations from various wells within the area (SAIC, 1995a). Using average measured and estimated aquifer parameters for FMC, groundwater flow velocity is calculated to be 0.026 foot/day (SAIC, 1995a). Variability in groundwater flow direction is likely to occur in localized areas of FMC dependent on local topography, proximity to surface water bodies, and subsurface geology and structure (SAIC, 1995a).

Few quantitative hydrogeological assessments of regional groundwater flow patterns in the area surrounding FMC have been conducted. Scott et. al., (1987) estimated the recharge area for Coldwater Spring based on groundwater elevation measurements from 140 wells and springs. Coldwater Spring receives groundwater from fractured and weathered zones in the Chilhowee group, as well as from solution cavities and channels in the Shady Dolomite; the Conasauga Formation which runs 2 1/2 miles (4 kilometers) below Cane Creek; and the Knox Group. Based on the limited data, Scott et al. (1987) inferred a recharge area of approximately 90 square miles (234 square kilometers) for Coldwater Spring generally extending from the spring northeastward to Jacksonville along the trace of the Jacksonville Fault. This and other faults in eastern Calhoun County are generally regarded to significantly impact groundwater storage and movement (Warman and Causey 1962, Scott et. al., 1987). Groundwater elevation measurements collected from April 1994 through June 1995 from wells near Remedial Investigation sites show that the measured depth to groundwater ranged from 0.0 to 129.87 feet below land surface (BLS) with the average depth being 24.2 feet BLS.

Groundwater quality in the area surrounding FMC has been investigated primarily through remediation activities at the installation. However, one study (Moser and DeJarnette, 1992) was conducted by the Geological Survey of Alabama to characterize groundwater quality in the county as a whole. Samples were collected in 1987 and 1988 from springs and from private wells ranging in depth from 65 to 263 feet BLS. These analyses indicate that the groundwater is a predominantly calcium carbonate type, characteristic of carbonate regions. The data demonstrate that groundwater quality in the area is generally good with some areas of alkaline and mineralized water. Lead was found in some samples at

concentrations as high as 15 ppb. Iron was also found in slightly elevated amounts (11,000 ppb) in some samples (Moser and DeJarnette, 1992). The only areas with known man-induced groundwater contamination is in the area of the former installation landfills.

The U.S. Geological Survey assisted in a multifaceted study of FMC and Pelham Range in 1993 and 1994 to characterize the geochemical signature of mineralized and highly altered rocks and the concomitant contribution of heavy metals in soils and groundwater. As part of this study, inorganic constituents analyses on stream and groundwater data were conducted (USGS., 1995). This analysis included groundwater data collected at monitoring wells surrounding Landfill No. 4 periodically from March 1994 to March 1995. As with the results of the 1992 groundwater sampling done by Moser and DeJarnette, this study also found elevated levels of iron and lead. Iron concentrations were elevated at most stations samples while lead concentrations were consistently elevated at monitoring well number 2 (USGS, 1995). Slightly elevated chloride levels were found at monitoring well number 4 in March, June and September 1994. Samples for other sampling periods at this well and at all other wells for all sampling periods were below the maximum contaminant level (MCL) (USGS, 1995). The study suggests that many elevated levels of heavy metals could be the natural results of mineralization and weathering of surrounding geological formations. The authors noted that although there is suspected anthropogenic contributions to the overall metal load by far the greatest contributor is the natural environment. This study and the work done by Moser and DeJarnette (1992) suggest that analysis of environmental contamination in this area should consider the occurrence of naturally elevated minerals and metals in background data.

In 1996, Guardian Systems performed a statistical analysis of the monitoring well groundwater data used by Tucker et al. In addition, the data set also included another year of monitoring data through March 1996. This analysis concluded that average concentrations of iron and manganese levels from groundwater at all wells exceeded the ADEM MCL. Lead was found to exceed the ADEM MCL at two wells. In addition to exceeding MCLs for those parameters, monitoring well 4 also had levels of chlorides and trichloroethylene that exceeded the MCL (Guardian Systems, 1996).

4.6 GEOLOGY

4.6.1 Geologic Structure

FMC lies almost entirely in the Valley and Ridge physiographic province of the Appalachian Highlands, where southeastward dipping thrust faults with associated minor folding are the predominant structural features. Figure 4-6 presents the geologic units underlying FMC. Consolidated rocks ranging in age from Precambrian to Pennsylvanian have sharply folded into northeastward-trending synclines and anticlines complicated by thrust faults that have a general northeastward-trending strike and southeasterly dip. These thrust faults are the predominant structural features of the Calhoun County area. The extreme eastern portion of FMC lies within the Piedmont physiographic province (SAIC, 1995a).

The Jacksonville Fault is a major thrust fault within the fold and thrust belt of the Appalachian Highlands in Alabama. This fault is the most significant structural geological feature due to its role in determining the stratigraphic relationships in the area and for its contribution to regional water supplies (SAIC, 1995a). Cambrian and Ordovician rocks associated with the fault and adjacent structures include the Chilhowee Group; Shady Dolomite; Rome Formation; Conasauga Formation; Knox Group, undifferentiated; Newala and Little Oak Limestones, undifferentiated; and Athens Shale.

Changes in the structural style of the fault along the strike suggest a complex history of deformation. Stratigraphic separation on the fault decreases toward Bynum, Alabama, where the fault dies out on the foreland side of an apparently imbricated, southwestern plunging anticlinal fold making Coldwater Mountain and the southwestern end of Choccolocco Mountain. Hydrologic conditions in areas adjacent to the fault are controlled by both stratigraphy and structure. The permeability of rock units in the area is the result of secondary openings. The rock types with the greatest permeability are the highly fractured quartzite beds of the Weisner Formation and the fractured dolomite beds within the solution cavities of the Knox Group. All the other rock units have very low primary and secondary porosity and permeability. The greatest porosity and permeability occurs in a wide zone of fracturing where quartzite and dolomite are

juxtaposed along the Jacksonville Fault. The wide fracture zone is most prominent southwest of FMC on the northwestern sides of the Choccolocco and Coldwater Mountains.

The Weisner Formation, characteristic of FMC, occurs to 2,500-foot (750-meter) depths and consists of buff shale, siltstone, sandstone, quartzite, and conglomerate. Outcrops form hills or mountains of great relief. Quartzite and conglomerate are most conspicuous where they form crests or ledges along the southeastern side of Choccolocco Mountain. This mountain runs north to south, forming the eastern boundary of FMC. Locally, the Weisner Formation contains deposits of limonite, manganese, bauxite, and hematite.

4.6.2 Soils

Three major soil associations are found in the disposal area at FMC. These soil associations are Stony Rough Land, the Anniston-Allen-Decatur-Cumberland Association, and the Rarden-Montevallo-Lehew group. These soil associations are illustrated in Figure 4-7. None of the soils present in the disposal area would constitute prime farmland.

Stony Rough Land is comprised of shallow, steep, and stony soils underlain by sandstone, limestone, and Talladega slate. Some 80 percent of the disposal area consists of this group. Characterized by stony or rough land, high water runoff, and slopes over 25 percent, this soil association does not lend itself to construction without proper erosion management practices. These soils are generally unsuited to cultivation. Typical uses include woodlands, wildlife management and grazing.

The Anniston-Allen-Decatur-Cumberland association is found in the northern and west-central portions of the cantonment area. This series is composed of deep, well-drained, level to moderately steep soils in valleys underlain by limestone and shale. The soils range from gravelly loam to silty clay loam. These soils are suitable for cultivation, but depending upon slope, may need careful management to prevent erosion. Cumberland and Decatur soils are dark reddish-brown gravelly loam developed from limestone saprolite source (SAIC, 1995a). Steeper slopes must be kept permanently vegetated, since erosion can occur without careful management.

The Rarden-Montevallo-Lehew group is composed of moderately deep or shallow soils on ridgetops and steep slopes and in local alluvium on foot slopes or in draws. This soil group is found in the northwestern and western portions of the cantonment area. Soils developed from the residuum of shale and fine-grained, micaceous sandstone. These soils are typically reddish-brown to dark gray brown to yellow brown silt loam, clay, or silty clay (SAIC, 1995a). The soils are not well suited for cultivation. The soils are typically only moderately to poorly productive.

4.6.3 Topography

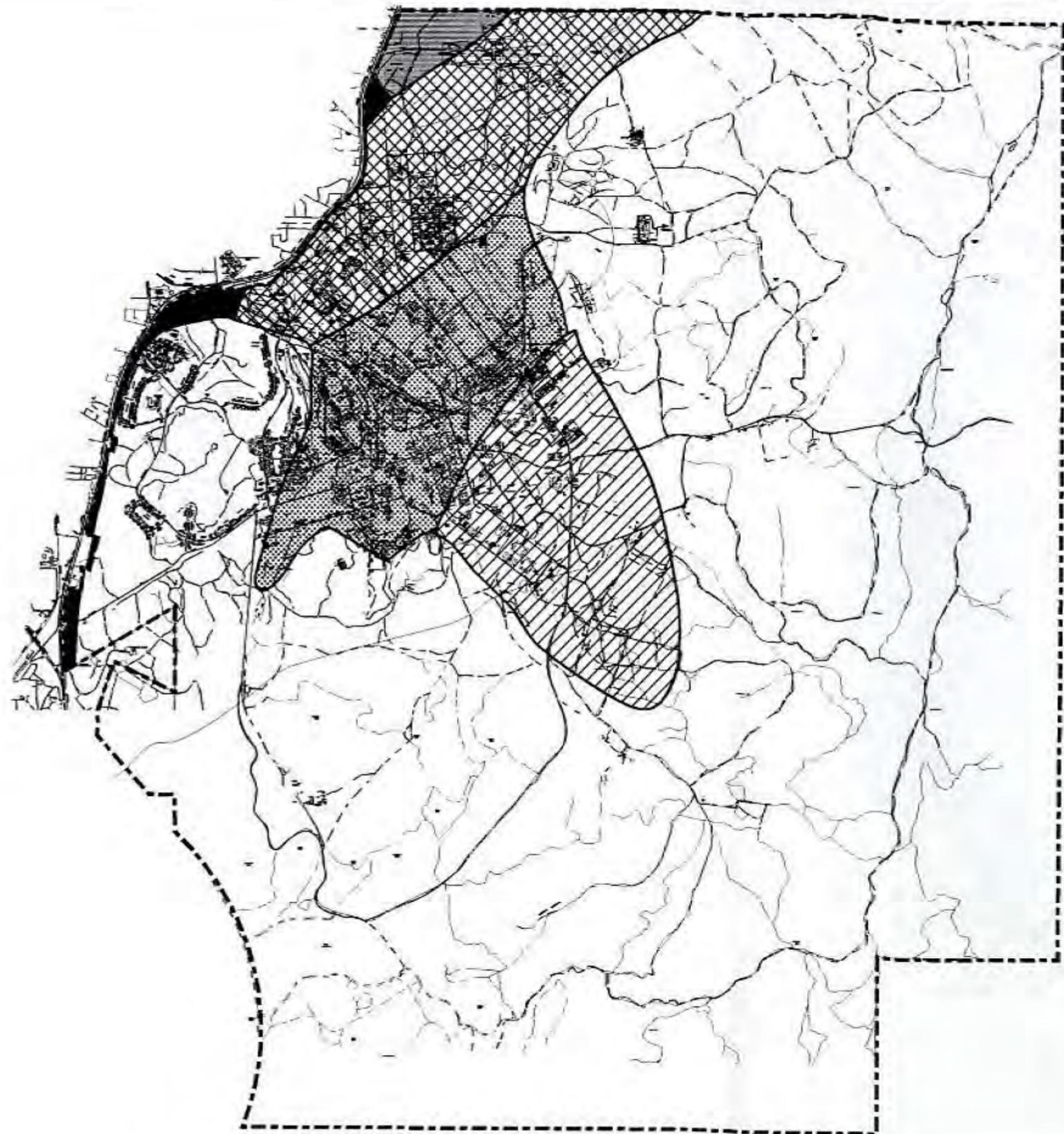
The cantonment area is surrounded on its southern and eastern sides by a series of mountainous ridges known as Choccolocco Mountains. Lateral ridges extend from the main range in a westerly direction, rising from 700 to 2,063 feet above sea level. Much of this area has slopes of over 25 percent (Figure 4-8). The remainder of FMC is more gently rolling. Early geologic survey documents reveal the existence of two caves in the cantonment area. However, these suspected caves have not been reported by installation personnel in over 80 years of operating the cantonment area. The Choccolocco Corridor is bordered by Choccolocco Mountain on the west and the Talladega Mountains on the east. The valley between these two mountain ranges consists of flat to gently rolling lands. The disposal area is typified by moderately steep to steep slopes with little flat land at either the ridge top or valley floor.

4.6.4 Mining Activity

According to the Bureau of Land Management, Non-Energy Mineral Department, no modern mining activities occur at FMC. By law, the Bureau of Land Management is prohibited from allowing mining activities on Department of Defense (DOD) lands. Additionally, the Bureau of Land Management, Oil and

Gas Section, reports no active or inactive permits or leases for oil and gas exploration and extraction at FMC.

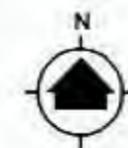
However, historical mining did occur at FMC and in the surrounding area. In the FMC Cultural Resources Overview by New South Associates, several references to mining at FMC and in the surrounding area are detailed. During the Civil War, the caves along Cane Creek were mined for saltpeter and Blue Mountain Cave was mined by the Confederate Army. After the Civil War, iron manufacturing companies relocated to this area lured by the rich deposits of hematite ore and plentiful forests. The area was mined to support iron manufacturing processes.



LEGEND

- RESERVATION BOUNDARY
- CONASAUGA FORMATION
- ▬ ROME FORMATION
- ⊠ FLOYD SHALE
- ▨ LITTLE OAK LIMESTONE, ATHENS SHALE, LENOR LIMESTONE
- ▧ NEWALA & LONGVIEW LIMESTONES & DIFFERENTIATED
- WEISNER FORMATION

SOURCE: FWEC, 1996



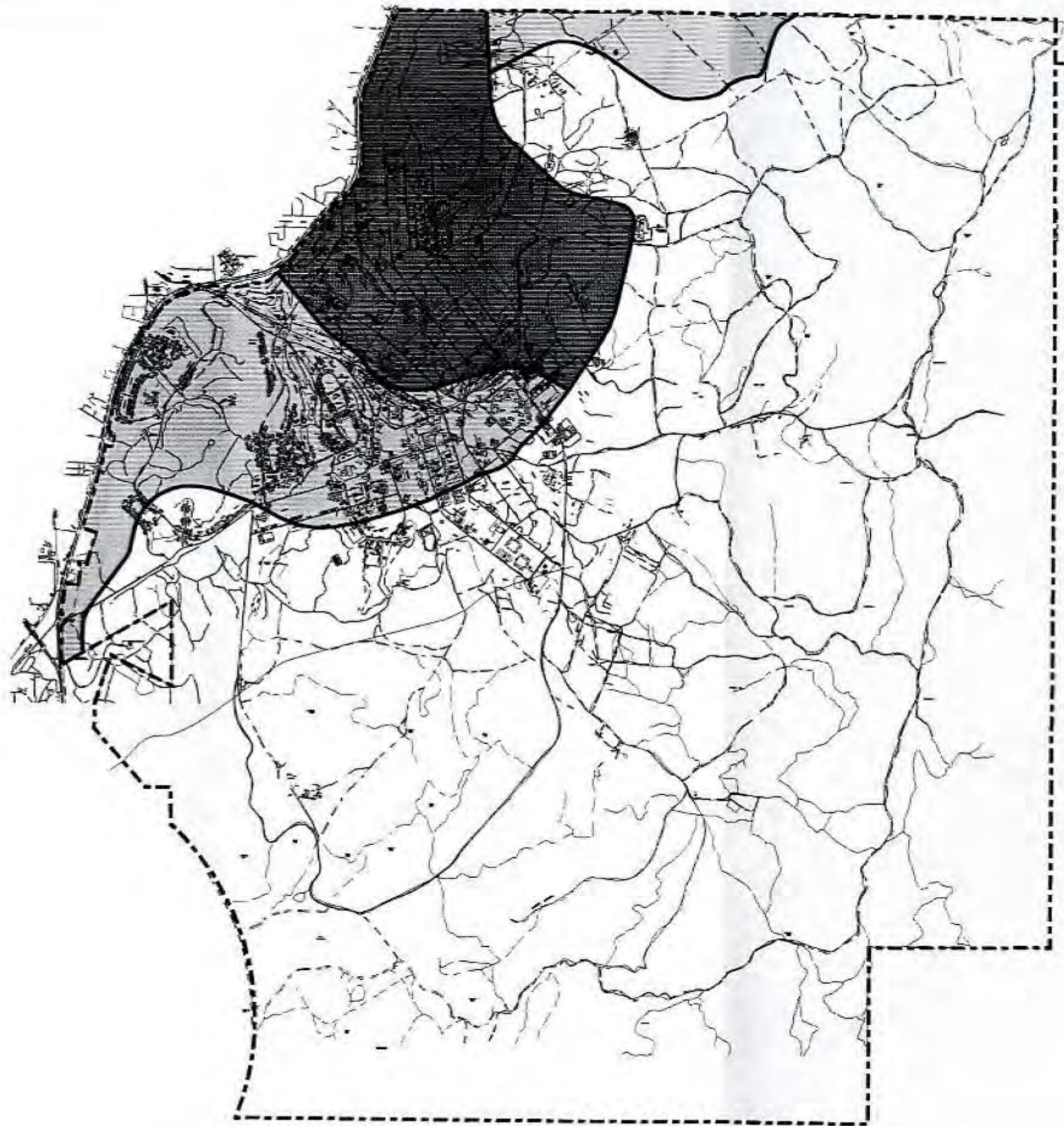
 PARSONS ES PARSONS HEA ST LOUIS, MISSOURI	 MOBILE DISTRICT US ARMY CORPS OF ENGINEERS MOBILE, ALABAMA
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ENVIRONMENTAL IMPACT STATEMENT

**DISPOSAL AND REUSE OF
FORT McCLELLAN, ALABAMA**

GEOLOGY, FORT McCLELLAN

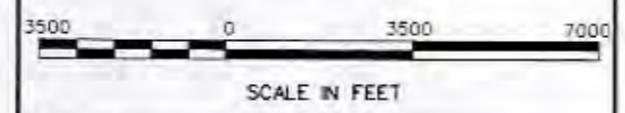
DATE: AUG., 1998	FIGURE NO. 4-6
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LEGEND

-  RESERVATION BOUNDARY
-  ANNISTON-ALLEN-DECATUR-CUMBERLAND
-  RARDEN-MONTEVALLO-LEHEW
-  STONY ROUGH LAND

SOURCE: FWEC, 1996



 PARSONS ES PARSONS H&A ST. LOUIS, MISSOURI	 MOBILE DISTRICT US ARMY CORPS OF ENGINEERS MOBILE, ALABAMA
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ENVIRONMENTAL IMPACT STATEMENT

**DISPOSAL AND REUSE OF
FORT McCLELLAN, ALABAMA**

SOIL ASSOCIATIONS AT FORT McCLELLAN

DATE: AUG., 1998	FIGURE NO. 4-7
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LEGEND

- RESERVATION BOUNDARY
- 15% - 24% SLOPE
- 25%+ SLOPE

SOURCE: SOUTHERN GIS AND EDRAW, 1997



SCALE IN FEET

PARSONS ES
PARSONS HEA
ST LOUIS, MISSOURI

MOBILE DISTRICT
US ARMY CORPS OF ENGINEERS
MOBILE, ALABAMA

ENVIRONMENTAL IMPACT STATEMENT

**DISPOSAL AND REUSE OF
FORT McCLELLAN, ALABAMA**

TOPOGRAPHY/SLOPE, FORT McCLELLAN

DATE: AUG., 1998

FIGURE NO. 4-8

4.7 INFRASTRUCTURE

4.7.1 Potable Water Supply

The potable water supply system provides supply sources, storage capacity, and a distribution network. The primary water source is the Anniston Water Works and Sewer Board. A 1.5 million gallon aboveground steel tanks provides the current storage capacity.

FMC obtains its water from the City of Anniston Water Works and Sewer Board. The source waters for this system is primarily from Coldwater Spring (estimated flow of 24-36 million gallons per day (MGD)), located approximately 7 miles southwest of Anniston, and Hillabee Creek Reservoir, located about 3 miles southeast of Anniston supplies a portion of the water. Both sources undergo chlorination and fluoridation treatment prior to distribution; water from Hillabee Creek must also undergo filtration. The Calhoun County Water and Fire Protection Authority Office, which gets its source water from Seven Springs and Read's Mill, supplies water to one faucet in area B44. This area is located on the Choccolocco Corridor land that is leased from the state and will return to state control upon closure of FMC.

The potable water is supplied to FMC through double mains from the city's distribution system to government-owned booster pump stations at Summerall and Baltzell Gates; this is the installation's primary drinking water system. Under the present operating conditions, the post's water demands are solely met by the Summerall Gate pumping station; the Baltzell Gate pumping station is used only for peak demand days and in case of fire. Summerall Gate pumps and Baltzell Gate pumps were replaced within the last 15 years with 1,500 gallon per minute (GPM) pumps. Water is re-chlorinated at the pumping stations before entering the FMC distribution system. Water distribution occurs through a system of approximately 513,000 LF of pipeline ranging in size from 4-inches to 12-inches in diameter.

There are two water storage tanks on FMC. One is an underground concrete storage reservoir with a 1 million gallon capacity, and the other is an aboveground steel tank with a 1.5 million gallon capacity. Both storage tanks were originally permitted water supplies by the ADEM. Due to degradation of its liner, the underground storage reservoir is no longer in service. The aboveground steel tank was refurbished in 1990 and remains in service.

There is a well located at Bivouac 44 that provides potable water. The well at Bivouac 44 was permitted by ADEM for 1987 through 1997. In July 1988 FMC notified ADEM that county water was provided to Bivouac 44. As a result, ADEM discontinued the permit requirements for this site, and the well is no longer used. A well at Reilly Lake provides water to flush toilets, but the water is not potable.

FMC is currently in compliance with Safe Drinking Water Standards. FMC's public water supply system was inspected by ADEM in July 1996. Water samples are taken at regular intervals to detect possible contamination. Lead content in drinking water was tested by the U.S. Army Environmental Hygiene Agency-South (USAEHA-South) during December 1991 and has been monitored continuously in accordance with ADEM requirements since that time. All results have been negative, and the drinking water has been found to meet required standards.

In 1994, FMC's population of approximately 8,000 had an average daily demand for water of 1.17 MGD. By contract, FMC's water limit was 3.5 MGD in 1994. In August 1993 the maximum water usage was 1.51 MGD. There is no physical limitation which would restrict delivery of substantially greater quantities of water by the Anniston system.

4.7.2 Wastewater Collection And Treatment

The wastewater management system includes an extensive network of gravity collection sewers, force mains, three pumping stations, and a recently improved wastewater treatment plant. The collection network consists of approximately 338,000 LF of sanitary sewer pipe and 300 LF of industrial waste pipe (FMRRA,1996). An estimated 75-percent of the network has been sliplined to reduce infiltration and inflow.

The wastewater collection system on FMC discharges to trunk sewers in four major zones which converge near the wastewater treatment plant (Figure 4-9). Zone 1 serves the Chemical School-National Guard area with 15-inch and 18-inch diameter gravity sewers. Zone 2 serves the central portion of FMC with 18-inch and 24-inch diameter gravity sewers. Zone 3 serves the eastern-most family housing area with a 12-inch diameter gravity sewer. Zone 4 serves the remaining family housing area using a 10-inch diameter gravity sewer and Pumping Station No. 3 with parallel 6-inch and 8-inch diameter force mains. Wastewater is transported across Jacksonville Highway to the treatment plant by a 30-inch diameter gravity sewer.

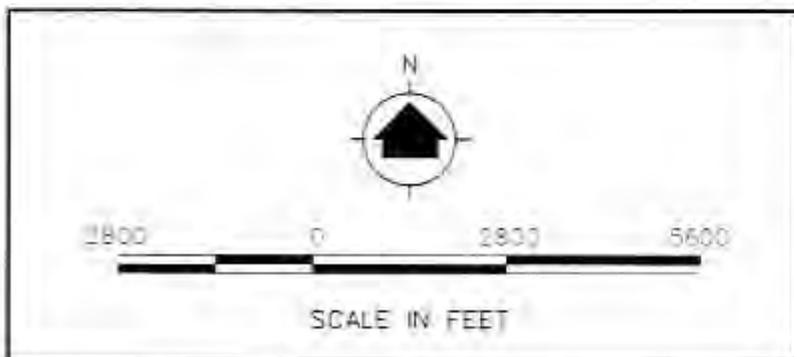
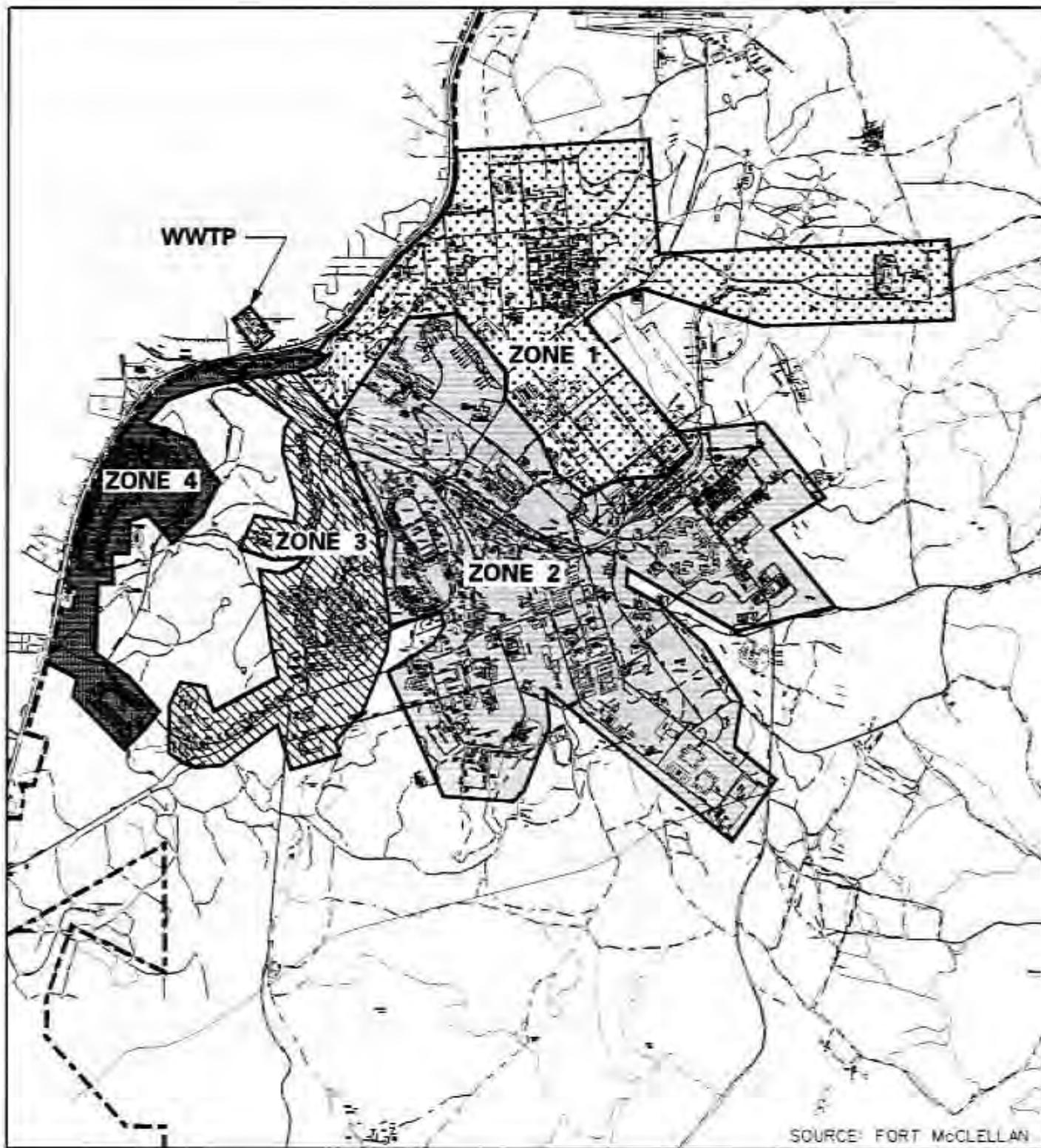
The FMC Wastewater Treatment Plant (WWTP) is located west of FMC along Anniston-Jacksonville Highway 21 and discharges into Cane Creek. The plant serves all of FMC as well as residents bordering the post boundary in the communities of Pelham Heights and Lenlock. Following an upgrade to achieve tertiary treatment standards a revised NPDES permit (No. AL0024520) for the plant's operation was issued in September 1994. The WWTP is operated by Operations Technologies, Inc. under contract. The average daily throughput of the WWTP is 1.5 MGD, but the system can accept a maximum average flow of 2.2 MGD. Of the 1.5 MGD average daily influent, 1.3 MGD is from FMC. The remaining 0.2 MGD is from the communities of Pelham Heights and Lenlock. The peak flow for storm events is established at 8.6 MGD; any flow in excess of 8.6 MGD must be reported to ADEM before the excess flow can bypass the treatment plant. Influent flows through a grit chamber, bar screen, and a Parshall flume prior to treatment in two primary clarifiers. After the primary clarifiers, the flow enters two mechanically aerated continuous flow aerobic reactors. Overflow from the digesters enters secondary clarifiers followed by carbon activated trickling filtration. Prior to discharge, the flow is aerated to increase the dissolved oxygen content and ultraviolet treatment is applied to reduce bacterial count. Sludge from the process is discharged to drying beds and removed to a sanitary landfill offpost after drying (Reisz, 1996).

4.7.3 Solid Waste Disposal

FMC formerly disposed of its sanitary solid waste in Landfill No. 4 located in the northwestern portion of the installation. This landfill has three disposal areas, one for sanitary waste, one for construction and demolition debris, and a special waste section for asbestos. However, because new RCRA Subtitle D requirements mandated that the sanitary landfill be lined, FMC closed the sanitary portion of the landfill on April 8, 1994. Presently, the installation's sanitary solid waste is disposed by a contractor off-post at a Subtitle D facility in Cropwell, Alabama.

The installation continues to dispose of construction and demolition debris in a 12.5-acre portion of Landfill No. 4. (Industrial Landfill). This landfill accepts wastes including construction/demolition waste and/or rubbish. Construction debris includes, but is not limited to masonry materials, sheet rock, roofing waste, insulation, rebar, scrap metal, paving materials, and wood products (ESE, 1998a). The industrial landfill is permitted by the ADEM to accept up to 30 tons per day.

A voluntary recycling program exists for FMC residents and personnel. Products such as paper, plastic, glass and aluminum are collected at designated areas throughout the installation. Scrap metal is also turned in through the recycling program. Building 338 houses the installation's recycling program.



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ENVIRONMENTAL IMPACT STATEMENT	
DISPOSAL AND REUSE OF FORT McCLELLAN, ALABAMA	
INFRASTRUCTURE - WASTEWATER COLLECTION ZONES	
DATE: AUG., 1998	FIGURE NO. 4-9

4.7.4 Landfills

There are three formerly used landfills (Landfill Nos. 1-3) at FMC and one landfill that has an active portion and a non-active portion (Landfill No. 4). The landfill locations are shown on Figure 4-10.

4.7.4.1 Landfill No. 1. Landfill No. 1 was the FMC Sanitary Landfill from 1945 to 1947. It is located between 16th Avenue and Avery Drive and covers approximately 11 wooded acres on the side of a hill. The parcel is adjacent to the floodplain of an intermittent creek that runs into Remount Creek. Samples collected during recent investigations of the site were analyzed for volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), pesticides and polychlorinated biphenyls (PCBs), explosive compounds, and metals. Naturally occurring lead and arsenic as well as trace concentrations of the pesticide DDE were detected in soils. A downstream sample collected from Remount Creek detected trace concentrations of VOCs (chloroform; 1,1,1-trichloroethane; and chlorobenzene) and an explosive compound (1,2 dinitrobenzene). Four monitoring wells were installed at the site. Groundwater samples detected trace metals (lead and arsenic) and isolated traces of VOCs, SVOCs, and explosive compounds. Science Applications International Corporation (SAIC) recommended that no further site investigation be conducted. FMC is currently considering all proposed courses of action (ESE, 1998a).

4.7.4.2 Landfill No. 2. Landfill No. 2 was the FMC landfill after the closure of Landfill No. 1. It was active from 1947 to an unknown date and occupies approximately 1.5 acres. The landfill is located on the southern tip of Cemetery Hill between 2nd Avenue and 10th Street, in the floodplain of the intermittent Cave Creek. Reportedly, this landfill was used to dispose of construction debris during demilitarization. Rusted drums, metal, small containers, and assorted building materials have been observed on the site. Groundwater samples analyzed for VOCs, SVOCs, PCBs, chemical warfare agent breakdown products, and explosives did not indicate pervasive groundwater contamination. Only naturally occurring trace metals were detected in surface water and sediment samples. SAIC recommended that no further site investigation was needed. FMC is currently considering all proposed courses of action (ESE, 1997a).

4.7.4.3 Landfill No. 3. Former Landfill No. 3 is located in the northwest corner of Main Post bounded by Anniston-Jacksonville Highway (Route 21) to the west, 3rd Avenue to the east, the installation's boundary to the north, and Cave Creek to the south. This 22-acre site was the sanitary landfill for the installation from 1946 to 1967. The landfill was constructed using trenches which extended northwest across the site from 3rd Avenue. Reportedly, empty pesticide containers, ammunition, and the burned ammunition pallets or crates were disposed here. Paint containers, fluorescent bulbs and ballasts, waste oil, and construction debris may also have been disposed at this location. There were no requirements to cap when it was closed in 1967, and settling is occurring, which could indicate that water is infiltrating through the topsoil (ESE, 1998a).

Currently, 19 monitoring wells have been installed at this site. Groundwater samples have been analyzed for VOCs, SVOCs, metals, pesticides/PCBs, chemical agent breakdown products, and explosives. The metals detected above USEPA drinking water maximum contaminant levels (MCLs) were aluminum, iron, lead, and manganese. The chlorinated compounds detected by the analysis in low concentrations include chlorobenzene, 1,1-dichloroethane, 1,2-dichloroethene, tetrachloroethene, trichloroethene, 1,1,2,2-tetrachloroethane, and pentachlorophenol. Pesticides detected in low concentrations include endosulfans I and II, alpha/delta-BHC, heptachlor, isodrin, 4,4'-DDD, 4,4'-DDE, and 4,4'-DDT. The compound related to explosives found in the groundwater was 1,3,5-trinitrobenzene. Other compounds detected included bis(2-ethylhexyl)phthalate, benzo(a)anthracene, and chysene (ESE, 1998a). There appears to be no widespread environmental contamination from Former Landfill No. 3 that is affecting the site's surrounding surface waters and corresponding sediment beds (ESE, 1998a). Continued monitoring and any remediation of potential groundwater contamination is being addressed by the BRAC Cleanup Plan (BCP).

Remedial alternatives proposed for the Former Landfill No. 3 include: no action; deed restrictions and monitoring; media cap; and the excavation of the surface soil and extraction of groundwater for treatment (ESE, 1998a).

4.7.4.4 Landfill No. 4. Landfill No. 4, located at the northern end of FMC and to the east of Landfill No. 3 was opened in 1967 as the Post Sanitary Landfill. This landfill was unlined and used the trench and fill method for disposal. All of the post household garbage, construction and demolition debris, oil contaminated soil, and dead animals used in the Chemical School demonstrations were disposed of in the Post Sanitary Landfill. This landfill was closed in April 1994 because regulations now require all sanitary landfills to be lined.

FMC received a temporary permit in 1993, to dispose of industrial and construction debris at this location. A permit to operate a permanent Industrial Landfill was issued in October 1995 which allows disposal of waste on previously unused sections of the landfill property. The Industrial Landfill is located on a 12.5-acre section of Landfill No. 4. This landfill accepts industrial wastes including construction/demolition waste and/or rubbish. Construction debris includes, but is not limited to masonry materials, sheet rock, roofing waste, insulation, rebar, scrap metal, paving materials, and wood products. In addition, there is a designated area for asbestos disposal (ESE, 1998a). Petroleum contaminated soils are placed in a lined portion of the landfill for remediation by bioremediation.

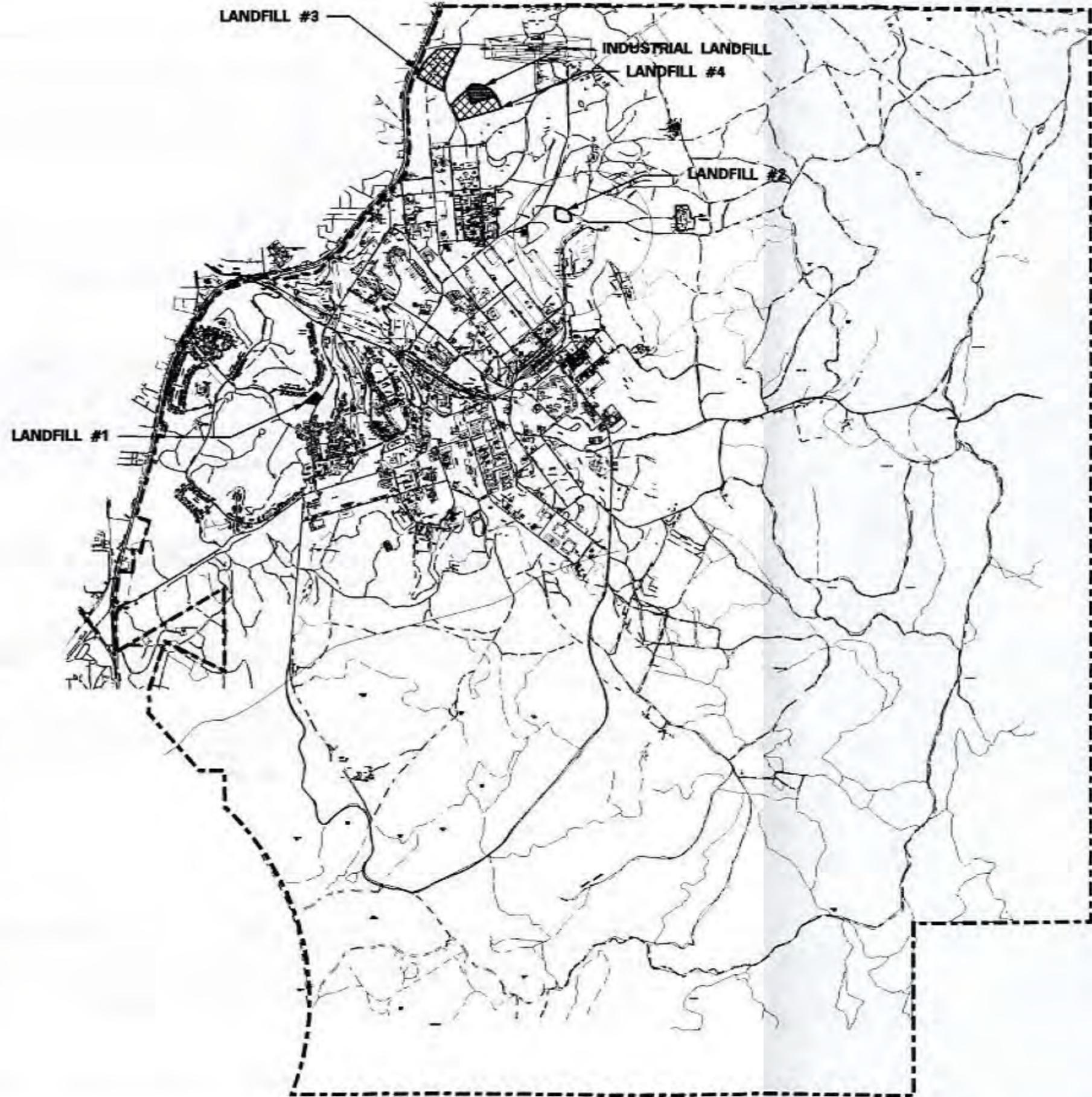
Groundwater sampling is conducted on a semi-annual basis. The sampling parameters are iron, total organic carbon (TOC), arsenic, barium, cadmium, chromium, lead, mercury, manganese, sodium, nitrates, COD, and phenols. In addition, explosive gas levels are monitored annually. Prior to closure and capping of the sanitary landfill, groundwater samples routinely exceeded drinking water standards for metals (i.e., manganese, lead, iron, and chromium). Analyses show that toluene, chloride, and magnesium were above background levels. Groundwater sampling results since the capping have changed dramatically. Lead levels have decreased the most; however, they are still above the MCL for drinking water (ESE, 1998a).

4.7.5 Highways And Roadways

Highway 21 is a major north/south 4-lane divided arterial adjacent on the west of FMC, transitioning to 5-6 lanes south of its intersection with Highway 431. Four main gates, Summerall, Baltzell, Baker and Galloway, provide access to the cantonment area from Highway 21. Highway 431 is a major northwest/southeast 4-lane divided arterial which intersects Highway 21 just south of Summerall Gate, and is the major connector between Anniston, Gadsden, and Huntsville. Average daily traffic (ADT) counts for 1995 exceeded 40,000 on Highway 21 south of its intersection with Highway 431, exceeding the ADT on I-20 which is adjacent to the south of Anniston and Oxford. ADT for 1995 on Highway 431 exceeded 23,000 near its intersection with Highway 21 (ADOT, 1996). The current Levels of Service (LOS) for Highway 21 range between "E" and "F" from north of Summerall Gate south to approximately 15th Street in Anniston (ADOT, 1995).

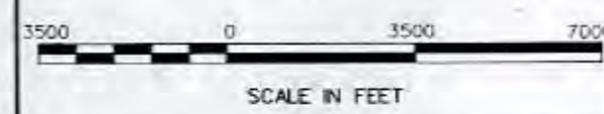
FMC has 112 miles of unsurfaced roads, 99 miles of surfaced roads, and 49 bridges (Installation Summary, 1996). Streets within the cantonment area are paved and adequately maintained. The major street system serving the cantonment area is configured in an irregular radial pattern with the major elements consisting of Baltzell Gate Road, Summerall Gate Road, and Galloway Gate Road. ADTs approximated 7,600 on Summerall Gate Road and 9,000 on Baltzell Gate Road in 1992 (ADOT, 1996). ADT on the Galloway Gate Road approximated 6,800 based on estimates provided by FMC staff. ADT at Baker gate are limited to local traffic in and out of the housing area serviced by this gate. The total external baseline traffic at FMC is approximately 23,500 ADT which includes the traffic at the Summerall, Baltzell and Galloway Gate Roads. The total baseline traffic (internal and external) is approximately 29,375 ADT (see Table 5.3).

Figure 4-10 Infrastructure - Landfills
11 x 17 (B & W)



- LEGEND**
- RESERVATION BOUNDARY
 - INDUSTRIAL LANDFILL (ACTIVE)
 - LANDFILL #1 - SANITARY (CLOSED, USED IN WWII ERA, POSSIBLE CERCLA SITE)
 - LANDFILL #2 - SANITARY (CLOSED, USED POST WWII, 1947-UNKNOWN, POSSIBLE CERCLA SITE)
 - ▨ LANDFILLS #3 - (1946-1967) AND #4 - (1967-PRESENT, SANITARY PORTION CLOSED 1994)

SOURCE: FWEC, 1996



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ENVIRONMENTAL IMPACT STATEMENT

DISPOSAL AND REUSE OF FORT McCLELLAN, ALABAMA

INFRASTRUCTURE - LANDFILLS

DATE: AUG., 1998	FIGURE NO. 4-10
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Connector streets link major activity areas. Major connector streets consist of 15th Street, 20th Street, 16th Avenue, 6th Avenue, 4th Avenue, 5th Avenue, Nielsen Street, 10th Avenue, 8th Avenue, and 21st Street. This configuration provides good access to and from the various activities within cantonment area. A number of hard surface roadways provide access to the outlying range and training areas outside of the cantonment area. These roadways include Rock Hollow Road, Bains Gap Road, and 10th Street. Other unnamed gravel roads provide access to range and training areas removed from the cantonment area. Figure 4-11 illustrates the pattern of arterials.

Transportation problems in the cantonment area are primarily related to congestion. Peak hour vehicle stacking is quite common at Baltzell Gate and Summerall Gate, the two most heavily used gates. This is due to the reduced carrying capacity of the two-lane Baltzell Gate and Summerall Gate Roads. Traffic congestion is also evident around the community center at the intersection of Summerall Gate Road and 10th Avenue.

4.7.6 Railways

FMC's rail network consists of 17 track sections originally totaling 8.3 miles and generally running east and west through the cantonment area. The original rail network consisted of nine spurs and seven sidings off the Southern Railroad lead track that connects to the branch line between Anniston and Spring Garden, Alabama. A large amount of the trackage has been removed or isolated from continued use. Current track available for usage totals approximately 3.8 miles. All usable trackage is currently maintained to minimum track safety standards required for a Federal Railroad Administration Class 2 categorization.

4.7.7 Runways

Reilly Army Airfield is located north of the cantonment area and lies approximately 1,800 feet south of the northern installation boundary. The airfield consists of a 2,300-foot runway running east to west. Reilly Army Airfield is no longer available for fixed-winged airfield operations. The tarmac at the airfield has been converted to a defensive driving course range.

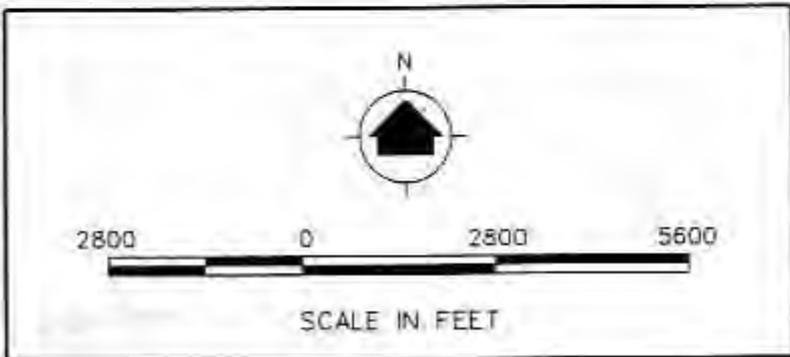
There are four authorized landing zones for rotary-winged aircraft on FMC: Center Pad FN116310, Noble Army Community Hospital Pad FN1222321, Alabama National Guard Pad FN125327 and Reilly Army Airfield FN129344.

The Anniston-Calhoun County Airport is located four miles south of Anniston. The airport has a 7,000-foot, lighted runway capable of servicing jet aircraft up to the Douglas DC-9 and Boeing 737 models. Military aircraft (C-130) can operate from this runway as well. One small airport, McMinn located within a 12-mile radius of the installation, is used for general aviation and chartered aircraft (Ebasco, 1992).

4.7.8 Incinerators

Two active incinerators are located on FMC: one at the Noble Army Community Hospital, and one at the Chemical Defense Training Facility.

4.7.8.1 Noble Army Community Hospital Incinerator. Located adjacent to the Noble Army Community Hospital, in Building 294, an infectious/pathological waste incinerator has been in operation since 1990. The incinerator currently burns approximately 1,000 to 1,200 pounds of regulated medical waste per month. Regulated wastes incinerated include cultures and stocks of infectious agents, pathological wastes, human blood and blood products, used sharps, isolation wastes, and unused sharps. The hospital



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ENVIRONMENTAL IMPACT STATEMENT	
DISPOSAL AND REUSE OF FORT McCLELLAN, ALABAMA	
INFRASTRUCTURE - STREETS	
DATE: AUG., 1998	FIGURE NO. 4-11

incinerator does not treat hazardous wastes and, therefore, is not operated under a State Air Permit. It is approved for operation under the ADEM Air Division's "Existing Small" medical waste incinerator regulations. Wastes are burned twice a week and ash is removed from the incinerator weekly (ESE, 1997a). The incinerator ash, sampled annually for heavy metals using the toxic characteristic leaching procedure (TCLP), is double bagged and sent to ACMAR Regional Landfill in Moody, Alabama by an off-site contractor.

4.7.8.2 Chemical Defense Training Facility Incinerator. The Chemical Defense Training Facility (CDTF) is used for training military personnel in techniques of detection and decontamination of nerve agents. The facility has used its incinerator located in Building 4483 to dispose of generated wastes since February 1987. Operating under a State Air Permit, the incinerator treats non-hazardous wastewater, personnel protective clothing, and other solid waste such as plastic, paper, rubber, glass and metal. The ash generated from the incinerator is tested annually for total metals using TCLP to confirm that it is non-hazardous. The ash is double bagged and disposed in the industrial landfill. Gases generated from incinerator combustion are filtered through a particulate filter, and a series of carbon units, prior to discharge to the atmosphere.

Each year approximately 6,000 gas mask filters containing chromium VI are heated in separate incinerator loads to 1,050°F for 15 minutes, a lower temperature than the typical 2,000°F temperature needed to treat chromium VI. The residue remaining following the heating process is then drummed and disposed as discussed in subsection 4.9.2.

4.7.9 Energy

4.7.9.1 Electrical System. Electrical power is supplied to FMC and the Anniston area by the Alabama Power Company (APCO). The distribution network consists of 856,691 LF of overhead electrical lines and 1,057,000 LF of underground electrical lines. APCO supplies power to FMC through a 115-kilovolt (kV), 3-phase, 60-hertz transmission line which is part of a loop system allowing backfeed during emergency conditions. FMC receives power from a single electric substation located south of Galloway Gate, and the power is distributed by four primary distribution feeders. The substation, owned by APCO, has a maximum continuous rating of 22,400 kilovolt-amperes (kVA). An additional 20,000 kVA could be delivered to FMC if required. Some facilities, such as the hospital, have generators capable of sustaining their power during a power outage.

In 1993 the average daily electrical demand at FMC was 12,263 kVA. The peak electrical demand was 17,640 kilowatts (kW). In 1993, the total electrical usage at FMC was 65,664,000 kilowatt hours (kWh).

4.7.9.2 Natural Gas. Natural gas is the primary fuel used for about 90 percent of the heated space at FMC. This natural gas is supplied by Alabama Gas Corporation (ALAGASCO). FMC is under contract to ALAGASCO to receive a maximum of 2.1 million cubic feet (MCF) of natural gas per day.

The natural gas distribution system consists of 26,038 LF of pipelines initially installed in 1965 (FMRRA, 1996). ALAGASCO supplies natural gas to FMC through a 10-inch, high pressure line that extends along Alabama Highway 21. The line temporarily increases to a 12-inch, high pressure line just prior to entering the post at Summerall Gate Road. Upon entrance to the installation, the line reduces to a 10-inch, high pressure line that continues along Summerall Gate Road to a metering station near 16th Avenue where it is regulated down to medium pressure and fed into the installation distribution system. Near the metering station is a peak shaving plant. This plant consists of five 30,000 gallon propane tanks. Liquid propane is blended with air to form a air-gas mixture that is used to supplement incoming natural gas during periods of peak demand.

In 1993, the average daily demand for natural gas at FMC was 12,645 hundred cubic feet (CCF). In 1993, the total natural gas demand for FMC was 483,862 MCF.

4.7.9.3 Fuel Oil and Steam. There are four central heating plants on the installation that have a rated output above 3,500,000 British Thermal Units per hour (BTU/hr). All of the plants are high pressure, steam boiler plants except one (Plant #4) which is a high temperature, hot water plant. Each plant supplies steam or high temperature hot water for heating, domestic hot water, and process steam.

Currently only three of the central heating plants are active (#1, #2, and #4). Plants 1, 2 and 3 are boilers. Plant #1 serves the 3100 Block area; Plant #2 serves the 2200 Block area and hospital (Buildings 292 and 295). Plant #3 serves the 1000 Block area but has been off-line for approximately 2 years. The 1000 Block area can also be backfed from Plant #2 as it is currently. Plant #4 serves the 1600 and 1800 Block areas and will remain as part of the reserve enclave. The four plants are equipped with dual burners for natural gas, or No. 4 or No. 6 fuel oil. Natural gas is primarily used in normal operations.

4.7.10 Communications

The telecommunications system at FMC includes an extensive standard (copper) cable network, limited fiber optic cable, and related switching equipment that are connected to an off-post service provider. Bell South Company provides telecommunications services to FMC.

FMC has approximately 266,000 feet of copper cable divided into 14 branch cables. The total number of wire pairs in the branch cables range from 50 to 1,800. Approximately 50% of the wire pairs are currently in use; an estimated 8% of the wire pairs are considered defective. The cable has been extended onto FMC mounted aerially on poles, direct buried, and within utility ducts. Aerially mounted cable is carried on approximately 800 poles. Of these poles, 300 are dedicated to telephone cable and the remaining are jointly used for other services.

The cable has been connected to Integrated Services Digital Network (ISDN) equipment capable of providing high-speed computer data communications at a number of buildings at FMC. The ISDN equipment is provided by Bell South for all service except the communications line between the Emergency Operations Center (Building 120) and the Joint Information Center (Building 2203).

FMC has approximately 5,000 feet of twelve-pair fiber optic cable, with two pairs currently in use. The cable is located in underground ducts, accessible by 11 manholes. The two fiber optic lines leave the main post at Summerall and Baltzell Gates. Fiber optic lines also connect the main switch at Building 251 to the remote switch at Noble Hospital (Building 292).

4.8 ORDNANCE AND EXPLOSIVES

Throughout its history, FMC has been used as an artillery and small arms training facility. Figure 4-12, taken from the "BRAC Ordnance, Ammunition and Explosives Archives Search Report" depicts the areas at FMC that have been potentially used for ordnance training activities (USACE, 1997). Figure 4-13, from the "Environmental Baseline Survey" illustrates historic and current training and UXO areas at FMC (ESE, 1998a). These figures document that large portions of FMC may contain unexploded ordnance.

FMC has been used for artillery training since the Spanish American War (NSA, 1992). FMC's location was originally chosen for its location in the Choccolocco Mountains which serve as a backstop for artillery training. FMC staff report that artillery rounds over 12 inches long have been found on mountain slopes (FMC, 1995b).

FMC has established Dud Impact Areas south of Ranges 16 and 17. The Dud Impact Areas are those locations where duds have been found. A dud is any munition which was not armed as intended or which has failed to explode after being armed. Dud ordnance is considered very hazardous. These two areas are posted and are permanently off limits to all civilian and military personnel. Range operations are now conducted in a manner designed specifically to minimize the production of duds. Range personnel currently report duds that occur during firing practice or are discovered on the ground. Range personnel contact Range Control, and they call the 722nd EOD to immediately handle the UXO hazard (ESE, 1998a)

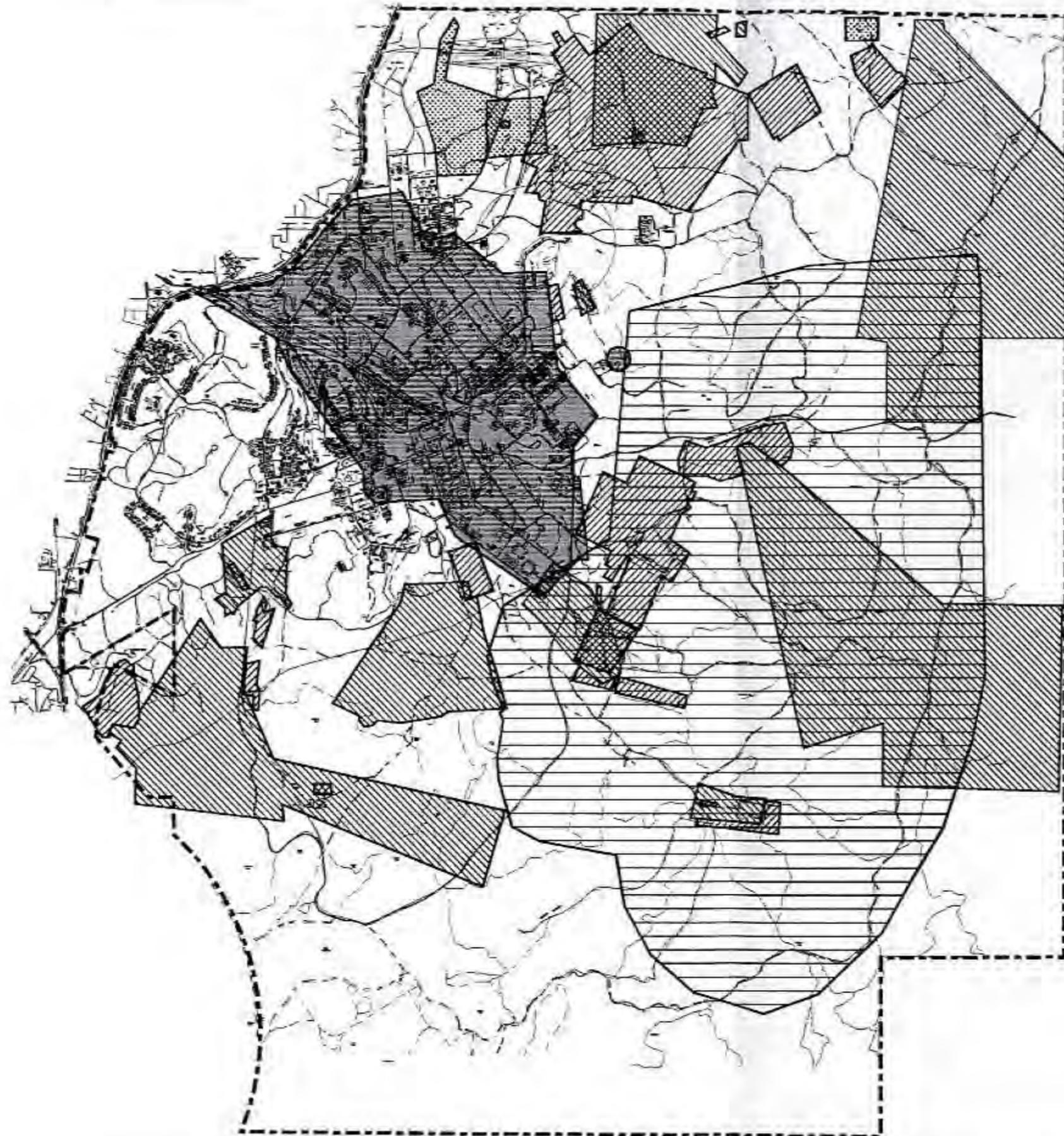
Locations of current ranges are well marked and accurately recorded. Few maps are available detailing historical ranges.

4.8.1 Current Ordnance Ranges

Current ranges consist of ranges commonly known to active personnel at FMC. They are retained in the database of real property and are clearly identified on the FMC Main Post Training Map. Several of the extant ranges have been closed and are no longer in use, however, they are not fenced or otherwise secured. There are 22 extant ranges on the FMC Main Post. Table 4.12 summarizes these ranges. Detailed information for these sites is provided in the FMC EBS document (ESE, 1998a).

4.8.2 Inactive Ordnance Ranges

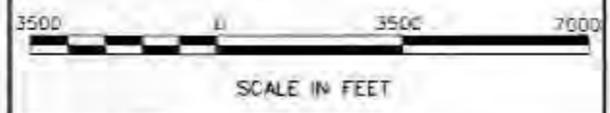
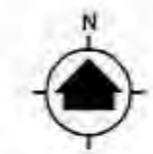
Ordnance ranges have been constructed and abandoned throughout the history of FMC. More than 30 former firing ranges were identified on FMC during the EBS that are no longer carried on the DEH database of real property. The existence of these ranges is still generally unknown to current FMC personnel. These ranges have been abandoned, and are now largely or completely overgrown by vegetation, and were not documented by previous environmental reports. Table 4.13 summarizes these historic ranges. Detailed information for these sites is provided in the FMC EBS document (ESE, 1997a).



LEGEND

- RESERVATION BOUNDARY
- ▨ RIFLE, PISTOL, AND SMALL ARMS RANGES
- ▨ POSSIBLE ARTILLERY IMPACT AREAS
- ▨ POSSIBLE EXPLOSIVE ORDNANCE IMPACT AREAS
- ▨ TRAINING AREAS
- ▨ CANTONMENT AREAS

SOURCE:
 FORT McCLELLAN ARCHIVES SEARCH REPORT,
 USACE ST. LOUIS DISTRICT, 1997



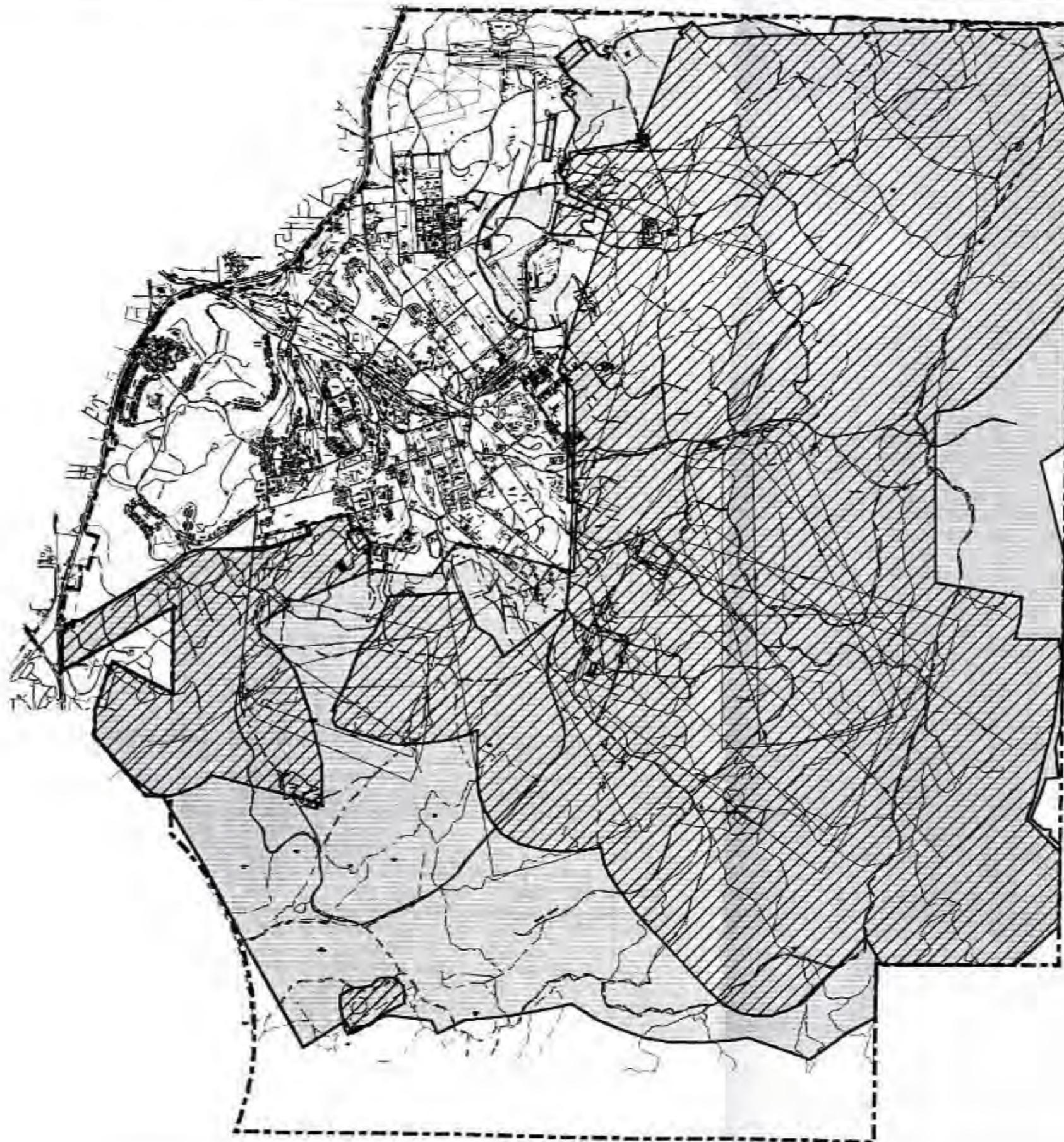
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ENVIRONMENTAL IMPACT STATEMENT

DISPOSAL AND REUSE OF
 FORT McCLELLAN, ALABAMA

**POTENTIAL LOCATIONS OF UNEXPLODED
 ORDNANCE AT FORT McCLELLAN**

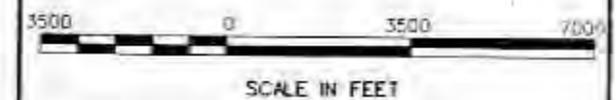
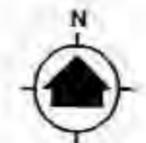
DATE: AUG., 1998	FIGURE NO. 4-12
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LEGEND

- RESERVATION BOUNDARY
- ▨ FUSED ORDNANCE AREAS
- ░ UXO/RANGES

SOURCE:
ENVIRONMENTAL BASELINE SURVEY, ESE, 1998



P PARSONS ES
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ST LOUIS, MISSOURI

MOBILE DISTRICT
US ARMY CORPS OF ENGINEERS
MOBILE, ALABAMA

ENVIRONMENTAL IMPACT STATEMENT

**DISPOSAL AND REUSE OF
FORT McCLELLAN, ALABAMA**

**POTENTIAL TRAINING AND UXO AREAS AT
FORT McCLELLAN**

DATE: AUG., 1998

FIGURE NO. 4-13

Table 4.12 Current Ranges - FMC Main Post

RANGE	LOCATION	ORDNANCE TYPES	TIME PERIOD
Range 12 Competitive Pistol	Southwest Main Post	Pistol: .22-cal; .38-cal; .45-cal; 9mm Rifle: .22-cal Machine gun: Machine gun (1960's) Shotgun: 12 gauge--no slugs	1951 to present
Range 13 Qualification Pistol (USMC) Range	Southwest Main Post	Pistol: .22-cal; .38-cal; .45-cal; 9mm Shotgun: 12 gauge-no slugs	1951 to present
Range 18 Down Range Feedback Range	Southcentral Main Post	Rifle: M-16, day/night phase, tracer, M-103 Springfield, M-1 Grenade, and machine gun.	1940 to present
Range 19 Qualification Pistol Range	Southwest Main Post	Pistol: .22-cal; .38-cal; .45-cal; 9mm Shotgun: 12 gauge--no slugs	1976 to present
Range 20 Infiltration Course	Central Main Post	Pistol: .22-cal; .38-cal; .45-cal; 9mm Rifle: M-60 with tracer Shotgun: 12 gauge--no slugs Other: dynamite, TNT, and C4	1980 to present
Range 21 Field Fire Range (Dry Fire, Protective Mask and Night Fire)	Eastcentral Main post	Rifle: M-16 with tracer	1980 to present
Range 22 Zero Range (25m)	Eastcentral Main Post	Rifle: M-16 with tracer	1961 to present
Range 23 Trainfire Range (Record, M-16 Qualification, NBC and Night Fire)	Central Main Post	Rifle: M-16 with Tracer Other: Misc artillery (date unknown)	1951 to present
Range 24 Lower Combat Indoctrination Range	Eastcentral Main Post	Rifle: M-16 blanks Other: Flares	unknown to present
Range 24a Multi-Purpose Range (Smoke, Demolition, and Flame Field Expedient (FFE))	Southeast Main Post	Rifle: M-14, M-16, and other rifles (including tracer rounds) Machine Gun: M-60 and machine guns (including tracer rounds) Other: C4, TNT, M-4 burster, blasting caps, simulators, trip flares, detonation cords, & smoke-producing munitions/equipment	1950s (approx) to present
Range 25 Known Distance Range (100-600 yards)	Central Main Post	Rifle: M-14, M-16, and M-1 Machine Gun: M-60, and tracer. Other: Artillery rounds.	1940 to present
Range 26 Live Fire and Maneuver Range	Central Main Post	Rifle: M-16 (since 1983) Other: Possible historical use of large caliber fused ordnance and large caliber weapons	Recent use 1976 to present. Historic use unknown
Range 27 Special Operations Range	Eastcentral Main Post	Pistol: 9mm; .38-cal; .45-cal Rifle: M-16 (1983-1989)	1976 to present

Table 4.12 Current Ranges - FMC Main Post

RANGE	LOCATION	ORDNANCE TYPES	TIME PERIOD
(Stress Pistol and Shotgun)		Machine Gun: M-60 and other Machine Guns Shotgun: 12 gauge (no slugs) (1989 to present)	
Range 28 Target Detection Range	Central Main Post	Rifle: M-16 blanks	1961 to present
Range 29 Weapons Demonstration and U.S. Weapons Range	Central Main Post	Pistol: .38-cal; .45-cal; 9mm Rifle: M-16 Machine Gun: M-60 Other: C-4, TNT, AT-4 Rocket, M-136, M-203, smoke, M-72 LAW, as well as the potential for historical use of fused ordnance	1977 to present. Historic use unknown.
Range 32 Hand Grenade Range	Southcentral Main Post	Other: Hand grenades (practice and live)	1987 to present
MOUT	Northcentral Main Post	Other: Limited to blanks, flares, and simulators	1989 to present
Skeet Range	Southwest Main Post	Shotgun: .410, 12, .20, .28 gauge	1988 to Present

Source: ESE, 1998

Table 4.13 Former Ordnance Ranges - FMC Main Post

RANGE	LOCATION	ORDNANCE TYPES	TIME PERIOD
Range 16 Grenade Launcher Range	Southwest Main Post Within Dud Impact Area	Other: Misc including M-203 (40mm) grenade, M-72 LAW, M-18(claymore mine), 3.5-rockets (bazooka), and hand grenades	1951 -1994
Range 17 Explosives Proficiency Training Area	Southwest Main Post	Multiple - adjacent to permanent dud area	1977-1994
Range 24 Upper Defensive Techniques	Eastcentral Main Post	Rifles: M-16 with tracer and flares	1983 - 1990
Range 30 Confidence Course	Northwest Main Post	Rifles: M-16 blanks (1977-1983) Machine Guns: M-60 and .30-cal (historic use)	1977-1983. Historic use unknown.
Range 31 Weapons Demonstration Range	Northwest Main Post	Pistol: .45-cal, .38-cal, Rifle: 90mm recoilless, M-16 Machine Gun: .50-cal; M-60 Shotgun: Other: M-72 (demo), and M-203 Demo most recently. Historical use includes 66mm incendiary rocket/TEA, flash, AP, and HE.	1951-1985. Historic use unknown.
Two Former Tank Ranges	North of Range 31 and East of Reilly Field	Unknown	Unknown Appear on 1956 & 1959 maps

Table 4.13 Former Ordnance Ranges - FMC Main Post

RANGE	LOCATION	ORDNANCE TYPES	TIME PERIOD
Seven Former Rifle & Machine Gun Ranges	Northern Main Post	Unknown	Unknown 4 ranges were in use in 1917 the other 3 appear on 1959 & 1966 maps
Former Mortar Firing Point	French Hill Quarry	Unknown	Unknown
Two Former Grenade Ranges/Areas	Northern Main Post	Unknown	Unknown Appears on 1959 map
Former Mortar Range	Within current Range 22 surface danger area	Unknown	Unknown Appears on 1959 map
Six Former Rifle Ranges	Two within the Range 20 boundaries, one east of Range 16, one north of the ammunition supply point, and two at unspecified locations	Unknown	Unknown Appear on various maps from 1946, 1948, and 1959.
Former Machine Gun Range	Western end of current Range 24A	Unknown	Unknown Appears on 1959 map
Former Demolition Area	Central portion of current Range 24A	Unknown	Unknown Appears on 1959 map
Former Large Caliber Weapons Range	West of current Range 13	Unspecified large caliber weapons and unidentified rifle	Unknown Appears on 1957 aerial photos and a 1959 map
Former Rifle Range	West of current Range 13	Unknown	Unknown Appears on 1957 aerial photos
Former Small Arms Range	West of current Range 13	Unknown. Possibly used as a short pistol range.	Unknown Appears on 1957 aerial photos
60mm Mortar Range	Main Post boundary near Summerall Gate	Unknown	Unknown Appears on 1946 & 1959

Table 4.13 Former Ordnance Ranges - FMC Main Post

RANGE	LOCATION	ORDNANCE TYPES	TIME PERIOD
	- Direction of fire toward the western & northern slopes of Baltzell Hills		maps
Former Artillery Training Area	Much of the Eastern Main Post including the cantonment area east of Rock Hollow Road	Various large caliber fuzed rounds	Unknown Appears on 1921 map
Former Bandholtz Machine Gun Qualifying Range	Southeast Main Post Current Range 24A	Unknown small arms and machine gun rounds	Unknown Appears on 1948 map
Former Bandholtz Field Firing Range No. 2	Southeast Main Post	Unknown small arms	Unknown Appears on 1948 map
Former Defendam Field Firing Range	Northern Main Post West portion of current Range 31	Unknown small arms	Unknown Appears on 1948 map
Former Pistol Ranges, Buildings 141 & 143	Buildings 141 & 143	Pistol: .22-cal	Unknown
Former Rifle Grenade Range North of Washington Ranges	Current Range 19	Unknown arms and grenades	Unknown Appears on 1946 map
Former Rifle Grenade Range at Skeet Range	Current Skeet Range	Unknown arms and grenades	Unknown Appears on 1946 map
Former Range 25 East	Companion Range to current Range 25	Unknown small arms	Unknown Appears on 1937 map
Former Pistol Range south of Range 25	South of current Range 25	Unknown	Unknown Appears on 1937 map
Former Defendam Range (eastern)	Northern Post Boundary and the western slope of the Choccolocco Mtns.	Unknown. Possibly used as a machine gun fire range	Unknown Appears on 1946 map
Former Machine Gun Range	South of current Range 25	Unknown. Presumably used as a machine gun fire range	Unknown Appears on 1946 map

Table 4.13 Former Ordnance Ranges - FMC Main Post

RANGE	LOCATION	ORDNANCE TYPES	TIME PERIOD
Former Pistol Range	Current Range 23	Unknown. Presumably used small arms range	Unknown Appears on 1946 map
Former Machine Gun Transition Range	Current Range 17	Unknown	Unknown Appears on 1946 map
Former Rocket Launcher Range	In the vicinity of current Range 17	Unknown	Unknown Appears on 1946 map
Former Antitank Range	North of the Ammunition Supply Point	Unknown Presumably includes 37mm antitank as well as M-1 rifle	Unknown Appears as antitank range on 1946 map and as a M-1 range on 1964 map
Former Range O.Q.-2A	Main Post boundary near Summerall Gate	Unknown	Unknown Appears on 1946 map
Area 45	Several former ranges located in the area south of Summerall Gate Road, east of FMC boundary, and west of Area 31	Unknown	Unknown
Former Trap and Skeet Range	East of Building 1345	Unknown. Presumably Shotgun use only	Unknown. Appears on March 1973 aerial photos
Former Weapons Demonstration Area	Southeast of Summerall Gate Road on the Western Main Post	Unknown.	Unknown. Appears on 1957 aerial photos
Former Probable Range	Southwestern Main Post	Unknown.	Unknown
Former 81mm Mortar Range	Northeastern corner of Main Post	Unknown. Presumably used for 81mm mortars.	Unknown. Appears on 1949, 1954, and 1961 aerial photos.
Impact Areas North-Central Main Post	Three separate, small areas in Northcentral Main Post east	Unknown. Presumably large caliber weapons and small arms.	Unknown. Appears on 1949 aerial photos.

Table 4.13 Former Ordnance Ranges - FMC Main Post

RANGE	LOCATION	ORDNANCE TYPES	TIME PERIOD
	of Range 30		
Impact Area near Stump Dump	Between Reservoir Ridge and the Stump Dump	Unknown	Unknown. Appears on 1961 aerial photo composite.
Impact Area Northeast Main Post	Northeastern Main Post	Unknown	Unknown. Appears on 1961 aerial photo composite.
Impact Areas Central Main Post	Five areas near Ranges 21 and 22 adjacent to Bains Gap Road	Unknown. Presumably includes mortars.	Unknown. Appears on 1949, 1954, and 1961 aerial photo composites.
Impact Area in Central Main Post	Downrange portion of current Range 29.	Unknown. Presumably large caliber weapons and small arms.	Unknown. Appears on 1949 aerial photo composite.
Main Post Impact Areas	Twelve specific areas and one general area including: 1) southwestern post boundary 2) north of current Range 25 3) west of Range 23 4) Current Range 23 quarry 5) eight scattered locations and 6) locations on the western slopes of the Choccolocco Mtns	Unspecified ordnance including large caliber ordnance, mines, mortar rounds, canister shot, and 75mm projectiles	Unknown

Source: ESE, 1998a

4.9 HAZARDOUS AND TOXIC MATERIALS

The characterization of the FMC baseline conditions for hazardous and toxic materials at FMC is currently under way as part of the Environmental Baseline Survey (EBS). Based on record reviews, interviews, and site inspection, the purpose of the EBS is to identify sources of contamination on and adjacent to FMC and any response actions that have been taken. The following paragraphs describe FMC's hazardous materials storage and handling status; hazardous waste disposal process; contaminated sites; and non-CERCLA hazards, such as radon, asbestos, polychlorinated biphenyls (PCBs), and lead-based paint (LBP).

4.9.1 Storage And Handling Areas

The installation operates a hazardous waste management program for the disposal of hazardous wastes in compliance with Resource Conservation and Recovery Act (RCRA) regulations. FMC is classified as a Large Quantity Generator of hazardous wastes (USEPA Identification Number AL4210020562).

Materials storage and handling areas are currently used for the following hazardous, toxic materials, or bulk oil: hazardous waste, flammable materials, pesticides/herbicides, fog oil, PCB transformers, ammunition, radiological materials, and chemical/biological agents. Appendix A of the Spill Prevention Control/Countermeasures Plan and Installation Spill Contingency Plan (SPCC) (FMC, 1996b) contains a list of the oil and hazardous substance storage, handling and transfer facilities. Areas formerly used for hazardous, toxic, or bulk oil materials storage and handling include the following: Former Ordnance Motor Repair Area, Battery Maintenance and Storage Areas, DRMO Facility, Waste Chemical Storage Area, Former Pentachlorophenol Dip Tank, Multi-Craft Shop, Former Dry Cleaning Area, Former Chemical Laundries, Former Fog Oil Storage Areas, Former Quartermaster's Gasoline Storage and Former Fuel Yard and the contractor laydown area (PCB transformers).

Hazardous Storage Area. The current Hazardous Storage Facility (Bldg. 348) was built in 1989 to consolidate all of the hazardous wastes generated on the post. Weekly inspections are performed of the building. No spills or releases have been documented at this building (ESE, 1998a).

Flammable Storage Areas. There are nine flammable storage buildings (Bldgs. 207, 681, 1377, 1830, 2117, 2282, 3141, 8417, and 9207) noted by the Real Property Office. Many of these are paint lockers and small storage areas that are kept locked. No releases or spills have been documented at these sites (ESE, 1998a). In addition to the storage buildings, there are numerous flammable storage lockers, including paint lockers, at FMC that are not on the Real Property Books.

Pesticide/Herbicide Mixing and Storage Areas. The primary facility used for pesticide and herbicide mixing and storage moved from Bldg. 208 in 1986 to its present location at Bldg. 211. Pesticides and herbicides formerly stored in Bldg. 208 include: Dursban, Xtraban Roach Concentrate, Diazinon 4E, Sevin, Malathion, Killmaster II and Prohibit Insecticide. Pesticides currently stored in Bldg. 211 include Dursban LO, Roundup, Orthene, Malathion, 2-4D, and Award (ESE, 1997a). Although no spills or releases have been documented at Bldg. 208, soil sampling in this area in 1985 indicated that some insecticide residues (e.g. chlordane metabolites; methoxychlor; hexachlorobenzene (HCB); p,p'-DDT; and dieldrin) were present. The levels of these chemicals were determined not to exceed levels that would be harmful to human health or the environment (ESE, 1998a).

The Golf Course Pesticide Mixing and Storage Facility (Bldg. 2252) began operations in 1985 (ESE, 1998a). No releases have been reported and no sampling has been done at the site. Building 2252 is reported to be in full compliance for pesticide storage and handling (ESE, 1998a). Limited pesticide storage for household application occurs in Self Help/You Do It (Bldg. 3214) as of 1995.

Fog Oil Drum Storage Areas. FMC has one fog oil drum storage area located near Range 24A. The fog oil storage area is equipped with an oil/water separator which discharges to nearby surface waters (ESE, 1998a). Records indicate that FMC was not in compliance with the NPDES permit for the facility. This

was due to erroneously low discharge limits in the permit. The state regulators corrected the permit limits after reevaluating the calculations used to establish the limits; thus, the facility was and is in compliance.

PCB Storage Facility. Transformers removed from service, awaiting testing or disposal are currently stored in the PCB Storage Facility (Bldg. 4460). Used transformers found to be free of PCBs are currently stored on a concrete pad adjacent to Bldg. 4437. There are no records of reportable spills at either of these facilities (ESE, 1998a).

Ammunition Supply Point. The Ammunition Supply Point is located at central FMC and has been used from 1917 to the present. Activities at this site include storage of ordnance, radiological material, and chemical agents. Red phosphorous and binary chemical agent components are currently stored in Bldgs. 4421 and 4416 respectively. There are no reported releases of chemical agent or radiological material and no unexploded ordnance issues are reported (ESE, 1998a).

Radiological Training Areas. Many of the training activities at FMC involve the use of radioactive material and equipment. The largest user of these resources is the U.S. Army Chemical School. FMC operates under three Nuclear Regulatory Commission (NRC) licenses described in subsection 4.10, Permits and Regulatory Authorizations. Disposal of radioactive waste is handled by the NRC license manager using the contract administered by the Radioactive Waste Disposal Division of the Army's Industrial Operations Command. Table 4.14 presents a summary of the areas where radiological materials were handled during training, storage, or disposal according to the EBS (ESE 1998a/b). Radiological investigations and actions completed to date indicate that all sites except 3181, 3180 and 3192 are free from radiological contamination. Site 3181 requires additional investigation to assess potential contamination. Sites 3180 and 3192 have been partially remediated but may require additional investigations and remedial actions.

Chemical/Biological Training Areas. There are several areas identified where the installation formerly conducted NBC training in the detection, decontamination, response to, and transfer of chemical and biological agents. The areas include: Former Detection and Identification Area, Biological Simulant Test Area, Toxic Hazards Detection and Decontamination Training Area, Former Agent Decontamination Training Area, Technical Escort Reaction Area, Former Chemical Munitions Disposal Area, Former Technical Escort Reaction Area, Old Toxic Training Area, and the HD Spill/Burial Sites (5-each).

Table 4.14 Current and Former Radiological Facilities and Training Areas		
Area	Title	Radiologic Material
RADIOLOGICAL FACILITIES		
Building 3192	Hot Cell Facility *	Co-60, Cs-137
Building 3182	Laboratory W	Cs-137, Co-60
Building 3180	Laboratory/w Vault	Cs-137, Co-60, U-233, and Ra-226
	Pad	Sr-Y-90
	Radioactive Waste Storage Yard	Co-60
Building 228	Radiological Calibration Facility	Sr-Y-90, Pu 239
Building 1081	Radiological Source Storage	Multiple Materials
Building 3181	Isotope and Scaler Laboratories	Sr-Y-90, Pu, Co-60, Au-186, Re-198, and Cs-137
OTHER FACILITIES		
Building 2281	ACMLS Bradeley Rad. Lab Vault	Unknown

Table 4.14 Current and Former Radiological Facilities and Training Areas

Area	Title	Radiologic Material
Building 4416	Storage	H-3, and Cs-137
Building T-812	Former Storage Vault	Ra-226

TRAINING AREAS

Iron Mountain (within Range 18A)	Burial Grounds	Co-60, Th-204, Ra-226, Cs-137, and Sr-90
Bromine Field (south of Bldg 3192)	Training Area	Br-82
Alpha Field (southeast of Bldg 3192)	Training Area	U-233 and U-238

* Currently contains radiologic materials (ESE, 1998a).

Source: FWEC, 1996b; FMC, 1994; and ESE, 1998a

Chemical Defense Training Facility. A variety of hazardous and non-hazardous materials are stored and used in the training conducted at the CDTF. After use, these materials are disposed of as detailed in subsections 4.7.8.2 and 4.9.2.

4.9.2 Uses And Disposal Of Hazardous Materials

Hazardous and toxic materials at FMC include explosives, petroleum products, herbicides and pesticides, pathological wastes, radioactive wastes, and chemical toxic wastes, including those associated with approximately 6,000 gas mask filters containing chromium VI from the Chemical Defense Training Facility (as discussed in subsections 4.7.8.2 and 4.9.2). Various companies are contracted through the Defense Reutilization and Marketing Office (DRMO) to remove these hazardous wastes from post for proper disposal. Table 4.15 lists the hazardous waste generated by various organizations in fiscal year 1993.

Table 4.15 Types of Hazardous Wastes Generated

Batteries	Formaldehyde
Chemicals	Medical Wastes
Contaminated Fuel	Mercury
Contaminated Soil	Oil Sludge
Contaminated Tanks	Paint/paint thinner
Decon Kits	PEG 200
Drugs	Photo waste
Filters	Solvents
Filter Ash (heated residue from gas mask filters at CDTF)	Transformers

Source: FWEC, 1996; FMC, 1994

4.9.3 Contaminated Sites

Over the years, multiple programs have been under way to define the environmental condition of FMC land areas, including those related to the Installation Restoration Program (IRP), RCRA, Community Environmental Response Facilitation Act (CERFA), and non-CERCLA programs. The current status of these efforts is summarized using the CERFA categories. The standardized CERFA categories are used to group areas based on the past presence or absence of hazardous materials and the status of any remediation identified. The CERFA categories are used to indicate the potential for transfer of Army property. Properties in CERFA categories 1 through 4 are suited for property transfer with no further action. Properties in categories 5 through 7 must be investigated and, where necessary, remediated prior to transfer. Properties for which environmental remediation has not been completed can be transferred (deeded) under Section 334 of the National Defense Authorization Act. For such properties, the covenant required by CERCLA Section 120(h) is delayed until remediation and any other special conditions are met.

Information developed from the EBS was used to group areas on FMC into the standardized CERFA parcel categories using DOD guidance. Figure 4-14 illustrates the location of the areas categorized into CERFA categories 2 through 7. The CERFA parcels categorized as 2 through 7 are those areas where there has been storage or a release of CERCLA hazardous substances, chemical warfare materials or petroleum products. One hundred eighty-nine (189) CERFA category 2 through 7 parcels were identified in the EBS, comprising over 770 acres. Included within these parcels are sites previously identified for the Installation Restoration Program. Detailed information regarding the nature of potential/existing contamination and ongoing investigations and remediation activities can be obtained from the FMC EBS (ESE, 1998a/b).

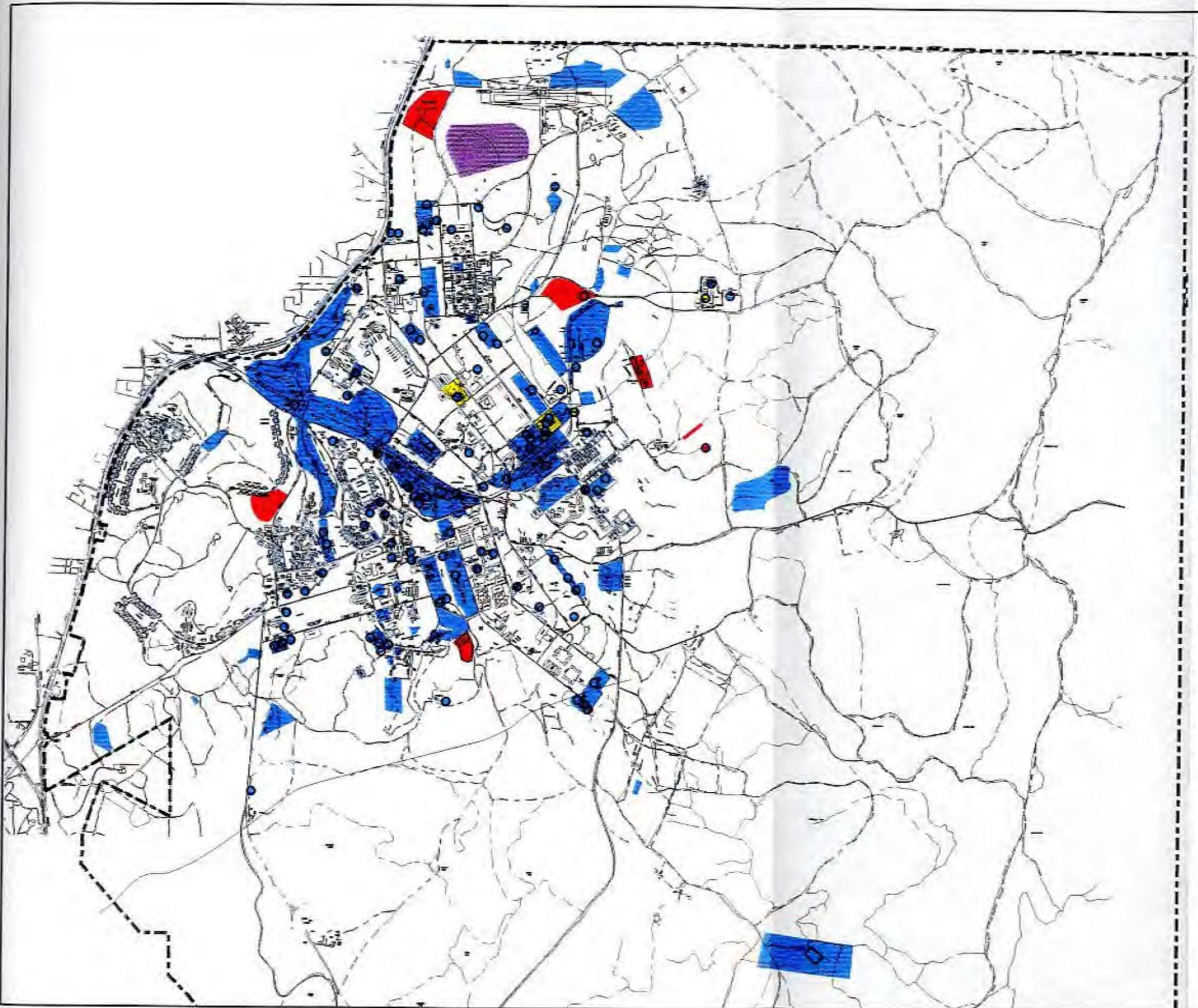
Those CERFA parcels requiring additional investigation and potential remedial actions will be addressed in the BRAC Cleanup Plan.

4.9.4 Other Hazards

Non-CERCLA parcels at FMC are illustrated in Figure 4-15.

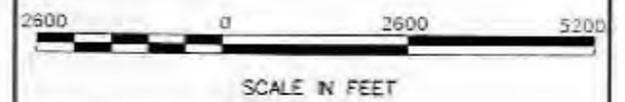
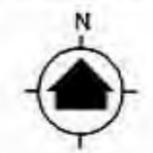
Asbestos. Identification and sampling of asbestos-containing material (ACM) has been conducted at FMC since 1984. Based on available information, the following surveying and sampling have been conducted.

- An asbestos survey of 94 miscellaneous buildings was conducted by ATC, Inc., in 1987. Friable ACM was identified in 53 of the 94 buildings surveyed, and 88 of the buildings surveyed contained potential hazards presented by nonfriable suspect material.
- An asbestos survey of 56 buildings was conducted by Environmental Management, Inc., toward the end of 1986 to early 1987. ACM was identified in 47 of the 56 buildings. Friable ACM was identified in 21 of the 56 buildings.



- LEGEND**
- RESERVATION BOUNDARY
 - CATEGORY 1 AREAS WHERE NO STORAGE, RELEASE OR DISPOSAL OF HAZARDOUS SUBSTANCES OR PETROLEUM PRODUCTS HAS OCCURRED
 - CATEGORY 2 AREAS WHERE ONLY STORAGE OF HAZARDOUS SUBSTANCES OR PETROLEUM PRODUCTS HAS OCCURRED
 - CATEGORY 4 AREAS WHERE STORAGE, RELEASE, DISPOSAL, AND/OR MIGRATION OF HAZARDOUS SUBSTANCES OR PETROLEUM PRODUCTS HAS OCCURRED, AND ALL REMEDIAL ACTIONS NECESSARY TO PROTECT HUMAN HEALTH AND THE ENVIRONMENT HAVE BEEN TAKEN
 - CATEGORY 5 AREAS WHERE STORAGE, RELEASE, DISPOSAL, AND/OR MIGRATION OF HAZARDOUS SUBSTANCES OR PETROLEUM PRODUCTS HAS OCCURRED, REMOVAL AND/OR REMEDIAL ACTION ARE UNDERWAY, BUT ALL REQUIRED REMEDIAL ACTIONS HAVE NOT YET BEEN TAKEN
 - CATEGORY 6 AREAS WHERE STORAGE, RELEASE, DISPOSAL, AND/OR MIGRATION OF HAZARDOUS SUBSTANCES OR PETROLEUM PRODUCTS HAS OCCURRED, BUT REQUIRED RESPONSE ACTIONS HAVE NOT YET BEEN IMPLEMENTED
 - CATEGORY 7 AREAS THAT ARE UNEVALUATED OR REQUIRED ADDITIONAL EVALUATION
 - SMALL SITE OR SMALL SITE WITHIN A LARGER DEFINED SITE

SOURCE:
ENVIRONMENTAL BASELINE SURVEY (ESE, 1998)



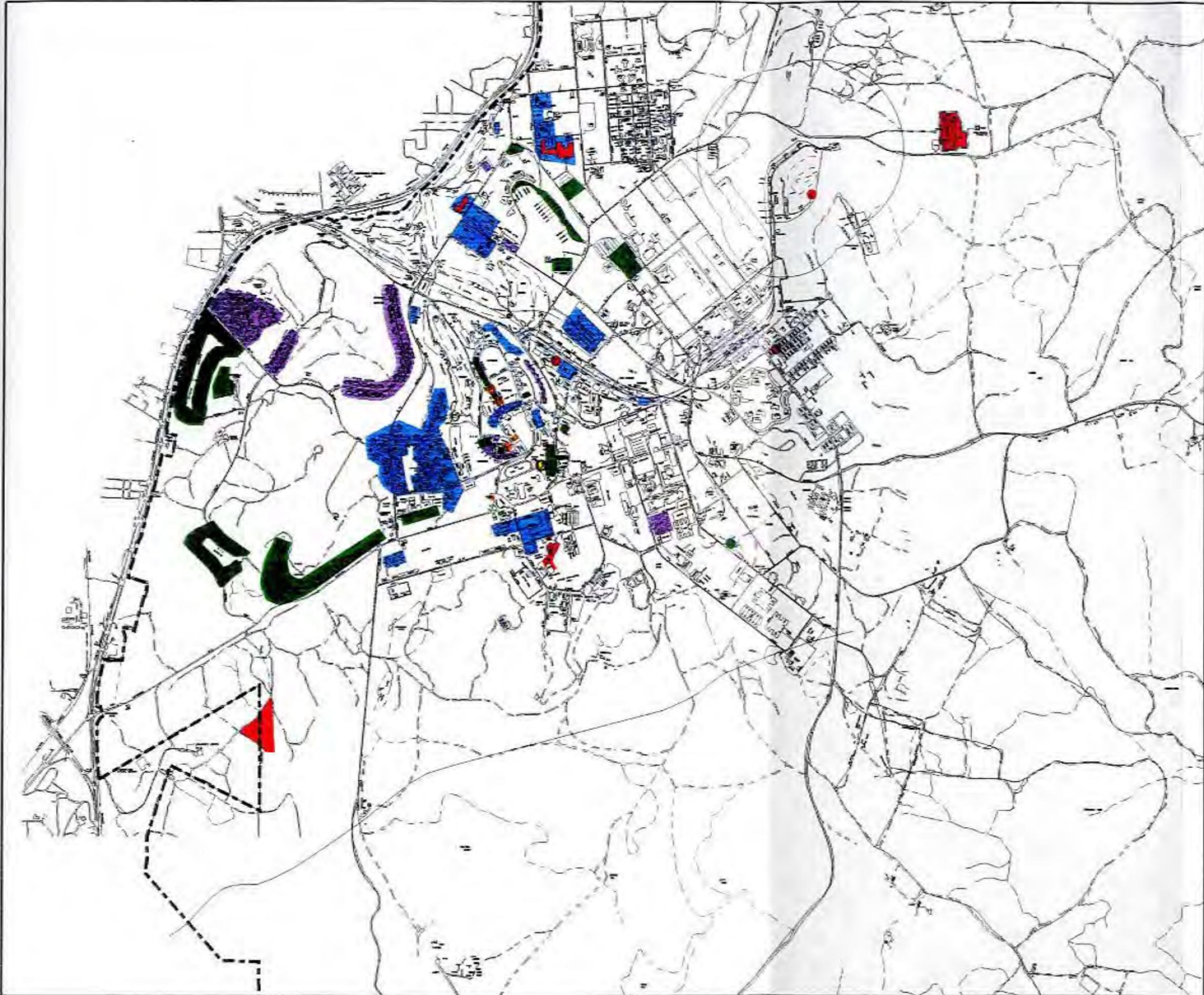
PARSONS ES PARSONS H&A ST LOUIS, MISSOURI	MOBILE DISTRICT US ARMY CORPS OF ENGINEERS MOBILE, ALABAMA
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ENVIRONMENTAL IMPACT STATEMENT

DISPOSAL AND REUSE OF
FORT McCLELLAN, ALABAMA

DOD CATEGORY PARCELS

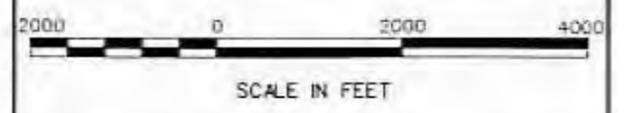
DATE: AUG., 1998	FIGURE NO. 4-14
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LEGEND

-  RESERVATION BOUNDARY
-  ASBESTOS (CONTAINING MATERIALS)
-  LEAD-BASED PAINT
-  ASBESTOS CONTAINING MATERIALS & LEAD-BASED PAINT
-  RADON
-  LEAD-BASED PAINT & RADON
-  RADIOLOGICAL FACILITIES
-  BIOLOGICAL/CHEMICAL

SOURCE:
ENVIRONMENTAL BASELINE SURVEY (ESE, 1997)



 PARSONS ES PARSONS HEA ST LOUIS, MISSOURI	 MOBILE DISTRICT US ARMY CORPS OF ENGINEERS MOBILE, ALABAMA
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ENVIRONMENTAL IMPACT STATEMENT

**DISPOSAL AND REUSE OF
FORT McCLELLAN, ALABAMA**

NON-CERCLA PARCELS

DATE: AUG., 1998	FIGURE NO. 4-15
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- An asbestos survey of 21 buildings was conducted by Environmental Management, Inc., during July 1986. ACM was identified in all 21 buildings. Four buildings were identified as containing asbestos only in floor tiles.
- Other data are also available for samples collected between 1984 and 1989 for various buildings and materials.

When a building that contains suspect asbestos is scheduled for renovation/demolition, an asbestos survey is conducted.

Appendix J of the EBS contains a table that lists by building number, all suspected buildings containing asbestos, the date surveyed, and the results (ESE, 1998b). A survey is currently underway to characterize the remaining buildings on FMC that are considered excess property.

Radon. Radon is a naturally occurring radioactive gas that is produced through the normal decay of uranium and thorium found in rocks and soil. The USEPA has suggested that the average long-term exposure limit is 4 picoCuries/liter of air. Retesting is suggested for levels obtained between 4 and 20 picoCuries/liter. If retesting confirms a level above 4 picoCuries/liter, remedial measures are recommended. FMC entered into the Army Radon Reduction Program in 1989. Buildings considered for radon testing were placed into three groups. Priority 1 structures are defined as schools, hospitals, housing, and billets. Priority 2 structures are defined as buildings housing 24-hour operations. Priority 3 structures are defined as all other routinely occupied structures.

According to the 1995 TRADOC Status of Radon Testing Report, Fort McClellan had 371 buildings classified as Priority 1, 25 buildings classified as Priority 2, and 318 buildings classified as Priority 3. All 371 of the Priority 1 Structures were tested and 4 buildings contained elevated levels of radon. Buildings 7 and 10, Priority 1 structures, had radon levels between 4.1 and 8.0 pCi/L and Buildings 102 and 141A, also Priority 1 structures, had radon levels between 4.1 and 16 pCi/L. Buildings 7, 10, 102, and 141A have been mitigated. Of the Priority 2 structures, 20 of 25 structures have been tested and results indicate levels below the 4.0 pCi/L limit in 19 structures. Building 3295 tested between 4.0 and 8.0 pCi/L and was remediated. Of the Priority 3 structures, 60 buildings have been screened and 59 tested below 4.0 pCi/L. Building 129 which is vacant tested in the range of 8.1 to 12.0 pCi/L (ESE, 1998a).

Table 4.16 summarizes the status of the FMC Radon Reduction Program.

Type	Buildings Classified as Type	Buildings with Testing Completed	Buildings Mitigated	Buildings under Long-Term Monitoring
Priority 1	371	371	4	0
Priority 2	25	20	1	0
Priority 3	318	60	0	0

Source: ESE, 1998a

Lead Paint. Lead-based paint (LBP) testing was conducted on various buildings by the U.S. Army Corps of Engineers (USACE), South Atlantic Division Laboratory (SADL), and the LBP Risk Assessment Report was developed by John Calvert Environmental, Inc. (JCE) in July 1995. According to the JCE report, the April 1990 HUD Guidelines for LBP survey procedural protocol were followed. LBP testing was conducted on a sample of 23 community-related buildings (i.e. churches, recreational centers, and health care facilities) and 171 family housing buildings. The uniformity of the type of paint used, the type of construction, and the age of the family housing buildings allowed for formation of 12 housing groups. LBP was present on interior and exterior surfaces of many of the buildings sampled. The LBP varied from good to poor condition. Some areas containing LBP were noted as being potentially accessible to children. Appendix K of the EBS contains a table that summarizes the LBP findings in the buildings tested (ESE, 1998b).

Polychlorinated Biphenyls (PCBs). By definition, electrical equipment is "PCB-contaminated" if it contains between 50 and 499 ppm of PCBs. A "PCB Transformer" is defined as any transformer containing 500 ppm or greater of PCBs. Four areas at FMC have been considered associated with historic and present PCB use, storage, or disposal: 1) the PCB Storage Facility (Building 4460); 2) the Temporary Transformer Storage/Staging Area (pad adjacent to Facility 4437); 3) DRMO/PDO areas (T-342 and 1800 area); and 4) the active transformers in service on post. PCB and PCB-contaminated transformers removed from service are stored for disposal in the PCB Storage Facility (Building 4460) on FMC and managed by the Directorate of Environment (DOE). This facility is a concrete slab with curbing that is covered by a roof and enclosed within a cyclone fence. Transformers are stored within the facility until disposal can be accomplished (ESE, 1998a). In the past, PCB and PCB-contaminated transformers were stored on the pad adjacent to Facility 4437, and lots at T-342 and 1800. A quarterly inspection program is performed on all in-service transformers and capacitors, and a log of these inspections is maintained.

In December 1984 there was a project drafted to remove all PCB capacitors on the installation. In January 1992 all pole or pad mounted transformers on post (with the exception of six in the substation, three in Building 141C, and three in Building 162) were sampled for PCBs and a database was compiled. At the end of 1995, 29 transformers with PCB concentrations greater than 50 ppm but less than 500 ppm remained operational. Appendix L of the EBS lists the locations of the 29 transformers (ESE, 1998b). These 29 transformers were removed and properly disposed in 1996. Disposal of PCB and PCB-contaminated transformers is accomplished through DRMO (ESE, 1998b).

Twelve transformers remain on the installation that were not tested for PCB content in 1992. Six are located in the electrical substation, three in Building 141C, and three in Building 162. They were tested in FY98. Of the six transformers in the substation, three had PCB concentrations between 50 and 499 ppm. The transformers in building 141C and 162 did not contain PCBs.

4.9.5 Storage Tanks

Underground Storage Tanks. There are 18 current UST sites located at FMC. Appendix D of the EBS lists these tanks, their locations, capacity, and type of fuel contained. The majority of these USTs contain Diesel Heating Oil No. 2. No. 2 oil is the main heating oil used at FMC. No. 2 oil is a non-regulated fuel in the State of Alabama. The remainder of the storage-only USTs contain diesel, heating oil #4, and oil (ESE, 1998a).

Thirteen USTs were closed in 1994 under the guidance of ADEM. The majority of these USTs contained waste oil. Six tanks were closed in-place; of those, four were replaced by new USTs, and two were not replaced. Seven tanks were excavated; of those, five were replaced by new USTs, and two were not replaced. Nine USTs were previously removed from FMC but no closure reports were on file at either FMC or ADEM (ESE, 1998a).

In 1991, Preliminary Investigations identified five additional sites of former USTs. Each of these sites stored petroleum products such as gasoline, diesel, and diesel based heating oil.

A secondary investigation identified Building 265, POL, and Building 2109, the Post Service Station, as being sites of multiple USTs. A number of tanks have been removed from these sites over the years, many remain or have been replaced. Monitoring wells have been installed at the Building 265 and 2109 sites. Both sites have been cleared for no further action. Building 3299, Motor Pool, had one leaking UST removed in 1989. Monitoring wells were installed at this site. This site has been recommended for no further action (ESE, 1998a).

Twelve locations at FMC were identified during the EBS as former gas station locations. Four USTs were removed from two of these station locations in 1991. Five of the other sites have been identified, but the status of USTs at these locations has not yet been determined. The remaining five sites were noted as either having no evidence of a foundation to mark the location or not found during the investigation.

Two USTs may exist at Building 598, the site of the former Pesticide Storage Building and a former vehicle maintenance building. In 1989, the building burned and records no longer exist concerning USTs associated with this site (ESE, 1998a).

Aboveground Storage Tanks. Aboveground Storage Tanks (ASTs) are divided into four categories at FMC: Bulk Storage Area, CDTF, propane, and Storage-Only No. 2 Heating Oil. Appendix D of the EBS lists ASTs located at FMC (ESE, 1998a).

The Bulk Storage Area at Building 296 consisted of six 25,000 gallon ASTs and one 10,000-gallon AST. No. 4 fuel was stored in five of the large tanks, while the remaining one stored No. 2 fuel (diesel). It is unknown what product was stored in the small tank. A concrete berm and pad was located around the Bulk Storage Area. The seven ASTs were removed in 1997 and the area was graded and stabilized with grass. A new bulk storage area was constructed within the 800 area.

Three ASTs are located at the CDTF. One of the tanks is a 4,000-gallon (15,200 liter) tank that previously held sulfuric acid; it has been empty for several years. A second tank is a 4,000-gallon AST that currently holds a caustic soda solution. Both of these tanks have lines that feed into a 20,000-gallon (76,000 liter) wastewater AST. These lines are used to neutralize the wastewater before it is incinerated (ESE, 1998a).

Five propane storage tanks of 30,000 gallons each are used for Facility 3217.

Many of the range offices are used infrequently and have small heating tanks. It is more cost effective for FMC to maintain small heating oil ASTs at these remote buildings than to heat the buildings by other means during the winter.

4.9.6 Spills

A few minor spills have occurred at FMC. In all instances, the spills were collected and cleaned up and, where necessary, any contaminated soil was excavated and disposed off site.

4.10 PERMITS AND REGULATORY AUTHORIZATIONS

This section provides a baseline of the environmental permits and licenses associated with the affected environment. This is not an all inclusive list of permits required or obtained by the installation. These existing permits may require review based on the proposed actions. Table 4.17 provides information about the existing environmental permits held by the installation for its activities.

Table 4.17 Environmental Permits

Title of Permit	Permit Number	Issuing Agency	Issue Date	Duration	General Conditions
Air Permits Boilers	1. 301-0017-Z008	Alabama Department of Environmental Management	1. 5/3/89	Life of boiler	Operate: 1. 4 gas/oil-fired boilers (one 9,279-mm Btu/hr, three 28,000,000 Btu/hr) for Boiler Plant 1
	2. 301-0017-Z002		2. 5/9/82		2. 2 gas/oil-fired boilers (51,500,000 Btu/hr) for Boiler Plant 2
	3. 301-0017-Z001		3. 5/4/81		3. 3 gas/oil-fired boilers (40,626,000 Btu/hr) for Boiler Plant 3
	4. Grandfathered				4. Boiler Plant 4
Air Permits Storage Tanks	1. 301-0017-Z004	Alabama Department of Environmental Management	1. 12/7/78	Life of storage tank	Operate: 1. 2 gasoline storage tanks (12,000 gallons each) for Facility T-263
	2. 301-0017-Z005		2. 12/7/78		2. 3 propane storage tanks (30,000 gallons each) for Facility 3217
	3. 301-0017-X009		3. 10/25/91		3. 1 fuel/oil storage tank (15,000 gallons) for Building 1076
	4. 301-0017-X010		4. 10/25/91		4. 1 fuel/oil storage tank (15,000 gallons) for Building 1076 (Outboard)
	5. 301-0017-X011		5. 10/25/91		5. 1 fuel/oil storage tank (20,000 gallons) for Building 3176 (East)
	6. 301-0017-X012		6. 10/25/91		6. 1 fuel/oil storage tank (20,000 gallons) for Building 3176 (West)
	7. 301-0017-Z013		7. 10/21/94		7. 4 gasoline storage tanks (12,000 gallons each) at Building 265 - POL Gasoline Dispensing Facility
	8. 301-0017-Z014		8. 10/21/94		8. 4 gasoline storage tanks (10,000 gallons each) at Building 2109 - AAFES Gasoline Dispensing Facility
			9. 8/4/95		9. 4 gasoline storage tanks (12,000 gallons each) at

Table 4.17 Environmental Permits

Title of Permit	Permit Number	Issuing Agency	Issue Date	Duration	General Conditions
	9. 301-0017-Z015				Building 265 - POL Gasoline Bulk Plant
Air Permits Incinerators	1. 301-0017-Z007	Alabama Department of Environmental Management	1. 12/17/92	Life of incinerator	Operate Chemical Defense Training Facility Incinerator with wet scrubber
RCRA Permit	1. AL4210020562	USEPA	1.		Large Quantity Generator & 90 day Storage Facility
Solid Waste Permit (Sanitary Landfill Closed)	1. 08-02R	Alabama Department of Environmental Management	1. 5/1/87	Expired	Disposal of approved waste which includes household garbage and rubbish, and commercial solid waste (i.e. wooden pallets, paper, and demolition waste)
Solid Waste Permit Industrial Landfill	1. 08-02	Alabama Department of Environmental Management	1. 10/12/95	1. 10/12/95 - 10/11/00	Disposal of approved industrial waste which includes construction & demolition waste and/or rubbish. Construction debris includes, but is not limited to, masonry materials, sheet rock, roofing waste, insulation, rebar, scrap metal, paving materials, and wood products. Industrial waste is limited to 30 tons/day.
Water Supply Permits	1. 92-779 2. 87-743	Alabama Department of Environmental Management	1. 10/9/92 2. 9/15/87	1. 10/92 - 9/98 2. 10/87 - 10/97	1. Operate water system consisting of 1 storage tank with a capacity of 1.5 million gallons. There is one unused 1 million gallon concrete storage tank that is in disrepair (Fort McClellan). 2. Operate system consisting of a 5-gpm well with hypochlorinator and 15,000-gallon elevated storage tank (Range 44), this well is not longer in use and ADEM has removed it from permitted status
Wastewater Permits National Pollutant Discharge	1. AL0024520 2. AL0055999	Alabama Department of Environmental Management	1. 9/15/94 2. 7/26/93	1. 10/1/94 - 9/30/99 2. 8/1/93 -	1. Maintained by Operations Technologies, Inc. Covers discharges from FMC wastewater treatment plant. 2. Covers stormwater

Table 4.17 Environmental Permits

Title of Permit	Permit Number	Issuing Agency	Issue Date	Duration	General Conditions
Elimination System (NPDES)	Mod. of AL0055999		Modification Issue Date - 5/6/96	7/31/98 Mod. Effective - 7/1/96	discharges through an oil/water separator at petroleum storage area at Range 24A, storm water runoff from the 11 th Chemical Company Motor Pool, DOL Subpool, 209 th Military Police Motor Pool, Landfill #4, inactive Landfills #1-3, DRMO Yard, Aboveground Storage Tank Farm, DOL Outdoor Storage Yard, Smoke Line Pad Range 24A.
Radiological Permits (U.S. Army Chemical School)	1. 01-02861 2. SNM-1877 3. 01-02861-04	U.S. Nuclear Regulatory Commission	1. 2/12/92 2. 6/4/91 3. 9/7/95	1. 2/12/92 - 2/28/97 2. 6/4/91 - 5/31/96 3. 9/7/95 - 9/30/96	<p>1. For research and development, and for instruction of personnel in the safe use and measurement of ionizing radiation. The following nuclear materials apply:</p> <ul style="list-style-type: none"> - Any byproduct materials with the atomic number 3-38; in any physical and/or chemical form; not to exceed 100 millicuries per radionuclide and 3 curies total - Cesium 137; sealed sources (3M Model 4F6S); not to exceed 500 millicuries per source and 2 curies total - Cesium 137; sealed sources (UDM-1A); not to exceed 120 curies - Hydrogen 3; in any physical and/or chemical form; not to exceed 1 curie - Americium 241; plated sources; not to exceed 1 microcurie per source and 10 microcuries total - Polonium; plated sources; not to exceed 1 microcurie <p>2. To be used for instrument calibration and in the training of students. The following nuclear materials apply:</p> <ul style="list-style-type: none"> - Plutonium 239; Plated alpha sources (Eberline Model S94-1 or AN/UDM-6); not to exceed 12.5 microcuries

Table 4.17 Environmental Permits

Title of Permit	Permit Number	Issuing Agency	Issue Date	Duration	General Conditions
					(200 micrograms) - Uranium 233; Plated alpha sources (Oak Ridge National Laboratory custom stainless steel plates); 24 microcuries (25 milligrams)

Note: * Landfill currently closed.

Source: FWEC, 1996b

4.11 BIOLOGICAL RESOURCES

This section includes a description of the animal and plant species, including:

- Fish and Wildlife;
- Vegetation and Plant Resources, including a discussion of the Mountain Longleaf Pine (MLP) ecosystem;
- Wetlands;
- Federal Threatened and Endangered Species;
- Other Species of Concern, including a discussion of those areas selected for more intensive ecological management (by FMC) and known as Special Interest Natural Areas (SINAs); and
- Integrated Natural Resources Management Provisions.

Additional information on the biological resources present at FMC, with emphasis on the mountain longleaf pine (*Pinus palustris*) (MLP) ecosystem, can be found in Appendix C.

4.11.1 Fish and Wildlife

FMC has a variety of habitats that support a diversity of natural fauna. These habitats support a diverse array of fauna and flora. The following sections briefly summarize the species that occur at the installation.

4.11.1.1 Mammals. An ecological survey conducted in 1980 identified approximately 35 species of mammals, an estimate that is likely conservative because of the crepuscular and nocturnal nature of many mammals (USAEHA, 1980). Typical species include raccoon (*Procyon lotor*), opossum (*Didelphis virginiana*), red fox (*Vulpes vulpes*), grey fox (*Urocyon cinereoargenteus*), coyote (*Canis latrans*), white-tailed deer (*Odocoileus virginianus*), cottontail rabbit (*Sylvilagus floridanus*), gray squirrel (*Sciurus carolinensis*), fox squirrel (*Sciurus niger*), bobcat (*Lynx rufus*), spotted skunk (*Spirogale putorius*), striped skunk (*Mephitis mephitis*), and several species of mice and rats (Ogden, 1992).

4.11.1.2 Birds. Approximately 200 avian species reside on the installation at least part of the year (USAEHA, 1980). Common species include northern cardinal (*Cardinalis cardinalis*), northern mockingbird (*Mimus polyglottus*), warblers (*Dendroica* spp.), indigo bunting (*Passerina cyanea*), red-eyed vireo (*Vireo olivaceus*), American crow (*Corvus brachyrhynchos*), bluejay (*Cyanocitta cristata*), several species of woodpeckers (*Melanerpes* spp., *Picoides* spp.), and Carolina chickadee (*Parus carolinensis*). Lake, stream and wetland habitats are inhabited by little blue heron (*Egretta caerulea*), belted kingfisher (*Ceryle alcyon*), and numerous waterfowl. Principal game birds include northern bobwhite (*Colinus virginianus*), mourning dove (*Zenaida macroura*), eastern wild turkey (*Meleagris gallopavo*) and wood duck (*Aix sponsa*) (Ogden, 1992).

As part of the Department of Army Legacy Resource Management Program, FMC funded a study of the effects of forest fragmentation on neotropical migratory birds (NTMB) in 1994 and 1995 (Webb, 1996a).

The study found that landscape factors such as fragment size and distance to edge were important factors in determining habitat suitability for neotropical migrants. NTMB species counted during the study that may be more susceptible to fragmentation and other activities that increase forest edge are listed in Table 4.18.

Common Name	Scientific Name	Forest Interior	Low Nesting
Acadian Flycatcher	<i>Empidonax virescens</i>	.	
Blue-gray Gnatcatcher	<i>Poliophtila caerulea</i>	.	
Wood Thrush	<i>Hylocichla mustelina</i>	.	
Gray Catbird	<i>Dumetella carolinensis</i>		.
Red-eyed Vireo	<i>Vireo olivaceus</i>	.	
Black-and-white Warbler	<i>Mniotilta varia</i>	.	.
Worm-eating Warbler	<i>Helminthos vermivorus</i>	.	.
Ovenbird	<i>Seiurus aurocapillus</i>	.	.
Kentucky Warbler	<i>Oporornis formosus</i>	.	.
Yellow-breasted Chat	<i>Icteria virens</i>		.
Scarlet Tanager	<i>Piranga olivacea</i>	.	
Indigo Bunting	<i>Passerina cyanea</i>		.
Chipping Sparrow	<i>Spizella pallida</i>		.

Source: Webb, 1996; and Finch, 1991

4.11.1.3 Reptiles and Amphibians. The terrain at FMC supports large numbers of amphibians and reptiles. Jacksonville State University has prepared a draft report titled Amphibians and Reptiles of Fort McClellan, Calhoun County, Alabama. The report indicated that surveys in 1997 found 16 species of toads and frogs, 12 species of salamanders, 5 species of lizards, 7 species of turtles, and 17 species of snakes. Typical inhabitants are copperhead (*Agkistrodon contortix*), king snake (*Lampropeltis getulus*), black racer (*Coluber constrictor*), fence lizard (*Sceloporus undulatus*), six-lined racerunner (*Cnemidophorus sexlineatus*), bullfrog (*Rana catesbeiana*), leopard frog (*Rana sphenoccephala*), and common snapping turtle (*Chelydra serpentina*). The four-toed salamander (*Hemidactylum scutatum*), which is rare in Alabama (state listed as S3) was found at Reily Lake (Cline and Adams, 1997).

4.11.1.4 Fish. The lakes and streams on FMC provide habitat for many species of fish. Common game species include the largemouth bass (*Micropterus salmoides*), bluegill (*Lepomis macrochirus*), and other sunfish, crappie (*Pomoxis* spp.), and catfish (*Ictalurus* spp.). Nongame fish include the blacknose dace (*Rhinichthys atratulus*), creek chub (*Semotilus atromaculatus*), and stoneroller (*Campostoma anomalum*) (USAEHA, 1980). Primary managed fish species populations include bass (*Micropterus* spp.) and bluegill (*Lepomis macrochirus*). As part of a biotic survey of Cane Creek, Weninegar (1993) conducted an electrofishing survey immediately downstream of the FMC boundary on Cane Creek. Species found included largescale stoneroller (*Campostoma oligolepis*), striped shiner (*Luxilus chrysocephalus*), Coosa shiner (*Notropis xaenocephalus*), Alabama hogsucker (*Hypentelium etowanum*), yellow bullhead (*Ictalurus natalis*), green sunfish (*Lepomis cyanellus*), longear sunfish (*Lepomis megalotis*), redeye bass (*Micropterus coosae*), and various darters (*Etheostoma* spp.). The largescale stoneroller and the longear sunfish were the most numerous species in this survey (Weninegar, 1993).

4.11.1.5 Invertebrates and Mussels. Yokely in 1993 (FMC, 1997b) conducted a molluscan survey of Cane Creek from the headwater reaches to the confluence with the Coosa River. Two mussel species were found; *Villosa vanuxemensis umbrans* and *Corbicula fluminea* (asiatic clam). Six gastropod species

were found. The snail population was concentrated in the upper reaches of Cane Creek, especially along and above the golf course area on FMC. *Elimia gerhardti* was the most common snail found.

As part of a biotic survey on Cane Creek, Weninegar also in 1993 (FMC, 1997b) sampled benthic macroinvertebrates at six sites from the headwaters to the mouth of Cane Creek. The benthic data were used to calculate a cumulative quality index based on numbers of taxa present. No quantitative data were collected. Taxa found included water penny, mayflies, sowbugs, caddisflies, stoneflies, blackflies, gilled snails, clams, damselflies, oligochetes, chironomids, pouch snails, tubificids, and two dipteran species. Weninegar concluded that the taxa present indicated poor water quality in the stream, degrading as the creek flows toward the mouth.

C² Environmental Services completed a mollusk survey of FMC (FMC, 1997b). This survey found the asiatic clam and seven snail species. *Elimia gerhardti* was the most common snail found. The mid to lower reaches of Cave, Cane, Remount, and South Branch Creek contained the highest numbers of mollusks. Mollusk species often were not found in the upper reaches and headwater seeps of the streams at FMC due to the low pH and low amounts of calcium in the water.

No federal threatened or endangered species were found at FMC during any of the mollusk surveys.

4.11.2 Vegetation and Plant Resources

FMC offers a wide variety of habitats, including highly disturbed areas such as roads and building sites, maintained fields, training areas, as well as various types of forest. Topography ranges from relatively level areas through much of the developed part of FMC to hills and mountainous ridges. FMC is located in the Ridge and Valley Province of the Appalachian Highlands. To the east of FMC is an extension of the Blue Ridge Province represented by the Talladega Mountains. Oak-pine forest dominates this general area. The area is transitional between north central deciduous forests and southern pine forests.

4.11.2.1 Land Cover. FMC land cover, as on most military installations, is divided into three general (non-ecological) categories associated with the level of existing disturbance and land management programs in place (Table 4.19): improved grounds; semi-improved grounds; and unimproved grounds. Improved grounds generally have limited biological resource values because of the high level of disturbance and human activity. Unimproved grounds generally offer the highest biological resource values of the three categories.

IMPROVED GROUNDS	ACREAGE
Buildings, Roads, Lawns and Other Turfed Areas	1,731
Athletic Fields and Parade Grounds	95
Golf Course and Cemeteries	222
Air Field and Heliport	231
SEMI-IMPROVED & UNIMPROVED GROUNDS	ACREAGE
Ponds and Lakes ¹	22
Commercial Forest Land ²	5,985
Noncommercial Forest Land ^{2 and 3}	10,660
Notes: 1 Maintained in accordance with Wildlife Management Plan	
2 Prescribed burning and other management practices conducted in accordance with Forestry and Wildlife Management Plans.	
3 Noncommercial Forest Lands contain approximately 1,136 acres that are not forested (semi-improved/developed portions of ranges, roads, road shoulders, trails, firebreaks, etc.).	

Table 4.19 Summary of Land Use and Land Cover Based on Maintenance Activity on FMC

IMPROVED GROUNDS	ACREAGE
<i>Source: FWEC, 1996b and FMC, 1991</i>	

An active tree planting program has been in operation for nearly 40 years. Commercial forestry programs throughout the southeast have favored loblolly pine (*Pinus taeda*) due to its ease of establishment and rapid growth. The forestry program at FMC has included the establishment of about 300 acres of loblolly pine at FMC Main Post. The forestry program at FMC has continually modified the commercial forest land cover through harvesting, thinning and strip disking, fertilizing and lime application, prescribed burning, and planting activities.

Forest types on FMC vary according to local topography, soils, and ecological successional stage. Upland forests can be dominated by either hardwoods or pines. Mixtures of these species are typical in the upland communities identified by the Alabama Natural Heritage Program (ANHP). In work done in 1994, ANHP conservatively identified 8 general upland community types occurring on FMC (ANHP, 1994). See Table C.1 for species that typically occur in each of these community types. Soil type and fire history are factors in determining the composition of these forests. Virginia pine (*Pinus virginiana*) is found along ridges, and longleaf pine (*Pinus palustris*) occurs along the south and west slopes of hills and ridges. Short-leaf pine (*Pinus echinata*) is most commonly encountered on more infertile soils. Upland hardwoods are dominated by oak and hickory species. Mountainous hardwoods are dominated by chestnut oak (*Quercus prinus*), scarlet oak (*Q. coccinea*) and pignut hickory (*Carya glabra*). Hardwoods on upland slopes and hills are dominated by southern red oak (*Quercus falcata*), post oak (*Q. stellata*), chestnut oak, black oak (*Q. velutina*), blackjack oak (*Q. marilandica*), pignut hickory, and dogwood (*Cornus florida*). American beech (*Fagus grandifolia*), yellow poplar (*Liriodendron tulipifera*), white ash (*Fraxinus americana*), maple (*Acer* spp.), white oak (*Q. alba*), American holly (*Ilex opaca*) and redbud (*Cercis canadensis*) are present in ravines.

The majority of the areas at FMC are developed or forested, with some oldfields also present. Without continued disturbance, undeveloped areas at FMC quickly revert to forestland. Persistent oldfields at FMC require some type of ongoing activities that either continually or occasionally maintains the land in early successional conditions. Generally oldfields are used for training programs and as ongoing impact areas.

4.11.2.2 Mountain Longleaf Pine (MLP) Ecosystem. Notable stands of longleaf pine (*Pinus palustris*) are found at FMC. Occurrence of this species on ridgetops and south-southwestern slopes of steep ridges are unusual and are referred to as mountain (or montane) longleaf pine (MLP) communities. Regional efforts are being made to restore and maintain remnant populations of longleaf pine (coastal and mountain longleaf pine) throughout the Southeast. These efforts include identifying the best remaining examples of longleaf pine forests, conducting research, and developing strategies for both the preservation of longleaf pine and the economic use of longleaf pine. These regional efforts by various conservation groups, private companies and landowners, universities, and state and federal agencies are being coordinated by the newly formed Longleaf Alliance (Kush, 1996).

The MLP ecosystem once covered ridge and southern slope regions of the Blue Ridge Mountains in northeastern Alabama and northwestern Georgia, but has been reduced to several degraded sites in northeastern Alabama. Slope, aspect, elevation, and fire intensity appear to be significant factors influencing the distribution of MLP in these mountain regions. The forest ecosystem is composed of a mosaic of forest types, with MLP dominating on flat, xeric ridges and moderately steep to steep (30-70 percent) upper, generally south to west facing, slopes.

The forest block at FMC is ecologically important due to its large size and unfragmented condition, diversity and uniqueness of species and communities present, rare species of animals and plants present, and general lack of exotics and disturbance. Decreased logging frequencies and periodic range fires that have allowed the plant communities to be maintained under "natural" conditions add to the ecological

importance of this ecosystem. The main post of FMC, particularly in Area 2 (Figure 3-2), represents the best remaining example of the MLP ecosystem on a landscape scale (Hilton, 1996). Additional discussion on the MLP ecosystem can be found in Appendix C.

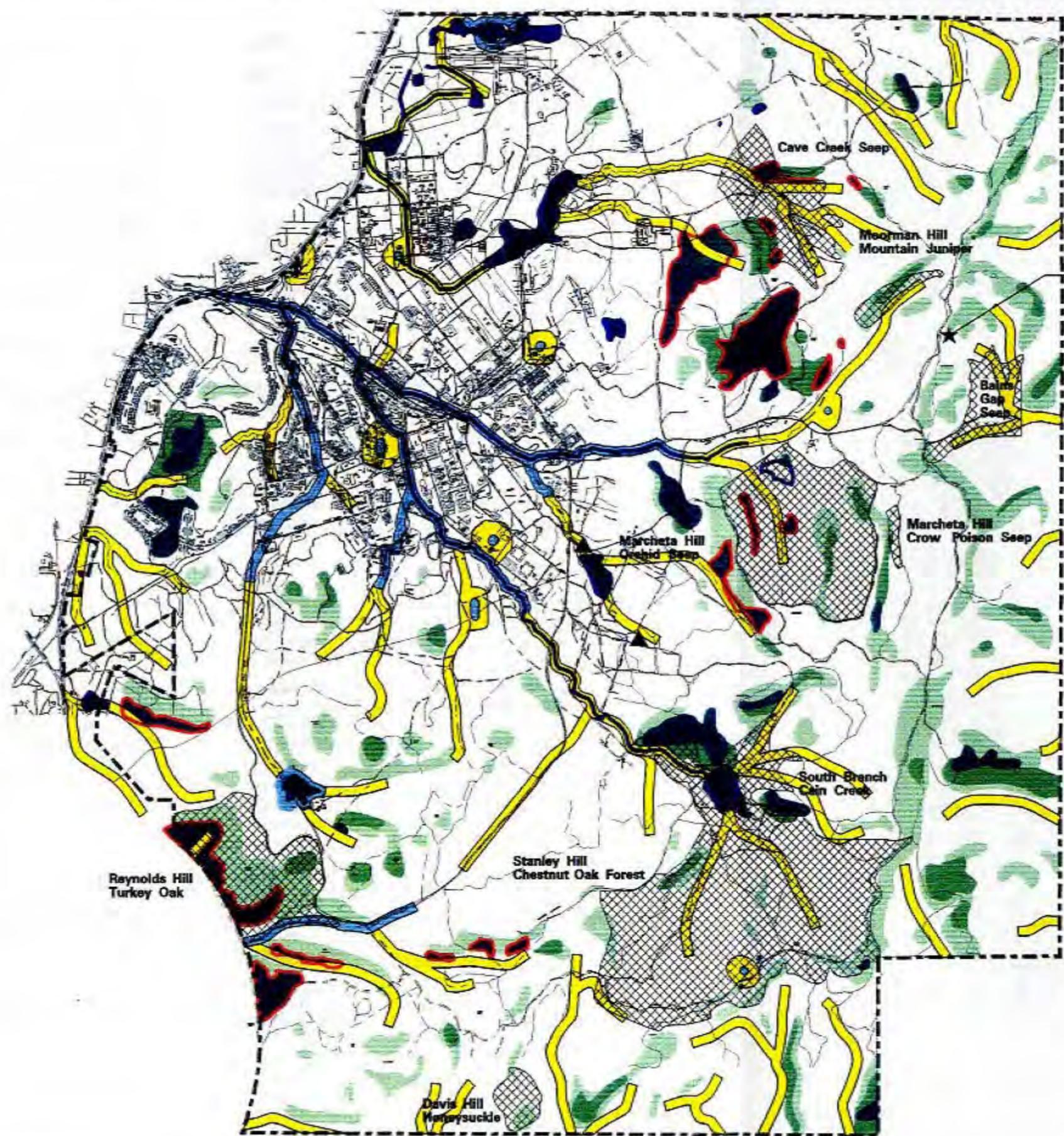
4.11.3 Wetlands

Wetland communities on the installation have been characterized and mapped by Gaddy (1984). This survey identified various wetland communities classified as palustrine forested, shrub/scrub, or emergent.

Further mapping and evaluations done by the U.S. Army Corps of Engineers (USACE) in 1992 included identification of larger wetland complexes that could be more effectively managed and monitored.

Figure 4-16 shows both the National Wetlands Inventory (NWI) classifications and the USACE jurisdictional wetlands limits for FMC. The Corps of Engineers study also provided management and protection recommendations. Subsequent management procedures were designed to remedy existing impacts on these wetlands and focus further management actions on more ecologically important wetlands such as headwater seeps. Not included in the wetland inventories completed to date are a number of seeps (e.g. Marcheta Hill Orchid Seep). FMC is currently identifying and investigating these seeps and has published a draft report entitled "Botanical Study of Upland Seeps on Fort McClellan, Alabama with Special Attention to *Platanthera integrilabia*". Dataforms were completed for each seep investigated and results indicate that many of the seeps may meet the criteria for jurisdictional wetland status (Whetstone, 1997). More information on seeps at FMC can be found in Appendix C, subsection C.2.4. Wetlands management and inventory activities in use at FMC include the following.

- Locations of larger wetland complexes (U.S. Army Corps of Engineers) have been delineated on installation Environmental Constraints Maps and distributed through Range Control and Directorate of Environment.
- "Vehicles Restricted" signs are placed around wetland complexes that are experiencing impacts from adjacent training or land management activities.



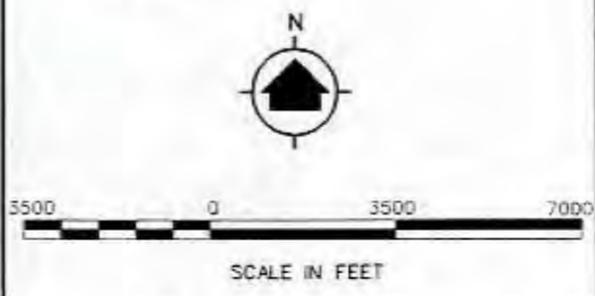
Fredrick Hill Aster Site
(Boundaries not delineated
at this time)

- LEGEND**
- RESERVATION BOUNDARY
 - WETLANDS AND LAKES
 - ▨ SPECIAL INTEREST NATURAL AREA (SINA)
 - LOW QUALITY GRAY BAT HABITAT
 - MODERATE QUALITY GRAY BAT HABITAT
 - POTENTIAL RED COCKADED WOODPECKER HABITAT
 - ▲ THREE-FLOWERED HAWTHORN LOCATION
 - HIGH PROBABILITY OF MOUNTAIN LONGLEAF PINE COMMUNITIES *
 - MODERATE PROBABILITY OF MOUNTAIN LONGLEAF PINE COMMUNITIES *
 - LOW PROBABILITY OF MOUNTAIN LONGLEAF PINE COMMUNITIES *

NOTE:

* Indicates the locations most likely to contain current, restorable, and/or historical MLP communities. The figure is designed to illustrate the estimated abundance and likely juxtaposition of the MLP communities at FMC. The areas most likely to contain these communities were predicted using the best available information. MLP locations are not based on comprehensive or specific surveys for MLP communities. Auburn University is currently conducting a survey of the MLP communities at FMC that is expected to be completed in 1999. See Appendix C for additional information.

- SOURCES:**
- RMS, 1984;
 - FMC, 1996d;
 - USGS, 7.5;
 - John Kusch, per. comm.;
 - FMC, 1997c;
 - USDA 1961;
 - Summerour, 1992;
 - JD/E, 1996;
 - USFWS, 1994;
 - NREC, 1986.



PARSONS ES
PARSONS M&A
ST LOUIS, MISSOURI

MOBILE DISTRICT
US ARMY CORPS OF ENGINEERS
MOBILE, ALABAMA

ENVIRONMENTAL IMPACT STATEMENT

DISPOSAL AND REUSE OF FORT McCLELLAN, ALABAMA

SENSITIVE HABITATS

DATE: AUG., 1998 FIGURE NO. 4-16

- Written guidance is provided to training units in pamphlets entitled "Protecting Natural Resources in the Field, FMC, Alabama."
- Digitized maps of wetlands are included in the installation's Geographic Information System.
- Briefings on the status of wetlands management are provided to command and organization leaders through quarterly Environmental Quality Control Committee meetings.
- Briefings and printed material are provided through Range Control to new training units.
- Forestry operations adhere to Alabama's Best Management Practices for forestry.

Some of the wetland communities, with their National Wetlands Inventory classification, that Gaddy (1984) identified as occurring at FMC include the following:

- Bottomland Hardwoods - Floodplain hardwood communities occurring on first and second floodplain levels and wetland transitional terraces (palustrine, forested - deciduous; seasonally and temporarily flooded);
- Depressions - Hardwood depressions in upland communities (palustrine, forested - deciduous temporarily flooded);
- Mixed Shrub Communities - Shrub dominated wetlands along stream floodplains, impoundment shorelines, and streamheads (palustrine, scrub/shrub - deciduous temporarily and seasonally flooded);
- Shrub Depression - Depressions in upland communities (palustrine, scrub/shrub - deciduous temporarily and seasonally flooded); and
- Herbaceous Wetlands - Herbaceous vegetation dominated wetland communities along floodplains and in impoundments either man-made or created by beaver (*Castor canadensis*) (palustrine, emergent persistent; temporarily and seasonally flooded).

4.11.4 Federal Threatened and Endangered Species

Two species listed as endangered by the U.S. Department of Interior — Fish and Wildlife Service (USFWS) have been recorded on FMC. One species, the red-cockaded woodpecker, has not been found on the installation since 1968. These endangered species are listed in Table 4.20. At the present time, no species listed by the USFWS as threatened are known to occur at FMC.

Species	Common Name	Status	Location (SINA)
<i>Myotis grisescens</i>	gray bat	Endangered	Current: Cane Creek Corridor
<i>Picoides borealis</i>	red-cockaded woodpecker	Endangered	Historical: Longleaf pine ecosystem

Source: FMC, 1996d and Appendix A, subsection A-4

4.11.4.1 Current Populations

Gray Bat. The gray bat, the largest member of the genus *Myotis* in the eastern United States, was listed as endangered by the USFWS in 1976. This species exhibits over-water feeding activities, ingesting aquatic night flying insects, along areas where forest cover and canopy extend to the water's edge. A recovery plan with the objective of delisting was prepared and approved in July, 1982. Populations of this species occur in Alabama, Arkansas, Kentucky, Missouri, and Tennessee.

There are no areas on or adjacent to the FMC that have been designated as critical habitat for the gray bat. There are no known caves at FMC Main Post that serve as maternity or winter roosts for the gray bat.

During August 1995, biologists captured two post-lactating female gray bats along Choccolocco Creek in the Choccolocco State Forest (3DI 1996a). The capture site is approximately 2 miles from the eastern boundary of Main Post.

In July 1997, biologists found gray bats roosting in three locations near FMC: 1) The Highway 21 bridge over Cane Creek approximately 100 feet outside Main Post served as a bachelor roost for at least seven adult males during the maternity season, and served as a transient roost for at least 17 gray bats (males and females); 2) On 29 July 1997, biologists discovered adult male, adult female, and juvenile gray bats roosting in Weaver Cave and Lady Cave, both located approximately 1 mile from the northwestern boundary of Main Post; and 3) Two clusters and one solitary gray bat were found in Weaver Cave. Two clusters of gray bats were found in Lady Cave. Additional gray bats may roost in reaches of the caves not investigated. The time of year and mix of ages and sexes in these colonies indicates these bats were transitory. Weaver Cave and Lady Cave had previously been investigated for the presence of gray bats during the maternity season (early July 1997), but no individuals or sign of gray bats were found (3DI, 1997). These cave may serve as roosts for maternity colonies in the future.

Biologists documented gray bats using Fort McClellan during mid- and late-summer (3DI, 1996a, 1996b, and 1997). Reproductive and transient adults have been captured over Cane Creek. Mist net surveys conducted during August 1995 resulted in the capture of 13 gray bats (five post-lactating females, seven adult males, and one of undetermined sex) on Cane Creek within Pelham Range. Mist net surveys conducted in June and July 1996 resulted in the capture of two gray bats (a lactating female and an adult male) on Pelham Range and two adult male gray bats on Main Post along Cane Creek at the golf course. Mist net surveys conducted in June and July 1997 resulted in the capture of one adult male on Cane Creek near the golf course and two post-lactating females on Cane Creek just within the eastern boundary of Pelham Range.

The capture of a reproductive female and three adult males during summer 1996 indicated that at least one maternity colony and one bachelor colony is located within approximately 21.7 miles of the Installation. Radiotelemetry studies conducted in 1997 revealed one bachelor roost under a bridge and two transitional cave roosts outside FMC boundaries; no roosts were found on FMC Main Post.

The August 1995 captures of post reproductive females and adult males indicate gray bats use the Installation during the transient period following the maternity season. After the maternity season, females and juveniles generally disperse to caves other than the maternity cave. Therefore, several different caves or structures may be used near or on FMC throughout summer and fall. This information is important for determining potential effects of seasonally dependent activities on foraging and roosting gray bats.

FMC and the USFWS have agreed that ESA Section 7 consultation is required for tree clearing within 50 feet of streams designated as high or moderate gray bat foraging habitat.

4.11.4.2 Historical Populations

Red-cockaded Woodpecker. The red-cockaded woodpecker (RCW) was officially listed as endangered by the USFWS in 1970. A recovery plan with the objective of delisting was prepared and approved, by USFWS, in August 1979. A revision to the recovery plan replaced the original and was approved April 1985.

The RCW is endemic to pine forests of the southeastern United States. The species is found in all southern states and southeastern coastal states from Texas into southern Virginia and into the interior of the southeast. The largest populations are in Coastal Plain forests of the Carolinas, Florida, Georgia, Alabama, Mississippi, Louisiana, eastern Texas and in the sandhills of the Carolinas. According to a census done in 1985, the largest number of active clusters were found on National Forests. Large numbers of clusters were also found on DOD lands. The last remaining active RCW cluster on FMC was recorded in 1968. Subsequent surveys in 1972, 1982, and 1985 failed to find birds and the cluster was classified inactive. A more complete description of historical populations and recent surveys on FMC can

be found in Appendix G of the Endangered Species Management Plan. Although the RCW no longer inhabits FMC, active clusters are known to exist in the Talladega National Forest approximately 5 to 7 miles to the east.

The primary reason for the decline in the RCW is often attributed to a decrease in oldgrowth pine that resulted from land clearing and forestry practices. These losses have been greatest in the longleaf-slash pine forest types, which are preferred nesting habitat for the woodpecker. In 1984, the Army formulated guidelines for managing the RCW on military lands. These guidelines involved population goals and inventory requirements. In response to them, the installation modified forest management practices to allow only selective thinning within existing longleaf pine stands. In 1996, the Army revised the guidelines and required more active management practices on installations where the RCW is present or on installations with inactive clusters that the installation in consultation with USFWS continues to manage in an effort to promote reactivation. Because FMC does not contain active or inactive clusters suitable for management, these guidelines are not currently applicable to the installation's resource management program.

Historically, longleaf pine forest on FMC are known to have contained RCWs. The USFWS issued a "no effect" decision on the last inactive cluster in 1986. In 1992, FMC contracted a detailed field survey to identify any possible unknown sites. The survey (FMC, 1996d) failed to find any birds. Historical removal of oldgrowth longleaf pine was credited as the primary reason. FMC however recognizes the Army's responsibility in preserving biodiversity and has taken measures to ensure the future of the longleaf pine community type on the installation. Auburn University, working through the U.S. Forest Service (USFS), will characterize and map existing longleaf communities and develop a management/restoration plan. Because the Talladega National Forest has been selected as a recovery population and active clusters exist approximately 5 to 7 miles east of FMC, it is possible that with restoration of these forests, habitat might be available at some future time.

4.11.5 Other Species of Concern

4.11.5.1 Special Interest Natural Areas

Special Interest Natural Areas (SINAs) on FMC consist of those biological communities that harbor Federal, candidate, or state-listed species, or those habitats containing single or groups of unique or unusual species. While the SINA have no specific legal or regulatory significance, they were classified as such as part of the Integrated Natural Resource Management Plan and the Endangered Species Management Plan (ESMP).

Eleven SINAs have been identified at FMC (Figure 4-16). Some SINAs actually contain a community type (e.g., wetland, stream) along with a buffer to mitigate sedimentation and related disturbances. Within these sites, a "critical element" has been delineated to identify the community of concern. See Appendix C, subsection C.2.1 for additional information. SINAs at FMC include (FMC, 1996d) the following:

- **Mountain Longleaf Pine (MLP) Ecosystem.** This largely unfragmented forest matrix contains the only known example of MLP on a landscape scale. This area also contains other special interest species and areas.
- **Marcheta Hill Orchid Seep.** This is the largest forested seep on the installation. The area is maintained and enhanced by fires resulting from adjacent range activity. This seep contains white fringeless orchid, rose pink, soapwort gentian, Diana butterfly and it is a probable jurisdictional wetland.
- **Bains Gap Seep.** This area contains a collection of small stream seepages that contain Fraser's loosestrife and Carlson's caddisfly. The area is very susceptible to erosion.
- **South Branch Cane Creek.** Headwaters of this stream contain 17 species of SCC, plus rare and endemic caddisflies. Cane Creek contains the coldwater elimia (*Elimia gerhardtii*).

- **Cave Creek Seep.** This seep forms the headwaters of this stream has been noted to contain pink lady's slipper, soapwort gentian, and white fringeless orchid. The area is enhanced by occasional wildfire.
- **Moorman Hill Mountain Juniper.** This area contains the mountain juniper and represents the southern range extension for this species. The area is enhanced by low intensity fires resulting from adjacent range activities.
- **Stanley Hill Chestnut Oak Forest.** This area is the largest tract of mesic woodlands on the installation and as such, it is considered an important area for breeding NTMB. The area is susceptible to wildfire from April to June.
- **Reynolds Hill Turkey Oak.** This area is dominated by mature longleaf pine but also contains a small disjunct population of turkey oak. Fire is critical to maintaining this SINA.
- **Davis Hill Honeysuckle.** The upper slopes of this area contain yellow honeysuckle.
- **Marcheta Hill Crow Poison Seep.** This small headwater seep contains the plant known as crow poison. The area is closely associated with Marcheta Hill Orchid Seep.
- **Frederick Hill Aster Site.** This area contains the only documented population of sky-blue aster in Alabama. Sporadic fires are needed to maintain openings in the canopy so this plant can flourish.

4.11.5.2 Unique or Unusual Species Not Receiving Federal Protection

A number of species have been found on FMC that currently do not receive protection under existing Federal regulations. Federal Species of Concern are listed in Table 4.21. Federal Species of Concern are plants or animals that are being considered for listing (or were formerly listed) as threatened or endangered. The communities associated with these populations are of great interest also. These species can often be indicators for identifying those biotic communities or ecosystems that are regionally uncommon or disappearing. The maintenance and protection of these communities is important in conserving biological diversity and proactively managing for endangered species. Consequently, the occurrences of these species were critical in identifying the Special Interest Natural Areas. State ranked species were also considered when developing SINA. State ranked species represent unusual, rare, or population extensions of more common species. Lists of state ranked species can be found in Tables C.6 and C.7 of Appendix C.

The Army will comply with the requirements of the Endangered Species Act (ESA) if any species being considered or under review for listing are listed or proposed for listing prior to transfer of ownership of the property.

Scientific Name	Common Name	State Rank	Special Interest Natural Area
<i>Sylvilagus obscurus</i>	Appalachian cottontail	S1	Mountain Longleaf Ecosystem
<i>Elimia gerhardti</i>	Coldwater elimia	S*	Cane Creek Corridor
<i>Speyeria diana</i>	Diana butterfly	S*	Marcheta Hill Orchid Seep
<i>Polycentropus carlsoni</i>	Carlson's caddisfly	S1	Bains Gap Seep and Cave Creek Seep
<i>Platanthera integrilabia</i>	White fringeless orchid	S1	Marcheta Hill Orchid Seep & Cave Creek Seep
<i>Lysimachia fraseri</i>	Fraser's loosestrife	S1	Bains Gap Seep

<i>Crateagus triflora</i>	Three-flowered hawthorn	S2	n/a
<i>Crataegus pearsonii</i>	Pearson's hawthorn	none	n/a

Note: * State ranking is currently under evaluation.

Source: FMC, 1996d

Appalachian Cottontail. This species, originally classified with the New England Cottontail, was recently recognized as a distinct taxa. It has been collected from the Talladega Mountains to the west of FMC and was considered a resident on FMC in recent surveys. A specimen collected by ANHP in 1994 was identified as being this species. To further investigate the potential occurrence of this species on FMC, the installation has sponsored surveys at higher elevations forests. Because this rabbit is associated with high elevation forests and rhododendron thickets, conservation measures may be linked to those that benefit other forest interior species in the Mountain Longleaf Ecosystem (FMC, 1996a).

Coldwater Elimia. Surveys by Yokely in 1993 found this snail along most of Cane Creek east of Highway 77, which includes FMC. Recent studies in the Coosa River have found this species to be widely distributed and relatively common. The USFWS has recently recommended that this species be placed in a lower category status since it is more abundant than originally believed. This action removes the species from listing consideration unless future studies show population declines or substantial threats. No specific management prescriptions are considered necessary by the installation to ensure continued survival. Efforts to manage the Cane Creek Corridor SINA, for other species, can be expected to benefit this species.

Diana butterfly. Two females have been observed at the Marcheta Hill Orchid Seep. This butterfly prefers wet, rich forested valleys and mountainsides, and relatively undisturbed forests near streams.

Carlson's caddisfly. FMC contains the only currently known populations of this species in Alabama. This caddisfly has been noted at Bains Gap Seep and South Branch Cane Creek. Seventeen additional species of caddisflies that are considered rare (state rank S1 to S3) in the state of Alabama have been found within these two SINA. Extensive surveys for the Carlson's caddisfly have not been conducted and the potential for additional populations exists.

Fraser's loosestrife. This plant occurs in the mountains of northeast Alabama, north Georgia, Tennessee, and the Carolinas. It is considered uncommon throughout its range. One population has been noted along a headwaters stream in Bains Gap. Further surveys did not locate additional populations.

White Fringeless Orchid. The white fringeless orchid (WFO) was formerly listed as a federal Candidate 2 (C2) species. The WFO is now, as are the majority of the former C2 species, considered a Species of Concern. Preliminary status reviews for this species indicate that the WFO (*Platanthera integrilabia*) may be listed as a federally threatened or endangered species. There have not been extensive or systematic surveys of all the seeps that occur at FMC and is it possible that additional populations of the WFO may be found at FMC.

The plant was first discovered, in detail, on Fort McClellan within the survey: Vascular Flora of Fort McClellan, AL (Whetstone, 1996). This survey located populations of the orchid in training areas 15I, 16C, and 16G. A follow-up survey was conducted from late spring 1997 to October 1997. This survey, Botanic Study of Upland Seeps on Fort McClellan, Alabama with Special Attention to *Platanthera integrilabia* (ORCHDACEAE) (Whetstone, 1997), found no new populations of WFO.

This bog and seepage plant has been found in two SINAs on FMC: Marcheta Hill Orchid Seep and Cave Creek Seep. The Marcheta Hill Orchid Seep population, which represents one of the largest known populations, is extensive with 252 flowering individuals in 1993 and 213 in 1995. This species was also found in 1992 and 1997 in the Cave Creek Seep. Protection measures have been implemented including

signage and mapping. Management of both these SINAs as part of the Mountain Longleaf Ecosystem will also benefit this species.

Three-flowered hawthorn. The three-flowered hawthorn (*Crataegus triflora*) is an understory shrub that prefers exposed limestone outcrops and an open canopy. Limited surveys for this plant have noted plants at a rock pit area near Range 29 and along a paved road leading into Range 25. This federal Species of Concern is being considered for threatened or endangered listing because the cedar-apple rust is believed to be interfering with production of viable fruits. A SINA for this species has not been designated at this time.

Pearson's hawthorn. During a 1995 floral survey of FMC, collections of field unidentifiable hawthorns were made at FMC. Specimens were provided to regional and national experts on hawthorn identification. A confirmed identification and follow-up surveys of three-flowered hawthorn have been made at FMC (see above). Pearson's hawthorn (*Crataegus pearsonii*) has been preliminarily identified as occurring in training area 15D near the quarry site. This hawthorn was thought to be extinct and has no current federal listing or state designation. If this species is validated to be present at FMC, it may initiate future listing efforts by the USFWS. Botanists considered to be experts in hawthorn identification and representatives from the USFWS and FMC conducted a survey of the quarry area on April 8, 1998. Additional analysis is required before a positive identification of the specimens can be made. The Army and National Guard will protect this site from training and development activities as further studies continue.

4.11.6 Integrated Natural Resources Management Provisions

Management of natural resources at FMC is included in the Integrated Natural Resource Management Plan (INRMP) (FMC, 1991). The INRMP is currently being updated (FMC, 1997c). This plan integrates all natural resource activities (land management, agricultural leases, erosion control, grounds maintenance, landscaping, forestry, fisheries, wildlife, and outdoor recreation). The multipurpose plan manages these resources with the goals of supporting the military training mission through management and maintenance of the land base; sustaining annual harvests of quality forest products; maintaining optimal fish and wildlife populations; enhancing soil and water conservation; preserving or enhancing existing flora and fauna; establishing agricultural outlease programs; ensuring no net loss of wetlands; and coordinating the natural resource management activities with other military land users and ensure their guidance is incorporated.

In 1996, the installation prepared an ESMP which is designed to manage at the community and ecosystem levels for federally listed and state ranked species as well as unusual or sensitive species on the installation. The plan established 11 SINAs, the management of which enhances the continuance of listed, unusual or sensitive species. Management of some of these SINAs was discussed above in subsection 4.11.5 above.

4.11.6.1 Recreational Hunting and Fishing

Hunting. FMC lands are actively hunted by military personnel and civilians. Approximately 10,000 to 12,000 man-days are spent hunting on FMC each year. The total area on FMC providing suitable habitat for wildlife is approximately 16,667 acres. Land available for recreational hunting on FMC totals approximately 16,000 acres (FMC, 1991). Approximately 9,500 of these acres are restricted at least part of the time by range and other military activities. Various furbearers and game birds are managed to enhance hunting opportunities. The white-tailed deer and eastern cottontail rabbit habitat are managed

on-site. Other furbearers recorded in the area include the swamp rabbit (*Sylvilagus aquaticus*), gray squirrel (*Sciurus carolinensis*), eastern fox squirrel (*Sciurus niger*), opossum (*Didelphis virginiana*), beaver (*Castor canadensis*), gray fox (*Urocyon cinereoargenteus*), red fox (*Vulpes vulpes*), and bobcat (*Felis rufus*). The wild turkey (*Meleagris gallapavo*), northern bobwhite (*Colinus virginianus*), mourning dove (*Zenaidura macroura*), and waterfowl populations also benefit from wildlife management programs.

Fishing. Three lakes, totalling 22.5 acres, are managed for military and civilian fishing resources. Management activities include restocking of sportfish, aquatic weed control, and selective poisoning to control undesirable fish. Lake shoreline clearing and deepening of shallow edges have been performed in the Duck Pond. The three warm water impoundments managed for fisheries include the following:

- Reilly Lake (8.5 acres);
- Yahoo Lake (13.5 acres); and
- Duck Pond (0.5 acres).

4.11.6.2 Timber Management. The Forest Management Plan portion of the INRMP provides for the orderly and scientific management of the installation's woodlands, protects the real estate investments of the government; facilitate the military mission; and assure continued production of forest products.

There are approximately 3,800 acres of commercial forest lands on the FMC that do not have access restricted by range or other military activities. A timber inventory was conducted in 1990 and the harvest schedule from 1991 to 1995 was set at 80 percent of annual incremental growth. Annual incremental growth is the amount the forest grows each year. (FMC, 1991).

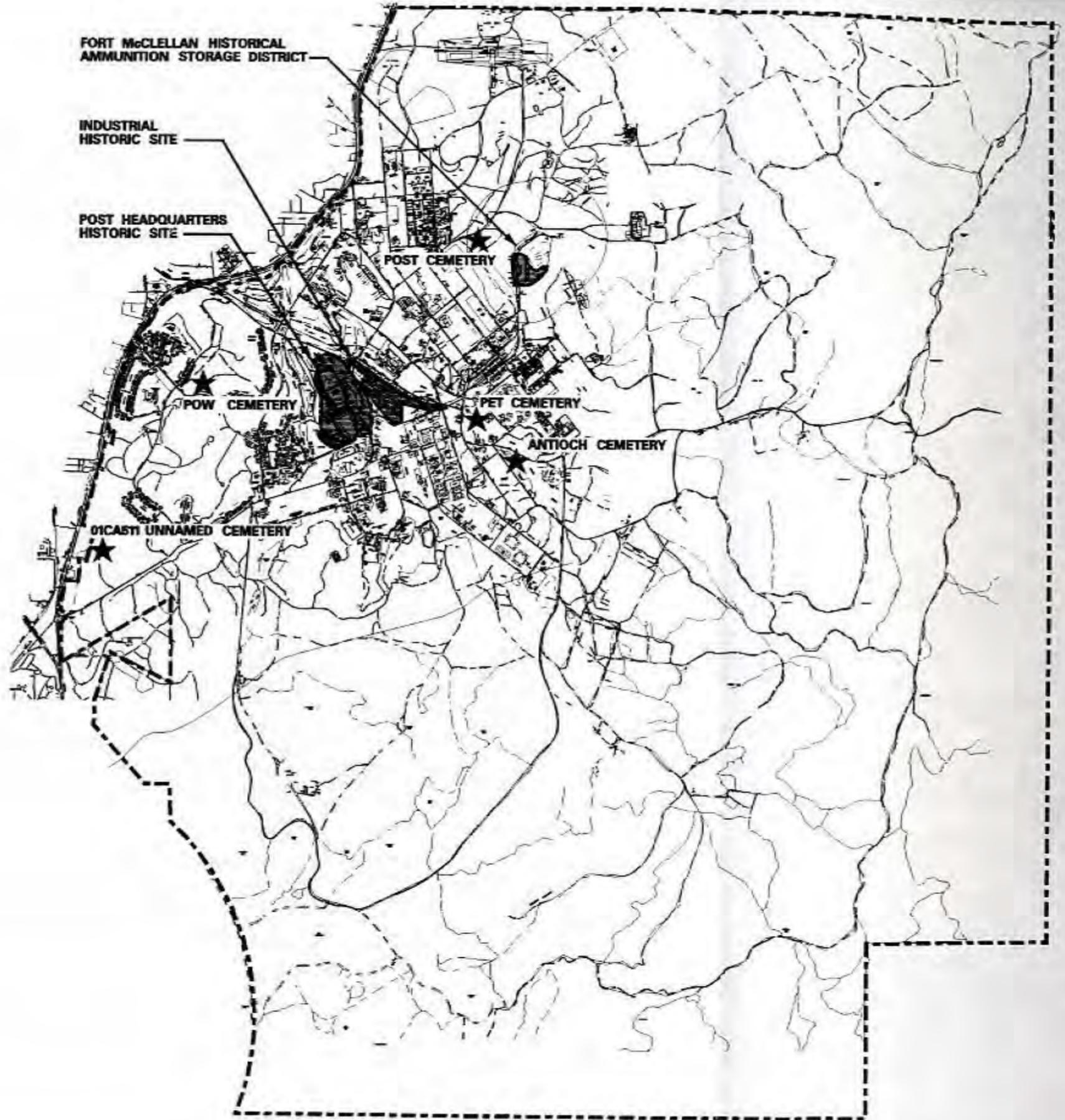
4.12 CULTURAL RESOURCES

This section describes the cultural resources found at FMC. It presents a brief prehistoric and historical summary and a description of the use of the area as FMC, a description of the archaeological and architectural investigations that have occurred at the installation; and, finally, a description of the cemeteries. Figure 4-17 portrays cultural features at FMC.

4.12.1 Cultural Framework

4.12.1.1 Prehistoric Summary. Investigations from the area surrounding FMC, and the Coosa River Valley specifically, provides more information on the past cultural chronology in the region. The chronology presented below follows the major cultural traditions for the eastern United States.

Paleo-Indian Period (10,000 - 8000 B.C.). The earliest period of human occupation in North America is called the Paleo-Indian Period. Scholarship suggests that hunters pursued herds of Pleistocene megafauna across the Beringia land bridge, and then quickly proceeded to populate the New World. Artifacts diagnostic of this period include finely worked lithic tools such as fluted and non-fluted projectile points, unifacial scrapers, graters, spokeshaves, and expedient tools. One site, 1CA103, has been recorded at FMC, from which a fluted Paleo-Indian point was recovered (McEachern et. al 1980). The



LEGEND

-  RESERVATION BOUNDARY
-  HISTORIC DISTRICT
-  CEMETERY LOCATION

NOTE:
 HISTORIC DISTRICT BOUNDARIES ARE SUBJECT
 TO CHANGE BASED UPON ON-GOING CONSULTATIONS
 WITH THE ALABAMA STATE HISTORICAL
 PRESERVATION OFFICER.

SOURCES:

- NSA, 1992
- NSA, 1993
- NSA, 1996
- FWEC, 1996



SCALE IN FEET



PARSONS ES
 PARSONS HRA
 ST. LOUIS, MISSOURI



MOBILE DISTRICT
 US ARMY CORPS OF ENGINEERS
 MOBILE, ALABAMA

ENVIRONMENTAL IMPACT STATEMENT

DISPOSAL AND REUSE OF
 FORT McCLELLAN, ALABAMA

**CULTURAL RESOURCES AND
 HISTORICAL SITES**

DATE: AUG., 1998

FIGURE NO. 4-17

Paleo-Indian period ended when environmental conditions related to the end of the Pleistocene and beginning of the Holocene stimulated technological and social changes.

Archaic Period (8000 - 1000 B.C.). The Archaic Period is subdivided into Early Archaic (8000 - 5000 B.C.), Middle Archaic (5000 - 3000 B.C.), and Late Archaic (3000 - 1000 B.C.). The extinction of Pleistocene megafauna and change in climate resulted in modifications to subsistence, technology, and settlement. Archaic peoples practiced a cyclical migration which optimized the exploitation of seasonally available resources. Hunting and gathering subsistence and small scale egalitarian social systems were typical of the period. Stemmed and corner-notched projectile points were common in the Archaic period, and ceramic vessels were developed near the end of this period. Late Archaic components at FMC have been identified at seven sites.

Woodland Period (1000 B.C. - A.D. 900). The Woodland Period is characterized by increased, although not fully developed, sedentism and evidence of horticulture as a supplement to hunter/gatherer subsistence techniques. Ceramic vessels and storage features were integral parts of this seasonally sedentary lifestyle. Greater variation can be observed in projectile point types. Woodland peoples often built earthen mounds for ceremonial purposes including burial interment. Twenty-one Woodland sites have been recorded at FMC, including eighteen stone features and one earthen mound.

Mississippian Period (A.D. 900 - 1540). The Mississippian Period, which spanned from the end of the Woodland Period until European contact, represents the apex of aboriginal socio-political development in the southeastern United States. The Mississippian Period is characterized by defined political boundaries controlled by a hierarchical polity reliant upon maize agriculture. Mississippian settlement patterning typically consisted of a large, central village containing one or more mounds surrounded by smaller hamlets which supposedly provided maize in the form of tribute to the central village. Mississippian sites often are found on floodplains of large drainages where there would be fertile soils. European-borne disease and violence sped the decline of the Mississippian social system after European contact in the mid-sixteenth century. Two sites on FMC have yielded artifacts diagnostic of the Mississippian Period, these sites are relatively small manifestations and do not represent major villages or hamlets.

Protohistoric Period (A.D. 1540 - 1700). The period of initial contact between Europeans and Native Americans is referred to as the Protohistoric Period. When Hernando DeSoto's expedition traversed the state of Alabama in 1540, it was part of the Coosa Polity. The travel accounts from this expedition described this territory as populous and fertile. When Tristan de Luna returned 16 years later, he described the region as having far fewer inhabitants than had been described by DeSoto. European contact caused the demise of the Mississippian culture and the loss of countless Native American lives. By the seventeenth century, mound building had ceased and native arts and industries were being affected, and in some cases, replaced by European trade goods and raw materials. European contact was a stimulus for the termination of the Native American lifestyle. Descendants of the Coosa, called the Creek Indians, would come to occupy the FMC region.

Historic Period (Post-1700). During the historic period, the area was inhabited by the Creeks. The Creek Confederation was a political alliance binding disparate groups in response to the end to the Mississippian structure and to encroachment by European settlers. Although no towns or occupations are known at FMC, present day Cane Creek was the location of at least one Creek village, and the fort is on what was Creek land. Practically all of the Creek either had voluntarily moved or been forcibly removed by the middle of the nineteenth century.

When the Creeks were removed in the nineteenth century, northeastern Alabama attracted many new settlers because of the availability of natural resources. Agriculturists were attracted to the rich soil of the floodplains and on the level ridges and terraces. In the 1860s, industrialists were attracted to the region by the availability of natural coal and iron rich hematite that supplied the early iron industry. In 1860, the population of Calhoun County was 25,881, which included 4,342 slaves. At that time, approximately 90 percent of the population was involved in agriculture (McEachern and Boice 1976).

4.12.1.2 Establishment of FMC. The significant military use of the region began when Camp Shipp was built near Anniston, Alabama, in 1898. In 1917, this post was expanded and renamed Camp McClellan after the well-known Union Civil War Commander. A 1929 War Department Order changed Camp McClellan to Fort McClellan. In 1941, the Pelham Range area of the post was added to facilitate the expanded training role in which FMC was involved. Currently, FMC is an active U.S. Army facility dedicated primarily to the training of military personnel.

In the quest for an ideal site for test firing artillery shells, the Army received reports from the Fourth Alabama Artillery Unit in the late nineteenth century of a potential firing range in Calhoun County, Alabama, identified as the Choccolocco Mountains. In 1912, the Federal Government's interest in the area began to grow following the successful training of National Guardsmen at the site. The Government proceeded to purchase the 18,950-acre (7,580-hectare) facility in 1917 for use as an artillery range.

Shortly after the Army's possession of the site, the United States declared war on Germany. The War Department decided to utilize "Camp McClellan" for Army mobilization training. By the end of the war, a total of 1,551 buildings had been built. The camp earned its official title, Fort McClellan, and became a permanent post in July 1929.

FMC hosted several regiments, including an anti-aircraft artillery and a tank company, prior to the second world war. During World War II, FMC was utilized in two crucial ways: (1) as a training center for some 50,000 soldiers and (2) as a prisoner of war camp. The post-war function of the fort underwent a transition from an occupational duty training center for soldiers to a basic training center for new recruits.

In 1947, FMC was inactivated; however, due to the outdoor training resources available and the diversity of topography conducive to all types of chemical field training, the fort was reactivated in 1950. It became the home of the Army's Chemical Corps School from 1951-1973 and was then re-established in 1979. The Women's Army Corps (WAC) was present at McClellan from the early 1950s until 1977. The U.S. Army Military Police School relocated from Fort Gordon, Georgia, to FMC in 1975. Both the U.S. Army Chemical School and the U.S. Army Military Police School remain at FMC today, in addition to training organizations, the Department of Defense Polygraph Institute, and the Chemical Defense Training Facility (CDTF) are located at FMC.

4.12.2 Cultural Resources Management and Section 106 Compliance

4.12.2.1 Archaeological Surveys. All the FMC excess acreage proposed for disposal was examined for archeological resources by six different surveys. These include some studies that have also covered parts of the Choccolocco Corridor and Pelham Range which are not included in the excess property. Survey work by the University of Alabama, Birmingham in 1976 and 1977 covered approximately 4500 acres of the excess property. The results of this work have been submitted to the Alabama State Historic Preservation Officer who provided concurrence with recommendations of those studies. The draft reports for the remainder of the archeological survey work in the excess property are now being examined by the Army and will shortly be submitted to the Alabama State Historic Preservation Officer for review.

Based on SHPO recommendations, site evaluations are expected to occur on a maximum of 13 sites expected to be transferred from federal control in the excess area using Phase II criteria. The evaluations will determine if the sites are eligible for the National Register. This work is expected to begin in summer, 1998 and was not completed in time for the FEIS. If additional studies are required, they will be conducted following the completion of these studies.

Archaeological investigations completed at FMC, which have covered the excess property (See Figure 4-18), include the following:

- **University of Alabama, Phase I Survey - 1976** (McEachern and Boice 1976). The first cultural resources survey at FMC was undertaken in 1976 by the University of Alabama in Birmingham. The pedestrian reconnaissance included coverage of approximately 250 acres of land that is now within the excess property. The SHPO has reviewed and concurred with the report recommendations.

-
- **University of Alabama, Phase I Survey - 1977** (McEachern et al 1980). This pedestrian reconnaissance provided survey coverage of approximately 4300 acres of land that is now within the excess property. The SHPO has reviewed and concurred with the report recommendations.
 - **Jacksonville State University, Phase I Survey - 1988** (Holstein 1988). This was a pedestrian survey with shovel testing of high probability portions of a project area (acreage unknown) of land that is now within the excess property.
 - **Jacksonville State University, Phase I Survey - 1991 to present.** This pedestrian survey with shovel testing covered approximately 7400 acres of land that is now within the excess property. SHPO has reviewed the draft report and JSU will complete the Final Phase I report addressing SHPO comments.
 - **Auburn University, Phase I Survey - 1993** (Cottier et al 1993). This was a pedestrian survey with shovel testing of a proposed highway corridor, a portion of which lies within FMC. This was a linear, rather than area survey, acreage unknown. Review status of this study, which was not conducted by the Army, is not known.
 - **Garrow and Associates, Phase I Survey - 1997** (draft report currently under review by the SHPO). This was a pedestrian survey with shovel testing of all areas in excess property not previously surveyed. Approximately 6800 acres, the balance of the previously unsurveyed land in the excess property, was surveyed in this investigation.

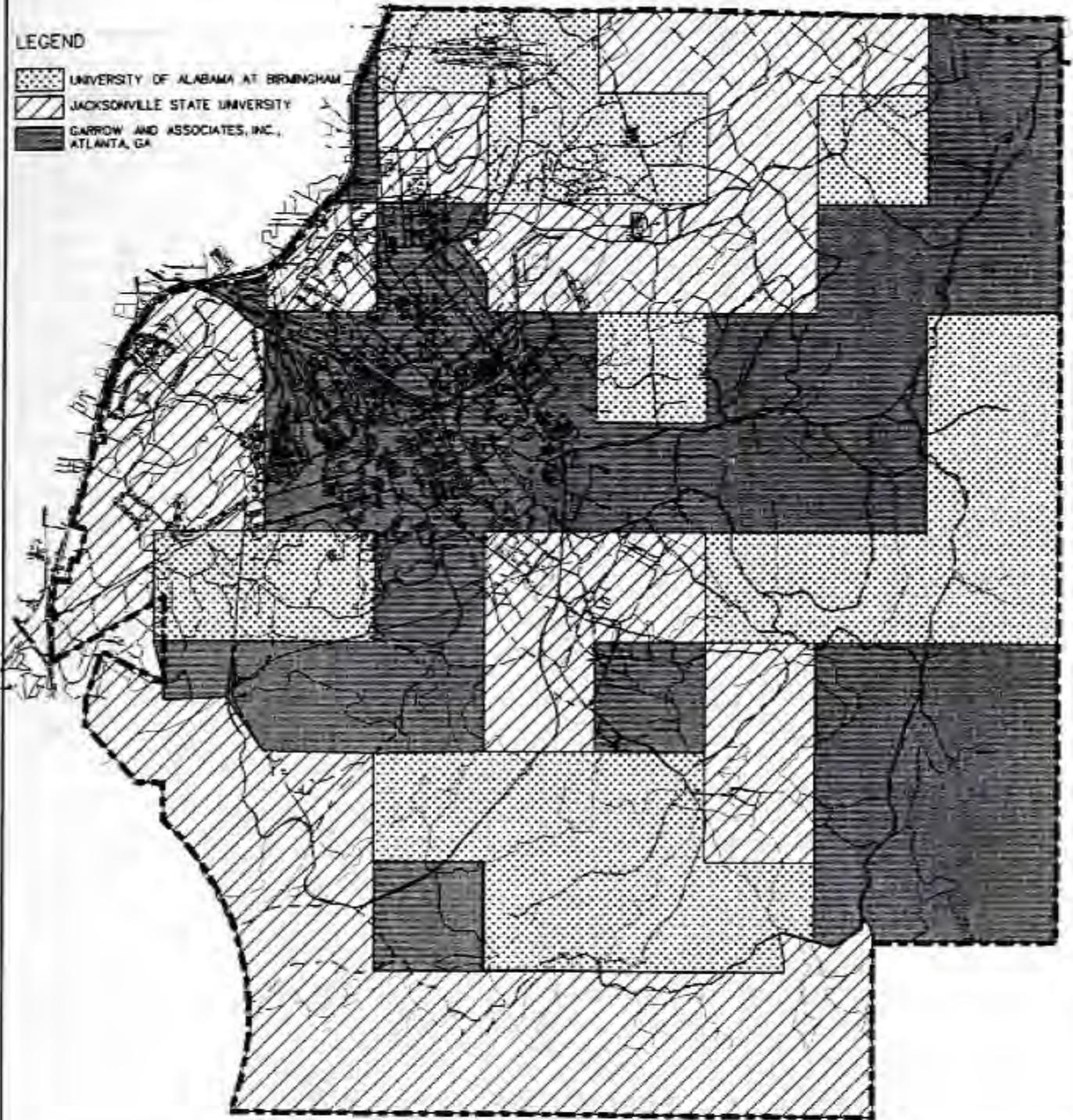
The results of early cultural resource studies conducted at FMC (McEachern and Boice 1976; McEachern et al 1980) were submitted to the Alabama State Historic Preservation Officer in a letter dated January 22, 1992 in which FMC's Environmental Management Division proposed to consider and protect sites identified by these surveys, and another that covered property that is not within the excess property. The SHPO responded in a letter dated February 7, 1992 indicating concurrence with the report findings.

Ground disturbing activities in areas surveyed, but for which survey reports have not been submitted to the SHPO and/or concurred will be evaluated for consultation, under standard Section 106 review procedures, or under the Programmatic Agreement.

Artifact and human skeletal remains collected at FMC are curated in compliance with the *Curation of Federally-Owned and Administered Archaeological Collections (36CFR79)* and *The Native American Graves Protection and Repatriation Act of 1990*. This legislation requires FMC to inventory their collections and provide for their proper curation and access for study. Disposition of materials collected during cultural resource surveys at FMC is shown in Table 4.22. In January 1995, notice of the possession, location and disposition of this material was provided to the 12 tribes with historical ties to this area. Since that time, three tribes have responded. The artifacts recovered during the recent Garrow & Associates survey will be returned to FMC by that firm following submission of the final report.

LEGEND

-  UNIVERSITY OF ALABAMA AT BIRMINGHAM
-  JACKSONVILLE STATE UNIVERSITY
-  GARROW AND ASSOCIATES, INC., ATLANTA, GA



SOURCE: DIRECTORATE OF ENVIRONMENT GIS, 1997



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MOBILE DISTRICT
U.S. ARMY CORPS OF ENGINEERS
MOBILE, ALABAMA

ENVIRONMENTAL IMPACT STATEMENT

DISPOSAL AND REUSE OF
FORT McCLELLAN, ALABAMA

**PHASE I
ARCHAEOLOGICAL INVESTIGATIONS,
FORT McCLELLAN**

DATE: AUG., 1998

FIGURE NO. 4-18

Table 4.22 Disposition of Native American Cultural & Historic Artifacts, Fort McClellan

Survey Information	Volume of Material (feet ³)	Location of Curated Materials
Various surveys	<1.0	FMC
1971 survey of Site 1Ca42	0.4	Jacksonville State University
1971 survey of Site 1Ca42	6.2 (incl. 3.2 ft of Nat. Amer. artifacts)	Anniston Museum/Museum of Nat. Hist.
1976-1977 Univ. of Alabama Birmingham	4.2	Jacksonville State University
1985 survey of Site 1Ca32	0.75	Jacksonville State University
1985-1987 survey of Site 1Ca42	53.7 (incl. 3.7 ft of Nat. Amer. artifacts)	Jacksonville State University
1991-present survey	2.2	Jacksonville State University
1992 testing of Site 1Ca62 and 1Ca507	1.5	Jacksonville State University
1993 Survey	<1	Auburn University
1997 Garrow & Assoc., Phase I Survey	1	FMC

Source: FMC, August 1996

4.12.2.2 Historic Buildings and Structures Surveys. Three historic architectural studies have been conducted for FMC. The Army is currently conducting a review of permanent World War II and Cold War era buildings and structures to determine whether any should be recommended as being eligible for the National Register of Historic Properties (NRHP).

The Military Showplace of the South, Fort McClellan, Alabama (Reed et al. 1993). The history and historic architecture of FMC is described and assessed in this work, which includes a description of the two FMC areas recommended as being eligible for the NRHP as districts. The proposed National Register districts were referred to as the Industrial District and the Main Administrative area known as "The Hill". Since that work, the Main Administrative District has been renamed the Headquarters District and another district has been proposed, to include the Magazine Area (Munitions Storage).

Inventory and Evaluation of Seventeen Buildings, Fort McClellan, Alabama (Reed et. al 1994). This report concluded that the Magazine Area constituted a third historic district, which is now called the Ammunition Storage district. Seventeen buildings omitted from earlier historic structures surveys because access was restricted, were inventoried and evaluated in this report. These buildings included one building in the Industrial District, and sixteen buildings in the Magazine Area. Five of the buildings cited in the report were subsequently demolished following HABS/HAER Level I standard architectural documentation. The current historic districts at FMC are shown on Figure 4-17.

Fort McClellan Historic Preservation Plan (Joseph et. al 1996). A comprehensive historic preservation plan was prepared for the management of cultural resources at FMC. This plan provides a brief overview of the prehistory and history of the FMC region, an inventory of the potentially NRHP eligible archaeological sites and historic architectural resources, and recommends treatment for identified resources and standards for documentation. This plan cited a total of 96 buildings as potentially NRHP eligible, including 62 buildings in the Headquarters District; 17 buildings in the Industrial District; and 8 buildings in the Ammunition Storage Area.

Summary. Based on consultation with the Alabama SHPO, there are presently three National Register eligible historic districts at Fort McClellan.

-
1. The Post Headquarters District includes 62 contributing structures.
 2. The Industrial District includes 17 contributing structures.
 3. The Ammunition Storage District includes 8 contributing structures.

In addition, Building 129, which lies between the Post Headquarters District and the Industrial District is regarded as eligible to the National Register. Thus, there are 87 structures that contribute to three historic districts, and a single building which is regarded as Register Eligible, but not within a historic district, for a total of 88 register eligible structures.

4.12.2.3 Cemeteries. FMC has a total of 4 cemeteries, identified on historic maps, photographs, property plats, Post acquisition records, and other archival sources (Joseph et. al 1996:105). Cemeteries are not considered historic properties, and are thus not subject to Section 106 compliance. However, for purposes of identification, these cemeteries include one Post cemetery (considered both a military cemetery and a historic church cemetery), one POW military cemetery, the Antioch cemetery (a civilian church cemetery), and one unnamed civilian cemetery on the west side of the post. The Post and POW cemeteries are within the FMC parcels being retained by the Army. Deed provisions allowing access to the two civilian cemeteries may be applicable.

4.13 SOCIOLOGICAL ENVIRONMENT

Elements of the sociological environment discussed in this section include the demographics of FMC and its surrounding environs; visual and aesthetic values; Native American and other ethnic groups; homeless programs; public safety and fire protection; and environmental justice.

4.13.1 Demographics

4.13.1.1 Fort McClellan Population. FMC's average daytime population for FY95 was 9,024 (Table 4.23). The on-post daytime population was comprised of an average of 5,326 military personnel; 1,459 military family members; and 2,239 civilians. Total on-post military resident population in FY95 totaled 5,351 (FMC, 1995c). Approximately 1,434 active military personnel and 2,100 military family members live off-post. In addition, over 5,000 military retirees live within the surrounding eight-county area, with 60 percent of those residing in Calhoun County.

4.13.1.2 Regional Population. The area considered as FMC's region of socioeconomic influence (ROI), as defined by the Economic Impact Forecast System (EIFS) (USACERL, 1984), consists of the surrounding eight-county region with Calhoun County realizing the greatest social and economic impacts from the installation. Calhoun County constitutes the Anniston Metropolitan Statistical Area (MSA). In addition to Calhoun County, other counties within the ROI include Cherokee, Clay, Cleburne, Etowah, Randolph, St. Clair and Talladega. The ROI in reality consists of a primary and secondary sphere of economic influence from FMC operations. Based upon current residency of military and civilian personnel associated with the installation in addition to other factors, including commuting distance and location of major shopping facilities, the primary ROI includes Calhoun, Cleburne, Etowah, and Talladega counties. According to zip code residency data, over 95 percent of the civilian and military personnel reside in Calhoun County (FMC, 1995c). In addition, the area's major shopping facilities are located in Calhoun (Addison, Oxford) and Etowah (Gadsden) counties. The presence of recreational facilities and military retirees are the major reasons for the inclusion of Cherokee, Clay, Randolph and St. Clair counties as the secondary area in the overall ROI. Both the primary and secondary ROI's receive direct and indirect benefits from FMC operations, including purchase of goods and services; purchase\rental of housing; and employment generation.

Over 70 percent of the ROI population is located in Calhoun, Etowah and Talladega counties. Gadsden (42,523) in Etowah County, Talladega (18,175) in Talladega County, and Anniston (26,623), Jacksonville (10,283) and Oxford (9,362) in Calhoun County are the largest cities within the ROI (Census, 1990). Approximately 54 percent of the ROI population is classified as urban compared to 60.4 percent for the state of Alabama. Calhoun and Etowah counties are the most urbanized with over 70 percent of the

population classified as urban, while over 70 percent of the population is classified as rural in Cherokee, Clay, Cleburne and St. Clair counties.

Classification	FY95
Average Daytime On-Post Population	
Military	
Permanent Party Military (includes both on-and-off-post residency)	2,166
Trainees\Students	3,160
Civilian	
DOD Civilian Employees	1,077
Other Civilian Employees	1,162
Military Family Members	1,459
Average Daytime Population	9,024
Total Resident Population	5,351
Off-Post Population	
Military Personnel, Permanent Party (off-post residency)	1,434
Military Family Members	2,100
Total Off-Post Population	3,534
Total Population	11,124

Source: Fort McClellan, Directorate of Resource Management.

As indicated in Table 4.24, the ROI increased in population by only one percent from 1980 to 1990 compared to a statewide increase of four percent during the same time period. Four counties within the ROI declined in population during this period with Calhoun and Etowah counties having both the largest absolute and relative decreases in population. The three largest cities in the ROI also decreased in population between 1980 and 1990. St. Clair County, which includes eastern suburbs of Birmingham, increased in population by over 20 percent during this period, with Cherokee and Cleburne counties registering very modest population growth. According to the U.S. Census, the majority of the population decrease was due to out-migration as this component of population change exceeded the natural increase in four (Calhoun, Clay, Etowah and Randolph) of the eight counties in the ROI. Only Cherokee and St. Clair counties had a net in-migration of population during this period. Overall, the ROI had a net out-migration of 15,101 people during the 1980-90 period (Census, 1990). Factors accounting for this out-migration include the loss of jobs associated with the textile industry which was accelerated by the recession during the 1980s; lack of employment opportunities for the younger population; and downsizing at FMC and the U.S. Army Depot. In addition, apparent under-counting occurred in Calhoun and Etowah during the 1990 census which resulted in lower 1990 population counts.

County	1980 Population	1990 Population	Percent Change	1995 Estimated Population	2000 Projected Population	2010 Projected Population
Calhoun	119,761	116,032	-.03	117,263	130,406	146,715
Cherokee	18,760	19,543	+.04	21,038	21,432	23,210
Clay	13,703	13,252	-.03	13,551	13,549	13,985

Cleburne	12,595	12,730	+0.01	13,272	13,416	14,455
Etowah	103,057	99,840	-0.03	100,259	109,930	122,167
Randolph	20,075	19,881	-0.01	20,323	20,204	20,682
St. Clair	41,205	49,811	+0.21	57,713	58,012	64,989
Talladega	73,826	74,109	+0.01	76,737	82,221	90,312
Total	402,982	405,198	+0.01	420,156	449,170	496,515
Anniston	29,135	26,623	-8.6	27,115 ¹	na	na
Oxford	8,939	9,362	+4.7	9,760 ¹	na	na
Alabama	3,893,888	4,040,389	+0.04	4,113,525	4,181,866	4,291,103

Note: 1 1992 population estimates.

Source: U.S. Census of Population (Census, 1980, 1990); and Alabama State Data Center, CBER.

The age structure of the regional population generally mirrors that of the state of Alabama with the median age of the ROI being 34.1 years, with Calhoun county having the lowest (32.7 years) and Cherokee county the highest (36.3 years) median age. Approximately 52 percent of the ROI population is female and 48 percent male. Population estimates for 1995 indicate a more stable and increasing population within the ROI since 1990, with all seven counties experiencing positive growth.

Population projections for the years 2000 and 2010 reflect the continuing dominance of Calhoun, Etowah and Talladega counties with almost three-fourths of the ROI's population located within these three counties. The population projections indicate a much greater population increase (18 percent) between 1995 and 2010 than for the state of Alabama (4 percent) during the same period (ASDC, 1996). However, these projections were completed prior to the decision to close FMC which will affect the resident, employee and military retiree populations of the region.

4.13.2 Visual And Aesthetic Values

The visual and aesthetic values at FMC include aspects of both the natural and man-made environment. FMC offers a varied and picturesque topographic setting characterized by gently to steeply rolling terrain with elevations ranging from 700 feet in the cantonment area to over 2,000 feet above sea level at the peak of the Choccolocco Mountain range which surrounds the cantonment area to the east and south. A wide variety of vegetation types provide diverse landscape settings as over 11,000 acres of FMC are forests that include oaks, hickories, beech, sweet gum, dogwood, maple, pines and a variety of other trees. Complementing this natural setting are large open space areas, including a golf course, parade ground and numerous recreational areas. Associated with the above is a natural aquatic environment which consists of two lakes and two ponds and more than 11 miles of spring-fed streams.

The most distinctive and appealing man-made feature on FMC is the Buckner Circle/Post Headquarters area which was constructed by the Works Progress Administration (WPA) in the 1930s. Buckner Circle, a family housing area for officers, represents a unique architectural and aesthetic environment with its Spanish Colonial Revival-style architecture and associated attractive open space areas. The adjacent Post Headquarters and associated administrative buildings exhibit similar architectural style and open space amenities.

4.13.3 Native American and Other Ethnic Concerns

Less than one percent of the population within the ROI is identified as Native American, Asian/Pacific Islander, or other race according to the 1990 U.S. Census (Census, 1990). These ethnic groups combined make up over one percent (1.28 percent) of the population in only one county (Calhoun) in the ROI.

Disposition of materials collected during historic resource surveys on FMC was discussed in subsection 4.12.2.1 above. Information on the curation and disposition of Native American cultural and historic artifacts collected from FMC was provided in that section. Notice of the possession, location and disposition of this material was provided in January 1995 to the 12 tribes with historical ties to this area (Rice, pers. comm., 1996). At present, three tribes have expressed interest in more information on the material.

4.13.4 Environmental Justice

On February 11, 1994, President Clinton issued Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority and Low-Income Populations* (FR, 1994) (See Appendix E for copy of Executive Order). The purpose of this executive order is to avoid the disproportionate placement of adverse environmental, economic, social, or health impacts from Federal actions and policies on minority and low-income populations or communities. An element emanating from this order was the creation of an Interagency Federal Working Group (IFWG) on Environmental Justice comprised of the heads of seventeen Federal departments and agencies, including the Department of Army. Each department or agency is to develop a strategy and implementation plan for addressing environmental justice.

On April 21, 1997, the president issued Executive Order 13045, *Protection of Children from Environmental Health Risks and Safety Risks* (FR, 1997) (See Appendix E for copy of Executive Order). This Executive Order recognizes that a growing body of scientific knowledge demonstrates that children may suffer disproportionately from environmental health risks and safety risks. These risks arise because children's bodily systems are not fully developed; because they eat, drink, and breathe more in proportion to their body weight; because their size and weight can diminish protection from standard safety features; and because their behavior patterns can make them more susceptible to accidents. Based on these factors, the President directed each federal agency to make it a high priority to identify and assess environmental health risks and safety risks that might disproportionately affect children. The President also directed each federal agency to ensure that its policies, programs, activities, and standards address disproportionate risks to children that result from environmental health risks or safety risks.

It is the Army's policy to fully comply with Executive Order 12898 and Executive Order 13045 by incorporating environmental justice concerns in decision-making processes supporting Army policies, programs, projects, and activities. In this regard, the Army ensures that it will identify, disclose, and respond to potential adverse social and environmental impacts on children, and minority and/or low-income populations within the area affected by a proposed Army action.

For environmental justice considerations, these populations are defined as individuals or groups of individuals which are subject to an actual or potential health, economic, or environmental threat arising from existing or proposed Federal actions and policies. "Low income" is defined as the aggregate annual mean income for a family of four in 1989 correlating to \$12,674.

Low-income and minority population data was compared for Calhoun County, the eight county ROI, and the State of Alabama. This comparative analysis is summarized in Table 4.25. The percent of the minority population in the FMC ROI (18.5 percent) is lower than that for the State of Alabama (26.4 percent) as is the percent of low income population. Talladega County had the highest percent minority population (31.3 percent) and also the highest percent of low-income persons (20.1 percent), while Cherokee and Cleburne counties had the lowest percent minority population. St. Clair, Cleburne and Calhoun counties had the lowest percent of low income population.

Table 4.25 Minority and Low-Income Populations: Fort McClellan Environs. 1990

County	Total Population	Percent Non-White Population	Median Household Income	Percent Persons Below Poverty Level ¹ (Includes Poor/Very	Percent Persons Below 50% of Poverty Level (Very Poor Only)

				Poor)	
Fort McClellan Region of Influence (ROI)					
Calhoun ²	116,034	19.9	23,802	15.7	6.5
Cherokee	19,543	6.9	21,368	17.6	5.8
Clay	13,252	16.7	19,252	17.4	5.1
Cleburne	12,730	5.2	21,158	15.3	5.7
Etowah	99,840	14.9	22,314	16.5	6.0
Randolph	19,840	23.9	19,448	18.9	6.9
St. Clair	50,009	9.6	24,106	14.8	5.4
Talladega	74,107	31.3	21,378	20.1	8.8
Total/Avg. (ROI)	405,355	18.5	22,340	16.9	6.6
Anniston, Ala.	26,623	45.7	19,099	24.4	10.4
State of Alabama	4,040,587	26.4	23,597	18.3	8.0
Notes: 1 The poverty threshold for a family of four persons was \$12,674 in 1989 as used in the 1990 U.S. Census.					
2 Includes Fort McClellan.					
<i>Source: 1990 U.S. Census of Population.</i>					

4.13.5 Homeless Programs

Several organizations, such as the Salvation Army, Meals-on-Wheels, Children's Services Inc., and Goodwill, offer practical assistance such as child care, shelter, rent/mortgage and utilities funding, home weatherization, clothing, food, work rehabilitation/job training, and medical services to families and individuals who are homeless, unemployed, handicapped, homebound, or financially disadvantaged. The Community Enabler and the American Red Cross specialize in providing food, clothing, shelter, medical attention, and communication in disaster and emergency situations. The American Red Cross also provides volunteer and blood services and safety training.

4.13.6 Other Special Programs

FMC provides social service programs that aid members of the military and their families. The majority of these services are provided by the Army Community Service. The American Red Cross on FMC also serves military families. Services provided by the Red Cross include family counseling and adjustment services, emergency communication, health and welfare inquires, supportive health services, and emergency financial assistance.

Calhoun County has an abundance of social service organizations which serve to meet specialized needs within the community. The Calhoun County Health Department provides medical services and counseling such as childrens' checkups, immunizations, maternity care, family planning, sexually transmitted disease treatment, and Medicare/Medicaid screening. The Health Department also performs inspections of restaurant and septic and sewage systems. In addition to caring for the mentally ill and retarded, the Calhoun County Mental Health Center has many capabilities such as child counseling, group homes, drug and alcohol abuse treatment and rehabilitation, and work programs for the handicapped. Other agencies which work with the physically and mentally handicapped include St. Michael's Community Service Center and the Association for Retarded Children.

While some funding for these services is provided by the Federal Government and the State, a great deal of support, financial and material, is provided from charitable donations from individuals and organizations. The United Way of Calhoun County serves as a distributor to designate funding to the appropriate social service organizations. The Calhoun County Human Resources Department coordinates child welfare and

food stamp programs, and also distributes welfare payments, and provides job training and placement to those with special needs.

4.13.7 Community Services

4.13.7.1 Police Protection

On-Post. Fort McClellan is under exclusive federal jurisdiction with law enforcement and security on FMC provided by the Law Enforcement Division under the Directorate of Community Safety from Building 63, and supplemented with personnel from the 209th Military Police Company and Fort McClellan Military Police Company. There are 25 personnel with 12 patrol vehicles in the Law Enforcement Division, and approximately 200 personnel available from the above Military Police companies. Approximately 50 personnel are on law enforcement patrol duty any given day. The military law enforcement authorities cooperate with local police departments on mutual off-post check-point activities, and coordinate their off-post activities with local law enforcement authorities on a case-by-case basis.

Off-Post. Police protection is provided in surrounding cities by city police departments and in rural areas by county sheriff departments. The Anniston City Police Department has 90 police officers, six dispatchers, and 27 patrol vehicles. The ratio of sworn law enforcement officers to residents of Calhoun County is approximately 1.7:1,000, as reported in *Crime in Alabama* by the State of Alabama Criminal Justice Information Center (1992).

4.13.7.2 Fire Protection

On-Post. Fire protection on FMC is provided from one fire station operated under the Directorate of Community Safety in Building 69. The fire department's equipment includes one 1,250 gpm pumper; two 1,000 gpm pumpers; one 250 gpm pumper; one rescue truck; one brush truck; and one hazardous spill response trailer. In 1992, 20 of the 22 firemen had been trained to the Hazardous Materials Technician level. Written mutual aid agreements exist between the FMC Fire Department and the Anniston City Fire Department, the Jacksonville City Fire Department, and the Anniston Army Depot Fire Department to provide assistance in the case of an emergency.

Off-Post. Fire protection for the area surrounding FMC is provided by the city fire departments located throughout Anniston, Piedmont, Jacksonville, and Oxford; and volunteer fire departments located in Alexandria, Coldwater, Eastaboga, Quad City, Ohatchee, and Weaver. All of these fire departments are on 24-hour call. The Anniston City Fire Department operates five stations within the city; one of which is located adjacent to FMC on Highway 21. The Oxford City Fire Department operates three fire stations, and the cities of Jacksonville and Piedmont each have one fire station.

4.13.7.3 Emergency Services. Noble Army Community Hospital Emergency Medical Service (EMS) serves residents of FMC. Calhoun County has a network of first response personnel trained in vital, emergency care. Every municipality within the county has access to emergency rescue services. The Jacksonville Fire Department, Oxford EMS, and Lincoln EMS offer ambulance service 24 hours a day. In addition, the entire county is serviced by enhanced 911 service.

4.14 ECONOMIC DEVELOPMENT

4.14.1 Regional Economic Activity

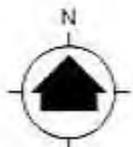
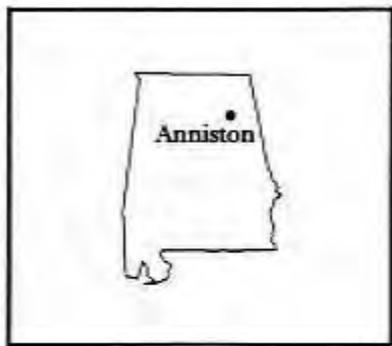
Calhoun County is the nucleus of the eight-county ROI and the primary beneficiary of the economic influence of FMC. The City of Anniston, located adjacent to FMC, is the economic hub of Calhoun County and, along with its sister city of Oxford, a primary growth center in the ROI. Other growth centers include Gadsden in Etowah County; Jacksonville, home of Jacksonville State University in Calhoun County; and Talladega in Talladega County (EARPDC, 1996b).

The regional non-agricultural civilian labor force totaled 195,263 in 1994, a 12 percent increase from 1985, and approximately equivalent to the state-wide increase percent during the same time period. Etowah and St. Clair counties had the greatest absolute increases in the civilian labor force during this period. The average annual regional unemployment rate was 6.5 percent in 1994, with Calhoun and Talladega counties having the highest unemployment rate (7.6 percent) and St. Clair County the lowest unemployment rate (3.9 percent) (USDL, 1995). The state-wide unemployment rate for the same time period was approximately 6 percent. The median household income for the ROI was \$22,340 in 1990, ranging from a high of \$24,106 in St. Clair County to a low of \$19,252 in Clay County. Calhoun County's median household income was \$23,802, or slightly higher than the state-wide median household income of \$23,597 (Census, 1990).

Total non-agricultural employment in the ROI in 1994 was 174,634, an approximate 12 percent increase since 1985 as compared to a state-wide 21 percent increase during the same time period. Approximately one-half of the absolute increase (20,450) occurred in Etowah and St. Clair counties, with St. Clair County having the greatest relative increase (32 percent) of all the counties in the ROI (USDC, 1995, 1986). Employment growth in Calhoun County was a modest four percent during this period, primarily due to significant reductions in federal/civilian and military employment at FMC and the Anniston Army Depot. This reduction in government and military employment, however, was more than off-set by employment increases in the manufacturing, retail trade and services industries.

Four of the five largest employers in Calhoun County are public organizations - FMC, Anniston Army Depot, Northeast Alabama Regional Medical Center, and Jacksonville State University. The largest private employers are manufacturing industries, with textiles and apparel manufacturing, and primary and fabricated metal products comprising almost three-fourths of the manufacturing jobs in Calhoun County (USDC, 1995). The county's employment and industrial base has become more balanced and diversified as the dependence on federal/civilian and military employment has diminished. Although Calhoun County contains one-fourth of the ROI labor force, 35 percent of the non-farm ROI employment is located within the county (USDC, 1995). In addition, Calhoun County lost population between 1980 and 1990. This implies that Calhoun County's employment base consists of portions of the labor force commuting from the surrounding counties.

During the last ten years the eight-county region, shown in Figure 4-19, has experienced economic changes that have been reflected in the region's employment pattern. Table 4.26 portrays the distribution of employment by industry sectors for 1994. Changes and growth trends in specific employment sectors have been consistent with national trends as exemplified by the regional decline in farm and agricultural-related employment, and corresponding increases in the retail trade and services industries.



APPROXIMATE SCALE IN MILES

 PARSONS ES PARSONS HEA ST. LOUIS, MISSOURI	 MOBILE DISTRICT US ARMY CORPS OF ENGINEERS MOBILE, ALABAMA
ENVIRONMENTAL IMPACT STATEMENT	
DISPOSAL AND REUSE OF FORT McCLELLAN, ALABAMA	
REGION OF INFLUENCE	
DATE: AUG., 1998	FIGURE NO. 4-19

The non-farm sector consists of two primary employment sectors - private and government. The private sector has experienced a larger growth rate during the 1985-1994 period than the government sector, with the retail and services industries experiencing the highest growth rates. For example, within the eight-county ROI employment within retail trade and services increased to 36.7 percent of total non-agricultural employment in 1994 versus 30.6 percent in 1985. The manufacturing industry, while still remaining the largest individual employment industry in the private sector, experienced a decrease in relative importance over the 10-year period with employment decreasing from 24.6 percent of total regional employment in 1985 to 22.6 percent 1994 (USDC, 1995, 1986). This decrease in the relative importance of manufacturing in comparison to the services and retail industries is consistent with national trends.

Table 4.26 Employment Distribution by Standard Identification Code, 1994: Fort McClellan Environs¹ (Employment by Place of Work)

SIC Code	Industry	Calhoun County		Region of Influence ²		State of Alabama
		Employment	Percent	Employment	Percent	Percent
7	Agricultural, Services, Forestry, Fishing	542	0.9	1,414	0.8	1.0
10	Mining	104	0.2	591	0.3	0.6
15	Contract Construction	2,550	4.2	9,228	5.1	5.5
19	Manufacturing	11,583	18.9	40,951	22.6	18.4
40	Transportation/Other Public Utilities	2,302	3.8	7,157	4.0	4.7
50	Wholesale Trade	2,463	4.0	6,291	3.5	4.4
52	Retail Trade	10,738	17.5	31,526	17.4	16.7
60	Finance, Insurance, Real Estate	2,178	3.6	6,290	3.5	5.1
70	Services	10,623	17.3	34,893	19.3	23.2
91	Government (includes military)	17,362	28.3	36,293	20.0	17.8
TOTAL		60,445	100.0	174,634	100.0	100.0

Notes: 1 Employment does not include farm workers.

2 Includes Calhoun, Cherokee, Clay, Cleburne, Etowah, Randolph, St. Clair and Talladega counties.

Source: U.S. Department of Commerce, Bureau of Economic Analysis, 1995.

The government sector also declined in relative importance during this 10-year period, declining from 24.2 percent of total regional employment in 1985 to 20.0 percent in 1994. Within the government sector, distribution of employment between federal/civilian, military, and state and local government shifted as state and local government employment increased, and federal/civilian and military employment decreased. In 1985 federal/civilian and military employment constituted 12 percent of total regional employment, but only 7.4 percent in 1994. The majority of this decrease has occurred in Calhoun County as a result of military downsizing of Fort McClellan and the Anniston Army Depot.

4.14.2 Installation Contribution To Regional Economic Activity

FMC is the largest employer in Calhoun County and the ROI when including both military and civilian personnel employed at the installation. Based on the FY95 Data Card for FMC (FMC, 1995c), the installation employed 2,166 active duty military personnel and 2,239 civilian personnel for a total permanent payroll of 4,405 personnel. In addition to full-time military and civilian employees, there is an average of 3,160 paid trainees and students temporarily at FMC at any given time period. The installation's total expenditures in the regional economy (including goods and services, civilian personnel salaries and military personnel salaries) are estimated at approximately \$189 million annually. FMC's annual military payroll is estimated at \$89 million, while the civilian payroll is estimated at \$37 million. Additionally, in FY95 FMC's local procurement amounted to an estimated \$62.7 million, which includes approximately \$17.3 million in salaries for contractual workers.

In addition to the above military and civilian personnel, FMC directly supports another 81,302 people. This group consists primarily of military retirees and their family members which comprise 76,530 people, and active duty military family members which comprise another 3,559 people. In addition, 1,213 military and civilian employees are employed at military satellite installations. In all, a total of 89,000 people are direct recipients of FMC's employment and retirement expenditures (FMC, 1995c). Although not all of those dependent upon FMC live in Calhoun County or the ROI, FMC plays a significant role in the local and regional economy.

The activity at FMC results in both direct and indirect economic impacts on the regional economy in respect to business volume, employment and income generated. According to the EIFS (Economic Impact Forecast System) Model, employment and operational expenditures at FMC are responsible for the direct generation of \$99.6 million annually in regional sales (business) volume revenue; 892 jobs in the retail, service and industrial sectors; and \$13.4 million in annual income in the form of wages and salaries from the jobs created in the retail, service and industrial sectors of the economy. All of the above direct economic impacts have a ripple effect on the regional economy with secondary spending, job creation and associated wages resulting from the initial economic impacts. As a result, another \$115.7 million in annual business volume and 1,035 jobs are indirectly generated within the regional economy from this multiplier effect. Appendix D provides an explanation of the EIFS Model methodology, and a summary of the model input and output forecast tables for FMC existing operations.

4.14.3 Installation Workforce Structure and Salaries

The combined salary of the 4,405 permanent party military and civilian personnel totaled over \$112 million in 1995. Table 4.27 provides a summary of 1995 personnel level strengths and salaries for FMC based military and civilian personnel.

Employee Type	Number	Average Salary¹	Total Salaries
Permanent Military, Officer	325	\$53,500	\$17,387,500
Permanent Military, Enlisted	1,841	17,900	32,953,900
Permanent Civilian, GS series	1,012	34,500	34,914,000
Permanent Civilian, Wage Grade	65	34,700	2,255,500
Non-Appropriated Funds	494	15,490	7,652,060
Contractual Workers	640	27,000	17,280,000
Private Associations	28	na	na
Total	4,405	N/A	\$112,442,960

Note 1: Reflects actual and not programmed salary. Salaries do not include fringe and other monetary benefits.

Table 4.27 1995 Personnel Levels and Salaries, FMC

Employee Type	Number	Average Salary ¹	Total Salaries
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Source: Directorate of Resource Management, FMC.

4.15 QUALITY OF LIFE

4.15.1 Housing

On-Post. A large number of personnel stationed at FMC and their dependents rely on available housing on post. The number of on-post housing units available is 8,955, which consists of 7,968 enlisted barracks spaces; 112 officer family housing units; 459 enlisted family housing units; 366 bachelor officer quarters (BOQs); and 50 rooms at the FMC Lodge (FMC, 1995c).

Single soldier enlisted quarters and trainee barracks are primarily concentrated near the Military Police School and Chemical School complexes. These quarters include two barracks in Buildings 3130 and 3131 near the Military Police School, and two complexes (Buildings 1020-1023 and 2220-2225) near the Chemical School. The newest enlisted barracks were built in 1988 at the corner of 20th Street and 3rd Avenue. The largest of the enlisted housing facilities (trainee barracks) are Buildings 1601, 1602, 1801, and 1802. These four buildings are being retained for use by ALARNG.

BOQs consists of two multi-story buildings, Buildings 3136 and 3137, located directly east of the Military Police School on 23rd Street. Immediately opposite to this housing, on the south side of 23rd Street, are two additional BOQ billets (Buildings 3133 and 3134). BOQ billeting is also located in Buildings 2275-2277 along WAC Circle. The National Guard utilizes World War II-era temporary structures for housing that are located in the western portion of the cantonment area. Billeting is also provided nearby.

There are 571 officer and enlisted family housing units on FMC. Additionally, there are 6 rock cottages on post that were converted to enlisted family quarters (Burke, pers. comm., 1996). Family housing is concentrated in the western periphery of the post, encompassing the area near Baltzell Gate Road, Summerall Gate Road, Alabama Highway 21, and 16th Avenue. Another housing area is located on "The Hill" where officer's quarters with a Spanish architectural theme line the horseshoe-shaped Buckner Circle. A secondary tier of family housing rings the officers' quarters directly below "The Hill" and along Baltzell Gate Road and Brennen Drive. A large noncommissioned officers (NCO) family housing complex exists at Baker Gate, with a second family housing complex designated as officer's quarters along Avery Drive. NCO housing is also found at the intersection of Summerall Gate Road and Sharp Road.

Off-Post. Many housing options with a substantial range of purchase and rental opportunities are available in Anniston, Calhoun County and the surrounding area to meet individual and family needs. These options include single family homes, apartments, condominiums, and manufacturing housing. In January, 1992, approximately 773 homes were available for sale within the Calhoun County area with the supply of rental apartments also abundant. Approximately 30 apartment complexes are located in Anniston and Calhoun County comprising over 2,500 rental units. Services to find housing are available through apartment finders, realty companies and realtors affiliated with the Multiple Listing Service within the surrounding area.

Table 4.28 provides a summary of the primary housing characteristics in Calhoun County and the surrounding ROI. A higher percent of the housing stock in Calhoun County consists of rental housing as compared to the overall ROI, with median monthly rents and housing values also higher in Calhoun County. The collective rental vacancy rate for all housing units in Calhoun County was 8.0 percent, lower than for the ROI and the state of Alabama. The higher costs and lower vacancy rates in Calhoun County are primarily due to housing demands associated with FMC, and Jacksonville State University. Calhoun County and the surrounding area have demonstrated the ability to accommodate shifts in housing demand in the past due to military or private sector expansion.

Table 4.28 Fort McClellan ROI Housing Characteristics

Housing Characteristic	Calhoun County	Region of Influence (ROI)
Total Number of Units	46,753	167,730
Number of Single Family Units	34,361	120,903
Number of Multi-Family Units	5,728	15,883
Percent of Units Owner Occupied	70.3	75.0
Percent of Units Vacant	8.0	10.2
Median Value Owner Occupied Units	\$51,300	\$45,755
Median Monthly Gross Rent	\$318	\$283

Source: U.S. Census of Population and Housing, 1990

4.15.2 Schools

On-Post. FMC operates one DOD dependent school for grades K-6 which is located in the western portion of the cantonment at 10th Street and 6th Avenue. Total enrollment for the 1994/95 school year was 330, with 66 personnel on staff, including 32 teachers, with a student to teacher ratio of approximately 10:1. The FMC Elementary School has established special programs for handicapped, gifted, and learning disabled children, and also offers special courses in emotional conflict, remedial reading and math, and speech. In addition, FMC operates a Child Development Center (CDC) near the DOD dependent school. The CDC provides pre-school nursery/kinder care services for children of working mothers of military personnel.

Off-Post. Over 90 percent of the off-post military and their dependents reside in Calhoun County. Calhoun County is served by five public school systems accredited by the Alabama State Department of Education. These public school systems, which include Anniston, Oxford, Jacksonville, Piedmont, and Calhoun County, have a total enrollment of over 20,000 students. The Calhoun County and Anniston City school systems account for the majority of public school attendees. Table 4.29 provides a brief overview of each school system.

Table 4.29 Characteristics of Public School Systems, Calhoun County

Characteristic	Anniston	Piedmont	Oxford	Jacksonville	Calhoun County
Number of Elementary Schools	7	2	2	1	10
Number of Middle Schools	1	1	1	1	8
Number of High Schools	1	1	1	1	7
Total Enrollment	3,847	1,280	2,888	1,600	10,725
Number of Teachers	300	70	170	97	525
Student/ Teacher Ratio	12.8:1	18.3:1	16.9:1	16.4:1	20.4:1
Federal Impact Aid	\$232,000	\$2,000	\$18,000	\$144,000	\$400,000

Source: Calhoun County Chamber of Commerce and communications with Calhoun County public school systems, 1993-94.

Public schools throughout Calhoun County receive Federal Impact Aid based on the number of eligible students who are dependents of military personnel living on and off base or live in low-rent housing. For the 1993-94 school year, the five public school systems in Calhoun County received a total of almost \$800,000 in Federal Impact Aid (FIA), with the Calhoun County School District receiving one-half of this

total. Calhoun County also contains ten private and parochial schools which provide education for children of pre-school age through grade 12.

In addition to the regular academic curriculum, the school districts offer a wide variety of special programs and opportunities designed to meet the diversity of childrens' needs. Tutorial services and advanced placement are just some of the opportunities available for gifted, handicapped, disadvantaged, and advanced students. Extracurricular activities, such as sports, scholastic competitions, and leadership development programs, are also provided to complement the academic side of education. Specific programs and specialized schools have been established for vocational/technical training and behavioral modification.

Higher education facilities and opportunities are abundant as seventeen junior colleges, and six colleges and universities are located within 60 miles (96 kilometers) of FMC. Jacksonville State University, located approximately 7 miles (11.2 kilometers) north of FMC, is the fourth largest university in the state of Alabama with an enrollment of over 8,000 students in its bachelor's and master's degree programs. The university offers programs in business, education, communications, nursing, and law enforcement. Other higher learning institutions within the immediate area include Harry M. Ayers State Technical College in Anniston; and, the Gadsden Business College and Gadsden State Junior College in Gadsden.

4.15.3 Family Support Services

On-Post. FMC provides social service programs similar to those provided in the surrounding community that aid members of the military and their families. The majority of these services are provided by the Army Community Service. The American Red Cross on FMC also serves military families. Services provided by the Red Cross include family counseling and adjustment services, emergency communication, health and welfare inquires, supportive health services, and emergency financial assistance.

Off-Post. Calhoun County has an abundance of social service organizations which serve to meet specialized needs within the community. The services these organizations provide involve many kinds of medical, shelter, financial, counseling, basic needs, and rehabilitative assistance. The majority of the recipients are low-income families, single parents, disabled individuals, elderly, or disaster stricken, and typically receive either free or low-cost services.

The Calhoun County Health Department provides medical services and counseling such as childrens' checkups, maternity care, family planning, sexually transmitted disease treatment, and Medicare/Medicaid screening. The Health Department also performs inspections of restaurant and septic and sewage systems. In addition to caring for the mentally ill and retarded, the Calhoun County Mental Health Center has many capabilities such as child counseling, group homes, drug and alcohol abuse treatment and rehabilitation, and work programs for the handicapped. Other agencies which serve the physically and mentally handicapped include St. Michael's Community Service Center and the Association for Retarded Children.

Several organizations, such as the Salvation Army, Meals-on-Wheels, Children's Services Inc., and Goodwill, offer practical assistance such as child care, shelter, rent/mortgage and utilities funding, home weatherization, clothing, food, work rehabilitation/job training, and medical services to families and individuals who are homeless, unemployed, handicapped, homebound, or financially disadvantaged. The Community Enabler and the American Red Cross specialize in providing food, clothing, shelter, medical attention, and communication in disaster and emergency situations. The American Red Cross also provides volunteer and blood services and safety training.

While some funding for these services is provided by the Federal Government and the State, a great deal of support, financial and material, comes in as charitable donations from individuals and organizations. The United Way of Calhoun County serves as a distributor to designate funding to the appropriate social service organizations.

4.15.4 Medical Facilities

On-Post. Noble Army Community Hospital provides a wide scope of services to active duty military personnel, dependents, retirees and civilian employees. In the early 1990's its staff of 250 served over 600 patients daily. In order to provide better service, Noble has expanded their Physical Therapy Clinic and Resource Management Division, and added a new X-ray file room within the past 10 years. Noble also has an exemplary Community Health Program; computerized, state-of-the-art lab services; nutritional counseling and classes; and proficient pharmacy services which fill approximately 800 prescriptions per day. (Note: Noble Army Community Hospital ceased in-care functions in 1996, and currently only provides out-patient care services).

Additional on-post health care is provided at the Consolidated Troop Medical Clinic, the Community Mental Health and Preventive Medicine Services, and the U.S. Army Dental Activity (DENTAC) at Stout Dental Clinic.

Off-Post. Three local hospitals and over 100 physicians provide primary medical care in the surrounding Anniston/Calhoun County area. All three hospitals are accredited by the Joint Commission of Accreditation of Hospital Organizations. Northeast Alabama Regional Medical Center, located in Anniston, is the county's largest medical facility with a 372-bed capacity and a staff of approximately 1,250. The hospital offers an extensive list of specialties, including MRI (Magnetic Resonance Imaging), cardiac laser surgery, nuclear cardiology treatment, and neurological surgery. It has a fully equipped, fully staffed 24-hour emergency room. In addition, the Regional Medical Center is home of Calhoun County's only accredited Cancer Treatment Center.

Stringfellow Memorial Hospital, also located in Anniston, is a non-profit, acute care medical-surgical hospital. With 125 beds and a staff of over 325, the hospital offers advanced health care, a 24-hour emergency room, and a variety of board certified physicians, including a full-time cardiologist. The most current addition to Stringfellow's line of specialties is the expansion of its neurological services. In addition, Stringfellow Memorial is home to the Diabetes Treatment Center, one of only two such centers in the state.

Jacksonville Hospital, with a staff of over 200, offers a 89-bed facility featuring a full range of care including internal medicine, physical therapy, orthopedic surgery, cosmetic surgery, pediatrics, urology, gastroenterology, and emergency medicine. In recent times, Jacksonville Hospital has established the most modern radiological services in Calhoun County, and continues to enhance its women's health program which includes free education on health care and prenatal care. In addition, the hospital regularly lends teaching expertise to student nurses from nearby Jacksonville State University.

Supplementing the hospitals and physicians of Calhoun County are 45 dentists, numerous eyecare professionals, and more than 35 pharmacies. For adults who require daily supervision, adult day care is available. In addition, six long-term health care facilities and a growing number of retirement communities are available in Calhoun County and the surrounding area.

4.15.5 Shops And Services

On-Post. The primary on-post retail complex is located southeast of the traffic circle in the cantonment area on Main Post. Facilities in this area include the following: Main Post Exchange, Post Commissary, bowling center, Burger King restaurant, post office, a class six store, dental clinic, military personnel building, and the exchange service outlet. Adjacent to the west is a second significant grouping of community facilities, including the main library, post field house; theater, family fitness center, service station, bank; and, guest lodge. Other facilities include Centurion Chapel, the Community Club and the thrift shop.

The Post Exchange, completed in 1977, offers 67,775 square feet (6,100 square meters) of various household goods, and also contains snack shops, repair shops, and personal care shops. The Post

Commissary sells non-perishable and perishable food items, while the Class Six Store sells various wines, spirits, and malt beverages. The 17-bay Auto Crafts Shop with 3 racks and a paint and body shop is available to military personnel and their families for performing maintenance and repair on their own vehicles. Trained mechanics are available to offer assistance and instruction on vehicle maintenance. In addition, various tools and parts can be purchased at the shop.

The troop barracks in the southeastern portion of the cantonment area are within walking distance of several community facilities, including two gymnasiums, a dispensary, a religious education facility, and a chapel. A number of other community facilities, such as a branch exchange, a dispensary, the WAC chapel, and a gymnasium, are located within or near the Chemical School complex.

There are three battalion dining facilities capable of feeding 800 people each, and one smaller, military-operated dining facility capable of feeding 500 people. Two alternate, fully-equipped battalion facilities exist and are operated only when others are closed for repairs. Three of the dining facilities are located near the Military Police School in Buildings 1601, 1801, and 1802; two facilities are located near the Chemical School, in Buildings 1001 and 2202; and one facility is located at the reception station in Building 504. The four facilities currently operating can cumulatively serve approximately 6,900 meals per day.

Off-Post. A wide variety and large number of commercial shops and services are available in Anniston, Calhoun County and the surrounding area to supply virtually any personal need. There are several shopping centers located throughout the area, including the Quintard Mall in Oxford which contains approximately 40 stores, and the larger Gadsden Mall in Gadsden approximately 25 miles (40 kilometers) northwest of FMC.

4.15.6 Recreation

On-Post. Outdoor Recreation promotes recreational, social, and physical well-being of military personnel, their families, and other authorized users by providing activities, goods, and services in modern, well-maintained facilities. There are approximately 317 acres available for recreational use on FMC as a part of the multi-purpose land use classified as "recreation/ranges" by the installation's Geographic Resources Analysis Support System (GRASS) land use database.

A number of recreational facilities are located throughout FMC which are directly related to the installation's fish and wildlife program as well as the entire natural resource management program. These facilities are ideal for activities including hunting, fishing, photography, and observing nature. Hunting is the highest participatory activity with approximately 16,000 mandays annually.

Two fishing lakes with picnic areas and supporting recreational facilities are available for use at FMC. These include Reilly Lake, located in the northeast corner of the cantonment area directly north of Reilly Army Airfield, and Yahoo Lake located on Iron Mountain Road in the southwest corner of the cantonment area. Picnic areas are located at each lake, with some fishing equipment available from the Outdoor Recreation Office. In addition, there are approximately 11.5 miles (18.4 kilometers) of creeks used for fishing. The recreation office is responsible for selling hunting and fishing licenses, issuing hunting and fishing permits, and collecting harvest data at the checking stations.

Some of the programs conducted on FMC utilizing the available natural resources include big buck contest, archery and gun hunting, commanders hunt, kiddie derby, paddle boats, and fishing tournaments. FMC also has a campsite area at Reilly Lake with eight sites having water and electricity, and five primitive sites.

The 18-hole Cane Creek Golf Course is the largest recreation land use in the cantonment area. Located in the western portion of the installation at Baltzell Gate Road and Galloway Road, the meandering facility includes a clubhouse, completed in 1996, with a pro shop, snack bar, shower, and lounge area.

Other passive recreational facilities include several museums - WAC Museum, Military Police Corps Regimental Museum, and the U.S. Army Chemical Corps Museum.

Off-Post. The communities surrounding FMC offer an abundance of recreational opportunities to suit almost any need. From outdoor sports to theatrical performances, the area has activities available year-round.

Calhoun County offers several sporting activities and recreational complexes. Golfers enjoy a total of six 9-hole and 18-golf courses which cover hundreds of acres of land in Anniston, Jacksonville, and Oxford. In addition, the Robert Trent Jones Golf Trail has a 27-hole golf course complex in northern Calhoun County. At Anniston's Woodland Park, softball has become the highest participant sport since the park's inception 3 years ago. The Oxford Lake and Civic Center complex contains facilities such as tennis courts, a par-three golf course and driving range, a swimming pool, and a baseball complex. For the spectator, Jacksonville State University has a Division I-A football team, and the Talladega Speedway, just beyond the Calhoun County line, hosts two major stock car races annually.

The area also has numerous outdoor parks and lakes which provide many opportunities for hiking, exploring, camping, water skiing, fishing, boating, swimming, and picnicking. Some of the parks and recreation areas nearby include DeSoto Caverns Park, Noccalula Falls Park, Willow Pointe Marina and Campground, Calhoun County Boat and Recreation Facility, Neely Henry Lake, and Cheaha State Park, the highest point in Alabama. The Ohatchee Creek Ranch, a wildlife park, contains over 50 exotic animal species from around the world.

Calhoun County has several museums and historic structures and districts for discovering historical facts about the area. The Anniston Museum of Natural History contains some of the finest examples of Southeastern natural history. The Berman Museum, located near the Anniston Museum of Natural History, contains a collection of rare weapons, unusual art and historical artifacts. The Cross Plains Depot and Museum, the Oxford Depot, Dr. J.C. Francis' Museum and Apothecary, the Tyler Hill Square Historic District, and the Victoria are among some of the other attractions of the region.

For entertainment, the Anniston Community Theater, one of the oldest theaters in the Southeast, provides year-round performances of ballet, opera, concerts, and many other fine arts. Jacksonville State University also offers a variety of theatrical productions during the summer months.

4.16 INSTALLATION AGREEMENTS

4.16.1 Memoranda of Understanding and Memoranda of Agreement

Fort McClellan provides or receives a variety of services to or from other DOD organizations, as well as state and local entities. These services are obtained under 72 Memoranda of Understanding (MOU) or Memoranda of Agreement (MOA). These services typically involve activities such as post-secondary education programs, resource and referral services for social service agencies, use of FMC facilities by non-DOD organizations, sharing of specialized medical services, and medical learning experiences.

4.16.2 Leases and Outgrants

Fort McClellan has executed a variety of agreements with state and local governmental agencies, corporations, and private individuals. These agreements cover utility and roadway easements, use of installation facilities and training areas, and provision of services on post. Leased areas associated with Main Post are those lands known as the Choccolocco Corridor, leased from the Alabama Forestry Commission.

4.16.3 Interservice And Intraservice Support Agreements

A total of 56 Interservice and Intraservice Support Agreements describe support services provided by the installation or to the installation. There are 34 interservice agreements with the installation providing support in 27 of them and receiving support in 7. There are 22 intraservice agreements with the installation providing support in 16 of them and receiving support in 6.

A review of the agreements reveals that most will not be influenced by the disposal and reuse of FMC. The agreements between FMC and the Chemical Stockpile Emergency Preparedness Program (CSEPP) at Anniston Army Depot will be influenced by the closure of FMC. Anniston Army Depot will make arrangements for CSEPP support currently provided by FMC. Selected facilities at FMC to support CSEPP are being retained. Medical, ambulance, and related services associated with the agreements will need to be provided by another source.

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Environmental and Socioeconomic Consequences

5.1 INTRODUCTION

This Section describes the environmental and socioeconomic consequences of implementing the primary Army action (disposal of excess property) and the secondary action to be taken by other parties (property reuse). The proposed actions are evaluated in the context of alternatives presented in Section 3. The discussion of consequences is divided into the following four major subsections:

- **No Action Alternative.** Analysis of impacts based on resource categories (subsection 5.2).
- **Disposal Alternatives.** Analysis of impacts based on resource categories associated with implementation of the encumbered disposal (ED) alternative and the unencumbered disposal (UD) alternative (subsection 5.3).
- **Reuse Alternatives.** Analysis of impacts based on resource categories associated with reuse alternatives of various levels of intensity (subsection 5.4):
 - Medium-Low Intensity Reuse (MLIR) Alternative;
 - Medium Intensity Reuse (MIR) Alternative; and
 - Medium-High Intensity Reuse (MHIR) Alternative.
- **Cumulative Effects.** Analysis of impacts of each alternative action on all resource categories to evaluate cumulative effects expected to occur given the disposal and reuse of all Fort McClellan (FMC) excess property and other reasonably foreseeable actions within the affected environment/region of influence (subsection 5.5). Cumulative effects address past, present, and reasonably foreseeable future activities.

5.1.1 Resource Evaluation Categories

Sixteen natural, cultural, sociological and economic resource categories, as presented in Section 4, were established to provide a framework for the identification of baseline conditions. These categories have been used to analyze and describe the effects of the Army's proposed BRAC action and associated alternatives. The categories were developed based on a review of installation resources, and applicable resource protection laws and regulations. The resource categories include:

- land use
- noise
- air quality
- water resources

-
- geology
 - ordnance and explosives
 - permits and regulatory authorizations
 - cultural resources
 - economic development
 - installation agreements
 - infrastructure
 - hazardous and toxic materials
 - biological resources
 - sociological environment
 - quality of life
-

5.1.2 Definition of Key Terms

The following paragraphs define key terms used throughout this section.

5.1.2.1 Direct versus Indirect Impacts. The terms *impact* and *effect* are synonymous as used in this Environmental Impact Statement (EIS). Impacts may be beneficial or adverse and may apply to the full range of natural, aesthetic, historic, cultural, and economic resources of the installation and its surrounding area. Definitions and examples of direct and indirect impacts as used in this document are as follows:

- **Direct Impact.** A *direct impact* is caused by the proposed action, and occurs at the same time and place.

Examples of direct impacts include:

- for the No Action Alternative, the reduction in lawn areas to be mowed;
- for the Army's disposal of FMC excess property, the potential loss of current Army forestry management practices that include the use of prescribed burns to help maintain the mountain longleaf pine (MLP) ecosystem at FMC; and
- for property reuse, the clearing of trees and other vegetation to accommodate new development.

- **Indirect Impact.** An *indirect impact* is caused by the proposed action and is later in time or farther removed in distances, but still reasonably foreseeable. Indirect impacts may include induced changes in the pattern of land use, population density or growth rate, and related effects on air, water and other natural and social systems.

Examples of indirect impacts include:

- reducing the areas to be mowed could have an indirect impact on area wildlife;
- loss of federal protection for significant cultural resources may result in the deterioration or loss of these resources at some future date; and
- clearing of trees for new development may have indirect impact on area streams by increasing the amount of soil erosion and sediment that reaches these streams.

- **Application of Direct versus Indirect Impacts.** For direct impacts to occur, a resource must be present. For example, if highly erodible soils were disturbed at a construction site near a stream, there could be direct impact on water quality through storm water runoff. This runoff could indirectly affect aquatic species through sedimentation downstream from the construction site.

5.1.2.2 Short-term versus Long-term Impacts. In addition to indicating whether impacts are direct or indirect, this Section also distinguishes between short- and long-term impact. In this context, short- and long-term do not refer to any rigid time period and are determined on a case-by-case basis in terms of the environmental consequences of implementing the proposed action or alternative.

5.1.2.3 Significance. The term *significance* as used in National Environmental Policy Act (NEPA)

requires consideration of both the *context* and *intensity* of the impact or effect under consideration. Significance can vary in relation to the context of the proposed action. For FMC proposed actions, the context may include consideration of effects on a national, regional, and/or local basis. Both short- and long-term effects may be relevant.

Impacts are also evaluated in terms of their intensity or severity. Factors contributing to the intensity of an impact include:

- Degree to which the action affects public health or safety;
- Proximity of the action to resources which are legally protected by various statutes (e.g., wetlands, regulatory floodplains, federally listed threatened and endangered species, or resources listed in, or eligible for, the National Register of Historic Places);
- Degree to which the effects of the action on the quality of the human environment are likely to be highly uncertain or controversial;
- Whether the action is related to other actions with individually insignificant but cumulatively significant impacts; and
- Whether the action threatens to violate federal, state or local law imposed for the protection of the environment.

5.1.2.4 Cumulative Effects. As stated in 40 CFR 1508.7 (Council of Environmental Quality Regulations), cumulative effects are defined 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.”

5.1.2.5 Mitigation. Where significant adverse impacts are identified, this document describes measures that will or could be used to mitigate these effects. Mitigation alternatives generally include:

- Avoiding the impact altogether by stopping or modifying the proposed action;
- Minimizing impacts by limiting the degree or magnitude of the action and its implementation;
- Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;
- Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; and
- Compensating for the impact by replacing or providing substitute resources or environments.

Mitigation associated with property disposal may be ensured through restrictive covenants in a deed, transfer documents, or other legal agreements between the party implementing an action and the federal, state, or local government agencies.

Mitigation of adverse impacts associated with the reuse of FMC property is generally the responsibility of the federal, state, and local agencies and private entities that implement reuse plans. Mitigation by non-Army entities that would avoid or reduce adverse impacts caused by reuse are expressed in the conditional “would/could” throughout Section 5.

5.1.3 Impact Analysis Process

5.1.3.1 Methodology for Analysis of Reuse Alternatives. This EIS analyzes potential environmental effects associated with the reuse of FMC excess property. The impacts associated with reuse are evaluated separately from the impacts of disposal. Reuse impact analyses are based upon intensity-based variations of implementing the Fort McClellan Development Commission (FMDC) reuse plan, with the MHIR Alternative approximating the FMDC plan, and the MIR and MLIR alternatives based on lower intensities of reuse than those expressed in the FMDC plan.

5.1.3.2 Summary of Reuse Obligations and Limitations. Army disposal of FMC would result in management of the property by other federal agencies or ownership by public and private-sector entities. Except as associated with encumbrances that might affect reuse upon transfer or conveyance, the Army would no longer manage or control activities that would occur on the land. Elimination of the Army from land use decision making would have several ramifications.

Proponency. The Army would not be the proponent for future activities on FMC lands. The FMDC reuse plan envisions multiple proponents. The entire range of possible actions that could occur, including land use planning and plan implementation, economic development, management of facilities, capital improvements, and further transfer or conveyance, would occur as a result of actions by future facility owners and managers.

Applicable Controls. Transfer or conveyance of FMC lands to other federal agencies would result in continuation of federal land management practices and application of federal statutes pertaining to resources. Transfer or conveyance of FMC lands to non-federal entities would result in continuation of many federally sponsored protections, such as those prohibiting takings of species protected pursuant to the Endangered Species Act (ESA) and requiring permits with respect to activities associated with wetlands.

Magnitude of Redevelopment. The magnitude of redevelopment would be a function of several factors, all of which, with the exception of certain encumbrances, would be beyond the control of the Army. While this EIS evaluates three reuse alternatives up to MHIR, of that portion of the installation available for transfer or conveyance, the ultimate redevelopment up to the MHIR Alternative intensity is uncertain. Some constraints identified in this EIS suggest that MHIR Alternative would be difficult to attain. For instance, the presence of the unexploded ordnance (UXO) or hazardous wastes, might preclude redevelopment of portions of the installation or result in specific areas being unsuitable for further development. Analysis of the MHIR Alternative and the other reuse alternatives, does not constitute an endorsement by the Army that such redevelopment would be warranted or prudent.

Mitigation. Examination of potential impacts resulting from disposal and reuse of FMC includes identification of mitigation actions that could avoid, reduce, or compensate for the severity of those predicted impacts. Upon disposal, and except as circumscribed by encumbrances, responsibility for implementation of mitigation actions would rest with the agencies or entities receiving the property. Where appropriate, this EIS identifies mitigation actions that subsequent managers or owners could implement to minimize or mitigate adverse impacts associated with reuse. The Army's listing of mitigation actions, as they relate to reuse, that could be implemented represents a beginning point for future owners and managers to consider as they assume stewardship of the property.

5.2 NO ACTION ALTERNATIVE

5.2.1 Introduction

Closure of FMC will result in the Army's placing all installation assets into an inactive or "caretaker" status until the property disposal process is complete. Because the decision to close FMC has been mandated by law, and since there is no certain completion date for the property disposal process, the No Action Alternative has been defined as maintaining the installation in caretaker status indefinitely.

As described in subsection 2.6.4, the Army, in consultation with FMDC, will determine the duration and required levels of maintenance for the installation's facilities and equipment in accordance with Department of Defense (DOD) guidance. Subsequent to that time frame, however, the Army may reduce the level of maintenance to that consistent with federal government standards for excess property. This latter caretaker activity level would be less intense than immediately following closure and pending transfer of assets to the FMDC. The caretaker status evaluated in this Section refers to the latter type of maintenance activities, which could occur for an indefinite period until transfer or disposal of the installation.

The environmental consequences identified in this subsection reflect the absence of current mission related activities at FMC.

5.2.2 Land Use

- **Direct.** Placing the disposal area in caretaker status will not have a direct impact on existing land use on, or adjacent, to the installation.
- **Indirect.** Indirect adverse and beneficial impacts would be expected from implementation of the No Action Alternative. Long-term adverse impacts could be expected as the physical condition of the buildings, utility systems and grounds within the disposal area could be expected to decline due to reduced maintenance under an extended period of caretaker status. This lack of maintenance and upkeep could potentially result in reduced suitability of the facilities to support reuse. Long-term minor beneficial impacts would also be expected from implementation of the No Action Alternative. Stopping all training activity within the disposal area might have a somewhat beneficial effect by decreasing erosion and noise levels, and not disturbing wildlife that use FMC habitat for nesting and roosting.

5.2.3 Air Quality

- **Direct.** A long-term beneficial impact would be a reduction in the amount and number of emission activities from normal mission related operations. Remaining activities associated with infrastructure maintenance, site remediation, and security operations would contribute only minor quantities of emissions from the use of motor vehicles, paints and solvents, and internal combustion sources such as mowing equipment, weed eaters, and tractors. The emissions from stationary sources such as boilers, space heaters and incinerators (Chemical Defense Training Facility (CDTF) and hospital incinerators will be closed) would also decrease considerably from their current levels because of the reduced on-post population.
- **Indirect.** No indirect impacts on air quality would be expected from implementation of the No Action Alternative.

5.2.4 Noise

- **Direct.** Minor beneficial impacts would be expected from the reduced noise levels associated with a reduction of activity. In contrast to normal operations, caretaker activities would not involve training activities, weapons/range training activities, or use of conventional ammunition.

-
- **Indirect.** Long-term minor beneficial impacts would be expected. Reduced noise levels might have a somewhat beneficial effect on wildlife including neotropical migratory birds (NTMB) that use FMC habitat for nesting and roosting.

5.2.5 Water Resources

5.2.5.1 Surface Water / Storm Water

- **Direct.** No direct impacts to surface water or storm water would be expected from implementation of the No Action Alternative.
- **Indirect.** Implementation of the No Action Alternative would have a minor beneficial impact to surface water. A reduction in the rate of application of fertilizers and pesticides may produce a minor decrease in the concentrations of these compounds in runoff. The elimination of field training will result in reduced impacts to soils from off-road vehicles, and lessen damage to vegetation and soils from impact of projectiles. The increased vegetation on training areas would retard surface water runoff resulting in reduced rates of soil erosion, and reduce the amount of sediment in surface water. Additionally, a reduction in the amount of vehicular traffic would result in lesser amounts of oil, fuels and lubricants deposited on roadways and parking lots which would result in reducing contaminated runoff from these areas.

5.2.5.2 Floodplains

- **Direct.** No direct impacts to floodplains would be expected from implementation of the No Action Alternative.
- **Indirect.** No indirect impacts to floodplains would be expected from implementation of the No Action Alternative.

5.2.5.3 Groundwater

- **Direct.** No direct impacts to groundwater would be expected from implementation of the No Action Alternative.
- **Indirect.** Implementation of the No Action Alternative has the potential to have a very slight positive benefit to groundwater. Caretaker activities will result in less vehicular traffic as well as less grounds maintenance activities. Under this alternative it is possible that less oil and grease will be deposited on the roadways and parking lots. This may reduce the amount of oil and grease that could be carried by surface water to soils and subsequently infiltrating to groundwater. Lower rates of application of fertilizers and pesticides may also result in reduced loading to the ground-water system. It is not likely that the lower use of the facilities will lead to a measurable change in ground-water quality. Deterioration of parking surfaces and increases in vegetation in training areas, may potentially occur under caretaker status. These conditions would retard surface water runoff and marginally increase groundwater recharge rates.

5.2.6 Geology

- **Direct.** No direct impacts to Geology would be expected from implementation of the No Action Alternative.
- **Indirect.** Implementation of the No Action Alternative may have a slight benefit to soils in the study area. Caretaker activities will result in lower levels of grounds maintenance. This may result in lower rates of application of fertilizers and pesticides to the lawn areas, and a resultant decrease in the potential for buildup of these compounds in the soil. Training areas would be expected to revert to brush with scattered trees once their use is discontinued. This would result in a lower rate of soil

erosion in the training areas.

5.2.7 Infrastructure

5.2.7.1 Utilities

- **Direct.** Long-term caretaker operations would require re-structuring of the utility systems, particularly water and wastewater systems, that support the Reserve Enclave and facilities. Utility services such as wastewater treatment and steam are provided by FMC facilities. The combination of wastewater flow from the Reserve Enclave and the off-post area served by the system would provide sufficient flow to maintain adequate minimum operations at the wastewater treatment plant. Boiler plant #3 would remain fully operational as part of the Reserve Enclave. The other three boiler plants would be reduced to caretaker status.

Reduced utilization and maintenance during a prolonged caretaker status are likely to result in the gradual deterioration of the major utility components. Utility components that could be adversely impacted include: the water distribution lines, chlorination station, and storage tanks; the wastewater collection system and pump station; electrical distribution system; natural gas distribution lines; telecommunication lines; and boiler plants #1, #2, and #3. Although adverse impacts can be expected, caretaker operations will be adequate to prevent the impacts from becoming significant.

Compared to normal operations, less water, wastewater, electricity and heating fuels would be used during caretaker status, thus representing a lower level of consumption of resources.

- **Indirect.** Most of the utilities at FMC are supplied from outside sources, i.e. water, electrical, natural gas, and telephone services. A reduction in the demand of for these services would not have adverse effects on the operations of current utility providers.

If deterioration occurred as a result of a prolonged caretaker status, the ability to provide utility service and the quality of the service may be adversely impacted. For example, service could be disrupted by the deterioration of distribution lines, or water quality could degrade due to reduced circulation in the distribution lines and water storage tanks.

5.2.7.2 Solid Waste

- **Direct.** The amount of solid waste generated from the disposal area would become minimal during a period of extended caretaker status. Therefore, there would be a beneficial impact as a result of the No Action Alternative. The existing closed landfills would remain covered and any existing investigations or monitoring would continue to assure that the environment is not being adversely affected.
- **Indirect.** Maintaining reduced solid waste generation at FMC disposal areas would yield indirect beneficial impacts by reducing the amount of waste to be disposed in local landfills and the correspondingly reduced transportation and energy costs.

5.2.7.3 Transportation System

- **Direct.** Road access to and through the installation will continue under the No Action Alternative. All major thoroughfares (i.e. Summerall Gate Road, Baltzell Gate Road) will be dedicated to and maintained by Calhoun County, with Calhoun County also assuming the responsibility for traffic control.
- **Indirect.** Indirect impacts will be associated with vehicular traffic. Trip generation will decrease substantially under the No Action Alternative as the small caretaker force on the property would generate only a fraction of the baseline ADT (average daily vehicle trips) of 29,375. Based upon

existing traffic count data, Summerall Gate Road and Baltzell Gate Road would be most impacted of the on-post roads by this reduction in traffic, while State Route (SR) 21 (Quintard Avenue) would be the most impacted off-post roadway. Highway 431 and Lenlock Lane would also be impacted by this reduction in traffic.

5.2.8 Ordnance and Explosives

- **Direct.** Long-term minor beneficial impacts would be expected. While in caretaker status, all use of ordnance for training activities within the disposal area would cease. Consequently no additional UXO would accumulate in the FMC range areas.
- **Indirect.** Beneficial and adverse impacts would be expected. Beneficial impacts include : 1) stopping all munitions/ordnance training activity within the disposal area would have a beneficial effect by decreasing noise levels and not disturbing wildlife that use FMC habitat for nesting and roosting; and 2) the need to put out fires and maintain fire breaks may require less intensive management efforts and could result in cost savings associated with these efforts. Adverse impacts include the long-term reduction in the frequency and extent of munitions/training related fires. These fires along with prescribed burns are key to the maintenance and survival of the MLP ecosystem; consequently elimination of these fires would have a negative impact on the MLP within FMC boundaries.

5.2.9 Hazardous and Toxic Materials

- **Direct.** Long-term beneficial impacts would be expected. The Army would continue to remediate any hazardous or radiological waste contaminated sites in the disposal area in accordance with applicable federal and state statutes and regulations. Storage and use of hazardous materials would decline to a minimal level. Unused storage tanks would be drained and closed or removed in accordance with applicable federal, state, and local requirements.

During caretaker status, asbestos containing material (ACM) and lead-based paint would continue to be subject to Army management policies and practices. Any remedial activities such as abatement of deteriorated ACM would be managed, and such materials would be disposed of properly and in accordance with all applicable federal, state, and local requirements.

- **Indirect.** No indirect impacts to Hazardous and Toxic Materials would be expected from implementation of the No Action Alternative.

5.2.10 Permits and Regulatory Authorizations

- **Direct.** No direct impacts would be expected from implementation of the No Action Alternative. The existing permits and regulatory authorizations would continue if required for caretaker operations. Expiring permits and other regulatory authorizations necessary to continue operation of the enclave and caretaker activities on the excess property would be renewed or extended. Those permits and regulatory authorizations not required for caretaker operations would be terminated.
- **Indirect.** No indirect impacts to permits and regulatory authorizations would be expected from implementation of the No Action Alternative.

5.2.11 Biological Resources

Under the “No Action” Alternative there would be some continuation of natural resources management programs including land management, pest control, forest management, and erosion control, but at reduced levels. Additionally, agreement with other Agencies would be sought to maintain the mountain longleaf pine (MLP) ecosystem through the continuation of prescribed burns and other management procedures.

5.2.11.1 Fish and Wildlife

- **Direct.** Long-term minor beneficial impacts would be expected. Beneficial impacts would occur when automobile traffic, mowing and ground maintenance, and range activities are decreased. Decreases in these activities would result in less noise, less use of fertilizer and pesticides, fewer leaks and spills of automobile fluids, and less soil disturbance.
- **Indirect.** Minor beneficial impacts would be expected. There would be less stress on aquatic species due to slightly improved water quality. Slightly more habitat would be available for common wildlife species near the cantonment area and at some of the ranges due to small increases in grassland and oldfield habitats. If the caretaker operations continued indefinitely, grasslands and oldfields would revert to shrubland and eventually forest. Any resultant increase in unfragmented forest would benefit NTMB. Small increases in the nesting success of NTMB might also occur due to reduced noise levels.

5.2.11.2 Vegetation and Plant Resources

- **Direct.** Long-term minor beneficial impacts on vegetation and plant resources would be anticipated as a result of implementing the No Action Alternative. Reduced training and administrative use of off-road vehicles will reduce the impact on vegetation in areas where vehicles are taken off road, thereby allowing the vegetation to recover.
- **Indirect.** Long-term minor adverse indirect impacts on vegetation and plant resources would be expected from implementation of the No Action Alternative. Less range activity and a smaller natural resource staff would mean fewer wildfires and prescribed burns, thereby, resulting in adverse impacts to the MLP community. The severity of the impacts would be directly associated with the duration of caretaker activities and the extent of MLP management programs. Canopy closure and leaf litter would increase at some locations. Small decreases in rare herbaceous understory plants such as sky blue aster, pale coneflower, eastern purple coneflower, and Fraser's loosestrife could occur. These changes would take several years to decades to occur.

5.2.11.3 Wetlands

- **Direct.** No direct impacts to wetlands are expected from implementation of the No Action Alternative.
- **Indirect.** Long-term minor beneficial impacts could occur due to less sediment, fertilizer, and hydrocarbon input from surface water runoff (see subsection 5.2.11.1).

5.2.11.4 Federal Threatened and Endangered Species

- **Direct.** Long-term minor beneficial impacts to Federal threatened or endangered species would occur due to less activity in the cantonment area, fewer range activities and the continuation of Endangered Species Management Plan (ESMP) measures. Decreases in cantonment area traffic, off-road vehicle use, exploding munitions, and use of night-time flares would result in less noise and disturbance along riparian corridors used by the gray bat. A Biological Assessment (BA) was prepared by the Army as part of the ongoing informal consultation with the U.S. Department of Interior — Fish and Wildlife Service (USFWS). The BA addresses the impacts of the caretaker activities on the gray bat and includes Project Design Features (PDFs) that avoid or minimize any potential impacts so that there will not be any adverse effects to the gray bat. Further protective measures will be provided in accordance with the July 1998 letter from the USACE to the USFWS.
- **Indirect.** Long-term minor beneficial impacts could occur to the gray bat if caretaker operations continued indefinitely. Over time, it is possible that with decreased activity and grounds maintenance that forest cover would increase along portions of Cane Creek that flow through the cantonment area. Based upon implementation of the Project Design Features detailed in the BA and the additional

protective measures described in the July 1998 letter from the USACE to the USFWS, no adverse impacts to the gray bat are expected.

No impacts to the red-cockaded woodpecker (RCW) are expected. Local RCW populations declined in the 1970s and currently there are no RCW colonies at FMC. The RCW population in the Talladega National Forest is not currently expanding or colonizing new areas.

5.2.11.5 Other Species of Concern

- **Direct.** Long-term minor beneficial impacts to other species of concern would occur due to less activity in the cantonment area, fewer range activities and the continuation of ESMP and other wildlife management measures. Decreases in cantonment area traffic, off-road vehicle use, exploding munitions, and use of night-time flares would result in less noise and disturbance.
- **Indirect.** Long-term minor adverse impacts would occur to mountain longleaf pine (MLP) communities. Adverse impacts would occur due to fewer range fires, reduced number of natural resource staff, and less maintenance of fire breaks. Populations of species that are fire adapted or need open canopies such as little bluestem, Indian grass, various asters, rosinweed, wild quinine, flowering spurge, and goat's rue that are associated with the MLP communities would decrease over time due to the potential reduction in prescribed burns. More complete canopy closure, and increased hardwood understories would also result in less recruitment of longleaf pine seedlings. Long-term minor adverse impacts would also occur to the white fringeless orchid (WFO) due to fewer wildfires caused by the tracer range. Tracer range wildfires and prescribed burns help prevent complete dominance of seeps by shrubs. Over time the shrub component would increase at Marcheta Hill Orchid Seep and the WFO population would decrease. This impact could be mitigated by increased management, i.e. prescribed burns at locations that contain WFO.

5.2.11.6 Integrated Natural Resources Management Provisions

- **Direct.** Minor long-term adverse impacts are expected. Funding for natural resource programs would decrease. Long-term beneficial impacts could also occur when ranges become inactive and more accessible to hunters, hikers, and birdwatchers.
- **Indirect.** Minor long-term adverse impacts are expected. Indirect benefits received from range induced wildfires, firebreaks maintained by range personnel, and controlling of access to threatened and endangered species locations within ranges would decrease. There would be a transition period before a cooperating agency could implement a prescribed burn program at FMC. If a cooperating agency that is willing to conduct an effective prescribed burn program at FMC can not be found the potential exists for long-term significant adverse impacts to the MLP communities, WFO, and other fire adapted species.

5.2.12 Cultural Resources

- **Direct.** Both minor beneficial and minor adverse effects would be anticipated. The level of activities associated with caretaker status would be lower, thus a beneficial impact will result from reducing the potential for disturbance of National Register of Historic Places (NRHP) eligible archaeological resources. The reduced activity in the cantonment and training areas associated with caretaker status might increase the potential for vandalism, an adverse impact.
- **Indirect.** There are no indirect effects to NRHP eligible archaeological resources from implementation of the No Action Alternative. Minor adverse effects would be expected for architectural resources/buildings as a result of decreased maintenance activities.

5.2.13 Sociological Resources

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- **Direct.** There will be short-term adverse impacts in respect to the population loss associated with the movement of the personnel from FMC. Due to the reduced number of employees present on a daily basis, there could be increase opportunity for vandalism, loss of property, and other criminal activity such as poaching. It is expected that there will be no adverse impacts on environmental justice, Native American and ethnic concerns, or homeless and other special programs, such as children, under caretaker status. Fire protection and security will continue to be provided on-post by the caretaker force.
 - **Indirect.** Minor adverse indirect impacts would be expected. Caretaker status would represent a foregone socioeconomic opportunity for reuse. For example, the benefits of job creation as a result of reuse activities would be lost until the property is conveyed to new owners.

5.2.14 Economic Development

Since closure of FMC (and the resulting loss of jobs) was a mandated action stemming from the recommendations of the 1995 BRAC Commission, the baseline against which socioeconomic impacts are assessed, in accordance with Army convention, is an installation postclosure population of zero.

- **Direct.** There will be some short-term minor economic impacts resulting from the employment of skilled and unskilled laborers for caretaker tasks, and from the purchase of maintenance supplies from local or regional vendors. However, considering the anticipated size of the caretaker workforce (estimated at less than 100), income generation and spending for services and supplies will be limited and have no major impact on the local or regional economy.
- **Indirect.** Long-term significant adverse impacts would result from the continued caretaker status and consequential lack of reuse of the disposal area. Economic opportunities and benefits, in the form of employment, business sales and income, would be postponed or lost due to lack of new economic activity. Lack of reuse would preclude the placing of the property on local tax rolls and result in loss of potential tax revenues.

5.2.15 Quality of Life

- **Direct.** No direct impacts on Quality of Life would be expected from implementation of the proposed action.
- **Indirect.** Some short-term indirect adverse impacts would be expected, with the implementation of the No Action Alternative. Upon closure of the Commissary and Post Exchange, military retirees and other eligible shoppers in the area will have to shop at four alternative military shopping facilities available within 100 miles of Calhoun County. These include Maxwell Air Force Base, Montgomery, Alabama; Redstone Arsenal, Huntsville, Alabama; Fort McPherson and Gillem, Atlanta, Georgia; and Fort Benning, Columbus, Georgia. In addition, military-provided medical services will have to be obtained elsewhere by those eligible for these services. On-post recreational facilities could be adversely impacted by lack of continual use and associated sustained maintenance.

5.2.16 Installation Agreements

- **Direct.** Short-term minor adverse impacts would be expected. Under caretaker status the Army would be unable to continue in mutual aid agreements and utilities agreements that are currently in place. Beneficiaries of these agreements would need to make other arrangements following closure of the installation.
- **Indirect.** Short-term adverse impacts on installation agreements would also be anticipated with the termination of support services to the Chemical Stockpile Emergency Preparedness Program (CSEPP). Initially these support services will be supplied by an Army CSEPP contingent remaining at FMC and by the Alabama Army National Guard (ALARNG) but at a reduced level from those supplied

currently by FMC. Medical, ambulance and related services associated with the agreements will need to be provided by another source.

5.3 DISPOSAL ALTERNATIVES

5.3.1 Introduction

Subsection 3.3 discusses the rationale associated with the development of alternatives for the primary Army action of disposal of excess property at FMC. As stated in that section:

- The Encumbered Disposal (ED) Alternative has been formulated to consider the type and degree of reuse constraints to be imposed on future owners by the Army as a condition of disposal and reuse. These encumbrances are imposed by the Army to: 1) protect future Army requirements or interests; 2) make the property available as soon as possible through the expedient disposal and reuse of parcels that are determined to be available and suitable for the intended reuse; 3) transfer the responsibility to protect important natural or cultural resources to future owners through the use of deed restrictions or covenants; or 4) meet special mitigation requirements or additional deed restrictions that are mutually agreed upon by the Army and a regulatory agency.
- The Unencumbered Disposal (UD) Alternative removes constraints and evaluates impacts that would be associated with disposal of the property without constraints on reasonably foreseeable reuse.

Subsections 5.3.2 through 5.3.16 identify the potential direct and indirect environmental impacts of ED and UD of FMC property. As detailed in subsection 3.3, encumbrances at FMC will include:

- **Wetlands.** The Army will notify the new owners of the responsibility to comply with the Clean Water Act if development is planned in, or sufficiently near to impact, wetlands.
- **Regulatory Floodplains.** The Army may impose restrictive covenants prohibiting land uses within regulatory floodplains to ensure compliance with: Executive Order (EO) 11988 (Floodplain Management); the National Flood Insurance Act; and the Flood Disaster Protection Act.
- **Threatened and Endangered Species.** In consultation with the USFWS, a Biological Assessment (BA) was prepared for the disposal and reuse of FMC. The BA assesses potential effects of the proposed action on gray bats, a federally listed endangered species. The BA describes features of the proposed action (otherwise known as Project Design Features or PDFs) intended to avoid or minimize adverse impacts to gray bats. The PDFs address actions prior to disposal, and reasonably foreseeable actions following disposal. Based upon implementation of the PDFs detailed in the BA and the additional protective measures described in the July 1998 letter from the USACE to the USFWS, no adverse impacts to the gray bat are expected. Those PDFs requiring specific actions following disposal are expected to be transferred to future owners in the form of deed restrictions or protective covenants.
- **Cultural Resources.** An encumbrance requiring protection of any properties found to be eligible for the NRHP would be assigned to new owner(s) as a condition of sale or transfer.
- **Utility System Interdependencies.** Conveyance of the property assumes that the utility systems will be transferred in their current condition to independent providers that would continue providing service to existing facilities. Appropriate non-exclusive utility easements would be provided.
- **Access Easements.** Existing easements represent an encumbrance on the future use of property, and would be transferred or conveyed to new owners. Easements could also be imposed on FMC excess property conveyed to future owners to provide access by the National Guard and Reserves to areas that would be transferred to them. Additionally, easements could be imposed to provide future access to remediation sites.

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- **Remedial Activities.** In conjunction with the remedial activities that might be required during an interim lease or upon conveyance, the Army would retain the right to: conduct investigations and surveys; to have Government personnel and contractors conduct remediation field activities; and to construct, operate, maintain, or undertake any other response or remedial action as required.
 - **Unexploded Ordnance (UXO).** If the UXO is not fully removed, restrictive covenants would be placed in transfer or conveyance documents to prohibit future owners from terrain-disruptive activities and to impose other requirements to ensure safety and protection of human health and the environment. The level of restrictive covenants will be determined following the more detailed Engineering Evaluation/Cost Analysis (EE/CA) process, which will invite public participation, and Department of Defense Explosive Safety Board (DDESB) review and approval.

In addition to the types of encumbrances listed above which would be applied to the ED Alternative only, there are numerous Federal, state and local regulations that have been adopted in an effort to protect environmental resources. Under both the ED Alternative and the UD Alternative new land users would be required to comply with these regulations as well as any future modification in the regulations.

5.3.2 Land Use

Encumbered Disposal Alternative

- **Direct.** Long-term minor beneficial impacts would be expected based upon implementation of the ED Alternative. As a result of disposal, all training activities within the disposal area would cease, to include ordnance and smoke training operations in the training areas, thereby eliminating impacts associated with these activities on nearby land uses.
- **Indirect.** Beneficial and adverse long-term impacts would be expected on land use as a result of implementing the ED Alternative. Encumbrances will have a beneficial impact on land use as reuse activities will be restricted to those that are consistent and compatible with the preservation and protection of existing natural and cultural resources, such as historic properties, wetlands, threatened and endangered species, etc. In addition, under certain circumstances ED would facilitate property transfer for earlier subsequent reuse. However, encumbrances could restrict development types and intensity, therein affecting the marketability and competitive position of the property for subsequent development by a private or other public entity.

Unencumbered Disposal Alternative

- **Direct.** As outlined in the ED Alternative above, long-term minor beneficial impacts would be expected based upon implementation of the UD Alternative. As a result of disposal, all training activities within the disposal area would cease, to include ordnance and smoke training operations in the training areas, thereby eliminating impacts associated with these activities on nearby land uses.
- **Indirect.** Beneficial and adverse long-term impacts would be expected. The lack of any initial encumbrances restricting development would result in the property being utilized at its highest and best use without any restrictions. However, for those parcels which have encumbrances, such as the remedial activities encumbrance, the time required for removal of an encumbrance could cause a delay in property transfer because of the time required for elimination of restrictions.

5.3.3 Air Quality

Air quality regulations are designed to be protective of human health and the environment. All air emission sources must comply with both the US Environmental Protection Agency (USEPA) Clean Air Act and Alabama Department of Environmental Management (ADEM) regulations. These regulations apply to air emission sources regardless if the source is federally or privately owned. As such, air quality does not have any encumbrances.

Encumbered Disposal Alternative

- **Direct.** A beneficial impact would be expected, as a result of implementing the ED Alternative, because the remaining activities at FMC would involve fewer emission activities than current Army mission related operations. In addition, any remaining air emission sources would be significantly reduced from current levels. The level of industrial operations such as degreasing, painting, facility maintenance and vehicle traffic etc. would decrease since the Army is relocating, although it is difficult to quantify the reduction in emissions. It should be noted that the emissions will not be 100% eliminated because the Army National Guard and Army Reserve will remain and would continue to conduct similar types of activities. Overall, air emissions should be reduced as a result of the disposal, and therefore the disposal has a beneficial impact. Since the region is an air quality attainment area, there will not be emission reduction credits for the Army to use elsewhere.
- **Indirect.** A minor short-term adverse impact would be expected, as a result of implementing the ED Alternative. The Comprehensive Environmental Response and Liability Act (CERCLA) requires that before property is transferred, necessary remedial action must be completed or remedial action must be in place, proven to be operating effectively, and approved by the USEPA Regional Administrator (see subsection 5.3.9). The remedial activities encumbrance would grant access to the Government to attend to remediation equipment used at sites that have been transferred for disposal. Minor amounts of air emissions could result from remediation activities depending on the contamination, type of treatment system, equipment and capture technology. For example, if the remediation system utilized an air stripper there would be air emissions associated with the remediation process. However, if the system utilized a carbon adsorption unit for water treatment there would not be any air emissions. The Government will need access to the remediation site to ensure proper operation and maintenance of the remediation system. These activities are indirect because the primary action is remediation, not a process typically associated with air emissions. Any potential air emissions associated with remediation would be temporary and are not anticipated to have a significant adverse impact on air quality.

Unencumbered Disposal Alternative

It is anticipated that implementation of this Alternative would result in direct or indirect impacts on air quality that are similar to those described in the ED Alternative because the Federal and state air quality regulations are applicable regardless if the facility is federally or privately owned.

- **Direct.** Same as the ED Alternative.
- **Indirect.** Same as the ED Alternative.

5.3.4 Noise

Encumbered Disposal Alternative

- **Direct.** Beneficial impacts would be expected as a result of implementing the ED Alternative. The cessation of training activities on the Main Post would result in an overall decrease in noise levels at FMC.
- **Indirect.** Short-term minor adverse impacts would be expected, as a result of implementing the ED Alternative. Some remedial activities, such as well installation, construction of groundwater treatment facilities, transportation of contaminated media, or UXO removal actions could create localized noise impacts. These noise producing activities would affect only the immediate vicinity, however, and would occur only during daytime hours.

Unencumbered Disposal Alternative

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- **Direct.** Beneficial impacts would be expected as a result of implementing the UD Alternative. As discussed in the ED Alternative, the cessation of training activities on the Main Post would result in an overall decrease in noise levels at FMC.
 - **Indirect.** Short-term minor adverse impacts, associated with implementing the UD Alternative, would be expected. These impacts would be similar to those described for the ED Alternative, and might include remedial activities, such as well installation, construction of groundwater treatment facilities, or transportation of contaminated media could create localized noise impacts. Short-term minor adverse impacts would also be expected with the removal of UXO encumbrance from locations throughout FMC. Implementation of the UD Alternative would result in short-term increases in noise levels related to excavation and removal of UXO and possibly detonation in place.

5.3.5 Water Resources

5.3.5.1 Surface Water

Encumbered Disposal Alternative

- **Direct.** There will be no direct impact to surface water from implementation of the ED Alternative.
- **Indirect.** Implementation of the ED Alternative will result in both long-term beneficial and adverse impacts to surface water. Beneficial impacts include: 1) Implementation of remedial hazardous waste cleanup activities may result in reduced potential for release of contaminants to surface water; and 2) Vegetation growing up in areas currently not vegetated may influence surface stormwater drainage.

Under the ED Alternative, a range of options exist for UXO removal which may have adverse impacts on surface water. All UXO may be left in place, or varying amounts may be removed. In the event that UXO clearance activities are performed, there will be indirect short- and long-term adverse impacts to surface water. Impacts from the UXO removal operations may include increased turbidity associated with sediments eroded from the disturbed area, siltation of stream channels and impoundments and disturbance of the stream channel by equipment movement. The degree of the impact will be dependent upon the depth and aerial extent land clearing associated with the UXO removal as well as the slope and soil type present.

Unencumbered Disposal Alternative

- **Direct.** Implementation of the UD Alternative will result in a significant adverse short- and long-term impact to surface water. The impact will be the result of UXO removal operations directly in the channel of creeks and streams.

Implementation of the UD Alternative may result in components of the stormwater system being owned by a variety of land owners. Under this alternative there would be no single owner or agency responsible for maintenance of the stormwater system and compliance with National Pollution Discharge Elimination System (NPDES) permits.

- **Indirect.** Implementation of the UD Alternative will result in a significant short-term adverse impact to surface water. Under the UD Alternative, all of the UXO will have to be identified and removed. This will create extensive disturbances to soil and vegetation which will result in greatly increased soil erosion. The increased soil erosion will result in widespread short-term, problems with sedimentation and turbidity in surface water.

5.3.5.2 Floodplains

Encumbered Disposal Alternative

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- **Direct.** Under the ED Alternative, a range of options exist for the UXO. All UXO may be left in place, or varying amounts may be removed. In the event that UXO clearance activities are performed, there may be direct short- and long-term adverse impacts to floodplains if UXO identification and removal activities are conducted in floodplains. The magnitude of the impact will be dependent upon the lateral and vertical extent of the UXO removal as well as the specific location.
 - **Indirect.** UXO removal operations under the ED Alternative could result in adverse short- and long-term impacts to floodplains from sedimentation from increased erosion caused by the clearing of vegetation and the disturbance of soils. The degree of the impact will be dependent upon the extent and location of the UXO removal activities.

Unencumbered Disposal Alternative

- **Direct.** Implementation of the UD Alternative will result in significant adverse short- and long-term impacts to floodplains. The impacts will be the result of UXO removal operations directly in the floodplains.
- **Indirect.** Implementation of the UD Alternative will result in both short- and long-term significant adverse impacts to floodplains. Under UD, all of the UXO will have to be identified and removed. This will create extensive disturbances to soil and vegetation which will result in greatly increased soil erosion. The increased soil erosion may result in problems with sediment accumulating in floodplains.

5.3.5.3 Groundwater

Encumbered Disposal Alternative

- **Direct.** Under an ED Alternative, encumbrances may be put in place to allow for installation and operation of systems to directly remediate groundwater. This would result in a localized long-term benefit to groundwater. Alternatively, encumbrances could be employed to restrict future uses of groundwater in lieu of groundwater remediation. This would result in localized long-term adverse impacts to groundwater.
- **Indirect.** Implementation of the ED Alternative will result in both minor long-term beneficial and adverse impacts to groundwater. Implementation of environmental remediation activities will result in lowered potential for release of contaminants to groundwater. Removal of UXO will require removal of vegetation, which could lead to greater run off and thus lower groundwater recharge rates. The degree of the impact will be dependent upon the extent and location of the UXO removal operations.

Unencumbered Disposal Alternative

- **Direct.** Implementation of the UD Alternative will require that the known groundwater contamination at the former landfills, and other locations, be treated to meet drinking water standards. This would result in a long-term beneficial impact to groundwater. It is possible that remediation of groundwater to these levels is not feasible.
- **Indirect.** Implementation of the UD Alternative may cause an indirect, long-term adverse impact to groundwater. The identification and removal of UXO would alter groundwater flow paths by disturbing infiltration rates and preferential flow paths. It is not expected to have any significant effect to regional springs and flow paths. However, small springs and seeps which are reliant upon localized sources of recharge and flow paths could be adversely impacted. The remediation of groundwater required to implement the UD Alternative could delay disposal and reuse of areas around the former landfills.

5.3.6 Geology

Encumbered Disposal Alternative

- **Direct.** Under the ED Alternative, a range of options exist for the UXO. All UXO may be left in place, or varying amounts may be removed. In the event that UXO clearance activities are performed, there will be direct short- and long-term adverse impacts to soils. In the areas that UXO will be removed from, vegetation will be stripped and extensive grading and reworking of the soil will be required. This will lead to a destruction of the soil structure as well as lead to extensive erosion of the soil.
- **Indirect.** Implementation of the ED Alternative will result in a minor long-term beneficial impact to geology and soils. Remedial HTRW activities may result in a lower potential for release of constituents from contaminated sites. The magnitude of the impact will depend upon the degree and type of site remediation performed.

Unencumbered Disposal Alternative

- **Direct.** Implementation of the UD Alternative will result in significant direct short- and long-term significant adverse impacts to geology and soils. Exploration and removal of UXO will result in total destruction of the soil structure from excavation. This activity will result in a greater potential for soil erosion, especially in areas with steep slopes. The fertility of the soil and its ability to support vegetation will be adversely impacted.
- **Indirect.** There will be no indirect impact from implementation of the UD Alternative.

5.3.7 Infrastructure

5.3.7.1 Utilities

The major utility systems include water, wastewater, electric, natural gas, and communications. The three steam systems within the excess area are not considered major utility components.

Encumbered Disposal Alternative

Under the ED Alternative, the major utility components would be disposed as whole systems rather than transferring ownership of utilities to entities with each parcel. The non-Army entity would provide utilities to the enclave and other occupants of the excess properties after transfer has occurred. Initially following transfer, the existing distribution and collection systems, as described in subsection 4.7, would be used to provide utility service. Once the transfer of the utility systems to a non-Army entity has occurred, the new utility purveyor may alter the major utility components and their configuration to better serve the area.

The parcels containing the facilities that house the boilers would have the option of using the steam plants and distribution systems associated with those boilers. Parcels separated from the steam systems would have to arrange for continued steam supply with the new owner of the boiler plant or install new independent heating systems.

- **Direct.** Property sold or transferred to new owners would include easements in the deed to allow access to the utility systems by the new utility purveyor. Transferring ownership and service responsibilities of the utility systems will cause no impact or interruption of service to areas currently served on FMC. The new utility providers would be required to manage the resources in accordance with all applicable federal, state and local requirements so that there should be no adverse impact to the environment.
- **Indirect.** Once the transfer of the utility systems to a non-Army entity has occurred, the new utility purveyor may upgrade the major utility components and their configuration to better serve the area. These upgrades may result in abandonment, replacement or relocation of existing utilities components. Excavation associated with these activities could increase erosion and sediments

transported into area waterways. With proper erosion control practices during construction no adverse impact is anticipated.

Unencumbered Disposal Alternative

Unencumbrance of the utility systems would require that new owners of the excess property be responsible for arranging their own utility service. The new property owners would have to arrange for their own service connection from a utility provider or supply their own energy, water, and wastewater treatment. Supplying their own utility needs would result in the abandonment of a parcel's existing utility components, freeing the parcel from the interdependencies and access easements. In some cases, arranging for a new utility service connection could result in abandoning all or portions of utility systems that currently exist on a parcel. Therefore, either scenario could free parcels from utility interdependencies and would eliminate the need for access easements by utility providers except where subsequently established by the new owners.

- **Direct.** Direct adverse impacts to the environment would be expected if individual parcel owners were required to provide their own utilities. Individual wastewater treatment systems would increase the number of discharge points making it more difficult to assure that the environment is not being adversely affected. Treated effluent from individual systems would have a greater likelihood of adversely affecting surface waters and groundwater in the area. Individual power generation would not be as energy efficient, as centralized systems, and would have greater potential to increase noise and air emissions in the area.

The parcels containing the facilities that house the boilers would have the option of using the steam plants and distribution systems associated with those boilers. Installation of multiple new heating sources for individual facilities separated from the steam system would not impact the environment. In most cases, a new heating source would be expected to be more energy efficient.

- **Indirect.** If abandoned, the existing underground utility conduits could cause a long-term adverse impact to the environment by providing a preferential pathway for potential subsurface contamination migration. If existing utility distribution and collections systems were removed or new service connections are established, the large amount of excavation required could cause a short-term adverse impact to surface water quality and vegetation.

5.3.7.2 Solid Waste

Encumbered Disposal Alternative

- **Direct.** The ED Alternative would transfer the landfill areas with the landfills in-place. Appropriate notifications and deed restrictions would be included to: inform future owner(s) of existing conditions; ensure that landfill caps, drainage structures and monitoring wells are not disturbed; and to ensure that the Army can obtain long-term access (via easements if required) to maintain and/or monitor landfill conditions. Plans exist to close and cap landfill #4 in accordance with Resource Conservation and Recovery Act (RCRA) Subtitle D requirements. This action would not result in any impact to existing or future solid waste streams. Subsection 5.3.9 considers the impacts of ED in regard to Environmental Restoration and Compliance procedures that are being followed for all potentially contaminated sites.
- **Indirect.** No indirect impacts would be expected from the implementation of the ED Alternative.

Unencumbered Disposal Alternative

- **Direct.** Due to the cost and the potential environmental ramifications, excavation and removal of the closed FMC landfills so that the excess areas could be disposed as unencumbered is not considered to be feasible. However, if this action were taken, it would result in a significant adverse impact due to

the magnitude of the excavated solid waste which would require redisposal. In addition, relocation of the existing groundwater monitoring wells to reduce or eliminate the Army easement requirements is not feasible since these wells are located in specific areas prescribed by the configuration of the landfills, existing landforms, and surface and subsurface water flows. The Army is responsible for the continued monitoring of these landfills in accordance with approved closure and post-closure plans, and there are no plans to transfer this monitoring responsibility to future land-owners.

- **Indirect.** Due to the volume of waste excavated from FMC landfills, an indirect adverse impact would occur at regional landfills identified to receive the excavated material. An indirect benefit would be that current landfill areas at FMC would generally be available for reuse.

5.3.7.3 Transportation System

Encumbered Disposal Alternative

- **Direct.** No direct impacts to local and regional transportation, especially the road system, would be expected as disposal of the property in itself would generate no new traffic.
- **Indirect.** Traffic volume could be impacted beneficially as ED in selected portions of the disposal area could result in lower intensity development with an associated reduction in traffic generation as compared to the UD Alternative.

Unencumbered Disposal Alternative

- **Direct.** No direct impacts to local and regional transportation, especially the road system, would be expected as disposal of the property in itself would generate no additional traffic.
- **Indirect.** Traffic volume could be impacted adversely as UD in selected portions of the disposal area could result in higher intensity development with an associated increase in traffic generation as compared to the ED Alternative.

5.3.8 Ordnance and Explosives

Over the life of a military range, the types and quantities of ordnance and explosives expended on the range vary due to changes in mission, training needs, and technology. Because of limited land availability and safety requirements, new ranges are often constructed on top of old ranges. Thus a variety of military ordnance and explosives, including unexploded ordnance (UXO) may exist on a military range as a result of the different types of weapons that have been employed on the range during its life cycle.

As noted in a 1994 DOD Inspector General report (DOD, 1994b) despite recent attempts to develop, evaluate, and identify innovative, cost-effective, commercially available systems for the detection, identification and removal of UXOs, technology performance has shown system detection capabilities for large area surveys have performance limitations that vary with ordnance type, terrain, soil types, and other factors. At the present time there is no single system or technology (including magnetometry, infrared and ground-penetrating radar) that can efficiently accomplish the task of identifying and removing UXOs from military ranges:

"... To date, there has been limited success in identifying UXO on or near the cleared surface. Detecting and identifying UXO underground presents a much greater challenge ... We found that relatively primitive detection and 'pick and shovel' removal methods are typically used for ordnance and explosive waste cleanup. The basic approach is to remove as much vegetation as possible, mark off grids, then use crews with hand held magnetometers to 'sweep' the area. The magnetometers will detect any metal to a maximum depth of approximately three feet. When a metal object is detected, it is exposed by careful hand excavation. Most of the objects identified through that

procedure are simply non-explosive scrap metal. However, when UXO is found, it is either destroyed in place or removed to a safe location for destruction. Those procedures are usually labor intensive and thus very expensive. The dangerous nature of the work requires the use of highly trained Explosive Ordnance Disposal (EOD) personnel.”
(DOD, 1994b)

As the UXO disposal method described above is only effective in detecting UXOs to a depth of approximately three feet, military ranges that may have UXOs imbedded at depths of greater than three feet must be cleared using the method, then have the soil removed to a depth of approximately three feet and the process completed again and again until the maximum anticipated depth of UXOs has been cleared. This relatively large-scale excavation of military ranges would not only be expensive, but is known to have serious environmental impacts.

Consequently, under an action that is separate and independent of this EIS, DOD is proposing a rule that identifies a process of evaluating appropriate actions on Closed, Transferred and Transferring Military Ranges, including all ranges owned, leased, possessed or otherwise used by DOD elements in support of DOD national defense mission. On September 26, 1997, DOD published a proposed *Department of Defense Range Rule (for Closed, Transferred and Transferring Military Ranges)* which was available for public review and comment. The estimated timeframe for finalization of this rule, and the associated procedures for defining response actions to address the unique risks posed by military munitions and other associated materials, is late-1998.

Encumbered Disposal Alternative

UXO clearance requirements for the encumbered disposal of FMC excess property will be determined via the EE/CA or Range Rule processes. It is anticipated, however, that based upon the soil types, topographic features (i.e. slope), vegetation, current land uses, and planned reuse, that under the encumbered disposal alternative, more UXO removal actions will take place in Redevelopment (Area 1) than in Passive Recreation Area (Area 2). Consequently impacts will be greater in the area slated for redevelopment (Area 1) and less in the area slated for passive recreational use (Area 2).

- **Direct.** Implementation of the ED Alternative entails the use of restrictive covenants to protect human health, safety, and the environment including the potential for restrictions on the use of the property. The ultimate decision regarding the amount, if any, of UXO removed, under the ED Alternative, will be determined in the Engineering Evaluation/Cost Analysis (EE/CA). The EE/CA will determine the extent of UXO throughout the disposal area and present recommendations concerning the type of reuse that can be supported within the disposal area, and cleanup or removal recommendations. The impacts associated with ED Alternative will be directly associated with the extent of UXO removal authorized by the DDESB. The extent of short-term and long-term environmental impacts associated with UXO clearance could vary from no impact, if no UXO removal is required or authorized, to significant impacts if a large number of acres of land are cleared in a manner requiring the extensive removal of soils and ground cover. The principal direct impacts associated with UXO clearance activities will be the removal of vegetation and soil which would adversely influence both plants and animals in the clearance areas. The extent of the impact will also be influenced by the degree of vegetation removal required (e.g. understory only versus total removal of all vegetation) and the habitat type of the removal activity (e.g. maintained/mowed range area or old field versus mountainous forest area or MLP ecosystem).
- **Indirect.** Indirect impacts associated with implementing the ED Alternative would also be directly related to the extent of UXO clearance activities. The extent of adverse indirect impacts could vary from no impact (if no UXO removal is required or authorized) to significant (if large numbers of acres of land are cleared in a manner requiring the extensive removal of soils and ground cover). Adverse indirect impacts would principally be related to soil erosion from the clearance activities. The extent of the adverse impacts would be related to the amount/depth/type of soils removed and the location within FMC. UXO clearance activities in the eastern half of the installation, where slopes are steep and soils highly erodible, would result in more soil erosion than if activities occurred in the western

flatter portions of FMC. This erosion would adversely impact the terrestrial habitats via the removal of soils and vegetation. Aquatic habitats would also be adversely impacted by sedimentation/siltation in the affected watersheds. Indirect adverse economic impacts may potentially occur under ED if UXO removal actions or UXO land use restrictions limit the ability or desirability of parcels to be redeveloped in accordance with the approved community reuse plan.

Unencumbered Disposal Alternative

UXO clearance for unencumbered disposal of FMC will require that the entire disposal area be cleared to unrestricted use levels. Based upon the soil types, topographic features (i.e. slope), vegetation, current land uses, and planned reuse, it is anticipated that, under the unencumbered disposal alternative, the impacts to the Passive Recreational Area (Area 2) will be significantly greater than the impacts to the area slated for the Redevelopment Area (Area 1). Significant adverse impacts would be expected in most of Area 2, with significant adverse impacts in Area 1 being localized and easier to mitigate.

- **Direct.** UD would include restoring the entire disposal area to unrestricted use, including excavation and removal of UXO, and/or possibly detonation in place. In order to achieve unrestricted use, UD would entail the removal of all UXO within the disposal area. The removal of all UXO within the total disposal area may not be feasible due to: 1) the limited ability to identify UXO, 2) the limitations of UXO removal technology, 3) ecological damage, and 4) excessive cost.

UD would have significant short-term and long-term adverse impacts on the environment. The principal direct impacts associated with UXO clearance activities will be the removal of vegetation which would adversely influence both plants and animals in the clearance areas. The extent of the impact will also be influenced by the degree of vegetation removal required (e.g. understory only versus total removal of all vegetation) and the habitat type of the removal activity (e.g. maintained (mowed) range area or old field versus mountainous forest area or MLP ecosystem). Based upon the apparent extensive amount of UXO throughout much of the FMC disposal area and the location of much of the UXO in the mountains of the eastern portions of the installation (where the large blocks of forest occur including MLP ecosystem), it is likely that UD will have a significant adverse impact on the biological resources of FMC.

- **Indirect.** Indirect impacts associated with the UD would be directly related to the amount/depth/type of soils removed, the type of vegetation in the removal areas and the location within FMC. UXO clearance activities in the eastern half of the installation, where slopes are steep and soils highly erodible, would result in more soil erosion than if activities occurred in the western flatter portions of FMC. This erosion would adversely impact the terrestrial habitats via the removal of soils and vegetation. Aquatic habitats would also be adversely impacted by sedimentation/siltation in the affected watersheds.

Based upon the necessity to disturb large amounts of soil to remove all the UXO under the UD, significant adverse impacts associated with soil erosion, damage to terrestrial habitats, and sedimentation of streams and low lying riparian habitats would be expected.

Indirect beneficial economic impacts may potentially occur under UD in that there would be no UXO land use restrictions. Consequently all parcels could be fully redeveloped and not constrained by UXO encumbrances.

5.3.9 Hazardous and Toxic Materials

Before excess DOD property can be disposed, a Finding of Suitability for Transfer (FOST) must be recorded. A FOST can not be completed without necessary remediation or disclosure of sites contaminated with hazardous or toxic materials. As discussed in subsection 4.9, the Environmental Baseline Survey (EBS) at FMC identified numerous sites having potential hazardous or toxic material conditions that would require additional investigation and possibly remediation. Sites requiring additional investigation were identified within Community Environmental Response Facilitation Act (CERFA) parcel categories 2 through 7. A BRAC Cleanup Plan (BCP) is being prepared for FMC that will address the

investigations needed at these CERFA parcels and prescribe remedial actions and monitoring where appropriate.

CERCLA requires that before property is transferred, necessary remedial action must be completed or remedial action plans must be in place or in operation. Plans or remediation must be proven to be effective, and approved by the USEPA Regional Administrator. If additional remediation is needed beyond the date of transfer, the federal government will be responsible only for remediation that is attributable to activities of the federal government prior to transfer. CERCLA also requires that on properties where hazardous materials have been released or disposed of, the type and quantity of material and time at which release or disposal occurred must be disclosed in the transfer documents.

Encumbered Disposal Alternative

- **Direct.** The ED Alternative incorporates two different potential actions for the disposal of contaminated parcels and the completion of the FOST. One action allows for the disposal of property before remediation is completed (under specific conditions) while the second action involves the cleanup of the parcel(s). CERCLA allows for the early transfer of parcels, before cleanup is completed, under a specific set of conditions that are protective of human health and the environment. In general, the ED Alternative assumes that remediation of contaminated sites (landfills, hot cell, radiological lab, etc.) by the federal government will: 1) be completed prior to disposal for short-term remedial actions or 2) will continue beyond the date of property transfer for long-term remediation efforts (e.g. long-term groundwater pump and treat actions). Under these long-term cleanup situations where the remedy is in place, operational, and certified as effective by USEPA, a parcel may be transferred to a new owner(s) under restrictive conditions including: a) planned land uses must be compatible with the level of remediation, and b) the federal government retains an easement to allow access to the site.

A September 1996 amendment to CERCLA allows Federal agencies to transfer property before all necessary cleanup actions have been taken or are in place. This provision is known as Early Transfer Authority (ETA) and authorizes the deferral of the CERCLA covenant requiring all remedial actions be completed before Federal property is transferred when the findings required by the statute can be made and the response action assurances required by the statute are given. Since FMC is not on the National Priorities List (Superfund), the Governor of Alabama must concur with the deferral request for FMC property. Notices, covenants (land use restrictions and institutional controls), access clause, response action assurance and other conditions would be part of the transfer package and deed language.

Specific parcels that can be transferred in an encumbered status will be identified by the Army through the completion of remedial investigations at FMC (consistent with all applicable federal, state and local laws and regulations). Ongoing coordination with the FMDC will identify proposed reuse activities and the appropriate level of cleanup action required to comply with their preferred reuse plans. The investigation and remediation process is occurring as a separate and distinct process with its own public involvement component. That process will not be completed prior to the completion of this EIS. The remediation process will be designed to ensure that no significant adverse impacts occur.

DOD policy with regard to lead-based paint (LBP) and asbestos is to manage them in a manner protective of human health and the environment. Residential structures built before 1978 are assumed to have lead based paint (LBP) and LBP hazards. Any results of inspections by the Army are provided to prospective purchases of the property. For buildings constructed before 1960, LBP hazards must be abated by the government or the new owner if the building is going to be used for residential purposes such as an individual residence, child care facility, community center, dependent school, etc. An appropriate notice is given to the prospective owner. The presence of unabated LBP or LBP hazards may preclude occupancy by some portions of the population. For buildings constructed between 1960 and 1978, the Army will provide appropriate notice to the prospective owners. Information pertaining to asbestos and asbestos containing material (ACM) on the property will be provided to prospective purchasers or transferees, and where ACM is determined to be in such a condition as to pose a threat to human health at the time of transfer, it will be remediated by the DOD or the future owner prior to occupancy.

- **Indirect.** The ED Alternative allows for the disposal of property that has not been fully remediated only in those instances where the remaining hazards are compatible with the intended reuse or where it is determined (by the Army and all applicable regulating agencies) that it would be more desirable to leave a potential hazard in place than to remediate. In these cases, deed notices and restrictions would be used to disclose the specific nature of the remaining hazard to the new owner. The deed would also specify that the new owner would be responsible for any future remediation of these known hazards if conditions or the intended reuse change. Enforcement of these provisions would be the responsibility of applicable state and federal agencies. Given these conditions, no impacts would be expected.

Unencumbered Disposal Alternative

- **Direct.** Under the UD Alternative, beneficial impacts would occur because the Army would complete the environmental remediation process for all identified hazards and dispose of the property with no restriction for future uses. The extended timeframe for remediation could result in FMC experiencing longer caretaker status period with the associated impacts as described in subsection 5.2.

Unencumbered disposal may not be feasible based upon the current knowledge of contamination at FMC and the technology available to treat the contamination. Even if it is feasible, the complete remediation of some hazardous sites may be cost prohibitive and could result in more harm to the environment than leaving them in place. For example, complete remediation of on-site landfills may require excavation which would be extremely expensive. The workers performing the remediation would be exposed to the unearthed hazards and an alternate disposal location would have to be identified. Therefore, landfill sites and other sites where complete remediation is not feasible would require that the intended reuse be consistent with the level of cleanup. In such cases, the landfill caps would have to remain undisturbed and easements would be required for access to conduct long-term monitoring. Other sites, although fully remediated, might also require long-term monitoring to satisfy applicable state and federal agencies. These sites would also require that access easements for monitoring be maintained.

- **Indirect.** There would be a long-term beneficial impact because the remediation process would eliminate any potential for contamination to off-site and affect adjacent properties.

5.3.10 Permits and Regulatory Authorizations

Encumbered Disposal Alternative

- **Direct.** With the ED Alternative, existing permits would be transferred to the new subsequent owners when feasible. If the existing permits could not be transferred, the new subsequent owners would be responsible for obtaining a new permit. Investigation and potential remediation of contaminated sites would continue until properly closed under current permits and regulatory authorizations. FMC would potentially no longer be an air emission synthetic minor source. Therefore, Alabama DEM Administrative Code 335-3-15.02-10 is not applicable and compliance documentation would not be required. Therefore, no impacts would be expected.
- **Indirect.** No indirect impacts would be expected, as a result of implementing the ED Alternative.

Unencumbered Disposal Alternative

- **Direct.** Existing permits and regulatory authorizations which cannot be transferred, would be replaced under the UD Alternative and could result in an adverse impact on reuse. Individual parcels would be responsible for arranging their own utility services with the new utility providers or, in some cases, perhaps providing their own services for water and wastewater for example. Any new water supply sources or sewage treatment services would require associated permits. The result could be an increase in the number of individual permits and permit holders.
- **Indirect.** Substantially increasing the number of discharge permits would make enforcement more difficult. Unauthorized discharges could become more common resulting in an adverse impact to the environment.

5.3.11 Biological Resources

Under the ED Alternative, a range of options exist for UXO removal. All UXO may be left in place, or varying amounts may be removed (see subsection 5.3.8). Unless otherwise noted, the following discussion of expected impacts is based on little to no UXO removal in the majority of the 11,000-acre Passive Recreation Area (Area 2). The actual extent of UXO removal for ED Alternative will be determined in the EE/CA. The discussion of expected impacts for the UD Alternative has assumed all UXO will be removed.

The Army currently manages the biological and natural resources of FMC as federal property under a wide range of federal laws, executive orders, and Army regulations and guidelines. Many of these policies require positive management actions which benefit the biological resources at FMC. The transfer from Army to private ownership could result in the overall reduction of wildlife management activities at FMC thereby resulting in adverse impacts to the biota of the area. The extent of these adverse impacts will be directly related to the extent of wildlife management activities undertaken by the future owners.

5.3.11.1 Fish and Wildlife

Encumbered Disposal Alternative

- **Direct.** No direct impacts would be expected based upon implementation of the ED Alternative.
- **Indirect.** If the ED Alternative is implemented, long-term beneficial impacts would occur for fish and wildlife resources. NTMB and aquatic species in particular would benefit from the implementation of this alternative. Leaving the UXO in place and placing permanent restrictions on development and/or other uses that required soil disturbances would prevent destruction of wildlife habitat, soil erosion, and forest fragmentation in areas that contain UXO (See Figures 4-12 and 4-13).

Unencumbered Disposal Alternative

- **Direct.** Removal of UXO in the steep, rocky, and rough mountain terrain, as well as other locations throughout FMC, would result in soil erosion that would impact water quality and aquatic species downstream of FMC boundaries. Short-term adverse impacts would occur to NTMB due to noise, dust, and other disturbances caused during removal of UXO that could interfere with feeding and nesting.
- **Indirect.** Long-term significant adverse impacts would occur to NTMB due to decrease in forest interior areas, forest fragmentation, and loss of mature forest and savanna habitat. Short-term significant adverse impacts would occur to aquatic species due to soil erosion. The increased turbidity and oxygen demand would be expected to cause moderate to high mortality of sensitive aquatic species. Long-term adverse impacts would also occur to aquatic species due to changes in watershed and stream characteristics such as deposition of silt and increases in stream temperatures due to vegetation removal.

5.3.11.2 Vegetation and Plant Resources

Encumbered Disposal Alternative

- **Direct.** It is anticipated that under the ED Alternative, construction and UXO clearance activities would be primarily confined to Area 1 (Redevelopment Area), an area that is already built up and has limited natural plant communities. UXO clearance and other soil and vegetative disturbing activities would be minimal in the Passive Recreation Area (Area 2). Consequently limited direct impacts would be expected, if the ED Alternative is implemented.
- **Indirect.** Long-term beneficial impacts would occur within the Passive Recreation Area (Area 2), if the ED Alternative is implemented. Leaving the UXO in place and placing permanent restrictions on development and/or other uses that reduce vegetation removal and soil disturbances would help to prevent forest fragmentation, spread of exotic species, removal of native vegetation, and silting of streams and wetlands. The majority of the MLP ecosystem would remain intact.

Unencumbered Disposal Alternative

- **Direct.** Long-term significant adverse impacts, particularly to the plant resources in the Passive Recreation Area (Area 2), would occur, if the UD Alternative is implemented. Excavation and other UXO removal activities would destroy MLP communities and native vegetation. Range activities that used tracers, flares, and exploding munitions have caused wildfires. Many of the areas that contain and/or are adjacent to UXO impacted areas have been exposed to re-occurring wildfires. The MLP communities often occur in current or historic range impact areas; consequently activities associated with the removal of UXO would result in a reduction in MLP communities. FMC contains the only known naturally reproducing landscape example of the MLP ecotype at one location (Hilton, 1996). If UXO removal were extensive, there could be a reduction in the MLP gene pool as both overstory and understory (seedlings and saplings) MLP were destroyed by vegetation removal and soil excavation.

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- **Indirect.** Long-term significant adverse impacts would occur, particularly to the plant resources in the Passive Recreation Area (Area 2), if the UD Alternative is implemented. Clearing ranges of UXO would require the removal of the overstory. Leaf litter, canopy structure, shading, and fuel loads characteristics, related to tree removal, would change. Removal of native vegetation, forest fragmentation, and soil disturbance would create conditions that would be favorable for increases in exotic plant populations to occur, plants such as kudzu, privet, and Japanese honeysuckle would compete with native vegetation. Overall diversity of native vegetation (including MLP communities, see subsection 5.3.11.5) would be likely to decrease. The degradation of the MLP would also be expected to adversely impact NTMB's via forest destruction and fragmentation. Forest fragmentation and soil erosion would also be expected to increase, further negatively impacting the biota of the area. Reestablishment of native communities destroyed by UXO removal, if possible, would be long-term and would require intensive management. Reestablishment of the MLP ecosystem to pre-UXO removal conditions would be difficult with moderate removal of UXO and highly unlikely with extensive removal of UXO.

5.3.11.3 Wetlands

Encumbered Disposal Alternative

- **Direct.** No direct impacts would be expected to Area 2 wetlands, if the ED Alternative is implemented, since minimal development is planned for this area. Within Area 1, impacts to wetlands could occur in association with remedial action activities (e.g. Landfill 3 remediation) and with UXO removal activities.
- **Indirect.** Long-term beneficial impacts could occur, if the ED Alternative is implemented. Leaving the UXO in place, particularly in Area 2, and placing permanent restrictions on development could prevent clearing, dredging and filling within, or adjacent to wetlands.

Unencumbered Disposal Alternative

- **Direct.** Adverse impacts may occur, if the UD Alternative is implemented. Impacts to wetlands containing UXO would be significant as removal activities, within the total disposal area, may result in the dredging or excavation of these areas (at this time it is not known if UXO is present within wetland areas).
- **Indirect.** Long-term adverse or significant adverse impacts could occur, if the UD Alternative is implemented. Clearing of vegetation and excavation of soil to remove UXO, throughout the total disposal area, would increase sediment loading to wetlands. Excavation of UXO in the mountain slopes could alter the area recharge and hydrology, thereby adversely impacting the mountain seeps (wetlands).

5.3.11.4 Federal Threatened and Endangered Species

Encumbered Disposal Alternative

- **Direct.** No adverse effects would be expected, if the ED Alternative is implemented. Pursuant to Section 7 of the Endangered Species Act (ESA), FMC is currently conducting informal consultations with the USFWS to identify any measures that might be required to avoid any adverse effects to the gray bat. Based upon the implementation of PDFs included in the Biological Assessment (BA) prepared by the Army in consultation with the USFWS, no adverse effects to the gray bat are expected.

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- **Indirect.** Long-term beneficial impacts would occur, if the ED Alternative is implemented. Leaving the UXO in place and placing permanent restrictions on development and/or other uses that required vegetation removal along riparian areas and soil disturbances would prevent destruction or degradation of habitat (and potentially improve the habitat) that is used by the gray bat.

Unencumbered Disposal Alternative

- **Direct.** Long-term adverse effects could occur, if the UD Alternative is implemented. The loss of protective management measures, currently provided as a result of current FMC management policies, would directly impact the gray bat at FMC. A BA was prepared to identify potential impacts and PDFs. The implementation of these PDFs is important for the protection of the gray bat at FMC.
- **Indirect.** Long-term adverse effects could occur. It is unlikely that the UD Alternative could be fully implemented without removing vegetation along riparian corridors used by the gray bat. Vegetation removal and soil excavation in the stream's watershed could also cause adverse impacts by impacting water quality and reducing aquatic insects that the gray bat feeds upon. It is likely that implementation of the UD Alternative would require formal consultation with the USFWS.

5.3.11.5 Other Species of Concern

Encumbered Disposal Alternative

- **Direct.** No direct impacts would be expected, within Area 2, if the ED Alternative is implemented since minimal activities associated with disposal (e.g. hazardous waste remediation and UXO removal) are anticipated in this area. Within Area 1, impacts would be limited to a few areas (e.g. Reynolds Hill Turkey Oak special interest natural area (SINA) and scattered MLP sites) located in the southwestern portions of FMC that are located within the fringes of Area 1 and maybe subject to disposal related activities.
- **Indirect.** Long-term beneficial impacts would occur, if the ED Alternative is implemented. Leaving the UXO in place, in Area 2, and placing restrictions on development and/or other uses that required soil disturbances would ensure that the majority of the forest block at FMC would remain intact (see Figures 4-12 and 4-13), would prevent destruction or degradation of habitats that either contain, are suitable habitat for, or serve as buffers for WFO, three-flowered hawthorn, and other state ranked species.

Unencumbered Disposal Alternative

- **Direct.** Long-term significant adverse impacts would occur, particularly in Area 2, if the UD Alternative is implemented. Soil excavation and other UXO removal activities, throughout the entire disposal area, would destroy actual populations, suitable habitat, and/or buffer areas for state ranked plant populations. Range activities that used flares and exploding munitions have caused wildfires that approximated natural fire regimes. For this reason, many of the areas that contain UXO also contain the best examples of MLP communities. High quality and old growth MLP communities have been identified as Special Interest Natural Areas (SINA) at FMC. Clearing these ranges of UXO would require the removal of MLP communities. State ranked herbaceous understory plants, such as sky blue aster, pale coneflower, eastern purple coneflower, and Fraser's loosestrife that are fire adapted or need an open canopy often persist in range impact areas also. It is unlikely that these communities could be recreated after complete removal of vegetation and excavation of the soil. Reestablishment of the MLP ecosystem to pre-UXO removal conditions would be difficult with moderate removal of UXO and highly unlikely with extensive removal of UXO.
- **Indirect.** Long-term significant adverse impacts, particularly in Area 2, would occur, if the UD Alternative is implemented. Excavation of soil, during UXO removal, in the watersheds containing seeps (e.g. Marcheta Hill Orchid Seep, Bains Gap Seep, etc.) could alter hydrology and impact the

WFO and other species endemic to these SINAs. Fragmentation of the forest block at FMC would alter the forest ecosystem. The ecological importance of the MLP ecosystem is based on its unfragmented condition, large size, lack of exotic species. Fragmentation could allow an increase in exotic plants and reduce the effective size of the ecosystem.

5.3.11.6 Integrated Natural Resources Management Provisions

Encumbered Disposal Alternative

- **Direct.** No direct impacts are expected, if the ED Alternative is implemented. The natural resources at FMC would not be significantly altered before being transferred to another organization. Existing natural resource programs and management plans developed by the Army would be applicable to and usable by the new owner(s).
- **Indirect.** Minor short-term adverse impacts could occur during the transition period, if the ED Alternative is implemented. The receiving organization would have to become familiar with the installation, location of threatened and endangered species locations, firebreaks and roads, local community, etc. Inefficiencies and minor management mistakes would be expected for a short period after obtaining a new, relatively unaccessible 10,000 to 12,000 acre ecosystem.

Unencumbered Disposal Alternative

- **Direct.** Short-term significant adverse impacts would be expected if the UD Alternative is implemented. A shift in priorities would occur. Erosion control projects would have to significantly increase after UXO removal. Exotic plant control and reforestation projects would need to be implemented. Funding and manpower would be shifted from management of threatened and endangered species, SINA, MLP communities, and state ranked species to erosion control and revegetation of disturbed areas. Long-term adverse impacts would also be expected.
- **Indirect.** Long-term beneficial impacts to hunting programs could occur, if the UD Alternative is implemented. However, it would require several years after UXO removal, for sufficient vegetation and animals to recolonize the area to support hunting activities. The creation of grassland, forbland, shrubland, and other early successional habitats could benefit populations of game species such as rabbits, deer, turkey, and northern bobwhite.

5.3.12 Cultural Resources

Encumbered Disposal Alternative

- **Direct.** Following the completion of two ongoing cultural resources investigation reports, the archaeological survey of the FMC BRAC parcels will be complete. Phase II site evaluations are scheduled to begin in the summer of 1998. Following the completion of those studies Section 106 and 110 requirements for the inventory of significant archaeological sites for the BRAC parcels will be complete. Minor beneficial effects would be anticipated, if the ED Alternative is implemented. Application of the historical resources encumbrance (covenants) would result in a beneficial effect on cultural resources because transfer of property would have deed restrictions requiring future owners to protect NRHP eligible cultural resources. The covenants will describe processes for consulting with the State Historic Preservation Officer (SHPO) to arrive at mutually agreeable and appropriate measures for either protecting the properties or mitigating the adverse effects of a proposed undertaking.
- **Indirect.** Minor adverse effects would be anticipated if the ED Alternative is implemented. The new owners may in the future seek to lessen or remove the preservation deed restrictions from NRHP eligible properties, resulting in degradation or loss of these properties. If the properties cannot be preserved intact, the preservation deed restriction would require the new owner(s) to consult with the

Alabama SHPO to undertake recordation of the properties, in accordance with the Secretary of the Interior's standards for recordation and any applicable state standards. Such recordation would mitigate any potentially adverse effects to a minor level.

Unencumbered Disposal Alternative

- **Direct.** Long-term minor adverse effects would be expected. FMC NRHP eligible properties would be adversely effected by the withdrawal of federal protection. If FMC historic properties are disposed of without preservation covenants, the Army, Alabama SHPO and the Advisory Council on Historic Preservation (ACHP) will consult, in accordance with Section 106 of the National Historic Preservation Act (NHPA), to determine appropriate measures for treating the loss of these properties. Measures carried out as a result of these consultations would mitigate for the loss or alteration of these historic properties.
- **Indirect.** Long-term minor adverse effects would be associated with the potential degradation or loss of these FMC historic properties under the unencumbered alternative. As a result, people living near FMC would lose these components of their heritage. The adverse effects of the undertaking would be reduced to a minor level by implementing appropriate mitigation measures, which would be determined through Section 106 consultations between the Army, Alabama SHPO, and the ACHP.

5.3.13 Sociological Resources

Encumbered Disposal Alternative

- **Direct.** Short-term minor beneficial impacts to sociological resources would be expected as predisposal activities, such as infrastructure maintenance, security operations, and environmental remediation activities would result in job creation and spending in the local economy. However, such activities would have little or no impact on local housing, schools and public services. There would be no negative impact on environmental justice (minority and low-income populations), social service or other programs.
- **Indirect.** No indirect impacts to sociological resources would be expected, if the ED Alternative is implemented.

Unencumbered Disposal Alternative

- **Direct.** Long-term beneficial and short-term adverse impacts would be expected, if the UD Alternative is implemented. Removal of certain encumbrances could enhance the long-term economic value and development potential of the property. However, transfer of initially unencumbered property could result in more rapid property development and associated increases in population which could have adverse short-term impacts on local housing and public service resources. No negative impacts on environmental justice, social service and other programs would be expected.
- **Indirect.** No indirect impacts to sociological resources would be expected, if the UD Alternative is implemented.

5.3.14 Economic Development

Encumbered Disposal Alternative

- **Direct.** Long-term beneficial and adverse impacts to economic development would be expected, if the ED Alternative is implemented. The ED Alternative would allow development to occur earlier, which would benefit the local economy in the form of employment, income, business sales and tax revenues. However, certain encumbrances (i.e. environmental remediation areas, UXO removal / UXO land use restrictions, utilities interdependencies, wetlands) could prohibit certain land uses, decrease development potential, and reduce the desirability of the parcels for development, therein adversely impacting the above economic benefits from reuse of the property.
- **Indirect.** Short-term minor beneficial impacts would be expected, if the ED Alternative is implemented, as employment and income generated by predisposal activities could generate indirect employment in the local economy.

Unencumbered Disposal Alternative

- **Direct.** Short-and long-term beneficial and adverse impacts would be expected, if the UD Alternative is implemented. The additional time required for removal of encumbrances would cause a delay in property transfer. This would result in a subsequent delay in reuse and economic benefits in the form of employment, income, business sales and tax revenues. Additionally, the lack of inplace utility systems will detract from the ability to redevelop the area. However, upon removal of development encumbrances, the property could be available for a broader range of uses which could ultimately offer greater economic benefits to the local economy.
- **Indirect.** Long-term beneficial impacts would be expected as removal of encumbrances would result in indirect employment, income and business sales as a result of the initial economic development activity.

5.3.15 Quality of Life

Encumbered Disposal Alternative

- **Direct.** No direct impacts on quality of life would be expected, if the ED Alternative is implemented.
- **Indirect.** No indirect impacts on quality of life would be expected, if the ED Alternative is implemented.

Unencumbered Disposal Alternative

- **Direct.** No direct impacts on quality of life would be expected, if the UD Alternative is implemented.
- **Indirect.** No indirect impacts on quality of life would be expected, if the UD Alternative is implemented.

5.3.16 Installation Agreements

Encumbered Disposal Alternative

- **Direct.** No direct impacts on installation agreements would be expected, if the ED Alternative is implemented.
- **Indirect.** Minor adverse impacts would be expected, if the ED Alternative is implemented. The remedial activities encumbrances would necessitate the Army's maintenance of support agreements with local fire departments and emergency medical care providers to respond to emergencies concerning hazardous waste site remediation at the installation. These impacts would be economic in nature.

Unencumbered Disposal Alternative

- **Direct.** Minor adverse impacts would be expected, if the UD Alternative is implemented.
- **Indirect.** Completion of remedial actions prior to disposal would eliminate the need for continued agreements with local fire departments and emergency medical care providers.

5.3.17 Preferred Disposal Alternative

Based upon a review of the impacts described in the preceding subsections, it is concluded that implementation of the UD Alternative is not reasonable based upon the anticipated adverse environmental impacts and the interests of the Army. Therefore, implementation of the ED Alternative is the Army's Preferred Action. This action will result in disposal actions that are timely, support Army requirements, and are compatible with the FMDC Reuse Plan.

Medium Intensity Reuse Alternative

- **Direct.** Under this alternative, adverse impacts would occur as a result of more intense development of the disposal area relative to baseline conditions. Total built floor space would increase to approximately 7.3 million square feet with an average employee density of 650 square feet/employee. Other impacts would be similar to those under MHIR Alternative, but of a lesser magnitude.
- **Indirect.** Indirect impacts associated with implementing this alternative would be similar to those under the MHIR Alternative.

Medium-Low Intensity Reuse Alternative

- **Direct.** No direct adverse impacts would occur, as a result of implementing the MLIR Alternative, as the amount of built floor space would increase by only approximately 335,000 square feet over baseline conditions. Total built floor space would increase to approximately 6.3 million square feet with an average employee density of 800 square feet/employee. Some currently available open areas would be developed, but at a low intensity.
- **Indirect.** No indirect impacts to land use would be expected from implementation of the MLIR Alternative.

5.4.3 Air Quality

As discussed in subsection 4.3, the region including FMC is currently an attainment area for established National Ambient Air Quality Standards (NAAQS) air pollutants. All air emission sources must comply with USEPA Clean Air Act and ADEM regulations regardless if the source is federally, publicly, or privately owned.

New industrial sources would likely increase air emissions in the Air Quality Control Region. Because no specific industrial use proposals have been identified, it is not possible to reasonably estimate the quantities of these emissions, nor predict the ambient air impacts. It is unlikely that there would be any significant adverse impacts on air quality (NAAQS exceedances) as a result of these new activities because the operators of any new emission sources would be required to comply with all applicable Federal and state air quality regulations, including prevention of significant deterioration (PSD) regulations. These regulations include a requirement to obtain applicable permits that possibly specify emission limits and control technology. These regulations are designed to be protective of the environment and are meant to prevent an attainment area becoming a nonattainment area.

Activities which can reasonably be estimated for the Disposal and Reuse of the Fort McClellan area include mobile sources, fugitive particulate matter from construction, and construction equipment emissions. Appendix G contains the detailed air emissions calculations along with the assumptions.

It should be noted that the NAAQS for particulate matter and ozone are being revised (as previously discussed in subsection 4.3). The proposal for particulate matter includes adding a category of 2.5 microns or less (PM_{2.5}) to the current category of 10 microns or less (PM₁₀). On July 16, 1997 USEPA administrator Carol M. Browner announced the revised standards for ozone and particulate matter. President Bill Clinton, also on July 16, 1997, signed a memorandum approving the issuance of the new air quality standards and directing the USEPA to complete their rulemaking by December 31, 1998. The President did, however, make some slight modifications to the revised standards and added a transitional period for implementing the standards. The new standards will not require local controls until 2004 for ozone and 2005 for particulate matter, with no compliance determinations until 2007 and 2008, respectively, and with possible extensions. Because the new standard would regulate fine particulates for the first time, USEPA will allow five years to build a nationwide monitoring network, and to gather and analyze the data needed to designate areas and develop implementation plans.

A preliminary analysis conducted by USEPA indicates that Calhoun County will remain an attainment area for ozone and particulate matter with the revised standards, although there is uncertainty in this preliminary analysis. EPA's preliminary analysis was based on existing ambient air monitoring data, if available, and does not estimate the impacts of additional air emission sources.

Medium-High Intensity Reuse Alternative

- **Direct.** Implementation of the MHIR Alternative would be expected to add various emission sources associated with industrial operations and construction activity. These emissions would replace Army activities that previously included sources such as boilers, generators, paint spray booths, fuel storage and dispensing, degreasing, and other miscellaneous sources. It is anticipated that there would be an overall net increase in emissions. Prescribed burning would be reduced by approximately 165 acres per year (see Appendix G).

Once the reuse areas are occupied by the various residential, commercial, and industrial tenants, an increase in vehicle traffic would generate additional mobile source emissions in the region. The anticipated change in vehicle emissions was calculated as the primary indicator of air quality impacts resulting from the land reuse because there are no specific industrial use proposals at this time. The analysis focused on the projected traffic, and subsequent emissions, for the region. The results of the emission modeling define the changes as indicated by the vehicle activity on installation roadways as predicted for MHIR, MIR, and MLIR alternatives. The emissions modeling indicates that under the MHIR Alternative (as well as the MIR and MLIR alternatives), a significant adverse impact will result from the increased levels of carbon monoxide (CO) and nitrogen oxides (NOx) directly associated with the emissions from the increased traffic volume, which is estimated to increase approximately 200 percent (see Table 5.3). The adverse impacts to air quality are based upon the projected traffic increase associated with redevelopment. Improvements in the road system envisioned in the FMDC reuse plan may potentially serve to lessen the projected impacts on air quality (see subsection 5.6.3).

Mobile source emissions were calculated using the USEPA approved Mobile 5b computer model which generates emission factors in grams per mile. Mobile 5b will estimate emission factors for three parameters: carbon monoxide (CO), nitrogen oxide (NOx), and volatile organic compounds (VOCs). These emission factors are then multiplied by the vehicle miles traveled to obtain overall air emissions. Vehicle miles traveled were determined based on the average daily trips. Although a mobile source emissions inventory has not been conducted at FMC, the baseline number of trips per day established was 29,375 for the MHIR. Implementation of this alternative is predicted to increase the number of trips per day to 87,750, or an increase of 58,375 trips per day over baseline conditions. The estimated increase in mobile source emissions is provided in Table 5.1. The assumptions and detailed calculations for determining mobile source emissions are provided in Appendix G.

Construction activities not only include the physical construction of the structure, but also the site development. Particulate matter is emitted during construction activities not only as a result from earth moving equipment and unpaved road emissions, but also with the actual construction of structures. Emissions can be associated with other construction activities such as land clearing, drilling and blasting, ground excavation, and cut and fill operations. Dust emissions can vary from day to day varying on the type of operations, level of activity, and meteorological conditions. Any potential air impacts from construction activities are considered to be short-term because the construction is short duration. Construction activities would also create temporary sources of vehicle/equipment exhaust emissions. Both the dust emissions and construction equipment exhaust emissions associated with construction are temporary and primarily confined to the immediate construction area.

5.4 REUSE ALTERNATIVES

5.4.1 Introduction

Three reuse alternatives have been evaluated in this EIS for anticipated environmental consequences. These three alternatives are referenced as Medium Low Intensity Reuse (MLIR) Alternative, Medium Intensity Reuse (MIR) Alternative, and Medium High Intensity Reuse (MHIR) Alternative. As noted in subsection 3.4, these reuse alternatives do not attempt to predict the exact nature or pattern of reuse activities that will ultimately occur at FMC. The alternatives are useful in identifying likely activities and the range of associated impacts that would be expected to occur under various levels of reuse intensity.

Subsections 5.4.2 through 5.4.16 identify the environmental consequences of these reuse alternatives. The reuse alternatives are evaluated based on the assumption that the Army would implement its preferred alternative, encumbered disposal. Reuse of the FMC excess area (approximately 17,360 acres), is proposed to involve multiple uses, as documented in the FMDC Plan. Much of the eastern one-half of FMC will remain open space whereas the western portions, including the existing cantonment area, will be reused for a variety of uses including: residential, industrial, retirement, retreat, commercial, mixed-use, retail, recreational, and open space.

As detailed in subsection 3.4.4, the three reuse alternatives are based upon the FMDC's Preferred Land Use Plan. Reuse of former FMC lands is not an Army action, but is a reasonably foreseeable future action of others; consequently, the Army does not select a preferred reuse alternative. Selection of a preferred reuse development plan will be made by the FMDC in conjunction with the local Calhoun County community. It is anticipated that FMDC would prefer to implement the MHIR Alternative, as this alternative encompasses many of the same elements and intensities as the FMDC's Preferred Land Use Plan. Nevertheless, the EIS provides the Army Decision Maker a range of reuse alternatives and their associated environmental effects, to assist in the review of potential encumbrances the Army may desire to place on future reuse in order to meet regulatory requirements, and to protect human health and the environment. In the following subsections, the direct and indirect impacts of the three reuse (MHIR, MIR, and MLIR) alternatives are presented. Full build-out of any of the implementation alternatives could occur over a 20-year time frame.

5.4.2 Land Use

Medium High Intensity Reuse Alternative

- **Direct.** Under the MHIR Alternative, adverse impacts to land use can be expected as the disposal area would be developed more intensely than under baseline conditions. The total square footage of built floor space would increase to approximately 9 million square feet (including residential) from the approximately 6 million square feet currently existing. A concurrent increase in floor area ratio (FAR) would also occur. Additionally, employee density would increase to approximately 500 square feet/employee from the existing 700 square feet/employee, allowing more people to work within the same area. Some areas currently left in open space or very low intensity uses would be converted to more intense land use types, such as residential, commercial and industrial uses. Proposed land use under the MHIR Alternative and other reuse alternatives is compatible with adjacent zoning in the City of Anniston.
- **Indirect.** Development of the reuse area, as specified in this reuse alternative, could adversely affect potential land use and development elsewhere within the region. Larger scale residential, commercial and industrial construction in the reuse area could result in postponing or cancelling new development elsewhere, and/or the relocation of existing businesses to the reuse area.

Particulate matter will be emitted into the air during construction activities although particulate from construction is generally large in diameter and is not expected to travel very far because of the particle size. The quantity of emissions is proportional to the area of land being developed and the level of construction activity. Dust emissions have a temporary impact on local air quality because construction is usually considered a nonrecurring activity. Table 5.1 summarizes the emissions associated with construction activities. The assumptions and detailed calculations for determining construction emissions are provided in Appendix G.

The analysis assumes 2,818 acres of disturbed area for MHIR Alternative. Construction related emissions would not be expected to create any significant ambient air quality impacts due to the relatively small quantities of these emissions and the dispersed locations of the construction sites.

Occasional emissions of hazardous air pollutants could also occur under this scenario depending on the type of industrial reuse. Examples of common industrial products classified as hazardous air pollutants include certain pesticides, chlorine, several types of solvents, and a variety of petroleum products. These chemicals, as well as several others that are often used during industrial operations, can be harmful to human health and the environment if released at excessive concentrations. It is difficult to predict the extent to which chemicals would be used under reuse without knowing the types of industries expected to locate in the area. The use of chemicals is highly regulated, however, controlled emissions associated with MHIR Alternative would not be expected to significantly affect air quality.

- **Indirect.** There is the potential for increased ground level ozone formation due to the significant increase in mobile source emissions. Ozone formation is a complex, photochemical set of reactions and there is not a reliable method to predict local point source impacts to ozone formation. Other indirect impacts include the potential for visible particulate matter down wind of the construction activities.

Medium Intensity Reuse Alternative

- **Direct.** This plan has the same amount of land in comparison to MHIR Alternative, but the intensity for reuse is reduced. As a result, the quantity of new stationary air sources to relocate in the area is reduced. The quantity of overall air emissions associated with this alternative would be slightly less than MHIR Alternative. The emissions modeling indicates that under the MIR Alternative, a significant adverse impact will result from the increased levels of carbon monoxide (CO) and nitrogen oxides (NOx) directly associated with the emissions from the increased traffic volume, which is estimated to increase approximately 100 percent (see Table 5.3). Considerations relevant to MHIR Alternative would apply but at a reduced intensity. Prescribed burning would be reduced by approximately 165 acres per year (see Appendix G). Construction emissions would also be reduced because the intensity of development is reduced compared to MHIR Alternative. The average daily trips are approximately 68% of MHIR Alternative, primarily as a result of the decreased intensity for development. Although a mobile source emissions inventory has not been conducted at FMC, the baseline number of trips per day established was 29,375 for the MIR. Implementation of this alternative is predicted to increase the number of trips per day to 59,800, or an increase of 30,425 trips per day over baseline conditions. Table 5.1 presents the estimated increase in vehicle emissions that would result under the MIR Alternative. These estimates are based on fewer daily trips compared to MHIR Alternative.
- **Indirect.** The indirect impacts associated with this land use plan would be similar to those described under MHIR Alternative, but at a reduced level. Ozone formation would be reduced primarily due to less vehicle traffic.

Medium-Low Intensity Reuse Alternative

- Direct.** This plan has the same amount of land in comparison to MHIR and MIR alternatives, but the intensity for reuse is reduced. As a result, the quantity of new stationary air sources to relocate in the area is reduced. The quantity of overall air emissions associated with this alternative would be less than both the MHIR and MIR alternative plans. The emissions modeling indicates that under the MLIR Alternative, a significant adverse impact will result from the increased levels of nitrogen oxides (NO_x), directly associated with the emissions from the increased traffic volume, which is estimated to increase approximately 50 percent (see Table 5.3). Considerations relevant to the other plans would apply but at a reduced intensity. There would not be any prescribed burning associated with this reuse plan (see Appendix G). Construction emissions would also be reduced because the intensity of development is reduced. The average daily trips are approximately 50% of MHIR Alternative. Although a mobile source emissions inventory has not been conducted at FMC, the baseline number of trips per day established was 29,375 for the MLIR. Implementation of this alternative is predicted to increase the number of trips per day to 44,150, or an increase of 14,775 trips per day over baseline conditions. Table 5.1 presents the estimated increase in vehicle emissions that would result under MLIR Alternative. These estimates are based on fewer daily trips compared to the MHIR Alternative.

Table 5.1 Estimated Increase in Air Emissions for all Reuse Alternatives at Fort McClellan

Source	Criteria Pollutants (tons per year)				
	PM-10	SO _x	CO	NO _x	VOC
Medium-High Intensity Reuse Alternative					
Mobile Sources ¹	NC	NC	2,878	228	282
Construction Dust	8.5	NA	NA	NA	NA
Construction Equipment	7.5	9.6	37.6	85.9	9.0
Total Increase	16.0	9.6	2,915.6	313.9	291.0
Medium Intensity Reuse Alternative					
Mobile Sources ¹	NC	NC	1,500	119	147
Construction Dust	8.5	NA	NA	NA	NA
Construction Equipment	6.9	8.8	34.8	79.1	8.3
Total Increase	15.4	8.8	1,534.8	198.1	155.3
Medium-Low Intensity Reuse Alternative					
Mobile Sources ¹	NC	NC	728	58	71
Construction Dust	8.5	NA	NA	NA	NA
Construction Equipment	6.5	8.4	33.1	75.2	7.9
Total Increase	15.0	8.4	761.1	133.2	78.9

Notes: 1) Mobile source calculations are based on USEPA Mobile 5b model using 19.6 miles per hour and vehicular traffic based upon proposed land use development and associated trips (See Appendix G for detailed calculations).

- 2) Mobile source baseline data is presented in subsection 4.3.2. Construction dust and equipment increases are based upon additional anticipated construction associated with redevelopment activities.

PM-10 = Particulate Matter less than or equal to 10 micrometers in diameter

SO_x = Sulfur Oxides

NO_x = Nitrogen Oxides

VOC = Volatile Organic Compound

NA = Not Applicable

NC = No Change

Source: Parsons Engineering Science, Inc.

- Indirect.** The indirect impacts associated with this land use plan would be similar to those described

under MIR Alternative, but at a reduced level. Ozone formation would be reduced primarily due to less vehicle traffic.

5.4.4 Noise

Medium-High Intensity Reuse Alternative

- **Direct.** Both beneficial and adverse impacts are expected from implementation of the MHIR Alternative. Overall, beneficial impacts are expected as there will be a reduction in baseline noise levels associated with the cessation of training activities at FMC Main Post. However, minor adverse impacts would be expected, associated with the new industrial activities that would locate in the planned Industrial Areas. New industries could use equipment that would produce noise, thereby affecting adjacent areas. This would primarily be of concern to residents of the proposed residential and retirement areas. The potential for localized noise problems would depend on what industries would actually locate in the area and the distance between these noise sources and the nearest housing. The open spaces proposed for the area and the distance between the industrial and residential areas would be expected to minimize the potential for noise-related land use compatibility problems.
- **Indirect.** Minor indirect adverse impacts would be expected from implementation of the MHIR Alternative. Short-term adverse impacts on the noise environment would be created as a result of construction of new buildings/roads and the demolition of some existing buildings/roads. Construction noise is not considered a significant impact, however, because it would be localized and temporary, and would most likely occur only during daylight hours.

Traffic generated by reuse activities (over 7.1 million square feet of built non-residential space) and travel by employee population, estimated to exceed 13,500 persons would have long-term effects on the noise environment. Noise from traffic would be most noticeable in the vicinity of the proposed parkway, as well as the proposed truck route and existing Highway 21. The parkway buffer area and the establishment of a separate truck route distant from residential areas would be expected to minimize the potential for noise-related land use compatibility problems.

Medium Intensity Reuse Alternative

- **Direct.** Minor direct adverse impacts would be expected from implementation of the MIR Alternative. Use of 5.8 million square feet of built non-residential space and an employee work force of approximate 8,900 persons would pose less potential for noise than MHIR Alternative.
- **Indirect.** Minor indirect adverse impacts would be expected from implementation of the MIR Alternative. The amount of construction or renovation attributable to 8,900 employees would pose less potential for noise than MHIR Alternative.

Medium-Low Intensity Reuse Alternative

- **Direct.** Minor direct adverse impacts would be expected from implementation of the MLIR Alternative. Considerations relevant to MIR would apply to the less intense MLIR Alternative. Use of 4.8 million square feet of built non-residential space and an employee work force of approximately 6,000 persons would pose less potential for noise than MHIR or MIR alternatives.
- **Indirect.** Minor adverse impacts would be expected. Considerations relevant to MIR Alternative would apply to the less intense MLIR Alternative. The amount of construction or renovation attributable to 6,000 employees would pose less potential for noise than MHIR or MIR alternatives.

5.4.5 Water Resources

5.4.5.1 Surface Water

Medium-High Intensity Reuse Alternative

- **Direct.** Implementation of MHIR Alternative would result in a long-term direct adverse impact to surface water. The development of currently undeveloped areas under the reuse plan would increase the amount of area with an impervious surface, associated with new buildings, roads, and parking lots. The development of 924 acres for industrial use will result in a total of 415 acres with an impervious surface (45% of the MHIR Alternative industrial acreage). Retirement, residential and retail land uses will each add 100 or more acres with an impervious surface. The total amount of impervious surface under the MHIR Alternative is approximately 1,009 acres. The impact of the additional impervious surface is to increase the peak surface water flow following storm events. Adverse impacts associated with increased stormwater runoff may be reduced if appropriate and effective new stormwater control systems are installed as part of the redevelopment action.
- **Indirect.** Implementation of MHIR Alternative will result in a long-term indirect adverse impact to surface water. The greater amount of vehicular traffic as well as the large number of parking areas associated with this development will result in a higher potential for contaminants such as oils, fuels and lubricants to be carried off of the roadways and parking lots to surface water. Over 87,000 vehicular trips per day are estimated under this alternative. The contaminants in the runoff could cause a minor adverse impact to water quality of the wetlands that are located within the areas to be developed in the disposal area. The loss of natural or existing vegetation in the areas to be developed will lead to increases in runoff. Filling and clearing of land as well as regrading operation in the wetlands would required Section 404 permits under the Clean Water Act. These permits would outline specific mitigation requirements to protect or replace the wetlands.

Medium Intensity Reuse Alternative

- **Direct.** Implementation of MIR Alternative will result in the same types of impacts described above for MHIR Alternative. The magnitude of the impact will be reduced due to the lower level of intensity of the reuse. The difference in the area with an impervious surface is slightly less than under the MHIR Alternative. As a result, the difference in the direct impact from MHIR Alternative is minimal.
- **Indirect.** The implementation of MIR Alternative will result in a slight long-term indirect adverse impact to surface water. The potential for contaminants to run off of roadways and parking lots and to enter the surface water system will be lower under this scenario than under MHIR Alternative. The lower intensity of the reuse will result in approximately 58,000 vehicular trips per day compared to over 87,000 under MHIR Alternative. The more limited public access to the passive recreation areas would result in a slightly lowered rate of surface water runoff.

Medium-Low Intensity Reuse Alternative

- **Direct.** The area with an impervious surface is less than either the MHIR or MIR alternatives; consequently, the magnitude of the long-term direct adverse impact to surface water related to increased run off will be lower than under either MHIR or MIR alternatives.
- **Indirect.** The potential for a long-term indirect adverse impact identified related to runoff of contaminants from parking lots and roadways will be much lower compared to MHIR Alternative. The estimated number of vehicular trips per day under this scenario is approximately half the number estimated for MHIR Alternative. The adverse, indirect impact of the implementation of this scenario on surface water will be proportionally less. A minor beneficial impact may result from lowered runoff from the passive recreation areas as the areas slowly revert to natural conditions of vegetative cover.

5.4.5.2 Floodplains

Medium-High Intensity Reuse Alternative

- **Direct.** Minor direct long-term adverse impacts will occur to the floodplains as a result of implementing the MHIR Alternative reuse plan. A small portion of the industrial, retail, retirement and residential development planned could occur within the floodplains. This development would require floodproofing, construction of raised buildings, or levees. Extensive development within the floodplains is not expected to occur, any development that does occur will need to adhere to EO 11988 to avoid adverse effects and incompatible development. The magnitude of this impact would be very slight.
- **Indirect.** Minor indirect short-term adverse impacts will occur to the floodplains as a result of implementing the MHIR Alternative. Increased erosion resulting from construction activities could lead to localized sedimentation within the floodplain. Although the impact could be important at any given location, the impact would, in general, be slight.

Medium Intensity Reuse Alternative

- **Direct.** The impacts to floodplains, associated with implementation of the MIR Alternative, would be similar to those described above for MHIR Alternative. The magnitude of the potential impact would be lower than the very slight impact noted for MHIR Alternative.
- **Indirect.** The potential for indirect impacts to floodplains from sedimentation would be insignificant if the MIR Alternative is implemented. Moderate sedimentation would be limited in extent under this alternative.

Medium-Low Intensity Reuse Alternative

- **Direct.** Only an insignificant direct adverse impact to floodplains would be expected if the MLIR Alternative is implemented. Under this alternative, little development within the floodplains would be expected to occur.
- **Indirect.** The potential for indirect impacts to floodplains from sedimentation would be insignificant if the MLIR Alternative is implemented.

5.4.5.3 Groundwater

Medium-High Intensity Reuse Alternative

- **Direct.** Implementation of MHIR Alternative will have a minor long-term adverse impact on groundwater if the MHIR Alternative is implemented. The development of 924 acres for industrial use will result in a total of 415 acres with an impervious surface (45% of the MHIR Alternative industrial acreage). Retirement, residential and retail land uses will each add 100 or more acres with an impervious surface. Under this scenario the total area with an impervious surface will be approximately 1,009 acres. Infiltration of precipitation does not occur with an impervious surface, resulting in a reduction in the amount of recharge to the groundwater system. Recharge to the groundwater system varies widely over the area. The areas most likely to have an impervious surface are in the topographically lower areas that would be expected to be discharge areas rather than recharge areas.
- **Indirect.** Implementation of the MHIR Alternative will have an indirect adverse, long-term impact on groundwater. Some of the runoff from parking lots and roadways constructed to support the development of large quantities of industrial, commercial, office and retail space may infiltrate to groundwater. This runoff may contain trace amounts of lubricants, fuels, antifreeze, deicing salts and other contaminants that could degrade the quality of the groundwater. It is anticipated that over

87,000 vehicular trips a day will be generated under the MHIR Alternative. Tables 5.3 and 5.4 (in subsection 5.4.7.3) contain additional information concerning the calculation of these vehicular trips. The approximately 71,000 vehicle trip net increase in traffic and use of parking lots, over baseline conditions, will increase the potential loading of contaminants to groundwater.

Medium Intensity Reuse Alternative

- **Direct.** Implementation of MIR Alternative will result in similar types of direct long-term impacts on groundwater as described for MHIR Alternative. The only difference will be a slight decrease in the amount of area with an impervious surface. The difference in the magnitude of potential impact associated with implementation of the MHIR Alternative will be minor.
- **Indirect.** Implementation of MIR Alternative will result in the potential for an adverse indirect long-term impact to groundwater. The mechanism for the impact is the same as described for MHIR Alternative. Just under 60,000 vehicular trips is estimated for this scenario compared to over 87,000 under MHIR Alternative. As delineated on Tables 5.3 and 5.4 (in subsection 5.4.7.3) implementation of this alternative will result in an approximately 43,000 vehicle trip net increase over baseline conditions.

Medium-Low Intensity Reuse Alternative

- **Direct.** Implementation of MLIR Alternative will have a slight direct, long-term adverse impact on groundwater. The amount of impervious surface, which limits infiltration of precipitation to groundwater is lower under this scenario compared to either the MHIR Alternative or the MIR Alternative, limiting the magnitude of the impact.
- **Indirect.** The potential indirect long-term adverse impact to groundwater from infiltration of water carrying contaminants that have run off of the roadways and parking lots is minor. The lower potential for an impact is based on the lower number of vehicular trips expected under this reuse intensity. As illustrated on Table 5.3 and 5.4 (subsections 5.4.7.3), implementation of the MLIR Alternative will result in the generation of approximately 27,000 additional vehicle trips when compared to baseline conditions.

5.4.6 Geology

Medium-High Intensity Reuse Alternative

- **Direct.** The implementation of MHIR Alternative will result in both long- and short-term adverse impacts to soil and geology. The implementation of MHIR Alternative would result in the development of residential, industrial and commercial land uses in areas that are currently undeveloped. Approximately 16 percent of the disposal area would be developed for residential and retirement use. Most of this area would be cleared to make way for the development. Some of the area that would be used for this development has been previously developed for other land uses. At least some of the area used for residential development would be in areas not previously developed. Areas with steep slopes and erodible soils would be most susceptible to adverse impacts.

Clearing and grading activities associated with the development activities described above will result in the increased potential for soil erosion as a part of the construction process. The amount of erosion that occurs can be reduced through the use of soil erosion control practices. The greatest impacts of the increased potential for soil erosion will be short-term as long as vegetation is reestablished and maintained in the impacted areas. The minimization of soil erosion and the re-establishment of vegetation in disturbed soils areas is an important consideration. Should redevelopment activities result in the exposure of infertile, highly mineralized soils (e.g. sulfide minerals), revegetation will be difficult and erosion related impacts would increase.

Maintenance of the grounds developed may result in the application of larger amounts of fertilizer and pesticides to lawns and landscaped areas. The fertilizer and pesticides could build up in the soil. This could result in a slight degradation of soil quality.

- **Indirect.** Implementation of MHIR Alternative will also result in an indirect long-term adverse impacts to soil and geology. Runoff from the additional roadways and parking lots associated with the reuse could contain small amounts of petroleum, lubricants and deicing solutions. These constituents could accumulate in soils. The additional runoff generated as a result of the increased area with an impervious surface could cause local erosion and sedimentation. Over the entire disposal area, these impacts are relatively minor. However, the degree of impact will vary with location.

Medium Intensity Reuse Alternative

- **Direct.** Implementation of MIR Alternative will create the same types of long-term and short-term direct impacts to soil and geology as noted in the subsection above. The magnitude of the impact will be reduced based on the lowered intensity of the reuse. With the lowered reuse intensity, it is likely that the reuse will be directed to the more easily developed portions of the subject area. This may result in a lower magnitude of impact.
- **Indirect.** The indirect impacts to soil and geology will be similar to those identified for MHIR Alternative. The magnitude of the impacts will be reduced based on the lower intensity of the reuse. The limited access of the public to the passive recreation areas may lead to a marginally lower rate of soil erosion.

Medium-Low Intensity Reuse Alternative

- **Direct.** Implementation of MLIR Alternative will create only slight direct impacts to soils and geology. The lowered intensity of the reuse will result in lesser impacts. The types of impacts expected would be similar in type to those described for MHIR Alternative, however the magnitude would be reduced.
- **Indirect.** Implementation of MLIR Alternative will create minor indirect, long-term adverse impacts to soils and geology. The types of impacts expected would be similar to those described for MHIR Alternative. However, the reduced intensity of the reuse will result in only minor impacts. Soil erosion in the passive recreation areas may be slightly reduced as the natural vegetative cover slowly reestablishes itself. The magnitude of this change is likely to be minimal.

5.4.7 Infrastructure

5.4.7.1 Utilities Once transfer of the major utilities has occurred in an encumbered condition, the responsibility for maintenance, repairs, and improvements will become the responsibility of the new utility provider. For the purposes of this analysis, it is assumed that the condition and configuration of the utilities at the time of transfer will be as described in subsection 4.7. The steam plants and communication systems will not be affected by the reuse intensity as a result of disposal beyond what has been described in subsection 5.3.7.1.

The major components of the utility system can be evaluated for their capacity to serve the effective population. Effective population (EP) is the population of the installation based on the amount of time each person spends on-post: personnel that live on-post count as one effective population based upon an assumed use of the utility systems for 24 hours per day, while personnel that work on-post but live off-post count as one-third effective population base upon an assumed use of the utility system for only 8 hours per day. The effective population for each reuse intensity is indicated in Table 5.2.

Table 5.2 FMC Effective Population			
Reuse Intensity	Residential Population	Employee Population	Effective Population ¹

MHIR Alternative	3,665	13,989	8,328
MIR Alternative	2,894	8,992	5,892
MLIR Alternative	2,600	6,052	4,618
FMC Baseline Population ²	5,351	4,405	6,819
Notes: 1 Effective population = one residential population + one-third employee population			
2 Residential Population includes 3,160 trainees and students (see Table 4.23)			
Source: Parsons Engineering Science, Inc			

Medium-High Intensity Reuse Alternative

The industrial development north of the existing cantonment area and the retail, retirement community and retreat developments south of the cantonment area would require that utility services be extended beyond areas served by the current utility configuration. Parcels identified for industrial development may require more service capacity given the increased reuse intensity. The anticipated effective population for MHIR Alternative is 8,328.

- **Direct.** Implementation of the MHIR Alternative would result in utility demands which would require additions, expansions and extensions of existing utility systems, thereby resulting in an adverse impact. The alterations will involve reconfiguration of the distribution and collection systems, and adjustments to meet the increased utility demands at some parcels.

Even though parcels within the existing cantonment area have existing utility services in place, re-configuration of these systems and new service connections will be necessary. Parcels planned for development outside the existing cantonment area, are not currently served by utilities and would therefore require construction of new utility distribution and collection systems.

The new utility providers will be responsible for providing the capacity to meet the service demands. The existing 1,500 gallons per minute (gpm) pumps at Summerall and Baltzell Gates and the existing water mains should have adequate capacity to meet any anticipated increased demands. Since the existing underground water storage tank is not in service, additional water storage capacity will likely be necessary for the expanded development.

Additional substations may be necessary in addition to expanding the distribution systems to meet the demands for electricity. Expanding the distribution system is likely all that would be required on site to satisfy the need for additional natural gas. These expansions and extensions should be feasible without causing an adverse impact to the environment.

Sewers would have to be reconfigured, extended and upgraded to provide the capacity anticipated. The wastewater treatment plant's capacity of 2.2 million gallons per day (mgd) should be sufficient to handle the anticipated discharge. Peak flows experienced during rainfall events could be reduced by correcting the infiltration and inflow problems experienced within the collection system at FMC (see subsection 4.7). Depending on the types of industries located on the excess property, the existing wastewater treatment plant may not be adequate to sufficiently treat the new industrial wastewater discharges. If this is the case, the wastewater treatment facilities may have to be expanded or modified.

- **Indirect.** There would be a number of short-term adverse impacts associated with the construction of new utility components. These indirect impacts would include those normally associated with the development process including soil disturbance, erosion, siltation of local surface water resources, loss of plant resources and possible loss of wildlife habitat.

Medium Intensity Reuse Alternative

As described above for MHIR Alternative, previously undeveloped areas are identified for use and portions of the existing cantonment area are identified for more intense reuse. The anticipated effective population for MIR Alternative is 5,892.

- **Direct.** Although the effective population is lower than for MHIR Alternative, similar impact as described above would be expected. Utility demands would require additions, expansions and extensions of existing utility systems resulting in an adverse impact.

The alterations will involve reconfiguration of the distribution and collection systems as described above for the MHIR Alternative. The utility demand would be less than for MHIR Alternative, but additional water storage capacity would still be required.

- **Indirect.** Short-term adverse impacts would be expected as a result of the construction associated with development as described above for MHIR Alternative.

Medium-Low Intensity Reuse Alternative

As described above for MHIR Alternative, previously undeveloped areas are identified for use and portions of the existing cantonment area are identified for more intense reuse. The anticipated effective population for MLIR Alternative is 4,618.

- **Direct.** Although the effective population is lower than for MHIR Alternative, similar impacts as described above would be expected. Utility demands would still require additions, expansions and extensions of existing utility systems resulting in an adverse impact.

The alterations will involve reconfiguration of the distribution and collection systems as described above for MHIR Alternative. The utility demand would be less than for MIR Alternative, but additional water storage capacity would still be required.

- **Indirect.** Short-term adverse impacts would be expected as a result of the construction associated with development as described above for MHIR Alternative.

5.4.7.2 Solid Waste

Medium-High Intensity Reuse Alternative

- **Direct.** The effective population anticipated following implementation of this alternative is similar to the current effective population at FMC. Therefore, the amount of solid waste generated would not be expected to substantially increase, and no adverse impact would be expected. The amount of solid waste generated could increase as a result of the type of industries located on the installation following redevelopment. An increase in the amount of solid waste generated could cause an adverse impact to the environment.
- **Indirect.** An increase in the amount of solid waste generated would be expected to have an adverse impact on the regional waste disposal facilities.

Medium Intensity Reuse Alternative

- **Direct.** Based on the anticipated effective population being less than the current effective population, if this alternative is implemented, the amount of solid waste generated would be expected to decrease. However, if the amount of solid waste generated increased, as a result of the type of industries located on the installation following redevelopment, an increase in the amount of solid waste generated could cause an adverse impact to the environment.
- **Indirect.** If the amount of solid waste generated increases under the MIR Alternative, there would be

an adverse impact on the regional waste disposal facilities.

Medium-Low Intensity Reuse Alternative

- **Direct.** Based on the anticipated effective population being less than the current effective population, if this alternative is implemented, the amount of solid waste generated would be expected to decrease. However, the amount of solid waste generated could increase depending on the type of industries located on the installation following redevelopment. An increase in the amount of solid waste generated could cause an adverse impact to the environment.
- **Indirect.** An increase in the amount of solid waste generated would be expected to have an adverse impact on the regional waste disposal facilities.

5.4.7.3 Transportation System

Additional traffic generated as a result of reuse of the disposal area would impact the local and regional roadway system. Estimated traffic projections under the three alternative reuse alternatives reflect total build-out scenarios, under which expansion of the existing roadway system capacity would be necessary. Table 5.3 summarizes estimated trip generation associated with the three reuse alternatives. Currently, eastern and western by-passes are programmed for construction, which would alleviate the current heavy volume of traffic on State Route 21 and enhance north/south movement of traffic through Anniston and adjacent areas. Both of these by-passes are planned to extend from I-20 northward to US Highway 431 and State Route 21 west of FMC.

Medium-High Intensity Reuse Alternative

- **Direct.** Significant adverse impacts would be expected under this implementation alternative. Table 5.3 summarizes estimated daily trip generation associated with the three reuse alternatives as compared to daily traffic generation under baseline conditions. MHIR Alternative would generate an estimated 87,750 total average daily vehicle trips (ADT) compared to 29,375 under baseline conditions. Under all alternatives it is estimated that 80 percent of the trips would be external, or those which enter or leave the reuse area from/to another destination. The estimated number of external trips would increase by 200 percent over baseline conditions.

Table 5.3 Summary of Trip Generation Estimates by Reuse Alternative ¹

Land Use Type	MHIR Alternative		MIR Alternative		MLIR Alternative	
	Amount of Development	Total Daily Vehicular Trips	Amount of Development	Total Daily Vehicular Trips	Amount of Development	Total Daily Vehicular Trips
Retail	228 acres	27,600	228 acres	18,700	228 acres	14,700
Office	116 acres	14,200	116 acres	7,800	116 acres	4,600
Office, Research & Dvlp.	25 acres	2,000	25 acres	1,600	25 acres	1,100
Residential	515 units	3,600	398 units	2,800	300 units	2,100
Residential (Retirement)	1,060 units	3,700	850 units	3,000	850 units	3,000
Industrial	924 acres	25,000	924 acres	17,200	924 acres	11,900
Education, Training	202 acres	8,700	202 acres	5,300	202 acres	3,800
Active Recreation	771 acres	1,800	771 acres	1,800	771 acres	1,800
Lagarde Park	150 acres	350	150 acres	350	150 acres	350

Expansion						
Yahoo Retreat	350 acres	800	350 acres	800	350 acres	800
Total Trips - Total (E & I)		87,750		59,800		44,150
<i>External Trips</i>		<i>70,200</i>		<i>47,840</i>		<i>35,320</i>
<i>Internal Trips</i> ²		<i>17,550</i>		<i>11,960</i>		<i>8,830</i>
Less Baseline Total Trips		29,375		29,375		29,375
<i>Baseline External Trips</i>		23,500		23,500		23,500
<i>Baseline Internal Trips</i> ²		5,875		5,875		5,875
Net Additional Total Trips ³		58,375		30,425		14,775
Net Additional External Trips		46,700		24,340		11,820
Net Additional Internal Trips		11,675		6,085		2,955
Notes: 1 Trip generation rates are based primarily on average rates from Institute of Transportation Engineers (1991). See Appendix G for detailed calculations.						
2 Trips which occur only within the reuse area and which are assumed to be 20 percent of total trips generated.						
3 Equal to total average daily vehicle trips generated less baseline ADT of 29,375.						
SOURCE: Parsons Engineering Science, 1997						

Table 5.4 summarizes the estimated future daily traffic distribution resulting under each of the three reuse alternatives. Traffic distribution is indicated under both scenarios of “with” and “without” the by-pass improvements. Without the by-pass improvements, the existing traffic volumes on State Route 21 between US Highway 431 and State Route 202 would increase by 60 percent under MHIR. This portion and other segments of State Route 21 are already operating at an E and F level-of-service (LOS). Level-of-service is a qualitative measure used by the highway transportation profession to describe operational conditions of a road in terms of speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience, and safety. Six levels-of-service are defined, ranging from LOS “A”, which represents the best operating conditions, to LOS “F”, which represents the worst operating conditions. A LOS “D” consists of a high density traffic flow with speed and maneuverability restrictions, while a LOS “E” represents unstable traffic flow with the road at or near capacity. However, it is estimated that 50 to 60 percent of the additional traffic volume would be removed from State Route 21 under the “with” by-pass scenario. Thus, substantial highway system improvements in addition to the proposed by-passes would be necessary to accommodate the projected additional traffic associated with MHIR Alternative. Under the “without by-pass” scenario the adverse impacts would be significant and extensive highway improvements would be necessary to accommodate the projected traffic.

- **Indirect.** Some increases in traffic could occur as a result of secondary job generation serving the new reuse development. In addition, safety hazards and accident rates could increase as a result of the magnitude of traffic volume increase.

Medium Intensity Reuse Alternative

- **Direct.** Total traffic generation under MIR Alternative would be approximately one-third less than under MHIR Alternative, but external traffic would still increase by 100 percent above baseline conditions. Thus, some adverse impacts from increased traffic volumes on the adjacent roadway system are expected. Under this alternative, traffic volumes on State Route 21 south of FMC would increase by over 25 percent or more under the “without” by-pass alternative. As with MHIR Alternative, highway improvements would also be necessary under this alternative. Under the “without bypass” scenario impacts would be greater under the MIR Alternative and extensive improvements would be necessary.
- **Indirect.** If this alternative is implemented, the impacts would be the same as under MHIR Alternative, but of lesser magnitude.

Medium-Low Intensity Reuse Alternative

- **Direct.** Total traffic generation would be approximately one-half the volume generated under MHIR, and would be 50 percent above baseline conditions. Considering the current volume of traffic, State Route 21 south of FMC would not be significantly adversely impacted under this alternative as traffic volumes would increase by less than 15 percent under the “without” by-pass scenario and by less than five percent under the “with” by-pass scenario.
- **Indirect.** If this alternative is implemented, the impacts would be of much lesser magnitude than under the MIR and MHIR Alternatives.

Table 5.4 Estimated Distribution of Added External Traffic by Reuse Alternative

Roadway	Existing ADT (1995)	Medium-High Intensity (Added Traffic)		Medium Intensity (Added Traffic)		Medium-Low Intensity (Added Traffic)	
		Without By-Pass Improvement	With By-Pass Improvement	Without By-Pass Improvement	With By-Pass Improvement	Without By-Pass Improvement	With By-Pass Improvement
SR 21, north of Weaver Road	25,859	3,604	3,650	1,928	1,928	956	956
SR 21, Weaver Road to Hwy 431	34,204	5,475	2,554	2,893	1,157	1,435	570
SR 21, Hwy 431 to Hwy 202	43,000	25,552	9,126	10,609	4,822	6,697	2,392
SR 21, south of Hwy 202	38,713	20,077	5,475	10,609	2,893	5,262	1,435
Weaver Road, north of SR 21	8,788	1,825	1,825	964	964	478	478
Hwy 431, west of SR 21	23,686	5,475	9,126	2,893	2,893	1,435	1,435
Hwy 202, west of SR 21	16,774	3,650	1,825	1,928	964	985	478
Eastern By-Pass (Golden Springs)							
North of Coleman Road	11,243		14,601		7,715		3,827
Coleman Road to US Hwy 78	6,253		12,776		6,750		3,348
South of US Hwy 78	NA		12,251		5,786		2,870
South of I-20	NA		3,650		1,928		956

Western By-Pass

Hwy 431 to Hwy 202	NA		5,475		2,893		1,435
South of Hwy 202	NA		3,650		1,928		957

Source: Parsons Engineering Science, 1997.

5.4.8 Ordnance and Explosives

For properties where UXO is a concern, all land transfers will be reviewed by the Department of Defense Explosive Safety Board (DDESB) as required by AR 385-64 (USAEC, 1995b). DDESB approval of UXO removal plans is required for all UXO removal programs specifically undertaken to prepare a property for reuse. Details pertaining to this process are presented in subsections 1.3.9, 2.6.1.2, and 5.3.8.

DOD guidelines for UXO removal include the completion of an Engineering Evaluation and Cost Analysis (EE/CA) prior to the transfer of property. The EE/CA will determine the extent of UXO throughout the disposal area and present recommendations concerning the reuse type's that can be supported within the disposal area and clearance/removal recommendations. The EE/CA process also includes public participation which allows the communities concerns and priorities to be addressed.

The environmental impacts of UXO clearance activities, associated with the reuse of FMC disposal property, will be directly associated with the extent of UXO clearance activities. Therefore, in general terms it is anticipated that the environmental impacts associated with reuse will be highest in the MHIR Alternative and lowest in the MLIR Alternative.

Medium-High Intensity Reuse Alternative

- **Direct.** Under the MHIR alternative, UXO clearance activities will likely be required at locations within the 7,200-acre redevelopment area (Area 1) and the 11,000-acre passive recreation area (Area 2). Removal of the UXO will have impacts including the loss of habitat in the area, and the removal and disturbance of the soil and vegetation.

Within the 7,200-acre redevelopment area (Area 1), UXO clearance may be required for a variety of sites as the MHIR Alternative includes the development of approximately 60 percent (4,320 acres) of the area. Within the redevelopment area are planned developments at sites containing known and possible ordnance impact areas, including:

- McClellan Industrial Area (eastern portion);
- Retirement Development Reserve (eastern and northwestern portions);
- McClellan Commercial Center (portions near the Retirement Community);
- Yahoo Retreat Area (central portion);
- Eastern By-Pass Area (portion west of Yahoo Lake Retreat area); and
- Truck Route (miscellaneous portions).

In the MHIR Alternative the 11,000-acre passive recreation area (Area 2) will include extensive wildlife and plant management as well as public access. Consequently, the potential for, and degree of, UXO clearance activities within this parcel are higher than under the MIR or MLIR alternatives.

- **Indirect.** Indirect impacts associated with reuse would be directly related to the amount, depth, and type of soils removed during UXO clearance, and the location of the clearance activities within FMC. Adverse indirect impacts would principally be related to soil erosion from the clearance activities. This erosion would adversely impact the terrestrial habitats via the removal of soils and vegetation. Aquatic habitats would also be adversely impacted by sedimentation and siltation in the affected watersheds.

Within the 7,200-acre redevelopment area (Area 1), most development is planned for areas that have already been developed or disturbed, and consequently will have minimal impact upon the natural

communities at FMC. However, there will be adverse impacts to the biological communities at some locations. These locations include the following:

- McClellan Industrial Area. Minor adverse impacts to fragmented forest habitats are anticipated.
- Retirement Development Reserve. Impacts to fragmented, unfragmented and interior forest habitats are anticipated.
- Commercial Center. Minor adverse impacts to fragmented forest habitats are anticipated.
- Yahoo Retreat Area. Impacts to fragmented, interior, and unfragmented forest habitats are anticipated.
- Eastern By-Pass Area. Impacts to the Reynolds Hill Turkey Oak SINA and to unfragmented fragmented forest habitats are anticipated.
- Truck Route. Impacts to fragmented and unfragmented forest habitats are anticipated.

Within the 11,000-acre passive recreational reuse area (Area 2), the MHIR Alternative has the potential for more UXO clearance activities than either the MIR and MLIR alternatives. Within this area of FMC, the slopes are steep and the soils highly erodible, compared to the western flatter portions of FMC. Consequently, UXO removal activities in this area may result in higher levels of erosion and siltation.

Medium Intensity Reuse Alternative

- **Direct.** Direct impacts under the MIR Alternative will be similar in nature to those described for the MHIR Alternative. However, under the MIR Alternative, the impacts within the 7,200-acre redevelopment area (Area 1) and the 11,000-acre passive recreation area (Area 2) are expected to be less under the MHIR Alternative.

Within the 7,200-acre redevelopment area (Area 1) under the MIR Alternative, approximately 55 percent (3,960 acres) will be developed compared to approximately 60 percent (4,320 acres) under the MHIR Alternative. Consequently it is likely that the extent of UXO clearance will be less under the MIR Alternative, resulting in somewhat lower environmental impacts.

Within the 11,000-acre passive recreation area under the MIR Alternative, public access to the area will be less (hunting and fishing will be restricted) when compared to the MHIR Alternative. Consequently it is likely that the need for extensive UXO clearance will be reduced compared to the MHIR alternative, thereby resulting in reduced impacts to the biological resources in the area.

- **Indirect.** Indirect impacts under the MIR Alternative will be similar in nature to those described for the MHIR Alternative. The magnitude of the impacts will be reduced under the MIR Alternative as the amount of area cleared in both the redevelopment area (Area 1) and the passive recreation area (Area 2) will be lower.

Medium-Low Intensity Reuse Alternative

- **Direct.** Direct impacts under the MLIR Alternative will be similar in nature to those described for the MHIR Alternative. However, under the MLIR Alternative, the impacts within the 7,200-acre redevelopment area (Area 1) and the 11,000-acre passive recreation area (Area 2) are expected to be less than under either the MHIR or MIR alternatives.

Within the 7,200-acre redevelopment area under the MLIR Alternative, approximately 52 percent (3,744 acres) will be developed compared to approximately 55 percent (3,960 acres) under the MIR Alternative or approximately 60 percent (4,320 acres) under the MHIR Alternative. Consequently it is likely that the extent of UXO clearance will be less under the MLIR Alternative, resulting in somewhat lower environmental impacts compared to either the MHIR or MIR alternatives.

Within the 11,000-acre passive recreation area under the MLIR Alternative, public access to the area and wildlife/plant management within the area will be less compared to the MHIR and MIR alternatives. Consequently it is likely that the need for extensive UXO clearance will be reduced (or eliminated) compared to the MHIR and MIR alternatives, thereby resulting in reduced impacts to the natural resources in the area.

- **Indirect.** Indirect impacts under the MLIR Alternative will be similar in nature to those described for the MHIR Alternative. The magnitude of the impacts will be reduced under the MLIR Alternative (compared to both the MHIR and MIR alternatives) as the amount of area cleared in both the redevelopment area and the passive recreation area should be lower than in either of the other reuse alternatives.

5.4.9 Hazardous and Toxic Materials

As discussed in subsection 5.3.9, regardless of the reuse scenario the Army is committed to remediating all hazardous conditions associated with contamination caused by past or current activities on FMC excess property areas. All such hazards will be remediated, or deed notifications and restrictions will be passed on to new owners if the remaining hazards are compatible with the planned reuse.

Medium-High Intensity Reuse Alternative

Areas near former landfill sites are designated for industrial reuse. The presence of these landfills would restrict how the areas could be used for industrial activities. For instance, the load bearing capacity may be limited and the cap may not be disturbed. To make these areas available for unrestricted use would require the use of piling or the contents of the landfills be removed. As discussed in subsection 5.3.9, removing of the contents of former landfills could create a greater negative impact on the environment than leaving the materials in place.

- **Direct.** No impacts to hazardous and toxic materials would be expected if the MHIR Alternative was implemented. Reuse activities associated with industrial, commercial or mixed use of the excess FMC areas could create the potential for hazardous spills. The reuse activities would be required to operate in accordance with federal and state requirements pertaining to hazardous materials and hazardous wastes. Permitting and enforcement mechanisms would provide assurance against contamination of the environment media and would be protective of human health and the environment.
- **Indirect.** No impacts would be expected if the MHIR Alternative was implemented.

Medium Intensity Reuse Alternative

Areas near former landfill sites are designated for industrial reuse. As discussed above under MHIR Alternative, the presence of these landfills may restrict the planned reuse options for these areas.

- **Direct.** No impacts would be expected. Conditions would be similar to MHIR Alternative described above.
- **Indirect.** No impacts would be expected if the MIR Alternative was implemented.

Medium-Low Intensity Reuse Alternative

Areas near former landfill sites are designated for industrial reuse. As discussed above under the MHIR Alternative, the presence of these landfills may restrict the planned reuse alternatives for these areas.

- **Direct.** No impacts would be expected. Conditions would be similar to the MHIR Alternative described above.

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- **Indirect.** No impacts would be expected if the MLIR Alternative was implemented.

5.4.10 Permits and Regulatory Authorizations

Medium-High Intensity Reuse Alternative

- **Direct.** No direct impacts to permits and regulatory authorizations would be expected if the MHIR Alternative was implemented. Operating permits and regulatory authorizations would be required for infrastructure systems and specific activities by reuse entities. Permits and authorizations to continue activities previously conducted by the Army would be subject to procedures and rules of the regulatory agencies, but may be allowed to be transferred to the new owners. For operational matters not currently covered, future owners and operators would be required to obtain permits and authorizations independently. Activities occurring in industrial reuse areas would likely require a variety of new permits and authorizations. Continuity of permitting and enforcement mechanisms would provide assurance against contamination of environmental media and would be protective of human health and the environment.
- **Indirect.** Implementation of the MHIR Alternative would result in no indirect to permits and regulatory authorizations.

Medium Intensity Reuse Alternative

- **Direct.** No impacts to permits and regulatory authorizations would be expected as a result of implementing the MIR Alternative. Conditions would be similar to those described above under MHIR Alternative.
- **Indirect.** No impacts to permits and regulatory authorizations would be expected as a result of implementing the MIR Alternative.

Medium-Low Intensity Reuse Alternative

- **Direct.** No impacts to permits and regulatory authorizations would be expected as a result of implementing the MLIR Alternative. Conditions would be similar to those described above under MHIR Alternative.
- **Indirect.** No impacts to permits and regulatory authorizations would be expected as a result of implementing the MLIR Alternative.

5.4.11 Biological Resources

Impacts to biological resources as a result of reuse differ with the location within the disposal area. In general, impacts associated with reuse within the FMDC redevelopment area (Area 1) will be similar among the three reuse alternatives since: 1) much of this area is already developed as it contains the current FMC cantonment area and 2) the general reuse type is the same under each reuse alternative, only the overall intensity differs. Consequently, the reuse impacts to the biological resources in this portion of FMC will be similar among the reuse alternatives.

Impacts to biological resources within the FMDC passive recreation area (Area 2) will, however, differ among the three reuse alternatives as the nature and extent of the management activities and public access differ among the three reuse alternatives (Table 3.2). The differences in management activities among the alternatives, as they relate to environmental impacts, are principally associated with the utilization of prescribed burning (and its influence on the MLP ecosystem and certain SINAs), the degree of timber management, the degree of public access, and the extent of threatened and endangered species, other species of concern, and wetlands management activities.

The Army currently manages the biological and natural resources of FMC as federal property under a wide range of federal laws, executive orders, and Army regulations and guidelines. Many of these policies require positive management actions which benefit the biological resources at FMC. The transfer from Army to private ownership could result in the overall reduction of wildlife management activities at FMC thereby resulting in adverse impacts to the biota of the area. The extent of these adverse impacts will be directly related to the extent of wildlife management activities undertaken by the future owners.

As mentioned in subsection 5.3.11.4, FMC entered into informal consultations with the USFWS to identify any adverse effects and required measures to minimize those effects to threatened and endangered species. Additional field studies to determine the occurrence of gray bats on FMC were recently completed as part of the informal consultation process with the USFWS.

5.4.11.1 Fish and Wildlife

Medium-High Intensity Reuse

- **Direct.** Implementing the MHIR Alternative will result in short-term adverse impacts during construction of new projects. Noise and dust could reduce nesting success of NTMB, particularly in Area 2. Some direct mortality could occur to small mammals, reptiles, and nesting birds during clearing and grubbing operations, particularly in Area 1. For game species impacts see subsection 5.4.11.6.
- **Indirect.** Long-term adverse impacts would occur to NTMB due to a decrease in forest habitat in portions of Area 1 (see subsection 5.4.11.2, Vegetation and Plant Resources), increased forest fragmentation (see subsection C.2.2 in Appendix C for an explanation of forest fragmentation's impacts on NTMB), and increased traffic noise, that would be associated with implementation of the MHIR Alternative. Short-term adverse impacts would occur to aquatic species due to soil erosion during the construction phase, principally within the Redevelopment Area (Area 1). Minor long-term adverse impacts could occur to aquatic species due to increased automobile traffic, and ground maintenance. These activities could result in greater use of fertilizer and pesticides, and increased leaks and spills of automobile fluids.

Medium Intensity Reuse Alternative

- **Direct.** Implementation of the MIR Alternative, would be expected to result in impacts similar to, but less extensive than the MHIR Alternative.
- **Indirect.** Impacts to NTMB would be expected to be the same as MHIR Alternative if the MIR Alternative is implemented, since the impacts to the large MLP forest block will be similar. Impacts to aquatic species would be expected to be slightly less than MHIR Alternative.

Medium-Low Intensity Reuse Alternative

- **Direct.** Implementation of the MLIR Alternative would be expected to result in slightly less impacts than MIR Alternative for non-game species. For game species impacts see subsection 5.4.11.6.
- **Indirect.** If the MLIR Alternative is implemented, impacts would be similar to those detailed for the MHIR Alternative. Additionally, impacts to NTMB, within Area 2, would occur in that a change in NTMB species composition would be expected, associated with a change from a MLP forest block to a hardwood dominated forest block. The overall size of the forest block, however, anticipated to similar among the alternatives. Impacts to aquatic species would be expected to be slightly less than MIR Alternative.

5.4.11.2 Vegetation and Plant Resources

Medium-High Intensity Reuse Alternative

- **Direct.** Long-term adverse impacts would occur due to loss of forest habitat, if the MHIR Alternative is implemented. Within Area 1, development of the rail industrial park, executive golf course, retail center, McClellan retirement golf community and Yahoo Retreat would result in the removal of approximately 800 acres of fragmented forest and 200 acres of unfragmented forest (see Figure 2-4 in Section 2, and Figures C-1, C-2 and C-3 in Appendix C). While not directly destroyed, the amount of interior forest would decrease by approximately 300 acres due to encroachment (see definition of interior forest in subsection C.2.2 of Appendix C). Impacts within Area 2 are expected to be minimal as little development is planned, therefore associated habitat loss or damage will be minimal.
- **Indirect.** Long-term adverse impacts could occur if the MHIR Alternative is implemented. Construction activity, particularly in Area 1, would create conditions favorable for populations of exotic species of plants to expand. Impacts within Area 2 are expected to be minimal as little development is planned and management activities, including prescribed burns, will maintain the area in a manner similar to existing conditions. Through the use of prescribed burning, the MLP ecosystem will be maintained.

Medium Intensity Reuse Alternative

- **Direct.** If the MIR Alternative is implemented, impacts would be expected to be the same or slightly less than if the MHIR Alternative was implemented.
- **Indirect.** If the MIR Alternative is implemented, impacts would be expected to be the same or slightly less than if the MHIR Alternative was implemented.

Medium-Low Intensity Reuse Alternative

- **Direct.** If the MLIR Alternative is implemented, impacts would be expected to be the same or slightly less than if the MIR Alternative was implemented.
- **Indirect.** If the MLIR Alternative is implemented, forestry management practices, in Area 2, will not include the continuation of prescribed burns. Without range fires or a prescribed burn program there will be long-term significant adverse impacts to the MLP ecosystem at FMC. Longleaf pine regeneration will decrease. Longleaf pine seedlings and saplings, which are tolerant of fire, but are poor competitors for water and nutrients will be replaced by various deciduous species and/or loblolly pine. Diversity and abundance of the herbaceous understory will decrease over time. The absence of fire will allow deciduous shrubs and vines and eventually deciduous overstory species to express greater dominance. Canopy closure will become more complete and will allow less sunlight to reach the forest floor. State ranked herbaceous species such as sky blue aster, pale coneflower, eastern purple coneflower, and Fraser's loosestrife would be adversely impacted.

5.4.11.3 Wetlands

Medium-High Intensity Reuse Alternative

- **Direct.** Long-term adverse impacts to wetlands could occur, principally in Area 1, if the MHIR Alternative is implemented. Development in or adjacent to wetlands would adversely impact wetlands. Current redevelopment plans include an industrial park that may be located within jurisdictional wetland areas. Building and parking lot placement could result in the dredging or filling of wetlands located in this area.
- **Indirect.** Long-term adverse impacts to wetlands could occur, principally in Area 1, if the

MHIR Alternative is implemented. Impacts could be due to runoff from the industrial park, golf courses, and other new development. During the construction phase, runoff and soil erosion could adversely impact wetlands. Post construction impacts would be related to an increase in impervious surface areas. Run-off, from impervious areas could include pesticides, fertilizer, automobile fluids. Potential run-off from the industrial area would depend on the type of industry.

Medium Intensity Reuse Alternative

- **Direct.** If the MIR Alternative is implemented, impacts would be expected to be the same or slightly less than if the MHIR Alternative is implemented.
- **Indirect.** If the MHIR Alternative is implemented, impacts would be expected to be the same or slightly less than if the MHIR Alternative is implemented for the majority of wetlands. See subsection 5.4.11.5 for a discussion on how the lack of fire may affect the WFO.

Medium-Low Intensity Reuse Alternative

- **Direct.** If the MLIR Alternative is implemented, impacts would be expected to be the same or slightly less than if the MIR Alternative is implemented.
- **Indirect.** If the MLIR Alternative is implemented, impacts would be expected to be the same or slightly less than if the MIR Alternative is implemented.

5.4.11.4 Federal Threatened and Endangered Species

Medium-High Intensity Reuse Alternative

- **Direct.** No direct effects would be expected to Federal T&E species if the MHIR Alternative is implemented. Pursuant to Section 7 of the Endangered Species Act (ESA), FMC conducted informal consultation with the USFWS to identify any project design features (PDFs) that might be required to avoid adverse or minimize effects to the gray bat. A Biological Assessment (BA) was completed in consultation with the USFWS to identify potential effects and PDFs. Based upon the results of the BA and implementation of the PDFs and the additional protective measures described in the USACE July 1998 letter to the USFWS, no adverse effects to the gray bat are expected.
- **Indirect.** No indirect effects would be expected to Federal T&E species if the MHIR Alternative is implemented. A Biological Assessment (BA) was prepared to identify potential effects and PDFs. Based upon the results of the BA and implementation of the PDFs and the additional protective measures described in the USACE July 1998 letter to the USFWS, no adverse effects to the gray bat are expected.

Medium Intensity Reuse Alternative

- **Direct.** No direct effects would be expected, if the MIR Alternative is implemented.
- **Indirect.** No indirect effects would be expected, if the MIR Alternative is implemented.

Medium-Low Intensity Reuse Alternative

- **Direct.** No direct effects would be expected, if the MLIR Alternative is implemented.
- **Indirect.** No indirect effects would be expected, if the MLIR Alternative is implemented.

5.4.11.5 Other Species of Concern

Medium-High Intensity Reuse Alternative

- **Direct.** No direct impacts are expected, within Area 2, as management activities will be similar to those currently in place if the MHIR Alternative is implemented. Within Area 1, impacts will be minimal since most of the SINAs and other species of concern are located within Area 2. Impacts are possible however, within the southwestern portions of Area 1, where the Reynolds Hill Turkey Oak SINA and scattered MLP stands maybe adversely affected by adjacent development activities.
- **Indirect.** Long-term adverse impacts could occur, if the MHIR Alternative is implemented. Encroachment upon the MLP ecosystem, principally within Area 2, due to new development, could alter the forest block (see the discussion under Vegetation and Plant Resources located in subsection 5.4.11.2). The ecological importance of the MLP forest ecosystem is based on it's unfragmented condition, large size, lack of exotic species, and importance to NTMB and rare species. Encroachment could allow an increase in exotic plants, reduce the effective size of the ecosystem, decrease the amount of quality habitat for interior and ground nesting NTMB, and/or degrade habitat that serves as a buffer for rare plant species and SINA.

Medium Intensity Reuse Alternative

- **Direct.** Impacts under the MIR Alternative are expected to be similar or slightly less than those under the MHIR Alternative.
- **Indirect.** If the MIR Alternative is implemented, the impacts would be expected to be the same or slightly less than if the MHIR Alternative is implemented.

Medium-Low Intensity Reuse Alternative

- **Direct.** Impacts under the MLIR Alternative are expected to be similar or slightly less than those under the MIR Alternative.
- **Indirect.** Without range fires or a prescribed burn program there will be long-term significant adverse impacts to the natural areas and the MLP ecosystem, principally within Area 2. Fire is needed to maintain the long-term viability of the MLP ecosystem and the unique habitats it harbors. The white fringeless orchid (WFO) occurs within seep communities that would be dominated by deciduous shrub species without periodic fire. Periodic fires remove the shrub component from the perimeters of these seeps and create conditions favorable for the WFO. In the absence of range fires and/or prescribed burns the shrubs would likely extend their dominance from the center of the seeps towards the border of the seeps, thereby reducing WFO populations. Longleaf pine regeneration would also decrease without range fires and/or a prescribed burn program (see discussion under Vegetation/Plant Resources). Special Interest Natural Areas (SINA) affected by lack of periodic fires would include the MLP ecosystem, Marcheta Hill Orchid Seep, Cave Creek Seep, Morman Hill Mountain Juniper, Reynolds Hill Turkey Oak, and Frederick Hill Aster Site. Diversity and abundance of the herbaceous understory would decrease over time. Populations of species that are fire adapted or need open canopies such as little bluestem, Indian grass, various asters, rosinweed, wild quinine, flowering spurge, and goat's rue that are associated with the MLP ecosystem would decrease over time. Exotic species such as Chinese privet, kudzu, and Japanese honeysuckle would be more likely to increase in the absence of fire.

5.4.11.6 Integrated Natural Resources Management Provisions

Medium-High Intensity Reuse Alternative

- **Direct.** Long-term beneficial direct impacts could occur, if the MHIR Alternative is implemented. Inactive range areas, in Area 2, would be more accessible to hunters and other outdoor recreation users. FMC also had its own hunting permit requirements. More hunters may decide to use this area if there are fewer permit requirements.
- **Indirect.** Minor long-term indirect adverse impacts are expected, principally within Area 2, if the MHIR Alternative is implemented. Indirect benefits received from range induced wildfires, firebreaks maintained by range personnel, and controlling of access to threatened and endangered species locations within ranges would decrease. There would be a transition period before a cooperating agency could implement a prescribed burn program at FMC. If a cooperating agency that is willing to conduct an extensive prescribed burn program at FMC can not be found the potential exists for long-term significant adverse impacts to the MLP communities, WFO, and other fire adapted species. Currently no agency that has sufficient expertise, manpower, and funding has agreed to manage these lands.

Medium Intensity Reuse Alternative

- **Direct.** Long-term direct adverse impacts are expected, if the MIR Alternative is implemented. There will be a decrease in the availability of area public hunting lands.
- **Indirect.** If the MIR Alternative is implemented, the resulting limited timber management practices may have a minor adverse indirect impacts on the local loggers and sawmills. The local supply of timber may decrease slightly.

Medium-Low Intensity Reuse Alternative

- **Direct.** Long-term adverse direct impacts are expected, if the MLIR Alternative is implemented. There will be a decrease in the availability of area public hunting lands, principally within Area 2.
- **Indirect.** Long-term adverse indirect impacts are expected, if the MLIR Alternative is implemented. Restricted hunting, no fish and wildlife management, and no timber management practices, principally within Area 2, could result in: 1) an overabundant deer population which may cause over browsing of understory vegetation including species of concern plants; 2) regeneration to more economically undesirable timber species; 3) economic loss of no timber harvesting; 4) a trend to fewer successional stages as climax communities would ultimately dominate the area due to natural succession; 5) loss of the MLP ecosystem resulting from the loss of sufficient fires to maintain the ecosystem; and 6) replacement of the MLP ecosystem with hardwood and hardwood/pine climax ecosystems.

5.4.12 Cultural Resources

Medium-High Intensity Reuse Alternative

- **Direct.** Implementation of the MHIR Alternative will result in no adverse or nonmitigable effects to NRHP properties, as adverse effects could either be avoided through the use of deed restrictions, or reduced to a minor level by completing mitigation measures mutually agreed upon by the Army, Alabama SHPO and the Advisory Council on Historic Preservation (ACHP) as part of the NHPA Section 106 consultation process.

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- **Indirect.** Indirect impacts to FMC historic properties can either be avoided through the use of preservation covenants or mitigated to a minor level by carrying out agreed upon mitigation measures.

Medium Intensity Reuse Alternative

- **Direct.** The discussion above for the MHIR Alternative applies in the case of MIR Alternative as well.
- **Indirect.** Indirect impacts to FMC historic properties can either be avoided through the use of preservation covenants or mitigated to a minor level by carrying out agreed upon mitigation measures.

Medium-Low Intensity Reuse Alternative

- **Direct.** The discussion above for MHIR Alternative applies in the case of MLIR Alternative as well.
- **Indirect.** Indirect impacts to FMC historic properties can either be avoided through the use of preservation covenants or mitigated to a minor level by carrying out agreed upon mitigation measures.

5.4.13 Sociological Resources

Medium-High Intensity Reuse Alternative

- **Direct.** Potential short-term adverse impacts could occur related to the population increase associated with the 9,584 new jobs created, if the MHIR Alternative is implemented. Total employment under the MHIR Alternative would approximately 14,000. The total daytime population, including employees and residents, would almost double to over 17,600 from the current level of approximately 9,000. As indicated in Table 5.4, there would be a net increase in population of approximately 3,600. This is based on the assumption that a minimum of forty (40) percent of the new employees will relocate to the area, while the military personnel and a certain percentage of the former DOD civilian personnel directly associated with current installation operations will move out of the area. The percent of employees estimated to relocate reflects the current and potential employment pool, or labor force, and skill levels within the region of influence which would have to be supplemented by in-migrants.

No disproportionately high or adverse human health or environmental impacts would be incurred by minority and low-income populations within the surrounding area by reuse of the surplus property. Low-income populations could economically benefit from construction jobs associated with project construction and/or subsequent long-term employment opportunities from reuse activities.

- **Indirect.** Short-term potential adverse impacts could occur in respect to housing demand by the new population/work force, and associated increased demands on public services, such as schools, police and fire protection. New housing and infrastructure construction, school construction/expansion, and expansion of police and fire protection facilities and personnel would be necessary to accommodate the additional demands of the increased population. The Economic Impact Forecast System (EIFS) Model estimates that reuse activities under this intensity level could potentially result in 1,143 additional school-age children, and a demand for an additional 3,600 housing units with the majority being owner-occupied (Table 5.5). However, the above population increase and service demands would occur over a number of years (20-year estimated buildout period), therein not creating significant adverse impacts over a short period of time.

Medium Intensity Reuse Alternative

- **Direct.** No adverse impacts would be expected related to the population increase associated with implementation of the MHIR Alternative. Implementation of this alternative will result in 4,587 new jobs and total employment of approximating 9,000 at the installation. Daytime population would increase to 11,886, or an approximate 32 percent increase from the baseline conditions. However, as indicated in Table 5.5, there would be a net decrease of 5,272 in total population as the number of military and civilian personnel moving out of the area would exceed the number of new in-migrants. This is based on the assumption that a minimum of 20 percent of the new employees will relocate to the area, while all of the military personnel and a certain percentage of the civilian personnel associated with installation activities would relocate out of the area.

No disproportionately high or adverse human health or environmental impacts would be incurred by minority and low-income populations within the surrounding area by reuse of the surplus property. Low-income populations could economically benefit from construction jobs associated with project construction and/or subsequent long-term employment opportunities from reuse activities.

- **Indirect.** No indirect adverse impacts would be expected if the MIR Alternative is implemented. According to the EIFS Model, the number of school-age children directly resulting from reuse activities would decrease by 385 from baseline conditions, while total housing demand would also decrease. Similarly, there would be no adverse impacts on low-income or minority populations under this alternative.

Medium-Low Intensity Reuse Alternative

- **Direct.** No direct impacts are anticipated if the MLIR Alternative is implemented. New employee population would only be 1,647 above baseline employment, while total daytime population would increase by only 372. However, as indicated in Table 5.5, local and regional population would decrease by 9,577 from baseline conditions. This is based on the assumption that there would be little or no in-migration to offset the loss of the military related population and a portion of the civilian personnel. There would be a commensurate decrease in housing demand and school enrollment compared to baseline conditions.
- **Indirect.** No indirect impacts would be expected if the MLIR Alternative is implemented. Because of the substantial decrease in total population associated with this alternative, the number of school-age children associated directly with reuse activities would decrease by 1,124 from baseline conditions, with housing demand also substantially decreasing.

5.4.14 Economic Development

The President's Five-Part Plan is a program designed to speed economic recovery of communities near closing military installations. The plan provides initiatives for rapid redevelopment and creation of new jobs. The socioeconomic impacts of the implementation of the reuse alternatives are estimated by the application of the Economic Impact Forecast System (EIFS) Model. Inputs required for model execution include the changes in employment and expenditures between baseline conditions (1995) and under each reuse alternative. Table 5.5 indicates the changes in employee population and total expenditures under the three alternative reuse plans. Changes in employment and spending (expenditures) represent the direct effects of the action. Based upon the above input data and application of calculated multipliers, the model estimates both direct and indirect impacts on various socioeconomic indicators, including sales volume, employment, income, population, housing, school enrollment and government income and expenditures for the Region of Influence (ROI). Tables 5.6, 5.7 and 5.8 indicate the net changes from baseline conditions in the above socioeconomic indicators under each alternative reuse plan. All of the subsequent numbers cited in the text of this subsection refer to net changes from baseline conditions. The Rational Threshold Value (RTV), or degree of significance of change, is also calculated for key economic indicators. Appendix D describes the EIFS Model in more detail, and contains the input and output data for baseline operations (1995), reuse alternatives and facility construction.

Table 5.5 EIFS Model Input Parameters For Each Reuse Alternative

Reuse Intensity	Employee Population ¹	Change in Employee Population ²	Total Expenditures ³	Change in Total Expenditures ⁴
MHIR Alternative	13,989	9,584	\$331,269,000	\$285,852,000
MIR Alternative	8,992	4,587	\$214,582,000	\$169,165,000
MLIR Alternative	6,052	1,647	\$144,977,000	\$99,560,000

Notes: 1 See Table 3.1 for calculation of employee population.
 2 Projected reuse employee population minus 1995 baseline employee population of permanent party military and civilian personnel (4,405).
 3 Derived from multiplying estimated average expenditure per employee by employee population. See Table D.1, Appendix D.
 4 Derived from subtracting baseline (1995) non-salary expenditures (\$45,417,000) from estimated reuse expenditures.

Source: EIFS Model and Parsons Engineering Science, Inc.

Medium-High Intensity Reuse Alternative

- **Direct.** Both short-term and long-term beneficial impacts would occur under this alternative. MHIR Alternative assumes higher floor area ratios (FARs) and employee densities than MIR and MLIR alternatives. Under MHIR Alternative approximately 14,000 employees would be located on the reused site. However, the total on-site resident population of 3,665 would be approximately one-third less than that under baseline conditions.

Table 5.6 summarizes the net change in economic impacts of MHIR Alternative. Direct long-term impacts resulting from employment and expenditures associated with the reuse activities include the creation of 2,378 additional new jobs in the retail, service and industrial sectors; the generation of \$35.89 million in additional annual income as a result of the jobs directly created; and, an increase of \$265.3 million in annual regional sales (business) volume. All of the above increases would significantly exceed the respective RTV's for the economic indicators for the ROI. However, these increases in economic activity would occur over an extended period of time and represent the level of impact at full build-out. Government revenues would increase by \$16.5 million under this alternative, with the enhanced tax base from reuse resulting in increased real property tax revenue. In addition, sales tax revenue would increase substantially under this alternative.

Direct short-term beneficial impacts would result from construction of the reuse facilities and associated infrastructure. The EIFS Model estimates that business volume would increase by \$146.6 million while total regional income would increase by \$103.5 million. A total of 1,267 additional jobs would be directly created in the retail, service and industrial sectors generating \$19.1 million in direct income. Although all of the RTVs for the economic indicators are exceeded under this alternative, construction activity would occur over an extended period of time. Thus, the annual economic impacts resulting from facility construction would not be expected to be significant.

Table 5.6 EIFS Standard Model Outputs for MHIR: Net Change from Existing Operations

Economic Indicator	Projected Change	Percent Change	RTV Range
Direct Sales Volume	\$265,669,000	266.67	NA
Indirect Sales Volume	\$308,549,000	266.67	NA
Total Sales Volume	\$574,218,000	266.67	-5.03% to 6.81%
Direct Employment	2,378	266.59	NA
Indirect Employment	2,762	366.85	NA
Total Employment	11,564	121.82	-3.38% to 2.80%
Direct Income	\$35,890,000	266.46	NA
Indirect Income	\$42,688,000	200.00	NA
Total Income	\$183,940,000	103.32	-4.02% to 5.63%
Local Population	3,617	25.90	-0.95% to 2.12%
Local Off-Base Population	8,595	95.63	NA
Number of School Children	1,143	60.86	NA
Demand for Housing			
Rental	337	22.80	NA
Owner-Occupied	3,263	148.52	NA
Total Housing Demand	3,600	100.00	NA
Government Expenditures	\$24,924,000	193.75	NA
Government Revenues	\$16,578,000	100.00	NA
Net Government Revenues	-\$8,346,000	-234.37	NA
Civilian Employees Expected to Relocate	7,274	NA	NA

Note: N/A Not Applicable.

Source: EIFS Model and Parsons Engineering Science, Inc.

- Indirect.** Long-term beneficial impacts would result from reuse under the MHIR Alternative. As a result of the direct impacts, 2,762 additional jobs would be indirectly created; and, \$308.5 million in additional annual indirect sales volume and \$42.6 million in additional indirect annual income generated. Direct and indirect employment resulting from reuse under this alternative would total 5,140, with the increase in total annual sales volume (direct and indirect) estimated at \$574.2 million and total annual income increasing by \$183.9 million.

Indirect short-term beneficial impacts would result from construction of the reuse facilities and associated infrastructure. The EIFS Model estimates that there would be an indirect increase of \$170.3 million in business volume, while 1,472 additional jobs would be indirectly created in the retail, service and industrial sectors.

Medium Intensity Reuse Alternative

- Direct.** Long-term beneficial impacts would occur under this alternative, but the magnitude of impacts would not be as great as under MHIR Alternative. The MIR Alternative assumes lower FARs and employee densities than MHIR Alternative. Under the MIR Alternative, approximately 9,000 employees would be located on the reused site, with a total on-site resident population of 2,894.

Table 5.7 summarizes the regional economic impacts of MIR Alternative. Net direct impacts resulting from employment and expenditures associated with the reuse activities include the creation of 1,218 additional new jobs in the retail, service and industrial sectors; the generation of \$18.38 million in additional annual income as a result of the jobs directly created; and, an increase of \$136 million in regional annual sales volume. All of the above increases would significantly exceed the RTVs for the respective economic indicators for the ROI. However, these increases in economic activity would occur over an extended period of time and represent the level of impact at full build-out. Government revenues would increase by \$3.3 million under this alternative, with the enhanced tax base from reuse resulting in increased real property tax revenue. In addition, sales tax revenue would increase substantially under this alternative.

Economic Indicator	Projected Change	Percent Change	RTV Range	
Direct Sales Volume	\$136,072,000	136.58	NA	
Indirect Sales Volume	\$158,041,000	136.58	NA	
Total Sales Volume	\$294,113,000	136.58	-5.03% to 6.81%	
Direct Employment	1,218	136.54	NA	
Indirect Employment	1,415	136.71	NA	
Total Employment	4,060	42.77	-3.38% to 2.80%	
Direct Income	\$18,383,000	136.59	NA	
Indirect Income	\$22,351,000	152.80	NA	
Total Income	\$54,904,000	30.83	-4.02% to 5.63%	
Local Population	-5,272	-37.75	-0.95% to 2.12%	
Local Off-Base Population	-294	-3.27	NA	
Number of School Children	-385	-20.50	NA	
Demand for Housing	Rental	-581	-39.30	NA
	Owner-Occupied	503	22.89	NA
	Total Housing Demand	-78	25.27	NA
Government Expenditures	\$8,892,000	69.12	NA	
Government Revenues	\$3,321,000	29.21	NA	
Net Government Revenues	-\$5,571,000	-256.44	NA	
Civilian Employees Expected to Relocate	1,798	NA	NA	
Note N/A Not applicable				
Source: EIFS Model and Parsons Engineering Science, Inc.				

Direct short-term beneficial impacts would result from construction of the reuse facilities and associated infrastructure. The EIFS Model estimates that business volume would increase by \$103.1

million while total regional income would increase by \$72.8 million. A total of 891 additional jobs would be created in the retail, service and industrial sectors directly generating \$13.4 million in income. None of the RTVs for the economic indicators are exceeded under this alternative.

- **Indirect.** Long-term beneficial impacts would result from MIR Alternative. As a result of the direct impacts, 1,415 additional jobs would be indirectly created; and, \$158 million in additional indirect sales volume and \$22.3 million in additional income generated. Direct and indirect employment resulting from reuse under this alternative would total 2,633, with the increase in total sales volume (direct and indirect) estimated at \$294 million and total income increasing by \$54.9 million.

Indirect short-term beneficial impacts would result from construction of the reuse facilities and associated infrastructure. The EIFS Model estimates that there would be an indirect increase of \$119.7 million in business volume, while 1,034 additional jobs would be indirectly created in the retail, service and industrial sectors.

Medium-Low Intensity Reuse Alternative

- **Direct.** Long-term beneficial impacts would occur under this alternative. MLIR Alternative assumes lower FARs and employee densities than MIR Alternative. Under the MLIR Alternative approximately 6,000 employees would be located on the reused site, with a total on-site resident population of 2,600. Thus, the overall economic impact would be of the least magnitude under this alternative.

Table 5.8 summarizes the regional economic impacts of MLIR Alternative. Direct net impacts resulting from employment and expenditures associated with the reuse activities include the creation of 531 additional new jobs; the generation of \$8 million in additional annual income as a result of the jobs directly created; and, an increase of \$59.3 million in regional annual sales volume. However, government revenues would decrease by \$3.9 million under this alternative. This decrease is directly the result of the loss of the military and government workers at the installation.

Direct short-term beneficial impacts would result from construction of the reuse facilities and associated infrastructure. The EIFS Model estimates that business volume would increase by \$75.1 million while total regional income would increase by \$53 million. A total of 649 additional jobs would be created in the retail, service and industrial sectors directly generating \$9.8 million in income. None of the RTVs for the economic indicators are exceeded under this alternative.

Economic Indicator	Projected Change	Percent Change	RTV Range
Direct Sales Volume	\$59,318,000	59.53	NA
Indirect Sales Volume	\$68,895,000	59.53	NA
Total Sales Volume	\$128,213,000	59.53	-5.03% to 6.81%
Direct Employment	531	59.52	NA
Indirect Employment	617	59.61	NA
Total Employment	-365	-3.84	-3.38% to 2.80%
Direct Income	\$8,014,000	59.53	NA
Indirect Income	\$10,307,000	70.41	NA
Total Income	-\$21,164,000	-11.89	-4.02% to 5.63%
Local Population	-9,577	-68.57	-0.95% to 2.12%
Local Off-Base Population	-4,599	-51.17	NA
Number of School Children	-1,124	-59.85	NA

Demand for Housing	Rental	-1,025	-69.35	NA
	Owner-Occupied	-834	-37.96	NA
	Total Housing Demand	-1,859	-50.58	NA
Government Expenditures		\$354,000	2.75	NA
Government Revenues		-\$3,961,000	-24.11	NA
Net Government Revenues		-\$4,315,000	-221.17	NA
Civilian Employees Expected to Relocate		0	NA	NA
Notes N/A Not applicable				
<i>Source: EIFS Model and Parsons Engineering Science, Inc.</i>				

- Indirect.** Long-term beneficial impacts would result from MLIR Alternative, but of less magnitude than under MIR Alternative. As a result of the direct impacts, 617 additional jobs would be indirectly created; and, \$68.8 million in additional indirect annual sales volume and \$10.3 million in additional annual income generated. However, total income would decrease by \$21.1 million primarily as a result of the loss of the higher paying military and DOD civilian jobs. Direct and indirect employment resulting from reuse under this alternative would total 1,148, with the increase in total sales volume (direct and indirect) estimated at \$128.2 million.

Indirect short-term beneficial impacts would result from construction of the reuse facilities and associated infrastructure. The EIFS Model estimates that there would be an indirect increase of \$87.3 million in business volume, while 754 additional jobs would be indirectly created in the retail, service and industrial sectors.

5.4.15 Quality of Life

Medium-High Intensity Reuse Alternative

- Direct.** Some short-term adverse impacts would be expected in respect to the school system and housing market, if the MHIR Alternative is implemented. The estimated school enrollment increase of 1,143, an increase of six percent over current regional enrollment, could result in overcrowding and necessitate construction of new school facilities. The projected demand for 3,600 housing units could strain the local and regional housing supply. However, since development will occur over an extended period of time, the current educational facilities and housing supply should be able to absorb these increases without major adverse impacts.

The increase in population could cause an increase in the demand for public and family support services. However, services should be able to expand accordingly due to increased tax revenues from the new development. No impacts would be expected regarding recreational facilities considering the current array of recreational opportunities available within the region, and the proposed open space and recreational uses within the reuse plan. An increase in shopping and service facilities would be expected due to the increase in population under MHIR Alternative.

- Indirect.** Short- and long-term minor adverse impacts could be expected, if the MHIR Alternative is implemented. Considering the rural and semi-rural nature of the area, visual and aesthetic values could be adversely affected by construction in the short-term, while the substitution of more intense and potentially obtrusive development could cause long-term adverse impacts to the visual and aesthetic resources.

Medium Intensity Reuse Alternative

- Direct.** No major impacts are anticipated as school enrollment would decrease under this alternative

compared to baseline conditions, while the regional and local housing supply should be adequate to satisfy most of the new demand for owner-occupied housing. No impacts would be expected regarding family support services, recreation, and shops and services.

- **Indirect.** No indirect impacts would be expected if this alternative was implemented.

Medium-Low Intensity Reuse Alternative

- **Direct.** No direct impacts would be expected if this alternative was implemented.
- **Indirect.** No indirect impacts would be expected if this alternative was implemented.

5.4.16 Installation Agreements

Medium-High Intensity Reuse Alternative

- **Direct.** No direct impacts would be expected if this alternative was implemented. The installation agreements between the Army and local agencies for provisions of various services would be continued until disposal of the excess area is complete. Those services are presently, and would continue to be, provided by local agency suppliers outside the boundaries of the disposal area.
- **Indirect.** No indirect impacts would be expected if this alternative was implemented.

Medium Intensity Reuse Alternative

- **Direct.** No direct impacts would be expected if this alternative was implemented. Conditions would be similar to, but less severe than, those affecting MHIR Alternative.
- **Indirect.** No indirect impacts would be expected if this alternative was implemented.

Medium-Low Intensity Reuse Alternative

- **Direct.** No direct impacts would be expected if this alternative was implemented. Conditions would be similar to, but less severe than, those affecting MHIR and MIR alternatives.
- **Indirect.** No indirect impacts would be expected if this alternative was implemented.

5.5 CUMULATIVE IMPACT - NO ACTION, DISPOSAL AND REUSE ALTERNATIVES

5.5.1 Introduction

Subsections 5.2 through 5.4 identify impacts of the No Action Alternative; the ED and UD alternatives for disposal; and the MLIR, MIR and MHIR alternatives for reuse. The cumulative impacts analysis evaluates the direct and indirect effects of implementing any one of the alternatives in association with past, present and reasonably foreseeable Army actions and the actions of other parties.

Subsections presented in the following pages include:

- 5.5.2 Summary of Past, Present, and Reasonably Foreseeable Future Actions
- 5.5.3 No Action alternative - Cumulative Impacts
- 5.5.4 Encumbered and Unencumbered Disposal - Cumulative Impacts
- 5.5.5 Disposal and Reuse - Cumulative Impacts
 - 5.5.5.1 MHIR Encumbered Disposal Alternative
 - 5.5.5.2 MIR Encumbered Disposal Alternative
 - 5.5.5.3 MLIR Encumbered Disposal Alternative

5.5.2 Summary of Past, Present, and Reasonably Foreseeable Future Actions

The cumulative impacts analysis considers past, present and reasonably foreseeable actions within and around FMC. Interviews were conducted with private sector and governmental agency representatives knowledgeable of past, present and future actions within the area. Agencies and organizations contacted included the following:

- U.S. Army;
- U.S. Forest Service and Alabama Forestry Commission;
- Alabama Department of Transportation;
- Calhoun County Department of Transportation;
- City of Anniston, City of Oxford and City of Jacksonville;
- Eastern Alabama Regional Planning and Development Commission; and
- Local realtors.

A summary of past and present actions within and around FMC that have the potential to impact a wide range of resource issues is provided in subsection 5.5.2.1, while reasonably foreseeable future actions are identified in subsection 5.5.2.2. More detailed information regarding past, present and reasonably foreseeable actions that are applicable to a particular resource are described for each resource category in the subsections of 5.5.5.1.

5.5.2.1 Past and Present Actions. Past and present actions within and around FMC have been identified and discussed in detail in Section 4. These actions include on-post and off-post actions. Representative actions include the following:

- Extensive training and range activities that have resulted in the potential for UXO throughout major portions of FMC.
- Training, maintenance, construction, and other past practices that have resulted in the presence of hazardous waste, hazardous materials, and other materials/wastes at sites throughout FMC.
- Military ownership activities that have resulted in range/training induced wildfires as well as reduced logging frequencies, which have maintained the MLP ecosystem on FMC.
- Military ownership that has resulted in the protection of threatened, endangered, and unique species and habitats on FMC property, and the identification, maintenance, and protection of historical and archaeological resources.

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- An extensive contiguous forest block is present within the area. This forest block consists of the eastern and southern portions of FMC, the Choccolocco Corridor (Alabama Forestry Commission) and the Talladega National Forest (USDA-FS).
 - The overall economy of Calhoun County, as well as the eight-county ROI, has been anchored by the presence of FMC.
 - The addition of over 10,000 jobs (primarily lower-paying retail and service sector jobs) in Calhoun County during the previous decade in which the county actually lost population, with the new jobs being filled by people living outside the county.
 - The concentration of new growth and development primarily along the I-20 and State Highway 21 corridors, with a corresponding increase in traffic generation and congestion on Highway 21 and other major state, county and city arterials.
 - An annual average of approximately 200 new housing units authorized by building permit in Calhoun County, with a total of 300-400 new housing units (not including mobile homes) developed annually (includes those authorized by building permit in incorporated areas and units developed in unincorporated Calhoun County which does not issue building permits);
 - Development of the Silver Lakes Golf Course, with a 27-hole course and a 9-hole course which is part of the Robert Trent Jones Golf Trail, into a residential community.
 - A modest annual demand for industrial land (30 acres/year) and new office space (10,000 square feet (SF)/year) in Calhoun County.
 - Limited industrial operations and modest traffic volumes have resulted in the East Alabama Intrastate Air Quality Control Region (AQCR) being an attainment area for all pollutants.
 - Construction activities at FMC have resulted in the establishment of considerable numbers of buildings and related infrastructure throughout the cantonment area. These buildings range from more recently constructed modern training and classroom facilities to historic buildings, constructed during earlier periods in FMC's history.
 - FMC currently provides support to Chemical Stockpile Emergence Preparedness Program (CSEPP) at Anniston Army Depot. Key elements of this support includes a variety of elements including, disaster preparedness, environmental cleanup, environmental compliance, safety, police, and emergency response services.

5.5.2.2 Reasonably Foreseeable Future Actions. Reasonably foreseeable future actions include on-post and surrounding community actions. Representative future actions include the following:

- Major transportation improvements, including 1) construction of the Anniston "eastern by-pass" which consists of the widening of Golden Springs Road from two to five lanes from U.S. Highway 78 to Choccolocco Road, and the construction of a new 5.23 mile four-lane road from Choccolocco Road to U.S. Highway 431/Alabama State Highway 21 just north of Summerall Gate; 2) construction of the Anniston "western by-pass", a new four-lane road from I-20 to Alabama State Highway 202; 3) widening of Quintard Avenue (U.S. Highway 431/Alabama State Highway 21) from I-20 to the split of U.S. Highway 431 and State Highway 21 south of Summerall Gate; and 4) the southward extension of Golden Springs Road from I-20 to Friendship Road in Oxford. These projects will result in new development opportunities, modify traffic flow and volume, increase the amount of some air pollutants associated with mobile sources, and may have other project specific, adverse environmental impacts.
- Establishment of a National Center for Domestic Preparedness (NCDP) for training first responders to domestic terrorists acts. The focus of the training would be to prepare State and local officials to deal

with chemical, biological, or nuclear terrorist acts and handle incidents dealing with hazardous materials. The Department of Justice (DOJ) is designated in Senate Report 105-48 as the agency charged with directing and coordinating activities at the Center. DOJ, FMDC, and the Army are working together on proposals and detailed plans of staffing, instruction programs, and facility needs, including the use of the CDTF.

- Establishment of the Mountain Longleaf Wildlife Refuge by the USFWS, in partnership with the ADCNR - GFD, on approximately 10,000 to 12,000 acres of unique habitat within the disposal area. In addition to preserving and enhancing the natural MLP ecosystem, the refuge will help to perpetuate NTMB's; preserve the natural diversity and ecology; and provide recreational opportunities within the refuge.
- Construction of the Chemical Demilitarization Incinerator at the Anniston Army Depot, scheduled for construction during 1997-1999, followed by testing and operations from 1999-2004, which will contribute an estimated \$565 million directly to the local/regional economy during its construction and operations/closure periods, with an estimated 800-900 construction employees and 600 operational employees.
- Continuation of commercial and industrial development in the I-20, State Highway 21 and U.S. Highway 78 growth corridors; and residential development in the Saks and Golden Springs neighborhoods, and along the Choccolocco Road corridor.
- The Choccolocco Corridor lease between FMC and the State of Alabama will expire. Management activities for the corridor, by the Alabama Forestry Commission, will continue and are expected to include routine state forest management activities. These multiple use management activities will include silvicultural activities such as timber inventories, tree harvests and thinning, tree planting and prescribed burning; as well as public recreational activities such as bicycle and hiking trails, wildlife viewing areas, camping, hunting, and fishing.
- The Talladega National Forest (Talladega and Shoal Creek Ranger Districts), just east of FMC, will continue to provide multiple-use management in the areas of timber management, recreation (hunting, fishing, camping, swimming, hiking, picnicking), water resources management, and wildlife management. Planned activities within portions of the Shoal Creek District of the Forest, in addition to routine multiple-use activities will include: 1) the reestablishment of MLP to its historical sites, 2) loblolly plantation stocking control, 3) the reclaiming, protecting and enhancing of existing RCW habitat, 4) providing and growing high quality pine sawtimber and maintaining hardwood mast production, 5) managing the area as a wildlife and T&E species corridor between the northern and southern divisions of the Talladega National Forest, 6) providing a diversity of plant and animal communities, 7) maintaining or improving water quality, 8) protecting and enhancing the scenic quality of the forest, and 9) providing multiple use opportunities while meeting remoteness criteria in lands designated as semi-primitive and roadless areas (USDA-FS, 1997).
- The reuse of FMC, as detailed by the FMDC, will include changes to the area including new industrial, commercial, residential, and recreational uses which will influence all resource areas.
- The initial post-closure caretaker status of FMC will have adverse economic impacts on the eight-county ROI with respect to the ability to generate redevelopment revenues and jobs until disposal to new owner(s) is completed.
- Support to CSEPP will continue with the Chemical Biological Defense Command (CBDCOM) activities at Anniston Army Depot by making arrangements for support currently provided by FMC. Selected facilities to support CSEPP are being retained at FMC.

The cumulative impacts analysis incorporates the above issues and considers those actions that can be determined to be reasonably foreseeable.

5.5.3 No Action Alternative - Cumulative Impacts

With the possible exception of infrastructure and specific biological community issues, no cumulative impacts would be expected as result of caretaker status. Infrastructure within the installation will likely deteriorate over time. Adverse effects resulting from reduced upkeep and deterioration of various resources or conditions during caretaker status would cause cumulative impacts on FMC as a whole. Additionally, the reduction or elimination of training related fires will likely have a negative impact on the MLP ecosystem. This impact could be significant if caretaker status occurred for an extended number of years.

5.5.4 Encumbered and Unencumbered Disposal - Cumulative Impacts

- **Encumbered Disposal.** No cumulative effects beyond the impacts discussed in subsection 5.3 would be expected for any of the resource areas. The act of transferring or conveying title in and of itself would not create impacts that could contribute to a cumulative effect for any resource.
- **Unencumbered Disposal.** Unencumbered disposal, as described in subsection 5.3 and subsection 3.3.2, is not reasonable based upon the anticipated significant adverse environmental impacts and interests of the Army. Consequently, as discussed in subsection 5.3.17, unencumbered disposal has been eliminated from further discussion.

5.5.5 Disposal and Reuse - Cumulative Impacts

This subsection presents the cumulative effects analysis for the encumbered disposal and reuse of FMC.

Resource attributes evaluated for cumulative impacts include the fifteen resource categories used to describe the Affected Environment in Section 4, and to describe anticipated impacts in previous discussions in Section 5. These resource categories include:

- | | |
|---|---------------------------------|
| · land use | · air quality |
| · noise | · water resources |
| · geology | · infrastructure |
| · ordnance and explosives | · hazardous and toxic materials |
| · permits and regulatory authorizations | · biological resources |
| · cultural resources | · sociological environment |
| · economic development | · quality of life |
| · installation agreements | |
-

The cumulative impact analysis, for each of the resource categories, includes the definition of the area that has the potential to be affected by the disposal and reuse actions at FMC. The boundary of the cumulative impact analysis area varies according to the resource evaluation category being considered. For many of the resource categories (e.g. unexploded ordnance, cultural resources, etc.), the impacts are not anticipated to extend beyond the installation boundaries. For those resources, the cumulative impact analysis is limited to the FMC excess lands. For some resource categories (e.g. land use, economics, etc.) the impacts would be expected to extend beyond the installation boundaries; consequently, the impact analysis area for these resources is detailed in the impact discussion for these resources.

5.5.5.1 Medium High Intensity Encumbered Disposal Alternative.

5.5.5.1.1 Introduction. The cumulative impacts associated with the encumbered disposal and MHIR Alternative are presented in the following pages. The MHIR Alternative discussion includes information, including the definition of the analysis area by resource category, that is applicable to (but not repeated in) the discussions of the MIR and MLIR alternatives.

5.5.5.1.2 Land Use.

Analysis Area. The cumulative impact analysis area for land use is defined by the FMC disposal area, adjacent unincorporated Calhoun County, and the adjacent communities of Anniston and Oxford. The greatest direct and indirect impacts of reuse on off-post land use will occur within these immediate environs of FMC.

Cumulative Impacts of Reuse. The cumulative effects of the proposed reuse action on land use include potential impacts to both on-and off-post land use in respect to intensity of development, compatibility with adjacent land uses and supply/demand of developable land.

Land use patterns and intensities under the MHIR Alternative would be basically compatible with adjacent off-base land uses. The majority of the proposed MHIR Alternative commercial areas are located near or adjacent to State Highway 21, which is characterized by predominantly commercial uses. Proposed residential areas and densities are consistent with existing uses and densities within the reuse area, and also compatible with adjacent residential developments.

The proposed MHIR Alternative, however, would result in a significantly higher intensity use over baseline conditions, and would add over 3,000 acres of proposed developable land to the local and regional market. Currently, there are over 200 acres approved for commercial and industrial development in Anniston and Oxford, with a 100-acre site being developed for commercial uses at Golden Springs Road between I-20 and US Highway 78. There are currently in excess of 1,000 acres of vacant industrial land available for development within the adjacent area of Calhoun County, Anniston and Oxford. The majority of current, approved and planned commercial and industrial development is located in the vicinity of I-20 near the Golden Springs and Coldwater exits. An average of 500 to 600 single family housing units, of which 30 to 35 percent are mobile homes, have been constructed annually within the analysis area, with 350 to 400 housing units currently under some stage of pre-construction or construction activity in Anniston and Oxford. The major areas of current and proposed new residential development include the Saks area along US Highway 431 just west of FMC; the Choccolocco road corridor south and east of FMC; the Golden Springs neighborhood in Anniston adjacent on the south of FMC; and areas east and south of Oxford.

In addition to current development underway, and the inventory of commercial and industrial land/space available and approved residential development, reuse of the disposal area under MHIR Alternative would have the following additional direct impacts on land use on FMC and adjacent areas:

- the addition of 228 acres for retail development (including approximately 590,000 SF of retail space);
- the addition of 141 acres for office complexes (including approximately 1,000,000 SF of office space);
- the development of approximately 1,575 single family dwelling units;
- the addition of 924 acres for industrial areas (including approximately 4,500,000 SF of industrial space); and
- the development of 202 acres for a training and educational complex (including approximately 1,100,000 SF of educational and training space).

Potential indirect impacts on adjacent and off-post land use would include the additional demand for housing, supportive commercial, and possibly industrial uses as a result of the development of the FMC reuse area. In addition, the magnitude of potential development of the FMC reuse area could adversely affect the development and marketability of competing areas within the immediate area.

Much of the development presently occurring or projected to occur within the analysis area is located in the unincorporated areas of Calhoun County adjacent to incorporated communities. Fort McClellan is currently an independent non-political entity located in Calhoun County. Since Calhoun County does not have land use, zoning, subdivision regulations or building permits in effect, future development and land use patterns could be jeopardized in the absence of land development regulations and standards.

5.5.5.1.3 Air Quality.

Analysis Area. The analysis area for air quality is the Air Quality Control Region (AQCR) and includes the Fort McClellan disposal area and Calhoun County. Fort McClellan is located in the East Alabama Intrastate AQCR.

Cumulative Impacts of Reuse. Past and present activities are reflected in the affected environment as described in subsection 4.3. Fort McClellan is located in an attainment area for all pollutants. Reasonably foreseeable activities for which emissions can be estimated for the Disposal and Reuse of the Fort McClellan area include mobile sources, fugitive particulate matter from construction, and construction equipment emissions (see subsection 5.4.3). It should be noted that there will also be a decrease in certain air emissions due to the disposal. Fog oil training and Army fire fighting training on Fort McClellan Main Post would be eliminated and prescribed burning would be reduced (see Table 4.7 and Appendix G). For this analysis it was assumed that prescribed burning would decrease by 50% on Main Post and increase by 10% on Pelham Range. Table 5.9 shows the net increase in emissions associated with MHIR Alternative. The increase in emissions is primarily due to mobile sources such as cars and trucks.

Table 5.9 Summary of Net Air Emissions for all Reuse Plans at Fort McClellan					
Source	Criteria Pollutants (tons per year)				
	PM-10	SO_x	CO	NO_x	VOC
Medium High Intensity Reuse Alternative					
Total Increase ¹	16.0	9.6	2,915.6	313.9	313.9
Medium Intensity Reuse Alternative					
Total Increase ¹	15.4	8.8	1,534.8	198.1	155.3
Medium Low Intensity Reuse Alternative					
Total Increase ¹	15.0	8.4	761.1	133.2	78.9
Air Emissions Reductions					
Prescribed Burning (MHIR, MIR)	19.3	NC	259.9	3.0	5.2
Prescribed Burning (MLIR)	175.5	NC	2,362.5	27.0	47.3
Fire Fighting Training	1.22	0.076	6.46	0.46	2.28
Fog Oil Training	2.42	0.016	10.2	0.203	239.0
Total Reduction (MHIR, MIR)	22.9	0.1	276.6	3.7	246.5
Total Reduction (MLIR)	179.1	0.1	2,379.2	27.7	288.6
Net Air Emissions Increase					
MHIR Alternative	-6.9	9.5	2,639.0	310.2	44.5
MIR Alternative	-7.5	8.7	1,258.2	194.4	-91.2
MLIR Alternative	-164.1	8.3	-1618.1	105.5	-209.7
EPA Conformity De Minimis Thresholds	100	100	100	100	50
Notes: 1. Increases are from Table 5.1, subsection 5.4.3 CO = Carbon Monoxide					

Table 5.9 Summary of Net Air Emissions for all Reuse Plans at Fort McClellan

Source	Criteria Pollutants (tons per year)				
	PM-10	SO _x	CO	NO _x	VOC
PM-10= Particulate Matter less than or equal to 10 micrometers in diameter SO _x = Sulfur Oxides					
		NO _x = Nitrogen Oxides			VOC = Volatile Organic Compound

Source: Parsons Engineering Science, Inc.

The significance criteria for determining air quality impacts will be based on the USEPA General Conformity Rule de minimis thresholds. Although the General Conformity rule does not apply for an attainment area, the increase in overall emissions is compared to these thresholds as an indication whether the impacts are adverse or significant adverse. If the predicted increase in emissions is less than de minimis thresholds, the impacts are adverse but not significant adverse. Moreover, if the predicted increase in emissions is greater than de minimis thresholds, the impacts are significant adverse. In this case, the predicted emissions for CO and NO_x exceed the de minimis thresholds. For example, 2,639 tons per year is greater than the de minimis threshold of 100 tons per year for CO. Therefore there is a long-term significant adverse impact on air quality and mitigation is required. The significant adverse impact is due to the increase in CO and NO_x emissions, primarily from mobile sources. The increase in construction dust is offset by a decrease in emissions from, fire fighting training, smoke obscuration training of the chemical school (smoke obscuration training of reserve units on Pelham Range is expected to continue), and prescribed burning (no prescribed burning under the MLIR). Construction equipment emissions are a contributing factor to the CO and NO_x emissions, although vehicle emissions are the primary source.

In addition to the primary activities described above that may potentially impact air quality, there are other reasonably foreseeable activities that have been identified which may result in air emissions. They include continued construction of new housing units, continued growth and development within the region, and continuation of the predominance of clean, light industries within the region. These activities reflect the continuing development trends in the region as illustrated in Section 4. One additional reasonably foreseeable activity is the Anniston Chemical Demilitarization Project which will occur at the Anniston Army Depot. Approximately 2,200 tons of chemical agents will be destroyed by four incinerators between 2001 and 2004. Construction of the facility will be completed in 1999 and testing will be completed in 2001. ADEM issued an air permit for the project and compliance with the permit conditions should ensure that significant adverse impacts do not occur as a result of this activity.

Land development and construction, as detailed in subsection 5.5.5.1.2, will produce air emissions. Dust emissions can vary from day to day varying on the type of operations, level of activity, and meteorological conditions. Both the dust emissions associated with construction and construction equipment exhaust emissions associated with construction are temporary and primarily confined to the immediate construction area. Construction related emissions already are part of the existing environment (Section 4) however, the rate of development is increasing. These emissions are not expected to create any significant ambient air quality impacts due to the relatively small quantities of these emissions and the dispersed locations of the construction sites.

There will be an increase in traffic because of the additional development in the area. The Metropolitan Planning Organization has planned multiple highway expansions (e.g. Anniston Eastern and Western Bypasses) to absorb this additional traffic. See subsection 5.5.5.1.7b for additional details on the highway expansions. It is anticipated that the traffic increase will have significant adverse impacts to air quality, which are off-set by decreases in current Army activities except for CO under the MHIR and MIR alternatives.

All stationary air emission sources must comply with both the USEPA Clean Air Act and Alabama Department of Environmental Management regulations, particularly ADEM Chapters 335-3-14, 335-3-15 and 335-3-16 which contain regulations for both construction and operating air permits. These regulations apply to emission sources regardless if the source is Federally, publicly, or privately owned. New industrial sources would likely increase air emissions in the Air Quality Control Region. Because no specific

industrial use proposals have been identified, it is not possible to reasonably estimate the quantities of these emissions, nor predict the ambient air impacts. However, most industry in the region is light industry which typically does not generate large amounts of air emissions. The light industries currently in the region or planning to locate in the region typically are not heavy industries that generate great amounts of air pollution. Most of the heavy industry is located in the Birmingham area. It is unlikely that there would be any significant adverse impacts on air quality (NAAQS exceedances) as a result of these new activities because the operators of any new emission sources would be required to comply with all applicable Federal and state air quality regulations. These regulations are designed to be protective of the environment and are meant to prevent an attainment area becoming a nonattainment area. In addition, stationary air emission sources would be required to comply with any new applicable Federal and state regulations and laws that may result from the revised particulate and ozone NAAQS.

5.5.5.1.4 Noise.

Analysis Area. The analysis area for cumulative noise impacts includes the FMC boundary and those noise zone II and III areas that extend beyond the installation boundary.

Cumulative Impacts of Reuse. The cumulative noise impacts include the positive benefits of decreased noise levels due to the reduction in training activities (training activity related noise will not be eliminated as the ALARNG and Reserve Components will continue to train at Pelham Range and will occupy 409 acres of the Main Post) at FMC. Adverse impacts associated with the potential for changes in traffic volume associated with the development of the eastern by-pass and other roads near FMC are expected. The increase in highway noise may be expected along the eastern by-pass, associated with a shift in traffic to this road, whereas decreases in highway noise may occur along Highway 21 as a result of decreased traffic volume associated with the use of the eastern by-pass instead of the Highway 21.

5.5.5.1.5 Water Resources.

Analysis Area. The analysis area for cumulative impacts to water resources includes all areas that contribute water to Coldwater Spring (located north of the disposal area) as well as all areas contributing surface water to the creeks that exit the disposal area. The recharge area for Coldwater Spring is reported to be over 90 square miles. The disposal area is a small portion of this area.

Cumulative Impacts of Reuse. The recharge area for Coldwater Spring includes large areas that have undergone development in the past as well as areas that are likely to be developed in the foreseeable future. The foreseeable development in the recharge area will result in an increase in the amount of impervious surface. This will result in a decrease in the amount of recharge to the groundwater system and could result in a decrease in the flow of the spring. The development may also lead to increases in contaminants from roadways recharging to the groundwater system and a resultant decline in water quality. The amount of development planned under the reuse is small compared to the entire size of the disposal area and is insignificant compared to the entire recharge area of the spring. MHIR Alternative will result in a minor cumulative long-term adverse impact to water quantity and quality.

5.5.5.1.6 Geology.

Analysis Area. The analysis area for impacts to geology and soils is the disposal area. Activities occurring beyond the boundaries of the disposal area will not impact geology and soils.

Cumulative Impacts of Reuse. All impacts to geology and soils are related to the reuse. It is anticipated that the construction of new buildings, roads, and related infrastructure may have a short-term impact on soil erosion, especially if any of this development occurs in areas with steep slopes.

5.5.5.1.7 Infrastructure

5.5.5.1.7a Infrastructure (Utilities).

Analysis Area. The analysis area for the utility systems is the region served by those utility systems. The confines of the wastewater systems is limited to FMC and the surrounding neighborhoods of Pelham Heights and Lenlock, so the area of analysis is the installation boundary and the neighborhoods surrounding the wastewater treatment plant. The contracted utility components (water, electric, natural gas, communication systems, and solid waste) originate from off-post sources and main feed lines. Therefore their analysis area extends to the areas served by each of those utility systems beyond the boundaries of FMC.

Cumulative Impacts of Reuse. The regional utility systems have sufficient capacity to meet the anticipated demand of the effective population associated with MHIR Alternative at FMC.

To ensure that the wastewater treatment plant has adequate capacity during rainfall events, the infiltration and inflow problems within the collection system at FMC must continue to be addressed. Some industries locating onto FMC may require their own pretreatment or necessitate modifications to the current plant's treatment process. Outside FMC, the wastewater generated from the neighboring communities is not anticipated to cause an undue burden on the treatment plant. If new wastewater treatment provider opted to expand the collection system beyond its current configuration, it would be their responsibility to make adjustments in the treatment plant and permit as necessary. Therefore, no cumulative adverse impacts are anticipated for the wastewater treatment system.

The anticipated water, electric, natural gas, communication systems, and solid waste demands under MHIR Alternative should not put an undue burden on the contracted utility suppliers. Water, energy, communications and solid waste disposal provided by outside sources will be adjusted by the supplier to meet future increased demand that may occur within the analysis area without impacting the environment. As energy efficient facilities replace current facilities the environmental impacts associated with energy usage for the new development will be reduced.

5.5.5.1.7b Infrastructure (Transportation).

Analysis Area. The analysis area for the assessment of the cumulative impacts of reuse on transportation and traffic is Calhoun County, especially the Anniston/Oxford area. This area was selected for analysis since the majority of the traffic origins and destinations associated with reuse of FMC will occur within Calhoun County.

Cumulative Impacts of Reuse. State Highway 21 is the primary arterial directly accessing FMC, and the major north/south arterial in the area. Other important arterials include US Highway 431, US Highway 78, State Highway 202 and I-20, all of which have served to expand urban and suburban development within the area in a radial fashion. Currently, portions of State Highway 21 near FMC are operating at an "E" and "F" LOS with average daily traffics (ADTs) counts exceeding 40,000 per day. The majority of State Highway 21 has ADTs exceeding 30,000 from FMC south to I-20. US Highway 431, although not as congested, has ADTs approaching 25,000 just west of its intersection with State Highway 21. Many of the ADTs along Highway 21 represent a 5-10 percent increase over those recorded in 1992. Thus, improvements to roadway capacity have not kept pace with development and resultant traffic generation.

Under MHIR Alternative, it is estimated that an additional 46,700 net external trips (70,200 - 23,500) would be generated under full build-out. All of this additional traffic would be collected off-base by State Highway 21 under current conditions. A major internal collector roadway which is part of the FMDC reuse plan would also distribute traffic to State Highway 21. As indicated in subsection 5.4.7.3 this additional external traffic would increase by 50 percent above the existing traffic volumes on some segments of Highway 21 without the by-pass improvement. Traffic volumes on other arterials (e.g. US Highway 431) would also increase substantially in the absence of major roadway improvements.

The Metropolitan Planning Organization (MPO) of the Calhoun Area Transportation Study (CATS) is

responsible for adopting a yearly Transportation Improvement Program (TIP). The TIP is prepared under the direction of the MPO by the Planning Division of the East Alabama Regional Planning and Development Commission. The TIP guides the Alabama Department of Transportation in its annual allocation of funds for transportation improvements and becomes part of the State TIP. The 1995-1998 TIP for Calhoun County includes 26 projects recommended and proposed for funding. Highway improvement projects currently partially or totally funded include the following:

- the southward extension (two lanes) of Golden Springs Road from I-20 to Friendship Road in Oxford;
- the widening of US Highway 78 in Oxford to 5-lanes from State Highway 21 east to Golden Springs Road;
- the construction of the Anniston Eastern By-Pass (4-lanes) between the Golden Springs exit on I-20 and the intersection of US Highway 431 and State Highway 21 west of FMC (only the southern portion between I-20 and Coleman Road has been funded to date); and,
- the construction of the Anniston Western By-Pass (4-lanes) along the Coldwater Road and Bynum-Leatherwood Road corridors between the I-20 Coldwater exit and US Highway 431 (only the southern portion between I-20 and State Highway 202 has been funded to date).

Completion of the programmed eastern and western by-passes will alleviate current traffic congestion, especially on State Highway 21, and will relieve much of the traffic generated under MHIR Alternative which otherwise would utilize Highway 21.

5.5.5.1.8 Ordnance and Explosives.

Analysis Area. The analysis area for cumulative munitions and ordnance impacts is limited to the FMC boundary, and more specifically to those areas of FMC known or suspected to contain UXO.

Cumulative Impacts of Reuse. UXO clearance, removal, excavation, and detonation activities at locations where residential, commercial, and/or industrial reuse is planned will have an adverse impact on the vegetative communities of the area and will consequently have adverse impacts to all biota. Additionally removal activities may increase soil erosion, especially if removal activities occur on steep slopes. Short-term increases in noise levels is also possible as a result of excavation and detonation activities.

5.5.5.1.9 Hazardous and Toxic Materials.

Analysis Area.. The cumulative impact analysis area for this hazardous and toxic materials includes all areas within the boundaries of FMC.

Cumulative Impacts of Reuse. Subsection 5.4.9 discusses the fact that existing hazardous waste sites at FMC will be investigated and remediated to a level that will match the anticipated reuse. Existing activities at FMC routinely use hazardous, toxic, and radiological materials as well as biological wastes and medical wastes which are a by-product of medical services. Under the MHIR Alternative, the amount of these materials used and generated by the Army will be greatly reduced at FMC. New activities located onto FMC as part of the MHIR Alternative may also use hazardous materials and/or generate hazardous wastes but the amounts are not known at this time. These new activities will be responsible for handling, managing, transporting and disposing of hazardous materials in full compliance with all applicable Federal, state and local regulations. Based on consideration of all past and present, reasonably foreseeable future actions and MHIR, it is anticipated that all hazardous materials and wastes will be handled, stored, transported and disposed of in a manner which protects the environment and human health. No significant adverse impacts would be expected.

5.5.5.1.10 Permits and Regulatory Authorizations.

Analysis Area. Specific permit procedures and requirements serve to define the boundary of areas considered. Existing operating permits are confined to the installation boundaries. Therefore the analysis

area for the cumulative effects of permits and regulatory authorities is the installation boundaries.

Cumulative Impacts of Reuse. Activities within the Army enclave at FMC will continue to comply with all Federal, state and local regulations. Elements of MHIR Alternative that will require new permits and regulatory authority include:

- All proposed actions that result in stationary source air emissions will be addressed during the Title V permit process and evaluated for inclusion; and
- Some of the activities associated with MHIR Alternative will require the new activities to obtain water quality management permits. Some construction will require application for inclusion in the state general stormwater permit.

It is anticipated that the new activities at FMC under MHIR Alternative will operate within all permit conditions and maintain coordination with appropriate regulatory agencies. These activities will be responsible for ensuring that significant adverse impacts to the environment do not occur.

5.5.5.1.11 Biological Resources.

Analysis Area. The analysis area for cumulative analysis of impacts to biological resources includes the current FMC Main Post boundaries, watercourses immediately downstream of the current FMC boundaries, and the Choccolocco corridor that connects FMC to the Talladega National Forest.

Cumulative Impacts of Reuse. Past Army actions at FMC were beneficial to biological resources. Military ownership resulted in range induced wildfires as well as reduced logging frequencies. These activities, combined with the rugged terrain and steep slopes of the Choccolocco Mountains, maintained MLP ecosystem that were lost or degraded at other locations. Army natural resource staff conducted surveys and management programs that documented and maintained SINA, species of conservation concern (SCC), and NTMB habitat. Additionally, the Army lease of the Choccolocco Corridor (the FMC lease will expire in 1999 and the land will remain under Alabama Forestry Commission management), provided a large contiguous section of forest extending from FMC through the Choccolocco Corridor into the National Forest lands east of FMC. This large tract of land is beneficial to NTMB and other species. See Appendix C, particularly subsections C.1.5 through C.1.8, for additional information on how Army ownership and range activities have maintained and enhanced the unique flora and fauna present at FMC. Soil erosion and run-off as a whole to Cane Creek, Cave Creek, and other small streams draining FMC were minimized through Army programs on FMC.

Future activities will result in adverse impacts to biological resources. Cumulative impacts could occur due to highway construction and redevelopment activities. With the exception of the eastern by-pass, a proposed highway that will cross the southwest portion of FMC, the expected future impacts to biological resources due to future activities have been covered in subsection 5.4.11. The highway would encroach upon the Reynolds Hill Turkey Oak SINA and would cause fragmentation of the southwest corner of the MLP forest ecosystem. While the highway would only directly replace approximately 50 acres of forest, the fragmentation caused by the eastern by-pass could reduce the effective size of the MLP ecosystem by approximately 1,200 acres. In addition to the impacts indicated in subsection 5.4.11, the highway would further reduce the amount of unfragmented forest by approximately 400 acres and interior forest by approximately 200 acres. Fragmentation could result in increased nest predation for forest interior NTMB species, particularly those species that nest close to the ground. Fragmentation could also create conditions more favorable for an increase of exotic plant populations. Aggressive exotics could replace SCC and/or other native species of plants. Highway construction would also contribute to increased sediment loading to streams during the construction phase and increased run-off from would be expected over the long-term due to increases in impervious surfaces and automobile traffic. These activities could result in greater stormwater run-off and increased run-off of petroleum hydrocarbons from leaks and spills of automobile fluids.

5.5.5.1.12 Cultural Resources.

Analysis Area. The cumulative impact analysis area for NRHP eligible archaeological sites and historic architectural properties is limited to the FMC excess lands available for disposal and reuse.

Cumulative Impacts of Reuse. No cumulative effects are expected for this reuse plan with application of the historic resources encumbrance and/or mitigation measures. FMC historic properties will either be protected by encumbrances or appropriate mitigation measures will be implemented to reduce adverse effects of their loss or alteration to a minor level. The make up of the encumbrances or the mitigation measures will be determined through section 106 consultations between the Army, the Alabama SHPO, and the ACHP.

5.5.5.1.13 Sociological Environment.

Analysis Area. The analysis area for the cumulative impacts on the sociological environment is the eight-county ROI, and more specifically Calhoun County. This analysis area was selected as the surrounding eight-county area was used as the ROI in the EIFS Model for assessing the sociological impacts of reuse.

Cumulative Impacts of Reuse. Recent population growth within the FMC ROI has been rather stable since 1980 as the region experienced only a one percent increase in population between 1980-90. Current 1995 population estimates indicate a modest growth rate of approximately four percent since 1990. St. Clair County and Cherokee County have experienced the greatest growth since 1980, while Calhoun County and Etowah County had the greatest population losses during the last decade. This overall population loss has been the result of out-migration, in part due to the downsizing at FMC and the Anniston Army Depot, and the lack of employment opportunities, especially higher paying skilled jobs, for the younger population.

Under the MHIR Alternative the daytime population (employees and residents) of the reuse area (FMC installation) would almost double from baseline conditions under full build-out to 17,600. Assuming a certain degree of in-migration of population will occur under this scenario, it is estimated that there will be a net regional population increase of approximately 3,600 after accounting for the out-migration of military personnel and some civilian personnel associated with FMC. This is equal to approximately three percent of the 1990 population of Calhoun County, and less than one percent of the ROI population.

Indirect net impacts include a potential school enrollment increase and additional housing demands. Since these impacts would occur over an extended period of time (e.g. 20 years), the demands on the local school system and housing market would not cause significant adverse impacts to the sociological environment. Police and fire protection services would require some expansion of existing facilities and personnel. No cumulative adverse impacts would occur in respect to environmental justice issues and the homeless programs.

5.5.5.1.14 Economic Development.

Analysis Area. The analysis area for the cumulative impacts of economic development is the eight-county ROI, and more specifically Calhoun County. This analysis area was selected since the surrounding eight-county area was used as the ROI in the EIFS Model for assessing the economic impacts of reuse.

Cumulative Impacts of Reuse. Trends in overall economic development in the eight-county ROI reflect a modest growth rate during the 1985-1995 period, with the civilian labor force increasing approximately 12 percent during this period. The service and retail sectors have increased while manufacturing has decreased in relative importance in respect to job opportunities and employment. Anniston, Oxford and Jacksonville in Calhoun County; Gadsden in Etowah County; and Talladega in Talladega County continue to be the major employment and growth centers in the ROI.

During the 10-year period from 1983-93 period over 10,000 civilian jobs were added in Calhoun County with the majority of this growth in the service and retail sectors. Most of this job growth occurred in the I-20 and State Highway 21 corridors in Oxford and Anniston. Retail sales in Calhoun County increased almost 33 percent during this 10-year period. Personal income, however, has not increased in terms of constant dollars as the local and regional job market continues to be dominated by lower-paying, unskilled jobs.

Military downsizing at Fort McClellan and the Anniston Army Dept during this period, however, resulted in substantial losses in government employment. Fort McClellan, however, still remains the largest employer in the ROI and has been an economic engine for employment creation, business and higher paying jobs. Activities at the installation are directly and indirectly responsible for over \$200 million in annual business sales; 1,755 jobs; and \$178 million in annual income.

Post-closure caretaker status will result in the inability to begin redevelopment to compensate for the loss of military and civilian jobs, and business sales associated with the closure of FMC. However, reuse of the disposal area under MHIR at full build-out would result in a net employment increase of 9,584 on the installation, and a net increase of approximately 5,000 direct and indirect jobs in the retail, service and industrial sectors. Direct and indirect business sales volume would increase by \$574 million annually, while direct and indirect personal income would increase by approximately \$78 million annually. Other indirect economic benefits include increases in the real property tax base, and property and sales tax revenues. In addition, economic benefits would accrue from the one-time construction of the proposed reuse facilities in the form of direct and indirect job creation, business sales and personal income.

5.5.5.1.15 Quality of Life.

Analysis Area. The analysis area selected for the assessment of cumulative impacts on quality of life issues is Calhoun County, especially the communities of Anniston and Oxford. This area was chosen as the majority of any quality of life impacts associated with reuse of the disposal area will be primarily within the more immediate environment of FMC.

Cumulative Impacts of Reuse. Direct impacts will accrue to the local school system in the form of potential increased enrollment resulting from the reuse activity and projected in-migration of population. A short-term adverse impact associated with increased enrollment could result in overcrowding and necessitate the construction of new school facilities. Under MHIR Alternative it is estimated that there will be a net enrollment increase of over 1,100 students - an approximate six percent increase over current enrollment levels. It is anticipated that the majority of this enrollment increase will occur in the Anniston and Calhoun County public school systems. These two school systems will lose over \$600,000 in Federal Impact Aid funds as a result of the loss of the school-age dependents of the military personnel. However, the loss of these federal funds will more than be off-set by the addition of the reuse area to the local property tax rolls and the subsequent collection of tax revenue by the local school systems. It is anticipated that any new facilities and personnel required to meet the additional enrollment demands can be financed by the new tax revenues.

The projected demand for an additional 3,600 housing units could result in a housing shortage within the region, especially in Calhoun County and the communities of Anniston and Oxford. However, this demand should be accommodated without any adverse impacts since full build-out of the reuse area is projected to occur over a 20-year time period.

No major impacts are anticipated in respect to public and family support services as increased tax revenues would be available to finance any needed expansion of these services. Current recreational and open space resources are sufficient to accommodate future additional demands. However, visual and aesthetic resources within and adjacent to the reuse area could be adversely impacted by modification/destruction of resources within the reuse area and from potentially more intense development.

5.5.5.1.16 Installation Agreements.

Analysis Area. The analysis area for cumulative installation agreements impacts includes the FMC boundary and those areas that extend beyond the installation boundary where external support to others, by FMC, was agreed upon based on existing agreements.

Cumulative Impacts of Reuse. Most of the non-DOD agreements are associated with easements with utility companies. However, minor cumulative impacts would be expected associated with the services currently provided by FMC in support of CSEPP. Anniston Army Depot will make arrangements for CSEPP support currently provided by FMC. Selected facilities at FMC to support CSEPP are being retained. Medical, ambulance, and related services associated with the agreements will need to be provided by another source.

5.5.5.2 Medium Intensity Reuse Encumbered Disposal Alternative.

5.5.5.2.1 Introduction. Implementation of this scenario would result in effects that would be similar to those under the MHIR Alternative, but on a lesser scale. Noteworthy differences between the MHIR and MIR alternatives are presented in the following paragraphs.

5.5.5.2.2 Land Use. In addition to development underway, and the current inventory of commercial and industrial land/space and approved residential development, reuse of the disposal area under the MIR Alternative would have the following additional direct impacts on land use on FMC and adjacent areas:

- the addition of 228 acres for retail development (including approximately 400,000 SF of retail space);
- the addition of 141 acres for office complexes (including approximately 747,000 SF of office space);
- the development of approximately 1,245 single family dwelling units;
- the addition of 924 acres for industrial areas (including approximately 3,863,000 SF of industrial space); and
- the development of 202 acres for a training and educational complex (including approximately 847,000 SF of educational and training space).

Potential indirect impacts on adjacent and off-post land use would include the additional demand for housing, supportive commercial, and possibly industrial uses as a result of the development of the FMC reuse area. In addition, the magnitude of potential development of the FMC reuse area could adversely affect the development and marketability of competing areas within the immediate area.

5.5.5.2.3 Air Quality. This plan has the same amount of land in comparison to the MHIR Alternative, but the intensity for reuse is reduced. As a result, the quantity of new stationary air sources to relocate in the area is reduced. The quantity of overall air emissions associated with this alternative would be slightly less than MHIR Alternative. For this analysis it was assumed that prescribed burning would decrease by 50% on Main Post and increase by 10% on Pelham Range. Table 5.9 shows the net increase in emissions associated with the MIR Alternative. The average daily trips are approximately 68% of the MHIR Alternative, thus the predicted emissions are significantly reduced. However, they are still well above the USEPA General Conformity Rule de minimis thresholds. A long-term significant adverse impact would be expected and mitigation is required primarily due to mobile sources.

5.5.5.2.4 Noise. Implementation of the MIR Alternative would result in similar impacts to those discussed in the MHIR Alternative in subsection 5.5.5.1.4.

5.5.5.2.5 Water Resources. The cumulative impact of implementation of the MIR Alternative would be similar to those described in subsection 5.5.5.1.5 for the MHIR Alternative. The magnitude of the cumulative impacts would be lessened due to the lower intensity of the reuse.

5.5.5.2.6 Geology. Implementation of the MIR Alternative would result in similar impacts to those discussed for the MHIR Alternative in subsection 5.5.5.1.6. The magnitude of the cumulative impacts

would be lessened due to the lower intensity of the reuse.

5.5.5.2.7 Infrastructure

5.5.5.2.7a Infrastructure (Utilities). Implementation of the MIR Alternative, in combination with the past and present actions, and reasonably foreseeable future actions previously identified will result in the same cumulative impacts as discussed in subsection 5.5.5.1.7. As described in subsection 5.5.5.1.7, there are no significant adverse cumulative impacts anticipated due to the added demand on infrastructure.

5.5.5.2.7b Infrastructure (Transportation). Under the MIR Alternative it is estimated that an additional 24,340 net external trips (47,840 - 23,500) would be generated under full build-out. All of this additional traffic would be collected off-base by State Highway 21 under current conditions. As indicated in subsection 5.4.7.3 this additional traffic would result in an approximate 25 percent increase in existing traffic volumes on some segments of Highway 21. Traffic volumes on other arterials (e.g. US Highway 431) would also increase in the absence of major roadway improvements.

5.5.5.2.8 Ordnance and Explosives. Implementation of the MIR Alternative would result in similar impacts to those discussed in the MHIR Alternative in subsection 5.5.5.1.8.

5.5.5.2.9 Hazardous and Toxic Materials. Implementation of the MIR Alternative, in combination with the past and present actions, and reasonably foreseeable future actions previously identified will result in the same cumulative impacts as discussed in subsection 5.5.5.1.9. As described in subsection 5.5.5.1.9, there are no significant adverse cumulative impacts anticipated due to the added generation or use of hazardous and toxic materials.

5.5.5.2.10 Permits and Regulatory Authorizations. Implementation of the MIR Alternative, in combination with the past and present actions, and reasonably foreseeable future actions previously identified will result in the same cumulative impacts as discussed in subsection 5.5.5.1.10. As described in subsection 5.5.5.1.10, there are no significant adverse cumulative impacts anticipated due to the added demand on permits and regulatory authorities.

5.5.5.2.11 Biological Resources. Implementation of the MIR Alternative would result in similar impacts to those discussed for the MHIR Alternative in subsection 5.5.5.1.11 for terrestrial species, but on a slightly lesser scale for aquatic species.

5.5.5.2.12 Cultural Resources. No cumulative effects are expected under this reuse alternative. Considerations relevant to the MHIR Alternative would apply to the less intense development of the MIR Alternative.

5.5.5.2.13 Sociological Environment. Under the MIR Alternative the daytime population of the reuse area would increase approximately 32 percent from the baseline level. Even though it is assumed that there will be some in-migration of population under this scenario, there will be a net population decrease of 5,272 because of the out-migration of the military and some civilian personnel currently stationed or employed at FMC. Indirect net impacts include a corresponding decrease in school enrollment, housing and public service demands resulting from reuse activities.

5.5.5.2.14 Economic Development. Economic benefits accruing to the region under the MIR Alternative would be approximately one-half the magnitude of benefits under the MHIR Alternative. Reuse of the disposal area under the MIR Alternative at full build-out would result in a net employment increase of 4,587 on the installation, and a net increase of 2,633 direct and indirect jobs in the retail, service and industrial sectors. Direct and indirect net business sales volume would increase by \$294 million annually, while total direct and indirect personal income would increase by approximately \$40 million annually. In addition, economic benefits would accrue from the one-time construction of the proposed reuse facilities in the form of direct and indirect job creation, business sales and personal income. However, these benefits would be approximately one-third less than under the MHIR Alternative.

5.5.5.2.15 Quality of Life. No impacts would be expected as there would be a net decrease in school enrollment compared to baseline conditions, while the increased demand for owner-occupied housing could be accommodated by the local and regional housing market.

5.5.5.2.16 Installation Agreements. Minor cumulative impacts would be expected. The services associated with FMC support to CSEPP will need to be arranged by Anniston Army Depot. Selected facilities at FMC to support CSEPP are being retained. Medical, ambulance and related services associated with the agreements will need to be provided by another source.

5.5.5.3 Medium Low Intensity Encumbered Disposal Alternative.

5.5.5.3.1 Introduction. Implementation of this scenario would result in effects that would be similar to those under the MHIR and MIR alternatives, but on a lesser scale. Noteworthy differences between the MHIR and MIR alternatives and the MLIR Alternative are presented in the following paragraphs.

5.5.5.3.2 Land Use. In addition to development underway, and the current inventory of commercial and industrial land, and approved residential development, reuse of the disposal area under the MLIR Alternative would have the following additional direct impacts on land use on FMC and adjacent areas:

- the addition of 228 acres of retail development (including approximately 315,000 SF of retail space);
- the addition of 141 acres for office complexes (including approximately 618,000 SF of office space);
- the development of approximately 1,150 single family dwelling units;
- the addition of 924 acres for industrial development (including approximately 3,219,000 SF of industrial space); and
- the development 202 acres for a training and educational complex (including approximately 706,000 SF of educational and training space).

Potential indirect impacts on adjacent and off-post land use would include the additional demand for supportive commercial, and possibly industrial uses as a result of the development of the FMC reuse area.

5.5.5.3.3 Air Quality. This plan has the same amount of land in comparison to the MHIR and MIR alternatives, but the intensity for reuse is reduced. As a result, the quantity of new stationary air sources to relocate in the area is reduced. The quantity of overall air emissions associated with this alternative would be less than both the MHIR and MIR alternatives. For this analysis it was assumed that prescribed burning would be eliminated. Table 5.9 shows the net increase in emissions associated with the MLIR Alternative. The average daily trips are approximately 50% of the MHIR Alternative, thus the predicted emissions are significantly reduced from the MIR Alternative. Based on a smaller increase in traffic in conjunction with the elimination of prescribed burning, NO_x is the only pollutant that would exceed the USEPA General Conformity Rule de minimis thresholds. The anticipated annual increase is only marginally greater than the de minimis thresholds (105.5 tons compared to 100 tons). However, by definition, the impact must be classified as a long-term significant adverse impact. Mitigation is required, primarily because of mobile sources, although this Alternative has less adverse impacts to air quality compared to the MHIR and MIR alternatives.

5.5.5.3.4 Noise. The cumulative impact of implementation of the MLIR Alternative would be similar to those described in subsection 5.5.5.1.4 for the MHIR Alternative.

5.5.5.3.5 Water Resources. The cumulative impact of implementation of the MLIR Alternative would be similar to those described in subsection 5.5.5.1.5 for the MHIR Alternative. The magnitude of the cumulative impact would be lessened due to the lower intensity of the reuse.

5.5.5.3.6 Geology. The cumulative impact of implementation of the MLIR Alternative would be similar to those described in subsection 5.5.5.1.6 for the MHIR Alternative. The magnitude of the cumulative impact would be lessened due to the lower intensity of the reuse.

5.5.5.3.7 Infrastructure

5.5.5.3.7a Infrastructure (Utilities). Implementation of the MLIR Alternative, in combination with the past and present actions, and reasonably foreseeable future actions previously identified will result in the same cumulative impacts as discussed in subsection 5.5.5.1.7. As described in subsection 5.5.5.1.7, there are no significant adverse cumulative impacts anticipated due to the added demand on infrastructure.

5.5.5.3.7b Infrastructure (Transportation). Under the MLIR Alternative it is estimated that an additional 11,820 net external trips (35,320 - 23,500) would be generated under full build-out. All of this additional traffic would be collected off-base by State Highway 21 under current conditions. As indicated in subsection 5.4.7.3 this additional traffic would increase existing traffic volumes by approximately 15 percent or more on some segments of Highway 21. Traffic volumes on other arterials (e.g. US Highway 431) would also increase in the absence of major roadway improvements.

5.5.5.3.8 Ordnance and Explosives. The cumulative impact of implementation of the MLIR Alternative would be similar to those described in subsection 5.5.5.1.8 for the MHIR Alternative.

5.5.5.3.9 Hazardous and Toxic Materials. Implementation of the MLIR Alternative, in combination with the past and present actions, and reasonably foreseeable future actions previously identified will result in the same cumulative impacts as discussed in subsection 5.5.5.1.9. As described in subsection 5.5.5.1.9, there are no significant adverse cumulative impacts anticipated due to the added demand on hazardous and toxic materials.

5.5.5.3.10 Permits and Regulatory Authorizations. Implementation of the MLIR Alternative, in combination with the past and present actions, and reasonably foreseeable future actions previously identified will result in the same cumulative impacts as discussed in subsection 5.5.5.1.10. As described in subsection 5.5.5.1.10, there are no significant adverse cumulative impacts anticipated due to the added demand on permits and regulatory authorities.

5.5.5.3.11 Biological Resources. Implementation of this alternative would result in effects that would be similar to those under the MHIR Alternative for terrestrial species, but on a slightly lesser scale for aquatic species.

5.5.5.3.12 Cultural Resources. No cumulative effects on cultural resources are expected under this reuse alternative. Considerations relevant to the MHIR and MIR alternatives would apply to the less intense MLIR Alternative.

5.5.5.3.13 Sociological Environment. Under the MLIR Alternative the daytime population of the reuse area would increase by only 372 above baseline conditions, while regional population would decrease by over 9,500. Indirect net impacts include commensurate decreases in housing and public service demands when compared to the MHIR and MIR Alternatives.

5.5.5.3.14 Economic Development. Economic benefits accruing to the region under the MLIR Alternative would be approximately one-fourth the magnitude of benefits under the MHIR Alternative. Reuse of the disposal area under the MLIR Alternative at full build-out would result in a net employment increase of 1,647 on the installation, and a net increase of approximately 1,150 direct and indirect jobs in the retail, service and industrial sectors. Direct and indirect business sales volume would increase by \$128 million annually, while total direct and indirect personal income would increase by approximately \$18 million annually. In addition, economic benefits would accrue from the one-time construction of the proposed reuse facilities in the form of direct and indirect job creation, business sales and personal income. However, these benefits from construction activity would be approximately one-half the magnitude of the benefits under the MHIR Alternative.

5.5.5.3.15 Quality of Life. As discussed in subsection 5.5.5.2.15 for the MIR Alternative, no impacts would be expected as there would be a net decrease in school enrollment compared to baseline conditions, while the demand for owner-occupied housing could be accommodated by the local and regional housing market.

5.5.5.3.16 Installation Agreements. Minor cumulative impacts would be expected. The services associated with FMC support to CSEPP will need to be arranged by Anniston Army Depot. Selected facilities at FMC to support CSEPP are being retained. Medical, ambulance and related services associated with the agreements will need to be provided by another source.



5.6 MITIGATION SUMMARY

5.6.1 No Action Alternative

As discussed in subsection 5.2, the No Action Alternative could, or in some areas would be expected to, create impacts adversely affecting land use, infrastructure, installation agreements, and economic development.

The longer FMC were to remain in caretaker status, the greater would be the potential for the predicted adverse impacts to affect various resources. The Army would implement the following mitigation measures to reduce or avoid adverse impacts associated with caretaker status as they might occur:

- Conduct installation security and maintenance operations to the extent provided by Army policies and regulations for the duration of the caretaker period, and transfer responsibilities for these functions to non-Army entities as soon as practicable to minimize disruption of service.
- Identify clean or remediated portions of the installation for disposal and reuse and prioritize restoration and cleanup activities to ensure timely disposal and reuse of remaining portions. Recycle solid wastes and debris where practicable.
- Utilize natural attenuation for environmental remediation at appropriate sites wherever there is no imminent threat to human health or the environment.
- Continuation of natural resources management programs including, endangered species management plan provisions, integrated natural resources management plan provisions, land management, pest control, forest management, and erosion control, but at reduced levels. Additionally, agreement with other Agencies would be sought to maintain the mountain longleaf pine (MLP) ecosystem through the continuation of prescribed burns and other management procedures. Continue close coordination with other federal agencies such as the USFWS and state agencies.
- Continued compliance with historic preservation laws and regulations.
- Actively support interim leasing arrangements, where environmental restoration efforts permit, to provide for job creation, habitation and maintenance of structures, and rapid reuse of the installation.

5.6.2 Disposal

Based upon a review of the impacts described in the preceding subsections, it is concluded that unencumbered disposal is not reasonable based upon the anticipated adverse environmental impacts and the interests of the Army. Therefore, the encumbered disposal alternative is the preferred Army action. This action will result in disposal actions that are timely, support Army requirements, and are compatible with the FMDC Reuse Plan.

To avoid, reduce, or compensate for adverse impacts that might occur as a result of encumbered disposal, the Army would:

- Transfer property with covenants, restrictions or notices, as appropriate, for residual environmental contamination, lead base paint, asbestos, UXO clearance actions, protection of historic and cultural resources, and protection of the gray bat.
- Continue required cleanup process and remedial actions.
- Complete EE/CA and any necessary UXO investigations to delineate the extent of UXO on excess FMC property and provide recommendation/notification regarding removal actions and use restrictions.
- Retain federal ownership of property where clearance/removal of UXO would cause significant adverse

and unacceptable ecological damage.

- Continue to work with the FMDC to ensure that, to the maximum extent feasible, encumbered disposal transactions are consistent with the adopted community reuse plan and implementation strategy.
- Prior to final disposal, conduct complete cultural resources surveys of FMC property to the maximum extent possible so as to ensure no adverse effects on the resource that might be present.
- Until final disposal, maintain installation buildings, infrastructure, and natural resources in caretaker status to the extent provided by Army policy and regulations.

Conveyance documents would notify future owners of the property of particular obligations concerning natural and cultural resources that would be imposed as a result of the Army's determination of the applicability of an encumbrance. Conveyance documents would also identify past hazardous substance activities at each site, as required by CERCLA and CERFA and identify restrictions associated with non-CERCLA hazards such as radon and lead based paint.

5.6.3 Reuse

The Army does not propose the implementation of specific mitigation actions for intensity-based reuse scenarios. This is appropriate because reuse planning and execution of redevelopment actions are a responsibility of non-Army entities. The following identifies general mitigation actions that could be implemented by other parties for the reduction, avoidance, or compensation of impacts resulting from their actions. Potential mitigation actions are suggested for those resource areas most likely to be affected by adverse impacts as a result of reuse.

- **Land Use (Land Development Controls).** Appropriate measures to mitigate any potential adverse impacts associated with development of FMC to a level intensity equal to MHIR Alternative include the application of land development controls and planning/design standards by the appropriate governing jurisdiction, whether it be the City of Anniston or Calhoun County. Such mechanisms include zoning and subdivision controls, site and grading plan review, and building permit review and approval procedures. Lot size, density, open space, landscaping, circulation, building bulk/appearance and other elements of the development could be controlled through use of these regulations and procedures.
- **Land Use (Slope and Soil Stability).** Reuse restrictions on the development of areas with steep slopes and/or highly erodible soils would reduce direct and indirect impacts associated with redevelopment activities where soils are disturbed in association with construction, demolition, site remediation or UXO clearance activities. Slope analysis at FMC has revealed that over 10,000 acres of FMC land has slopes greater than 15%. As presented in the FMC Comprehensive Reuse Plan Existing Conditions Report (FMRRA, 1996), slopes greater than 25% are constrained for development whereas slopes between 15 and 25% can be developed as long as careful consideration is given to the size and placement of buildings and roads. In addition to the steep slopes throughout portions of FMC, approximately 80% of the disposal area is comprised of highly erodible soils which does not lend itself to construction without proper erosion management practices.

Since large portions of FMC contain steep slopes and highly erodible soils, restrictions on the development within these areas would mitigate impacts associated with soil erosion, siltation, and habitat loss.

- **Air Quality.** The air permit process established by the Clean Air Act (CAA) and the Alabama Department of Environmental Management provides effective controls over new stationary sources. Adherence to the provisions of the CAA and State Regulations would prevent any significant adverse impacts from stationary sources. Application of best management practices could be used to control fugitive dust (particulate) during construction. Two potential approaches to control construction dust include applying water or dust suppressants and/or planting of plants and grass to the disturbed areas.

For mobile sources, a comprehensive air quality analysis should be conducted for each highway/road expansion and for each existing highway/road that experiences a significant increase in Average Daily Traffic. The goal is to reduce vehicle miles traveled and to reduce congestion during peak hours. The air quality analysis should include dispersion modeling using an approved model to determine if a NAAQS will be exceeded. All air quality analyses should be coordinated with both the Alabama Department of Environmental Management and the Alabama Department of Transportation. Additional possible mitigation measures include implementing trip reduction plans, promoting car and van pooling, using economical vehicles, improving highways, and revising work schedules. Other measures include using public transportation, improving road intersection control, and constructing bicycle paths.

- **Water Resources.** Application of best management practices to reduce sediment loading to surface waters could aid in reducing impacts on water quality. Construction of storm water detention/retention systems could help mitigate impacts associated with storm water runoff from impervious surfaces.
- **Geology.** Disturbance of highly erodible soils, especially those soils associated with the steep slopes on the eastern portions of FMC, should be avoided wherever possible. Should these or other soil types be disturbed, desilting basins, sediment traps, silt fences, straw barriers, and other erosion control measures could be constructed.
- **Ordinance and Explosives.** Comply with deed covenants on land uses which implement the recommendations from the EE/CA and DDESB decisions, regarding UXO removal activities and land use restrictions (institutional controls) imposed as part of the land transfers.
- **Hazardous and Toxic Materials.** Comply with all applicable Federal, state, and local regulations and permit requirements for use of hazardous and toxic materials. Encourage redevelopment activities and industries that are environmentally friendly.
- **Biological Resources (General).** Adverse impacts on biological resources would occur primarily as a result of construction. Two principal measures for conservation of significant biological resources are ensuring consultation with natural resources experts and regulatory agencies prior to initiating actions and implementing best management practices in association with approved construction projects. Operational controls could also be applied to minimize any adverse effects of noise and light on sensitive biological resources.
- **Biological Resources (Mountain Longleaf Pine Ecosystem).** Adverse impacts to the Mountain Longleaf Pine (MLP) community could be mitigated via the implementation of a management program. Elements of the plan would include the following elements:
 - 1) The use of prescribed burns to assure the continued long-term viability of this ecosystem (see Appendix C for additional details on the MLP ecosystem). The prescribed burn program will need to provide a fire regime similar to that occurring at FMC under preclosure conditions (i.e. the prescribed burns will require fires of sufficient frequency, intensity, duration, season, and geographic extent to equate to the fires historically caused by the training activities and the prescribed burn program at FMC). Completion of Auburn University MLP survey of FMC will provide additional information to augment the management of the MLP ecosystem.
 - 2) Direct forest management activities toward the reestablishment of MLP in historic locations, currently containing other species that have replaced MLP due to fire suppression or planting of other species.
 - 3) Establishment of the Mountain Longleaf Wildlife Refuge at FMC would assure the implementation of a vigorous management program including prescribed burning for the MLP ecosystem as well as the management for other biological resources including NTMB's; rare, threatened, and endangered species; and overall ecosystem diversity.

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- **Biological Resources (Threatened and Endangered Species).** Implement the reuse Project Design Features (PDFs) detailed in the Biological Assessment (BA) and the additional protective measures described in the July 1998 letter from the USACE to the USFWS, resulting from informal consultation with the USFWS.
 - **Biological Resources (Other Species of Concern).** Management practices that would maintain populations of other species of concern could include the establishment of buffer areas around SINAs and known populations. For the WFO populations, prescribed burns for the MLP ecosystem and watershed protection to maintain the recharge area for the seeps will benefit the WFO.
 - **Socioeconomic Resources.** No mitigation is necessary. Mitigation of any potential adverse impacts would be partially accomplished through phased implementation of the development of the reuse area. A 20-year build-out period is anticipated for the reuse area, which will result in gradual development of the area with the impacts absorbed over a period of time.

5.7 ENVIRONMENTAL JUSTICE SUMMARY

On February 11, 1994, the President issued Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations*, and on April 21, 1997 he issued Executive Order 13045, *Protection of Children from Environmental Health Risks and Safety Risks*. These orders require that federal agencies conduct their programs, policies, and activities that substantially affect human health or the environment so that there are not disproportionately high and adverse human health or environmental effects on children, or on minority and low-income populations.

The Army's proposed action is not designed to create a benefit for any group or individual. As part of the screening process, entities may express interest in installation assets to provide assistance to homeless persons. FMDC has signed an agreement with the Homeless Alliance of Calhoun County in allocating 14 buildings in the 1200 Area for homeless use. The FMDC Reuse Plan (Fort McClellan Comprehensive Reuse Plan, Homeless Assistance Application - FMRRA, 1997f) must accommodate expressions of homeless interests accepted by Human Health Services and be approved by the Department of Housing and Urban Development (HUD).

Disposal and reuse of FMC will not cause disproportionately high or adverse human health or environmental impacts on children or minority/low-income populations of the surrounding community. Review and evaluation of economic and social information from statistical data sources (e.g. U.S. Census) have not disclosed the existence of identifiable minority or low-income "pockets" or communities within the immediate vicinity of FMC.



5.8 CLEAN AIR ACT CONFORMITY

Under the authority of the CAA and resultant regulations, the USEPA has divided the country into geographical regions known as Air Quality Control Regions (AQCRs) to evaluate compliance with the NAAQS. There are primary NAAQS for protection of public health and there are secondary NAAQS for the protection of public welfare. FMC is under the jurisdiction of the USEPA Region IV and is located within Calhoun County in the East Alabama Intrastate AQCR. The East Alabama Intrastate AQCR is classified as attainment for all criteria pollutants.

There are two independent legal requirements which are used to determine air quality impacts. The first governing requirement is the National Environmental Policy Act (NEPA) and the second is the General Conformity Provision per the CAA, Section 176. Fulfillment of one requirement does not fulfill the other requirement, nor does the exemption of one automatically exempt the other. NEPA requires consideration of the direct and indirect effects of an action on the environment through a prescribed documented process. Completion of this EIS fulfills the NEPA air quality analysis requirements.

Federal Regulations (40 CFR, Part 51, Subpart W) establish General Conformity requirements for Federal facilities to ensure that activities do not adversely affect the State Implementation Plan goals. Conformity is aimed at preventing a Federal action from contributing or causing a violation of the NAAQS, from increasing the frequency of an existing violation, or delaying the timely attainment of a standard. At one time, USEPA considered implementing conformity requirements for attainment areas, however, the National Highway System Designation Act of 1995, Section 305 (Public Law 104-59) modified the CAA, Section 176 preventing the applicability of General Conformity to attainment areas. Since Fort McClellan is located in an attainment area for all criteria pollutants, the General Conformity Rule does not apply.



5.9 UNAVOIDABLE ADVERSE ENVIRONMENTAL IMPACTS

The following paragraphs identify adverse environmental impacts that cannot be avoided in connection with the no action, encumbered disposal, and unencumbered disposal alternatives.

5.9.1 No Action

Notwithstanding Army efforts to maintain the installation's assets, deterioration of FMC facilities would occur as a function of age. Post-closure caretaker status would result in the inability to begin redevelopment activities to compensate for the loss of jobs and attendant adverse impacts on socioeconomics in the region of influence that would occur as a result of the closure of the installation.

5.9.2 Encumbered Disposal

Several encumbrances applicable to FMC, taken together, would impede redevelopment of the FMDC portions of the installation. Removal of many of these encumbrances ultimately would occur (e.g., the Army would eventually be able to certify that certain parcels have been remediated in accordance with CERCLA and CERFA). Predictions are not available for how quickly the FMDC would be able to redevelop the installation in the absence of such encumbrances.

5.9.3 Unencumbered Disposal

Without encumbrances, transfer of the property would involve no deed-recorded limitations to reuse, although new property owners would still be subject to laws and regulations at the federal, state, and local levels. Based on the FMDC reuse plan, the reuse alternatives could involve numerous adverse impacts. The degree to which these impacts would be unavoidable cannot be presently determined because the future reuse actions would be by non-Army entities in ways not presently defined to the degree necessary to quantify impacts. However, a variety of unavoidable impacts associated with unencumbered disposal can be identified in general terms. These impacts include the following:

- **UXO Clearance.** Unencumbered disposal would require the removal of all UXO from the disposal area. The extent of environmental damage resulting from the UXO removal process will be directly associated to the location, linear and vertical extent, type(s), and amount of UXO within the disposal area. The Environmental Baseline Survey (EBS) and the BRAC Ordnance Ammunition and Explosives Archive Search both indicate that much of the disposal area has the potential for UXO. Based upon these studies it is anticipated that significant UXO removal may be required under the UD Alternative. Consequently, significant adverse environmental impacts are anticipated including the loss of plant communities. This includes the MLP ecosystem, SINA's, riparian habitats and other biological systems in the disposal area. Soil loss and erosion associated with the clearance activities would also adversely impact the wetland and aquatic systems via increased siltation and habitat loss.
- **Hazardous and Toxic Materials Remediation.** The UD Alternative would require the cleanup of all contamination to the cleanest levels possible (e.g. any contaminated groundwater would need to be cleaned up to drinking water standards) or would require that the new owner(s) agree to complete cleanup to the satisfaction of the regulatory agencies. Cleanup to these standards would be expensive and time consuming and thereby delay the transfer and reuse of some parcels until the cleanup is complete. Cleanup would exceed requirements based on FMDC reuse plan (e.g., industrial areas would be remediated to residential use levels). This will delay reuse activities and could significantly increase costs to the taxpayers.
- **Threatened and Endangered Species.** Under the UD Alternative habitat for the gray bat would not be protected which could result in adverse impacts to this species.

-
- **Cultural Resources.** Under the UD Alternative, long-term minor adverse impacts would be expected. FMC NRHP eligible properties would be adversely effected by the withdrawal of federal protection. If FMC historic properties are disposed of without preservation covenants, the Army, Alabama SHPO, and the ACHP will consult, in accordance with Section 106 of the NHPA, to determine appropriate mitigation measures for treating the potential degradation or loss of these properties. The adverse impacts of UD disposal of FMC historic properties would thus be reduced to a minor level by implementing these agreed upon mitigation measures.
 - **Access Easements.** Under the UD Alternative access easements providing access by the ALARNG and Army Reserves to lands being retained by the Army for their use, as well as to hazardous waste remediation sites and UXO clearance sites would not be required. Consequently, adverse impacts associated with the inability to readily access these properties could occur.

The presentation of suggested mitigation actions in subsection 5.6 serves as a starting point so that subsequent owners can avoid generating adverse impacts during reuse.

5.10 IRREVERSIBLE OR IRRETRIEVABLE COMMITMENTS OF RESOURCE

Irreversible and irretrievable resource commitments are related to the use of non-renewable resources and the effects that use of these resources will have on future generations. Irreversible effects primarily result from use or destruction of a specific resource (e.g., energy and mineral) that cannot be replaced within a reasonable time frame. Irretrievable resource commitments involve the loss in value of an affected resource that cannot be restored as a result of the action (e.g., extinction of a threatened or endangered species).

The No Action Alternative and disposal alternative will not result in any irreversible or irretrievable commitment of resources. Reuse, however, could result in irreversible or irretrievable commitments of resources if land development either physically eliminated rare or endangered plant or animal species, or if subsequent secondary impacts from land development resulted in defilement of natural resources immediately adjacent to committed developed areas.



5.11 SHORT-TERM USES OF MAN'S ENVIRONMENT AND MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

Short-term uses of the biophysical components of man's environment include construction-related disturbances and direct impacts associated with an increase in population and activity that occurs over a period of less than five years. Long-term uses of man's environment include those impacts occurring over a period of more than five years, including permanent resource loss.

Several kinds of activities could result in short-term resource uses that compromise long-term productivity. Filling of wetlands or loss of other especially important habitats, conversion of prime or unique farmlands to nonagricultural use, and consumptive use of high-quality water at non-renewable rates are examples of actions that affect long-term productivity.

Disposal of FMC, encumbered or unencumbered, would facilitate long-term productivity by allowing future economically beneficial reuse of the property. The No Action Alternative would hinder long-term economic productivity by restricting future development. Under all the reuse scenarios, future construction would have temporary adverse effects on air quality, storm water runoff, noise, traffic circulation and roadways, energy consumption, and aesthetics. Short-term disturbances of previously undisturbed sensitive biological habitats could result from construction of new facilities, which could cause long-term reductions in biological productivity.

List of Preparers

This Environmental Impact Statement was prepared under the direction of the U.S. Department of the Army, Training and Doctrine Command; and the U.S. Army Corps of Engineers, Mobile District. A list of persons who participated in the preparation of this document is presented below.

Name	Education and Experience	Primary Responsibilities
Robert B. Bax	B.S. Forestry; M.S. Recreation & Park Administration; 20 years experience in environmental, urban/regional, recreation and military planning projects.	Principal-In-Charge; planning and general supervision of all work elements.
Gregory W. Knauer	B.A. Zoology; M.S. Aquatic Ecology; 20 years experience in environmental planning, water quality investigation, and military master planning projects.	Project Manager/Principal Scientist; coordination of technical elements and analysis; coordination and review of document preparation.
Richard E. Hall	B.S. Environmental Biology; M.S. Zoology 20 years experience in environmental investigations and impact assessment.	Assistant Project Manager/Senior Project Scientist; data collection and key participant in description of proposed action, alternatives formulation, facilities, and land use alternatives and related environmental analysis.
Donald E. Beisel	B.S. Geography; M.A. Geography; 23 years of experience in community/urban planning, environmental planning, and socioeconomic studies.	Senior Project Planner; data collection and preparation of socioeconomic analysis and related text sections including EIFS model forecasts. Prepared transportation sections.
Elizabeth A. Crowell	B.A., Anthropology; M.A., American Civilization; M.A., Historical Archaeology; Ph.D., Historical Archaeology; more than 20 years experience in all phases of	Senior Archaeologist; data collection/preparation of the archaeological and cultural resources sections.

Name	Education and Experience	Primary Responsibilities
Daniel W. Currence	prehistoric and historical archaeological projects. B.S., Civil Engineering; M.S., Environmental Engineering; 9 years of civil and environmental engineering experience on hazardous waste sites.	Senior Project Engineer; data collection/preparation of infrastructure and hazardous and toxic materials analysis and related sections.
Christine M. Eck	A.A.S., Commercial Art, 14 years of graphics, CADD, GIS and related experience.	CADD Specialist, graphics
Lee L. Gorday	B.A., Geology; M.A. Geology; 14 years of experience in hydrogeologic systems and groundwater contamination.	Senior Hydrogeologist; data collection and preparation of groundwater, geology, and soils elements.
Mike R. Grimm	B.S., Chemical Engineering; M.S., Chemical Engineering; 4 years experience in preparation of environmental documents, air emission inventories and permitting, regulatory compliance, and hazardous waste minimization.	Environmental Engineer; data collection and key participant in the preparation of air quality and climate analysis.
Randolph D. Norris	B.S., Plant & Soil Science; M.S. Environmental Planning; 6 years of experience in environmental planning, impact assessment, and environmental management.	Environmental Planner; data collection, preparation of quality of life and installation agreements analysis, and assisted in land use, noise, hazardous/toxic materials, and alternatives analysis.
G. Thomas Plattner	B.S., Biology; M.S., Environmental Studies; 8 years experience in wetland management; wildlife, and endangered species management; preparation of environmental documents.	Environmental Scientist; data collection, analysis and key participant in preparation of EIS text and supporting sections relating to biological resources, specializing in unique ecosystems and T&E species, including preparation of Appendix C.
Darrel B. Sisk, Jr.	B.E.D. Environmental Design; M.S. Architectural Engineering; 15 years experience in base civil engineering, military planning and environmental planning and impact assessment.	Senior Project Planner; data collection and key participant in description of proposed action and alternatives formulation, assisted in land use, noise, hazardous/toxic materials, infrastructure alternatives analysis and related environmental analysis.
Cynthia A. Whitley	B.A., International Affairs; M.A., Historical Archaeology; 10 years of experience in historic preservation, cultural resource management, and regulatory compliance.	Historian/Architectural Historian; data collection/preparation of cultural resources and archeological sections.

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7.1 INTRODUCTION

This Final Environmental Impact Statement (FEIS) will be filed with the U.S. Environmental Protection Agency and circulated for public review and comment. A Notice of Availability (NOA) will be printed in the *Federal Register*, initiating a 30-day comment period.

This Section identifies Federal, state and local agencies; and elected officials that received a copy of the DEIS. In addition, agencies, organizations, and individuals that provided substantive comments on the DEIS (or that specifically requested a copy of the FEIS) were provided with a copy of the FEIS concurrent with the publication of the Notice of Availability in the *Federal Register*. Those entities that received a copy of the FEIS have been indicated with an asterisk (*) in the list below. The FEIS (and appendices) have also been provided to each of the eight public repositories listed at the end of this Section and in subsection 1.3.4. All persons on the Environmental Impact Statement (EIS) mailing list will be informed (by receipt of a mailed informational flyer) of the availability of the FEIS; the location of numerous public repositories where the document is available for review; and the time, date and place where comments on the FEIS should be sent. Comments received during the FEIS 30-day comment period will be considered by the Army decision-maker in reaching the final decision on this action.

7.2 FEDERAL AGENCIES

Advisory Council on Historic Preservation (*)
Attn: Mr. Don L. Kilma, Executive Director
Old Post Office Building, Suite 809
100 Pennsylvania Avenue, N.W.
Washington, D.C. 20004

Department of Health & Human Services
Attn: Ms. Pat Ford-Roegner
101 Marietta Tower, Suite 1515
Atlanta, Georgia 30323

Department of Housing and Urban Development (*)
Attn: Mr. Bill Dirl
600 Beacon Parkway, West, suite 300
Birmingham, Alabama 35209

Department of Housing and Urban Development
Attn: Mr. Heager L. Hill
600 Beacon Parkway, West, suite 300
Birmingham, Alabama 35209

Federal Highway Administration
Attn: Mr. Joe D. Wilkerson
500 East Boulevard, Suite 200
Montgomery, Alabama 36117

Federal Highway Administration (*)
Attn: Mr. Larry R. Dreihaup
Division Administrator
61 Forsyth Street SW 17T100
Atlanta, Georgia 30303

Federal Emergency Management Agency
Attn: Mr. Kenneth D. Hutchinson
Federal Regional Center
1371 Peachtree Street, N.E.
Atlanta, Georgia 30309

National Center for Domestic Preparedness (*)
Attn: Mr. L.Z. Johnson
Building 65
Fort McClellan, Alabama 36205-5000

USDA - Forest Service
Attn: Mr. John H. Yancey
2946 Chestnut Street
Montgomery, Alabama 36107

USDA - Natural Resources Conservation Service
Attn: Mr. John C. Meetze
665 Opelika Road (P.O. Box 311)
Auburn, Alabama 36830

U.S. Department of Interior (USDOI) (*)
Office of Environmental Policy and Compliance
Attn: Sheila Huff
1849 "C" Street, NW, Room 2340
Washington, D.C. 20240

USDOI - Bureau of Land Management
ATTN: Clay W. Moore
411 Briarwood Dr. Suite 404
Jackson, Mississippi 39206

USDOI - National Park Service
Attn: Director - Southeast Region
75 Spring Street
Atlanta, Georgia 30303

USDOI - U.S. Fish and Wildlife Service (*)
Attn: Mr. Larry E. Goldman
P.O. Drawer 1190
Daphne, Alabama 36256

USDOI - U.S. Fish and Wildlife Service (*)
Attn: Ms. Noreen K. Clough
Regional Director
1875 Century Boulevard
Atlanta, Georgia 30345

USDOI - U.S. Fish and Wildlife Service
Attn: Mr. Tom Follrath
Chief, Division of Real Estate
1875 Century Boulevard
Atlanta, Georgia 30345

USDOI - U.S. Geological Survey
Attn: Mr. Jess Weaver
2350 Fairlane Drive, Suite 120
Montgomery, Alabama 36116

US Department of Justice (*)
Attn: Ms Laurie Robinson
Office of Justice Programs
810 7th Street NW, Room 6400
Washington D.C. 20535

US Department of Justice
Attn: Mr John Hansel
Office of General Council
810 7th Street NW, Room 5400
Washington, D.C. 20535

US Environmental Protection Agency (*)
Region IV
Attn: Mr. Bart Reedy
100 Alabama Avenue
Atlanta Federal Center
Atlanta, Georgia 30303

US Environmental Protection Agency (*)
Region IV
Attn: Dr. Gerald Miller
345 Courtland Street, N.E.
Atlanta, Georgia 30365

7.3 STATE AGENCIES

Alabama Cooperative Extension System

Alabama Department of Conservation and Natural

Attn: Mr. W. Gaines Smith
State Headquarters, Office of the Director
Auburn University, Alabama 36849-5612

Resources (*)
Alabama Natural Heritage Program
Attn: Mr. Jarel Hilton
1500 E. Fairview Ave.
Montgomery, Alabama 36106

Alabama Department of Conservation and Natural
Resources (*)
Game and Fish Division
Attn: Mr. Gary H. Moody
64 North Union Street
Montgomery, Alabama 36130

Alabama Department of Environmental
Management (*)
Attn: Mr. Chris L. Johnson
1751 Cong. W.L. Dickinson Dr.
Montgomery, Alabama 36109-2608

Alabama Department of Forestry Management
Commissioner's Office
Attn: Mr. Jack Thompson
P.O. Box 3336
Montgomery, Alabama 36109-0036

Alabama Forestry Commission (*)
Attn: Mr. Timothy C. Boyce
513 Madison Avenue
Montgomery, Alabama 36104-3631

Alabama Historical Commission (*)
Attn: Elizabeth Brown
State Historic Preservation Officer
468 S. Perry Street
Montgomery, Alabama 36130-0900

Alabama Department of Transportation (*)
Attn: Mr. Bill Garnett
1409 Coliseum Boulevard
Montgomery, Alabama 36130-3050

Alabama Department of Transportation
Attn: Mr. Terry W. Robinson
1409 Coliseum Boulevard
Montgomery, Alabama 36130-3050

Alabama State Parks
Attn: Mr. Carlos A. Scardina
64 North Union Street
Montgomery, Alabama 36130

7.4 LOCAL AND REGIONAL AGENCIES

Anniston Housing Authority
Attn: Mr. Sam Jones, Jr.
P.O. Box 2225
Anniston, Alabama 36202

Anniston Museum of Natural History (*)
Attn: Cheryl H. Bragg
800 Museum Drive, P.O. Box 1587
Anniston, Alabama 36202-1587

East Alabama Regional Planning and Development
Commission
Attn: Mr. David Shaw
1130 Quintard Ave., Suite 300
Anniston, Alabama 36202

Fort McClellan Development Commission (*)
Attn: Mr. Rob Richardson
Building 65
Fort McClellan, Alabama 36205-5000

7.5 ELECTED OFFICIALS

The Honorable Jefferson B. Sessions (*)
U.S. Senate
P.O. Box 228
Tuscumbia, Alabama 35674

The Honorable Fob James Jr. (*)
Governor - State of Alabama
State Capitol
3926 Beardsley Drive
Montgomery, Alabama 36130

The Honorable Richard Shelby (*)
U.S. Senate
P.O. Box 1092
Tuscumbia, Alabama 35406

The Honorable Richard Shelby (*)
Attn: Patrick Denny
Federal Building (Senator Shelby's Office)
1118 Greensboro Ave.
Suite 240
Tuscaloosa, Alabama 35401

The Honorable Bob Riley (*)
U.S. House of Representatives
1129 Noble Street
Anniston, Alabama 36201

The Honorable Bob Riley (*)
Attn: Mr. Dan Gans
Office of Congressman Bob Riley
510 Cannon House Office Building
Washington D.C. 20515

The Honorable Doug Ghee
Alabama Senate
P.O. Box 848
Anniston, Alabama 36202

The Honorable Barbara Boyd (*)
Alabama House of Representatives (District 32)
P.O. Box 2132
Anniston, Alabama 36201

The Honorable Larry Simms
Alabama House of Representatives
11 South Union Street
Eastaboga, Alabama 36260

The Honorable Mike Rogers
Alabama House of Representatives
State Capitol Building
Montgomery, Alabama 36130

The Honorable Gene Stedham
Mayor of Anniston
P.O. Box 670
Anniston, Alabama 36202

The Honorable Joe Mundy
Mayor of Blue Mountain
Blue Mountain City Hall
Blue Mountain, Alabama 36201

The Honorable Wille Maude Snow
Mayor of Hobson City
600 Park Avenue
Hobson City, Alabama 36201

The Honorable George Douthit
Mayor of Jacksonville
320 Church Avenue, S.E.
Jacksonville, Alabama 36265

The Honorable Joseph Roberson
Mayor of Ohatchee
301 Main Street
Ohatchee, Alabama 36271

The Honorable Leon Smith
Mayor of Oxford
P.O. Box 3383
Oxford, Alabama 36203

The Honorable Vera Stewart
Mayor of Piedmont
P.O. Box 112
Piedmont, Alabama 36272

The Honorable Ed Kimbrough
Mayor of Weaver
406 Anniston Street
Weaver, Alabama 36277

Calhoun County Commission
Calhoun County Administrative Offices
1702 Noble Street, Suite 103
Anniston, Alabama 36201

7.6 ORGANIZATIONS

Alabama Environmental Council (*)
Attn: Mr. Kenneth Wills
2717 7th Ave. South, Suite 207
Birmingham, Alabama 35233

Alabama Audubon Council & Alabama (*)
Ornithological Society
Attn: Robert R. Reid, Jr.
2616 Mountain Brook Parkway
Birmingham, Alabama 35223

Anniston Chamber of Commerce
Attn: Mr. Gerald Powell - Military Affairs Com.
P.O. Box 909
Jacksonville, Alabama 36265

Auburn University, School of Forestry (*)
Attn: Dr. John S. Kush
108 M. White Smith Hall
Auburn University, Alabama 36849-5418

Auburn University, Department of Zoology and
Wildlife Science
Attn: Dr. Geoffrey Hill
331 Funchess Hall
Auburn University, Alabama 36849-5414

B.A.S.S.
Attn: Mr. Bruce Shupp
P.O. Box 17900
Montgomery, Alabama 36141-0900

Bluebirds Over Alabama (*)
Attn: Ms. Laura Meeds
26 Pelham Hgts
Anniston, Alabama 36206

Building Trades, Plumbers, and Steamfitters
Attn: Mr. Ben Hollingsworth
P.O. Box 29
Weaver, Alabama 36277

Calhoun Veterans Council
Attn: Mr. R.J. Hewitt
6206 Meadowlark Dr.
Anniston, Alabama 36206

Heartwood
Attn: Mr. Thomas J. Sager
8 Laird Ave.
Rolla, Missouri 65401

The Longleaf Alliance (*)
Attn: Mr. Dean Gjerstad

The Nature Conservancy of Alabama
Attn: Ms. Kathy Cooley

111 M. White Smith Hall
Auburn University, Alabama 36849-5418

Pepper Place 2821C 2nd Avenue South
Birmingham, Alabama 35233

Jacksonville State University (*)
Attn: Mr. Pete Conroy
Ayers Hall
Jacksonville, Alabama 36205

Sierra Club
Attn: Mr. Troy Gordon
P.O. Box 58
Columbia, MO 65205

Wild Alabama (*)
Attn: Mr. Robert Cox
P.O. Box 117
Moulton, Alabama 35650

7.7 INDIVIDUALS

Mr. Peter Allan
25 Hickory Place
APT. H-22
Chatham, NJ 07928-3014

Mr. Jeff Amy (*)
Anniston Star
P.O. Box 189
Anniston, Alabama 36202

Ms. Janet Brittain
103 E. 22nd Street
Anniston, Alabama 36201

Mr. Harry A. Bryson
P.O. Box 1056
APO, AP 96555

Mr. Curtis Franklin
802 Wana Street
Weaver, Alabama 36277

Mr. Bill Garland
31600 Tara
Spanish Fort, Alabama 36527

Mr. John Hendry
EDAW, Inc.
200 Sparkman Drive
Huntsville, AL 35805

Mr. John R. Herbert
QST Environmental, Inc.
404 SW 140th Terrace
Newberry, Florida 32669-3000

Mr. George Horn (*)
61 Jewell Lane
Oxford, Alabama 36203

Ms. Francine Hutchinson
105 Shamrock Road
Anniston, Alabama 3620

Mr. Joe Johnson
1670 Clara Lane
Weaver, Alabama 36277

Mr. Nick Kilgore
1114 Anniston Road
Anniston, AL 36206-7729

Richard L. Krause
1506 Forest Avenue
Wilmette, Illinois 60091

Mr. Lewis Lankford, E-6, Ret. US Army (*)
1105 Bonnie Drive
Weaver, Alabama 36277

Mr. Andrew Mavian
1819 H. Street NW., Suite 900
Washington, D.C. 20006

Mr. Calvin H. McDowell
1144 Anniston Beach Road
Anniston, AL 36206

Mr Norman Morrison
126 Mattison

Mr. Jim Noles
Balch & Bingham

Oxford, Al 36203

P.O. Box 306
Birmingham, AL 35201

Ms. Lisa A. Orlando
BSA Environmental Services, Inc.
21403 Chagrin Blvd., Suite 101
Beachwood, OH 44122

David Pace
API
2021 K Street, NW
Washington, D.C. 20006

Mr. Earl Possardt
USDOJ - U.S. Fish and Wildlife Service
1875 Century Boulevard
Atlanta, Georgia 30345

Russ Romme
3D International, Inc.
781 Neeb Road
Cincinnati, Ohio 45233

Ms. Judy Smith (*)
Monograph Acquisition Services
Colorado State University Libraries
Fort Collins, Colorado 80523-1019

Mr. Daniel E. Spector (*)
1317 7th Avenue, Northeast
Jacksonville, Alabama 36205

Mr. Harry Thomas
5708 Dawson Avenue
Anniston, Alabama 36206

Mr. Tommy Thompson
3530 Highway 78 West
Oxford, Alabama 36203

Mr. Donald L. Walters (*)
115 Jill Lane
Anniston, Alabama 36201

Dr. D. R. Webb
200 Park Ave.
Eugene, Oregon 97405

7.8 PUBLIC LIBRARIES

A copy of the FEIS (including the main document and appendices) is available for public review at the following public libraries:

Fischer Library
U.S. Army Chemical School
Fifth Avenue, Building 1081
Fort McClellan, Alabama 36205-5020

Ramsey Library
U.S. Army Military Police School
Building 3181
Fort McClellan, Alabama 36205-5020

Contact: Mr. Richard Pastorett (205) 848-4414

Contact: Ms. Carolyn Floyd (205) 848-3737

Abrams (Fort McClellan Community) Library
2102 Traffic Circle
Fort McClellan, Alabama 36205-5020

Anniston - Calhoun County Public Library
108 E. 10th Street
Anniston, Alabama 36202

Contact: Ms. Joyce Waybright (205) 848-4151

Contact: Mr. Tom Mullins (205) 237-8503
(Special Collections - Alabama Room)

Oxford Public Library
213 Choccolocco Street
Oxford, Alabama 36203

Jacksonville Public Library
200 Pelham Road, North
Jacksonville, Alabama 36205

Contact: Ms. Irene Sparks (205) 831-1750

Contact: Ms. Kathryn Childress (205) 435-6332

Cole Library
Jacksonville State University
700 Pelham Road, North
Jacksonville, Alabama 36265-1602

Contact: Ms. Mary Beris (205) 782-5758

Mobile District, Army Corps of Engineers
109 Saint Joseph Street
P.O. Box 2288
Mobile, Alabama 36628

Contact: Mr. Curtis Flakes (334) 690-2777

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Persons Consulted

Name	Address	Telephone No.	Reason Contacted
Allison, James	Botanist Georgia Natural Heritage Prog. Social Circle, Georgia	770-918-6411	Biological Resources MLP Forest Complex
Aspy, Dale	USEPA Region IV Mobile Source Group 345 Courtland Street N.E. Atlanta, Georgia 30365	404-562-9041	Air Quality Analysis
Boyer, William	Research Forester U.S. Forest Service Southern Research Station Auburn University, Alabama	334-826-8700	Biological Resources MLP Forest Complex
Costa, Ralph	Red-cockaded Woodpecker Recovery Biologist U.S. Fish and Wildlife Service Clemson, South Carolina	864-656-2432	Biological Resources MLP Forest Complex
Currie, Robert	Listing/Recovery Biologist U.S. Fish and Wildlife Service Ashville, North Carolina	704-258-3939 ext. 224	Biological Resources MLP Forest Complex
Curtis, Bill	East Alabama Regional Planning and Development Commission 1130 Quintard Avenue Anniston, Alabama 36202	205-237-6741	Land Use, Socioeconomics, Transportation
Fulks, Rebecca	Alabama Department of Transportation 1409 Coliseum Blvd. Montgomery, Alabama 36130	334-242-6649	Air Quality Analysis
Garland, Bill	Fish and Wildlife Biologist	334-441-5181	Biological Resources

Name	Address	Telephone No.	Reason Contacted
	U.S. Fish and Wildlife Service Daphne, Alabama		MLP Forest Complex
Garner, Aaron	Building Department City of Oxford 100 Choccolocco Street Oxford, Alabama	205-831-9685	Building Permit Data, Construction Cost Estimates
Garnett, Bill	Alabama Department of Transportation 1409 Coliseum Blvd. Montgomery, Alabama 36130	334.242.6152	Southern Bypass Highway
Garrett, Dale	Building Department City of Anniston Anniston, Alabama	205-231-7660	Building Permit Data, Construction Cost Estimates
Garthright, Lynn	Alabama Department of Environmental Management PO Box 361463 Montgomery, Alabama 36130	334-271-7878	Air Quality Analysis
Goldman, Larry	Field Supervisor U.S. Fish and Wildlife Service Daphne, Alabama	334-441-5181	Biological Resources MLP Forest Complex
Hains, Mark	Coordinator Longleaf Pine Alliance Andalusia, Alabama	334-222-7779	Biological Resources MLP Forest Complex
Hansen, Craig	Calhoun County Health Department Anniston, Alabama	205-237-4324	Septic Tank Hookups
Haynes, Steve	Alabama Transportation Department 1545 US Highway 431 Anniston, Alabama	205-8203131	Transportation, Traffic
Hill, Geoff	Assistant Professor Dept. of Zoology/Wildlife Science Auburn University, Alabama.	334-844-9269	Biological Resources MLP Forest Complex
Hilton, Jarel	Acting Coordinator Alabama Natural Heritage Prog. Montgomery, Alabama	334-834-4519	Biological Resources MLP Forest Complex
Hunter, Chuck	Partners in Flight Coordinator U.S. Fish and Wildlife Service	404-679-7130	Biological Resources MLP Forest Complex
Jacobson, Terry	T&E Recovery U.S. Fish and Wildlife Service Jackson, Mississippi	601-965-4900	Biological Resources MLP Forest Complex
Jaye, Nolan	Environmental Engineer Bregman & Company Director of Engineering Anniston, Alabama	205-848-3120	Solid Wastes

Name	Address	Telephone No.	Reason Contacted
Johnson, Charles	Public Works Department City of Anniston 1128 Gurnee Avenue Anniston, Alabama	205-231-7742	Land Use Plans
Johnson, Chris	Alabama Dept. of Environmental Management 1751 Cong. W.L. Dickenson Dr. Montgomery, Alabama 36130	334.271.7789	ADEM regulations
Kush, John S.	Senior Research Associate School of Forestry Auburn University, Alabama	334-844-1065	Biological Resources MLP Forest Complex
Maceina, Edelgard	Graduate student School of Forestry Auburn University, Alabama	334-844-1005	Biological Resources MLP Forest Complex
Mauer, Eric	USEPA Region IV Mobile Source Group 345 Courtland Street N.E. Atlanta, Georgia 30365	404-562-9041	Air Quality Analysis
Meldahl, Ralph	Assistant Professor School of Forestry Auburn University, Alabama.	334-844-1060	Biological Resources MLP Forest Complex
Oberholster, Chris	Director of Science/Stewardship Nature Conservancy Birmingham, Alabama	205-251-1155	Biological Resources MLP Forest Complex
Oberholster, Susan	Botanist U.S. Forest Service Brent, Alabama	205-926-9765	Biological Resources MLP Forest Complex
Patterson, Karen	Ecoregional Ecologist Nature Conservancy Chapel Hill, North Carolina	919-967-5439	Biological Resources MLP Forest Complex
Reiss, John	Petroleum Engineer Oil & Gas Section Jackson (MS) District Bureau of Land Management	601-977-5400	Geology
Richardson, Robert	FMDC (FMRRRA) 1702 Noble Street, Suite 101 Anniston, Alabama 36202	205-231-1724	Reuse Planning
Schafale, Mike	Ecologist/Botanist North Carolina Heritage Prog.	919-733-4181	Biological Resources MLP Forest Complex
Schotz, Alfred	Community Ecologist Alabama Natural Heritage Prog. Montgomery, Alabama	334-242-3044	Biological Resources MLP Forest Complex
Shankman, David	Professor Department of Geography University of Alabama Tuscaloosa, Alabama	205-348-1534	Biological Resources MLP Forest Complex

Name	Address	Telephone No.	Reason Contacted
Shaw, David	East Alabama Regional Planning and Development Commission 1130 Quintard Avenue, Suite 1130 Anniston, Alabama 36202	205-237-6741	Socioeconomics
Summerour, Charles	retired Professor/Ornithologist Jacksonville State University, Alabama	205-435-4730	Biological Resources MLP Forest Complex
Wills, Kenneth	Natural Resource Planner/Biologist Alabama Environmental Council Birmingham, Alabama	205-322-3126	Biological Resources MLP Forest Complex
Woodrey, Mark	Wildlife/Fisheries Biologist Natural Science Museum Jackson, Mississippi	601-354-7303	Biological Resources MLP Forest Complex
Webb, Randy	Ornithologist Net Work Associates Eugene, Oregon	541-683-7576	Biological Resources MLP Forest Complex
Wood, Ken	Building/Public Works Department City of Jacksonville Jacksonville, Alabama	205-435-7611	Building Permit Data

List of Acronyms and Abbreviations

LIST OF ACRONYMS AND ABBREVIATIONS

A

ACES	Alabama Cooperative Extension System
ACHP	Advisory Council on Historic Preservation
ACM	asbestos containing materials
ADCNR-ANHP	Alabama Department of Conservation and Natural Resources - Alabama Natural Heritage Program
ADCNR-GFD	Alabama Department of Conservation and Natural Resources - Game and Fish Division
ADAI	Alabama Department of Agriculture and Industries
ADEM	Alabama Department of Environmental Management
ADOT	Alabama Department of Transportation
ADTs	average daily traffic (counts)
AFC	Alabama Forestry Commission
AIRFA	American Indian Religious Freedom Act
AL	Alabama
ALAGASCO	Alabama Gas Corporation
ALARNG	Alabama Army National Guard
ANHP	Alabama Natural Heritage Program
APCO	Alabama Power Company
AQCR	Air Quality Control Region(s)
AR	Army Regulation
ARPA	Archaeological Resources Protection Act
AST	aboveground storage tank

B

BA	Biological Assessment
BCCRHAA	Base Closure Community Redevelopment and Homeless Assistance Act of 1994
BCT	BRAC Clean-up Team
BCP	BRAC Clean-up Plan
BEC	BRAC Environmental Coordinator
BLM	Bureau of Land Management
BLS	below land surface
BMPs	best management practices
BO	Biological Opinion
BOQs	bachelor officer quarters
BRAC	Base Realignment and Closure

BRAC 90	Defense Base Closure and Realignment Act of 1990
BRAC 95	Defense Base Closure and Realignment Act of 1995
BTU	British thermal unit

C

CAA	Clean Air Act
CAAA	Clean Air Act Amendments
CAT ₃	Calhoun Area Transportation Study
CCF	hundred cubic feet
CDC	child development center
CDTF	Chemical Defense Training Facility
CEQ	President's Council on Environmental Quality
CERCLA	Comprehensive Environmental Response and Liability Act
CERFA	Community Environmental Response Facilitation Act
CFC	chlorofluorocarbon
CFR	Code of Federal Regulations
CO	carbon monoxide
CPI	Consumer Price Index
CS	tear gas
CSEPP	Chemical Stockpile Emergence Preparedness Program
CWA	Clean Water Act

D

DA	Department of the Army
dBA	decibels, A-weighted scale
DDESB	Department of Defense Explosive Safety Board
DEH	Directorate of Engineering and Housing (now DPW)
DEIS	Draft Environmental Impact Statement
DENTAC	U.S. Army Dental Activity
DNL	day-night sound level
DOD	Department of Defense
DOE	Directorate of Environment
DOJ	Department of Justice

DPTMSEC &RCS DRM DRMO	Directorate of Plans, Training, Mobilization, Security and Reserve Components Directorate of Resource Management Defense Reutilization and Marketing Office	INRMP IRP	Integrated Natural Resource Management Plan Installation Restoration Program
E		J	
EA EARPDC	Environmental Assessment East Alabama Regional Planning and Development Commission	JIC JSU	Joint Information Center Jacksonville State University
EBS ED EDC EE/CA EIFS EIS EMS ENR EO EOC EOD EP ESA ESE ESMP	Environmental Baseline Survey encumbered disposal economic development conveyance Engineering Evaluation/Cost Analysis Economic Impact Forecasting System Environmental Impact Statement emergency medical service Engineering News Record Executive Order Emergency Operations Center explosive ordnance disposal effective population Endangered Species Act Environmental Science and Engineering Endangered Species Management Plan	K km KV kVA KWH	 kilometer kilovolt kilovolt-amperes kilowatt hours
F		L	
FAA FAR FEIS FEMA FHA FIA FLW FMC FMDC FMRRA FNSI FOSL FOST FOTW FTX FWPCA FY	Federal Aviation Administration floor area ratio Final Environmental Impact Statement Federal Emergency Management Agency Federal Highway Administration Federal Impact Aid U.S. Army Engineer Center and Fort Leonard Wood Fort McClellan or U.S. Chemical and Military Police Center and Fort McClellan Fort McClellan Development Commission Fort McClellan Reuse and Redevelopment Authority Finding of No Significant Impact Finding of Suitability to Lease Finding of Suitability for Transfer Federally Owned Treatment Works field training exercise Federal Water Pollution Control Act fiscal year	LBP LF LIR LOS LRA	lead based paints lineal feet low intensity reuse level of service local redevelopment or reuse authority
G		M	
GB gpm GPS	mustard gas gallons per minute global positioning system	MACT MBTA MCF MCL mgd MHIR MIR MLIR MLP MOA MOU MPO MSL MOUT MRI MSA	Maximum Available Control Technology Migratory Bird Treaty Act million cubic feet maximum contaminant level million gallons per day medium high intensity reuse medium intensity reuse medium low intensity reuse mountain longleaf pine memorandum of agreement memorandum of understanding Metropolitan Planning Organization mean sea level Military Operations in Urbanized Terrain magnetic resonance imaging Metropolitan Statistical Area
H		N	
HAP HCB HIR HPP HTRW HUD	hazardous air pollutant(s) hexachlorobenzene high intensity reuse Historic Preservation Plan hazardous, toxic and radiological waste Department of Housing and Urban Development	n/a NA NAAQS NAF NAGPRA NCDP NEPA NESHAP NGVD NHPA NMFS NOA NOI Nox NOV NPDES	not applicable No Action (Alternative) National Ambient Air Quality Standards non-appropriated fund Native American Grave Protection and Repatriation Act of 1990 National Center for Disaster Preparedness (NCDP became Department of Justice Center for Domestic Preparedness (DOJ CDP) on June 1, 1998; for FEIS NCDP and DOJ CDP are synonymous) National Environmental Policy Act national emission standards for hazardous air pollutants National Geodetic Vertical Datum National Historic Preservation Act National Marine Fisheries Service Notice of Availability Notice of Intent nitrogen oxide Notice of Violation National Pollution Discharge Elimination System
I ICUZ	 Installation Compatible Use Zone		

NRC	Nuclear Regulatory Commission	TCLP	toxic characteristic leaching procedure
NRCS	Natural Resources Conservation Service	TIP	Transportation Improvement Program
NRHP	National Register of Historic Places	TOC	total organic carbon
NSPS	New Source Performance Standards	TPY	tons per year
NSR	new source review	TRADOC	U.S. Army Training and Doctrine Command
NTMB	neotropical migratory birds		
NWI	National Wetland Inventory		
		U	
O		UD	unencumbered disposal
OE	ordnance/explosive	US	United States
OMS	operations and maintenance shop	USACERL	U.S. Army Construction Engineering Research Laboratory
		USAEC	U.S. Army Environmental Center
P		USAEHA	U.S. Army Environmental Hygiene Agency
PA	Programmatic Agreement	USACE	U.S. Army Corps of Engineers
PA/SI	Preliminary Assessment/Site Inspection	USARC	U.S. Army Reserve Command
PAO	Public Affairs Office	U.S.C.	United States Code
PCBs	polychlorinated biphenyls	USEPA	U.S. Environmental Protection Agency
PDFs	project design features	USDA-FS	U.S. Department of Agriculture, Forest Service
POL	petroleum, oil and lubricants	USFWS	U.S. Department of the Interior, Fish and Wildlife Service
POW	prisoner of war		
PPI	Producer Price Index	USGS	U.S. Geological Survey
ppm	parts per million	UST	underground storage tank
PSD	prevention of significant deterioration or proportional stock density	UXO	unexploded ordnance
PTE	potential to emit		
		V	
Q (none)		VOC	volatile organic compound
R		W	
RAB	Restoration Advisory Board	WAC	Women's Army Corps
RCW	red-cockaded woodpecker	WFO	white fringeless orchid
RCRA	Resource Conservation and Recovery Act	w/	with
RD/RA	Remedial Design/Remedial Action	w/o	with out
RFP	Request for Proposals	WPA	Works Progress Administration
RI/FIS	Remedial Investigation/Feasibility Study	WWTP	wastewater treatment plan
ROD	Record of Decision		
ROI	region of socioeconomic influence	X, Y, Z (none)	
ROW	right-of-way		
RTD	reutilization, transfer, donation		
RTV	rational threshold value		
S			
SAIC	Science Applications International Corporation		
SADL	South Atlantic Division Laboratory		
SARA	Superfund Amendments and Reauthorization Act		
SCC	species of conservation concern		
SF	square foot/feet		
SHPO	State Historic Preservation Officer		
SINA	Special Interest Natural Area		
SIP	State Implementation Plan		
Sox	sulfur oxide		
SPCC	Spill Prevention Control/Countermeasures Plan		
SR	State Route		
SVOCs	semivolatile organic compounds		
SWPPP	Stormwater Pollution Prevention Plan		
T			
T&E	threatened and endangered species		
TBD	to be determined		

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Appendix A
**SCOPING MEETING,
DEIS COMMENTS AND
COMMENT RESPONSES**

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Appendix A: Scoping Meeting, DEIS Comments and Comment Responses

A.1 INTRODUCTION

Appendix A contains two elements summarizing scoping comments and DEIS comments associated with the disposal and reuse of Fort McClellan. Included in this Appendix are:

- 1) copies of the scoping response letters and comment sheets, received for federal and state agencies, special interest groups and organizations, and individuals during the scoping process;
- 2) a reproduction of the Scoping Report which was originally prepared on November 15, 1996 following the Scoping Meeting;
- 3) copy of the DEIS Public Meeting Transcript; and
- 4) copies of the DEIS comment letters and Army responses to the comments on the DEIS.

A.2 SCOPING COMMENTS

A.2.1 SCOPING LETTERS AND COMMENT SHEETS

As part of the scoping process, the Army received a total of 29 letters and comment sheets from federal and state agencies, special interest groups and organizations, and individuals, as listed below. Copies of the letters and comment sheets received have been provided on the following pages.

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1 US Department of Agriculture, Forest Service	A-3
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3 US Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service	A-7
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United States
Department of
Agriculture

Forest
Service

National Forest
in Alabama

2946 Chestnut Street
Montgomery, Alabama 36107

File Code: 1950

Date: August 22, 1996

Mr. Robert B. Bax, Vice President
Harland Bartholomew & Associates, Inc.
400 Woods Mill Road South, Suite 330
Chesterfield, Missouri 63017

Dear Mr. Bax:

I am in receipt of your July 19 letter concerning the disposal and reuse of the land at Fort McClellan, Alabama. We appreciate the opportunity to provide you comments and information in your NEPA process.

I am sorry we were unable to attend your pre-scoping meeting and the public meeting. However, my staff has put together the following list of issues and affected environment for your use and consideration in developing the EIS.

Issues

- Land Use - It appears that you will be evaluating different potential uses of the land, after it is disposed of. The issue, then, is to what use(s) will the land be put to when disposed of. The choices (industry, residential, recreation, etc.) you analyze will have different sets of environmental effects which will need to be disclosed, and issues related to those are listed further below.
- Socio-Economic impacts - This issue is fairly self-explanatory. Different alternatives will have differing effects on employment, income, and economic diversity.
- Threatened, Endangered, Sensitive (TES) species (flora and fauna) - The issue is what effect will each alternative have on any listed species. Inventory information about what exists on the acreage will be needed, and U.S Fish & Wildlife Service will be involved if any exist. One species we are aware of in Choccolocco Creek watershed, is the Blue Shiner.
- Wetlands - If 'wetlands' exist in the area of concern, the issue of effects on wetlands will need to be addressed.
- Cultural/Historical Resources - An analysis of effects on any existing historical sites will need to be made, with concurrence from the State Historical Preservation Office (SHPO). This will necessitate either an existing inventory, or survey of the area by an archeologist.



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Mr. Robert Bax

2.

- Air Quality - Effects on air quality will vary by alternative - industrial use being the likely largest effect. Things like pollutant amounts, and visual sensitivity (what can be seen, from where) will come into the analysis.
- Water Quality - This will likely be an issue from a surface water standpoint (Blue Shiner), and ground water standpoint, depending on the use alternatives.
- Vegetative Community effects and Restoration - This is a potential issue, depending on the land use alternatives analyzed. The vegetative community that exist on the land now is mostly hardwoods (based on observations from our own people), and that community has evolved due to fire exclusion from the area. It is likely that some of the 17,000 acres was once longleaf pine community, a fire dependent community. This is certainly an issue on the nearby National Forest, but to what extent this will be an issue in your analysis will be evident from your scoping effort.
- Should this land become State land? - Your scoping may reveal an issue relating to a desire for this land to be acquired by the State via the 'Forever Wild' acquisition program.
- Hazardous Waste - This may arise as an issue if there is currently hazardous waste on site that needs clean-up, or is one of the alternative uses of the land analyzed is industrial use.

Affected Environment (related to National Forest)

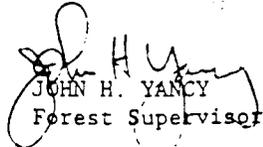
- Visual Quality may be a factor, depending on land use - things such as what can be seen from the Scenic Drive or the Pinhoti Trail, or overall visibility may be an effect factor.
- Additional Special Uses, such as power line rights-of-way, may be requested across National Forest land to serve the land being disposed of. Again, this would depend on land use alternatives.
- 'Southern Appalachian Assessment' - An assessment of the entire Souther Appalachian region (Virginia to this part of Alabama) has been recently completed. We feel this may be helpful to your affected environment description effort. We are enclosing a set of documents with this letter for your information and use.

Mr. Robert B. Bax

3.

If you have any questions about what we have presented to you, please let us know. You may contact either Bud Johnston or Rick Morgan at (334) 832-4470.

Sincerely,


JOHN H. YANCY
Forest Supervisor

Enclosure

cc:
Mr. Curtis Flakes
Mobile District Corps of Engineers
ATTN: CESAM-PD-EC
P.O. Box 2288
Mobile, AL 36628
Shoal Creek RD



United States
Department of
Agriculture

Natural
Resources
Conservation
Service

State Office
665 Opelika Road
P.O. Box 311
Auburn, Alabama 36830

July 23, 1996

Mr. Robert B. Bax
Vice President/Project Manager
Harland Bartholomew & Associates, Inc.
400 Woods Mill Road South, Suite 330
Chesterfield, Missouri 63017

Dear Mr. Bax:

This letter acknowledges receipt of the notification on the scoping meeting scheduled for August 6, 1996. John Meetze, Soil Conservationist, will represent this agency at the discussion of the preparation of an Environmental Impact Statement (EIS) for the disposal and reuse of Fort McClellan, Alabama. Please address any future correspondence concerning the project to him at the above address.

As requested, an issue of concern to this agency that should be considered in the EIS is the erosion control methods to be used. Planning for the future prevention of erosion on this land should include on-site and off-site effects of erosion on the environment.

Sincerely,

RONNIE D. MURPHY
State Conservationist



The National Resources Conservation Service,
formerly the Soil Conservation Service, works
hand-in-hand with the American people to
conserve natural resources on private lands.

AN EQUAL OPPORTUNITY EMPLOYER



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE

Southeast Regional Office
9721 Executive Center Drive North
St. Petersburg, Florida 33702

August 6, 1996

Mr. Curtis Flakes
Mobile District Corps of Engineers
ATTN: CESAM-PD-EC
P.O. Box 2288
Mobile, Alabama 36628

Dear Mr. Flakes:

The National Marine Fisheries Service has reviewed the Notification of Environmental Impact Statement and Request for Information Disposal and Reuse Environmental Impact Statement for Fort McClellan in Calhoun County, Alabama, as provided by Harland Bartholomew and Associates, Inc. The notification is dated July, 19, 1996.

Based on the information provided in the notification, we do not anticipate that the proposed action will have any impact on marine, estuarine, or anadromous fishery resources under the purview of this office.

If you have any questions, please contact Mr. Mark Thompson of our Panama City Branch Office at 904/234-5061.

Sincerely,

✓ Andreas Mager, Jr.
Assistant Regional Director
Habitat Conservation Division

cc:
Harland Bartholomew & Associates Inc.
400 Woods Mill Road South
Suite 330
Chesterfield, Missouri 63017

F/SEO2



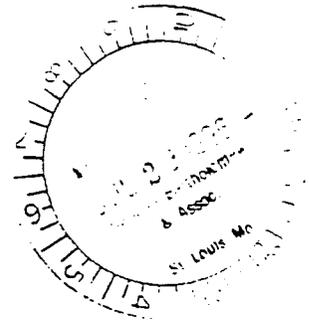


IN REPLY REFER TO

United States Department of the Interior

FISH AND WILDLIFE SERVICE
2001-A Highway 98
P. O. Drawer 1190
Daphne, Alabama 36526

July 25, 1996



Mr. Robert B. Bax
Vice President, Harland Bartholomew and Associates, Inc.
400 Woods Mill Road South
Suite 330
Chesterfield, MO 63017

Dear Mr. Bax:

This replies to your July 19, 1996 letter to Ms. Noreen K. Clough, Regional Director, U. S. Fish and Wildlife Service (Service) concerning a notification of intent to prepare an Environmental Impact Statement (EIS) for Fort McClellan, Alabama. This will confirm our receipt of your letter and to notify you that the Daphne Field Office at the letterhead address will serve as lead office for the Service on this issue. I plan to attend the prescoping meeting you have scheduled for August 6, at Fort McClellan.

You asked for a preliminary identification of key issues that should be considered in the EIS. At this time, we have identified on a preliminary basis two general issues, with many potential associated possible issues

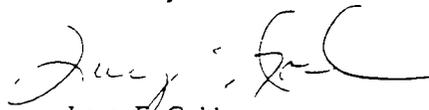
One major issue is the potential impact of alternatives on species listed by the Service as endangered or threatened. Information is already in the hands of the U. S. Army (Army) regarding these species and we understand that the Army is supporting information gathering on some species. The EIS should examine both impacts to listed species as a result of the Army possibly releasing this land as well as any needs for listed species recovery that might be forgone as a result of an ownership change. Likely direct and indirect impacts, including both on base and off base, should be considered.

The second major issue is the potential loss of the unique long leaf pine ecosystem found on large parts of the Main Post tract of land. This tract has been described as the best remaining example of the montane long leaf pine ecosystem in the world, thanks to the periodic fires that have run through the area as an indirect effect of military activities. Careful attention should be devoted in the EIS process to assembling information and expertise so that the value of this ecosystem and its needs are fully factored into the decision process. One important component from the Service's viewpoint is the value of the area to neotropical migratory birds and other avifauna that use the area. The Service believes it important that these natural values be sustained into the future, regardless of land ownership.

Corollary to these issues is the need to understand the likely environmental impact of any development on the Main Post tract. The presence of what is thought to be a vast amount of unexploded ordnance in the undeveloped part of this tract presents a major question in terms of analyzing environmental impacts associated with development scenarios. If development of the currently forested lands is considered, then a detailed evaluation of the impact resulting from the associated ordnance removal would be an absolute necessity in order to understand the offsite impacts, particularly to listed aquatic mollusks and fish that are found in drainages around Fort McClellan. Since extensive earth moving would likely be necessary with this option, the effects to terrestrial wildlife could be severe.

We emphasize that this information is very preliminary and our position may change as new information is received. If you have any further questions, please contact me at (334) 441-5181.

Sincerely,



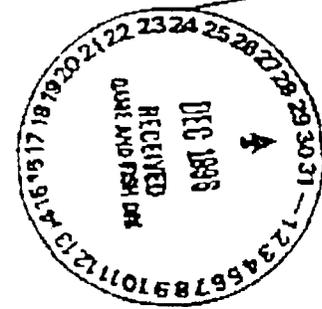
Larry E. Goldman
Field Supervisor



United States Department of the Interior

FISH AND WILDLIFE SERVICE

1875 Century Boulevard
Atlanta, Georgia 30345
December 26, 1996



TO WHOM IT MAY CONCERN

Mr. Robert H. Richardson
Executive Director
Fort McClellan Local Reuse
and Redevelopment Authority
P.O. Box 306
Anniston, Alabama 36202

Dear Mr. Richardson:

This letter is in regard to planning efforts currently underway to determine the best future uses of Ft. McClellan at Anniston, Alabama. Studies conducted by Auburn University and the Alabama Natural Heritage Commission have indicated that approximately 12,000 acres on the Main Post at Ft. McClellan contain a unique mountain longleaf pine habitat. Steep slopes and isolated ridges contain relic trees up to 250 years old and isolated old growth stands of longleaf pine that average 180 years in age. Research has documented the rapid loss of this type habitat, and it is believed that Ft. McClellan now represents the best example of a large, natural mountain longleaf pine ecosystem.

Over the last few years, the Fish and Wildlife Service has made a commitment to ecosystem management. Teams have been formed nationwide to address and promulgate ecosystem management within specific areas. The Central Gulf Coast Ecosystem Team was formed to restore and protect key habitats within the central gulf coast region, which includes Ft. McClellan. The unique mountain longleaf pine community at Ft. McClellan certainly is a key habitat which should be protected.

In view of the importance of protecting the unique mountain longleaf pine ecosystem, the Service would like to actively participate with the Local Reuse and Redevelopment Authority in formulating plans to preserve this habitat. We have coordinated with the Alabama Department of Conservation and Natural Resources, Game and Fish Division, and our agencies agree that these lands should be preserved and made available for outdoor public use opportunities. Our agencies would develop a partnership agreement to ensure that this occurs.

The Service will work with the Department of Defense, the Local Reuse and Redevelopment Authority, and the Alabama Department of Conservation and Natural Resources in future plans for the protection and management of the 12,000 natural acres at Ft. McClellan. For further information and assistance, you may contact Mr. Larry Goldman at U.S. Fish and Wildlife Service, 2001 Highway 98, Suite A, P.O. Drawer 1190, Daphne, Alabama 36526, or by phone at (334)441-5181.

Sincerely yours,

Noreen K. Clough
Regional Director

cc: Mr. Charles D. Kelley, Director, Division of Game and Fish, Dept. of Conservation and Natural Resources, 64 N. Union Street, Montgomery, AL 36130



U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
Georgia Division
1720 Peachtree Road N.W. Suite 300
Atlanta, Georgia 30367
August 13, 1996

IN REPLY REFER TO
HPD-GA

Mr. Curtis Flakes
Mobile District Corps of Engineers
ATTN: CESAM-PD-EC
P.O. Box 2288
Mobile, Alabama 36628

Subject: FHWA response to Notification of Environmental Impact
Statement Disposal and Reuse of Fort McClellan, Alabama

Dear Mr. Flakes:

Thank you for the letter of July 19, 1996, regarding the above notification and request for information. At this time the Georgia Division Office of the Federal Highway Administration has no comments regarding the above project.

We appreciate the opportunity to respond to your request and if additional assistance is required please contact Mr. Clyde Johnson at (404) 347-4754.

Sincerely,

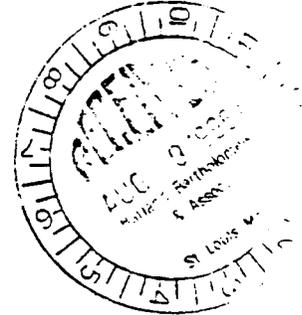

Larry R. Dreihaup, P.E.
Division Administrator



U.S. Department
of Transportation
**Federal Railroad
Administration**

Region III

Suite 440 North Tower
1720 Peachtree Road, N.W.
Atlanta, Georgia 30329



August 1, 1996

Mr. Robert B. Bax
Vice President/Project Manager
Harland Bartholomew & Associates, Inc.
400 Woods Mill Road South
Suite 300
Chesterfield, Missouri 63017

Dear Mr. Bax:

This is in response to your letter of July 19, 1996, concerning the closure of Fort McClellan, Alabama.

The Federal Railroad Administration's primary function is to ensure the safety of the nation's rail transportation system. We do not have any jurisdiction over military base closures. Therefore, since the proposed closure of Fort McClellan falls outside the purview of this agency, we will not be filing any comments or attending any meetings concerning this subject.

Sincerely,

L. F. Dennin II
Regional Administrator



STATE OF ALABAMA
DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
64 NORTH UNION STREET
MONTGOMERY, ALABAMA 36130

FOB JAMES, JR.
GOVERNOR

JAMES D. MARTIN
COMMISSIONER
BOB MACRORY
ASSISTANT COMMISSIONER

4 September 1996

Mr. Curtis Flakes
Mobile District Corps of Engineers
ATTN: CESAM-PD-EC
P.O. Box 2288
Mobile, AL 36628

Dear Mr. Flakes:

I represented the Alabama Natural Heritage Program at the pre-scoping meeting on August 6, regarding the disposal and reuse environmental impact statement for Ft. McClellan, Alabama, and provided Harland Bartholomew & Associates, Inc. with a list of key biological issues I felt should be considered in the EIS. The Alabama Natural Heritage Program is charged with conducting an on-going biological inventory of the state, and housing this information in a standardized database. The program maintains lists of rare plants, animals, and communities, continually up-dating individual species' ranks as more information is gathered. We also identify biologically significant sites across the state. Ft. McClellan Main Post is one such site.

Attached please find written comments pertinent to the EIS process. Also included from the Heritage database is a list of all known sensitive species recorded from Main Post. Thank you for allowing us to participate in this process.

Respectfully,

Jarel L. Hilton
Acting Coordinator
Alabama Natural Heritage Program

xc: Larry Goldman
U.S. Fish & Wildlife Service
Alabama Field Office

The Department of Conservation and Natural Resources does not discriminate on the basis of race, color, religion, age, gender, national origin, or disability in its hiring or employment practices nor in admission to, access to, or operations of its programs, services, or activities.

Key Ecological Issues to be Considered for the Reuse of Fort McClellan, AL
Submitted by the Alabama Natural Heritage Program

1. Sensitive fauna and flora have been documented by the Alabama Natural Heritage Program. Thirteen species of plants have been identified, three of which are former candidates for federal listing. The federally listed endangered gray bat has been documented along streams on Main Post, and historically, the federally listed endangered red-cockaded woodpecker occurred there as well; the last active colony was reported around 1970. Two former candidate invertebrate species, one an aquatic snail, the other a butterfly, are also documented from Main Post. Rare fauna and flora occur in a diverse habitat matrix embedded within the overall forest cover on Main Post. Long term viability of these species is dependent upon the integrity of the forest.
2. The longleaf pine ecosystem was once the dominant plant cover of the southeastern United States coastal plain, formerly extending from southeastern Virginia to central Florida and eastern Texas. At least 1200 plant species are endemic to this system, many of which are considered rare, threatened, and endangered by state or federal authorities. Based on floral composition and topographic features, the mountain longleaf pine is considered part of a distinct natural community within the longleaf pine ecosystem. This natural community once covered most ridge and southern slope regions of the disjunct areas of the southern Blue Ridge in northeastern Alabama and northwestern Georgia, but has been reduced to only one remnant site in Georgia and several degraded sites in northeastern Alabama. Main Post of Fort McClellan represents the best remaining example of a mountain longleaf pine community on a landscape scale. The herbaceous component of the mountain longleaf pine natural community assemblage is diverse, as documented on Main Post by the Alabama Natural Heritage Program.
3. Natural ecological processes such as fire need to be maintained for the long-term viability of the mountain longleaf system and the rare species it harbors. Mountain longleaf requires fire to maintain its competitive edge in establishing reproduction, and will gradually be replaced by hardwoods and shortleaf pine in the absence of fire. The transition from ridge top longleaf pine to cove and bottom hardwood forest types is defined where hydric conditions control the downward extent of fire penetration, creating a natural ecotone between pines and hardwoods. Fire is necessary to maintain the integrity of this system by controlling hardwood and other pine species invasion, maintaining species diversity, reducing fuel loads, and encouraging new longleaf recruitment.
4. Reuse alternatives requiring the clearing of forest cover and excavation of the mountainside would destroy the integrity of the natural ecosystem and pose serious erosional hazards due to the steepness of the terrain on Ft. McClellan. Siltation of streams and seeps, many of which harbor sensitive plant and animal species, would also potentially occur.
5. The continuity of the installation's forests, with contiguous forests to the north, east, and south actually provide a single forest cover of much larger proportions. The leased Choccolocco Corridor that connects Ft. McClellan to forests within the Talladega National Forest is especially significant. Unfragmented forest cover is particularly important to the conservation of neotropical migratory birds. The Army has entered into a Memorandum of Agreement with other federal agencies (Partners in Flight) to participate in the Federal Neotropical Migratory Bird Conservation Committee. DOD has assumed a leadership role in this conservation effort and has prepared a strategic plan for participation in the program.

6. Eleven Special Interest Natural Areas (SINA) have been identified on the Main Post of Ft. McClellan. **The most important SINA is the mountain longleaf community complex which occurs throughout the steeper slopes and higher elevations on the south and east of Main Post, and encompasses approximately 12,000 acres. The continuity of this forest is critical to the long term maintenance of the smaller SINAs and sensitive species contained within this natural community complex.** Additional SINAs include the Marcheta Hill Orchid Seep, Bains Gap Seep, South Branch Cane Creek, Cave Creek Seep, Moorman Hill Mountain Juniper, Stanley Hill Chestnut Oak Forest, Reynolds Hill Turkey Oak, Davis Hill Honeysuckle, Marcheta Hill Crow Poison Seep, and Frederick Hill Aster Site. Existing army stewardship of these SINAs and the sensitive species they contain as provided for in the Endangered Species Management Plan should be used as a baseline guide to future resource management and protection under reuse alternatives.

Species of Conservation Concern, Main Post, Ft. McClellan, AL

Latin Name	Common Name	Global Rank	State Rank	Federal Status
<u>Plants</u>				
<i>Aster azureus</i>	sky blue aster	G5	S1	none
<i>Crataegus triflora</i>	three-flowered hawthorn	G2	S2	former C2
<i>Cypripedium acaule</i>	pink lady's slipper	G5	S3	none
<i>Echinacea pallida</i>	pale coneflower	G4G5	S2	none
<i>Gentiana saponaria</i>	soapwort gentian	G5	S3	none
<i>Juniperus communis</i>	ground juniper	G5	S1	none
<i>Lonicera flava</i>	yellow honeysuckle	G5?	S3	none
<i>Lysimachia fraseri</i>	Fraser's loosestrife	G2G3	S1	former C2
<i>Orobanche uniflora</i>	single flowered cancer root	G5	S2	none
<i>Platanthera integrilabia</i>	white fringeless orchid	G2	S1	former C2
<i>Sabatia capitata</i>	rose pink	G2	S2	none
<i>Zigadenus leimanthoides</i>	crow-poison	G4Q	S1	none
<u>Animals</u>				
<i>Elimia gerhardti</i>	coldwater elimia	G?	S?	former C2
<i>Myotis grisescens</i>	gray bat	G2	S2	endangered
<i>Speyeria diana</i>	diana	G3	S3?	former C2
<u>Historic animal occurrence</u>				
<i>Picoides borealis</i>	red-cockaded woodpecker	G2	S2	endangered

Global and state ranks follow a standardized methodology developed by The Nature Conservancy and used by all state Heritage programs. Ranks are based on a scale of one to five, one representing a status of critically imperiled, or less than five known populations, and five designating a relatively secure status. The global rank refers to the status of an element across its entire range, while the state rank refers to the status of that element within the state. The U.S. Fish & Wildlife Service no longer recognizes the C2 candidate species designation.



STATE OF ALABAMA
 DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
 64 NORTH UNION STREET
 MONTGOMERY, ALABAMA 36130

FOR JAMES, JR.
 GOVERNOR

January 12, 1996

JAMES D. MARTIN
 COMMISSIONER
 309 MACKORY
 ASSISTANT COMMISSIONER

Mr. Robert Richardson
 Executive Director
 Fort McClellan Reuse and Redevelopment
 Authority
 PO Box 306
 Anniston, Alabama 36202

Dear Mr. Richardson:

The Game and Fish Division of the Department of Conservation and Natural Resources manages certain lands in Alabama for wildlife and public use. The public use includes hunting, camping, birdwatching, and other related outdoor recreation. The Choccolocco Wildlife Management Area is one of our more popular areas and it is immediately adjacent to Fort McClellan. As such, the Game and Fish Division is interested in obtaining those undeveloped areas of Fort McClellan that are suitable for wildlife management. I am attaching a map that depicts those areas. This interest was expressed in a September 29 letter to Mr. Bill Huie of the National Parks Service.

Please consider this a formal request for the title on the undeveloped portions of Fort McClellan to be transferred to the Department of Conservation and Natural Resources to be managed by the Game and Fish Division as a wildlife management area. We will be glad to meet with you to discuss our interest and to provide additional information as needed. You may contact Mr. Gary H. Moody, Chief of Wildlife (334-242-3469), in this regard if necessary.

Sincerely,

James D. Martin

Attachment

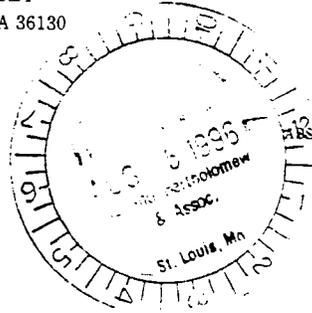
The Department of Conservation and Natural Resources does not discriminate on the basis of race, color, religion, sex, gender, national



FOR JAMES, JR.
GOVERNOR

STATE OF ALABAMA
DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
64 NORTH UNION STREET
MONTGOMERY, ALABAMA 36130

1 August 1996



JAMES D. MARTIN
COMMISSIONER
BOB MACROBY
ASSISTANT COMMISSIONER

Mr. Robert B. Bax
Vice President/Project Manager
Harland Bartholomew & Associates, Inc.
400 Woods Mill Road South, Suite 330
Chesterfield, MO 63017

Dear Mr. Bax:

I am writing in response to your letter of July 24th informing me of your involvement with the EIS for the disposal and reuse of Fort McClellan, Alabama. I would be happy to provide information from this office relevant to the EIS process, and will provide detailed written comments to Mr. Curtis Flakes of the Mobile District Corps of Engineers no later than 30 days following the public scoping meeting.

I plan to attend the 2:00 pre-scoping meeting at the Post Theater on Tuesday, August 6. The key issues I recommend for consideration include the following:

1. Sensitive fauna and flora have been documented by the Alabama Natural Heritage Program. Eleven species of plants have been identified, two of which are former candidates for federal listing. Historically, the federally listed endangered red-cockaded woodpecker occurred on Fort McClellan; the last active colony was reported around 1970. Two former candidate invertebrate species, one an aquatic snail, the other a butterfly are also documented from the Main Post. Rare fauna and flora occur in a matrix embedded within the overall forest cover on Main Post. Long term viability of these species is dependent upon the integrity of the forest.
2. The longleaf pine ecosystem was once the dominant plant cover of the southeastern United States coastal plain, formerly extending from southeastern Virginia to central Florida and eastern Texas. At least 1200 plant species are endemic to this system, many of which are considered rare, threatened, and endangered by state or federal authorities. Based on floral composition and topographic features, the mountain longleaf pine is considered part of a distinct natural community within the longleaf pine ecosystem. This natural community once covered most ridge and southern slope regions of the disjunct areas of the southern Blue Ridge in northeastern Alabama and northwestern Georgia, but has been reduced to only one remnant site in Georgia, and several degraded sites in northeastern Alabama. The Main Post of Fort McClellan represents the best remaining example of a mountain longleaf pine community on a landscape scale. The herbaceous component of the mountain longleaf pine natural community assemblage is diverse, as documented on Main Post by the Alabama Natural Heritage Program.

The Department of Conservation and Natural Resources does not discriminate on the basis of race, color, religion, age, gender, national origin, or disability in its hiring or employment practices nor in admission to, access to, or operations of its programs, services, or activities.

3. Natural ecological processes such as fire need to be maintained for the long-term viability of the mountain longleaf system and the rare species it harbors. Mountain longleaf requires fire to maintain its competitive edge in establishing reproduction, and will gradually be replaced by hardwoods and shortleaf pine in the absence of fire. The transition from ridge top longleaf pine to cove and bottom hardwood forest types is defined by fire where hydric conditions control the downward extent of fire penetration to create a natural ecotone between pines and hardwoods. Fire is necessary to maintain the integrity of this system by controlling hardwood and other pine species invasion, maintaining species diversity, reducing fuel loads, and encouraging new longleaf recruitment.

4. Reuse alternatives requiring the clearance of forest cover and excavation of the mountainside would destroy the integrity of the natural ecosystem, and pose serious erosional hazards due to the steepness of the terrain on Ft. McClellan. Siltation of streams and seeps, many of which harbor sensitive plant and animal species, would also potentially occur.

5. The continuity of installation forests, as well as contiguous forests to the north, east, and south actually provide a single forest cover of much larger proportions. The leased Choccolocco Corridor that connects Ft. McClellan to forests within the Talladega National Forest is especially significant. This continuous forest cover is important to the conservation of neotropical migratory birds. The Army has entered into a Memorandum of Agreement with other federal agencies to participate in the Federal Neotropical Migratory Bird Conservation Committee. DOD has assumed a leadership role in this conservation effort and has prepared a strategic plan for participation in the program.

6. Eleven Special Interest Natural Areas (SINA) have been identified on the Main Post of Ft. McClellan. **The most important SINA is the mountain longleaf community complex which occurs throughout the steeper slopes and higher elevations on the south and east of Main Post, and encompasses approximately 12,000 acres. The continuity of this forest is imperative in the long term maintenance of the smaller SINAs and sensitive species contained within this natural community complex.** Additional SINAs include the Marcheta Hill Orchid Seep, Bains Gap Seep, South Branch Cane Creek, Cave Creek Seep, Moorman Hill Mountain Juniper, Stanley Hill Chestnut Oak Forest, Reynolds Hill Turkey Oak, Davis Hill Honeysuckle, Marcheta Hill Crow Poison Seep, and Frederick Hill Aster Site.. Existing army stewardship of these SINAs and the sensitive species they contain as provided for in the Endangered Species Management Plan should be used as a baseline guide to future resource management and protection under reuse alternatives.

If you have any questions concerning these key issues, please call me at 334-242-3078.

Sincerely,

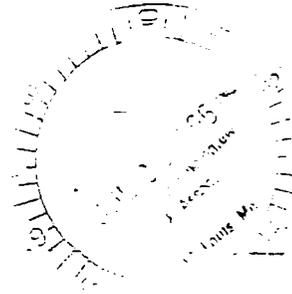
Jarel L. Hilton

Jarel L. Hilton
Acting Coordinator
Alabama Natural Heritage Program

Commissioner's Office
Tel No. (334)240-7100
Fax No. (334)240-7190

July 23, 1996

Mr. Robert B. Box
Harland Bartholomew & Associates
400 Woods Mill Road South
Chesterfield, Missouri 63017



Dear Mr. Box:

We are in receipt of your notice relative to the development of an environmental impact statement for the disposal and reuse of Fort McClellan.

As primarily a regulatory agency, we have an interest in the proper disposal and reuse of any property in our state. At this time, however, I do not know of any information my agency has that might be helpful to you.

Sincerely,


Jack Thompson
Commissioner

JT/jh/bja

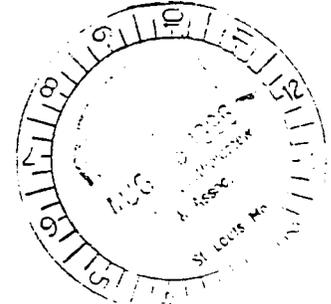


TIMOTHY C. BOYCE
STATE FORESTER
RICHARD H. CUMMIS
ASST. STATE FORESTER

Making Alabama Better For People



Alabama Forestry Commission
PO Box 302550 Montgomery, AL 36130-2550
July 29, 1996



Mr. Robert B. Bax
Harland Bartholomew & Associates, Inc.
400 Woods Mill Road South, Suite 330
Chesterfield, MO 63017

Dear Mr. Bax:

This is in reply to your recent letter concerning the Disposal and Reuse Environmental Impact Statement for Fort McClellan, Alabama.

The Alabama Forestry Commission is very much interested in acquiring the over 17,000 acres that may become available. We feel that the highest and best use for this land would be as an addition to Choccolocco State Forest which is located adjacent to Ft. McClellan. The property, if acquired, would be managed as a multiple use forest.

Attached is a proposal and map that was developed for the Ft. McClellan Reuse and Redevelopment Authority regarding the property in question.

The Alabama Forestry Commission will be represented at the pre-scoping and public scoping meetings by David Frederick with the Alabama Forestry Commission. If additional information is needed, David can be contacted at (334)240-9335.

Sincerely,

Timothy C. Boyce
State Forester

Attachment

cc: Mr. Curtis Flakes, Mobile District Corps of Engineers

513 Madison Avenue Montgomery AL 36104-3631 • Telephone (334) 240-9300 • Fax (334) 240-9390

Proposal
Expansion of Choccolocco State Forest Using
Undeveloped Land at Fort McClellan
October 11, 1995

PROPOSAL:

The Alabama Forestry Commission proposes to expand Choccolocco State Forest to include undeveloped areas of Fort McClellan.

APPROACH:

The Alabama Forestry Commission would obtain ownership of approximately 14,000 of undeveloped forested property. This would be the lands which lie east of the building complexes and extends to the existing eastern Fort boundary with Choccolocco State Forest (see attached map). The Alabama Forestry Commission has an established record of working with the Army and National Guard in providing forested areas for training while at the same time providing timber management, open space, recreation and other uses of its property for the public. As owners of this property, the Alabama Forestry Commission would expand Choccolocco State Forest and continue our multiple use management, providing benefits to Anniston through a broad range of uses.

The Alabama Forestry Commission also proposes to manage any undeveloped properties transferred to the Alabama National Guard. The Alabama Forestry Commission would work with the Guard to provide recreational benefits to the public while also providing training areas and timber sale revenue. The Alabama Forestry Commission and the National Guard would negotiate the fee to cover costs of forest management of these lands.

RATIONALE:

The property at Fort McClellan consists of developed land in the valley surrounded by an undeveloped buffer strip on the slopes of Choccolocco Mountain. The Alabama Forestry Commission proposes that this undeveloped land be kept as a working forest and be managed as an addition to Alabama's State Forest System. As a state forest, this land would benefit the people of Anniston, the surrounding area and the state of Alabama as a site for recreation, wildlife management and production of forest products.

The Alabama Forestry Commission has an established track record at Choccolocco State Forest demonstrating its ability to work with the military and other agencies to provide maximum benefits to the people of Alabama. The Alabama Department of Conservation has a lease which provides public hunting on the State Forest as part of Choccolocco Wildlife Management Area. The Forest is used by National Guard and Army units for maneuvers and bivouac training. There are also bicycle and hiking trails established for public use and several wildlife viewing areas. All of these activities are coordinated around normal silvicultural activities which occur on a working forest, such as timber inventories, tree harvests and thinnings, tree planting and prescribed burning.

This management philosophy would be extended to the Fort property as part of either the State Forest or as a National Guard base. Either way the Alabama Forestry Commission would provide the following:

- 1.) Recreational opportunities to the public such as bicycle and hiking trails, camping, hunting, fishing and wildlife viewing areas.
- 2.) Expertise and manpower to manage the forested areas for high quality, high value forest products. These high value products would serve as a source of materials to support economic activities in the community.
- 3.) Protection from wildfire, insects, disease and other destructive agents.
- 4.) Training and maneuver areas for the Alabama National Guard.
- 5.) Public hunting through the Alabama Department of Conservation as part of Choccolocco Wildlife Management Area.

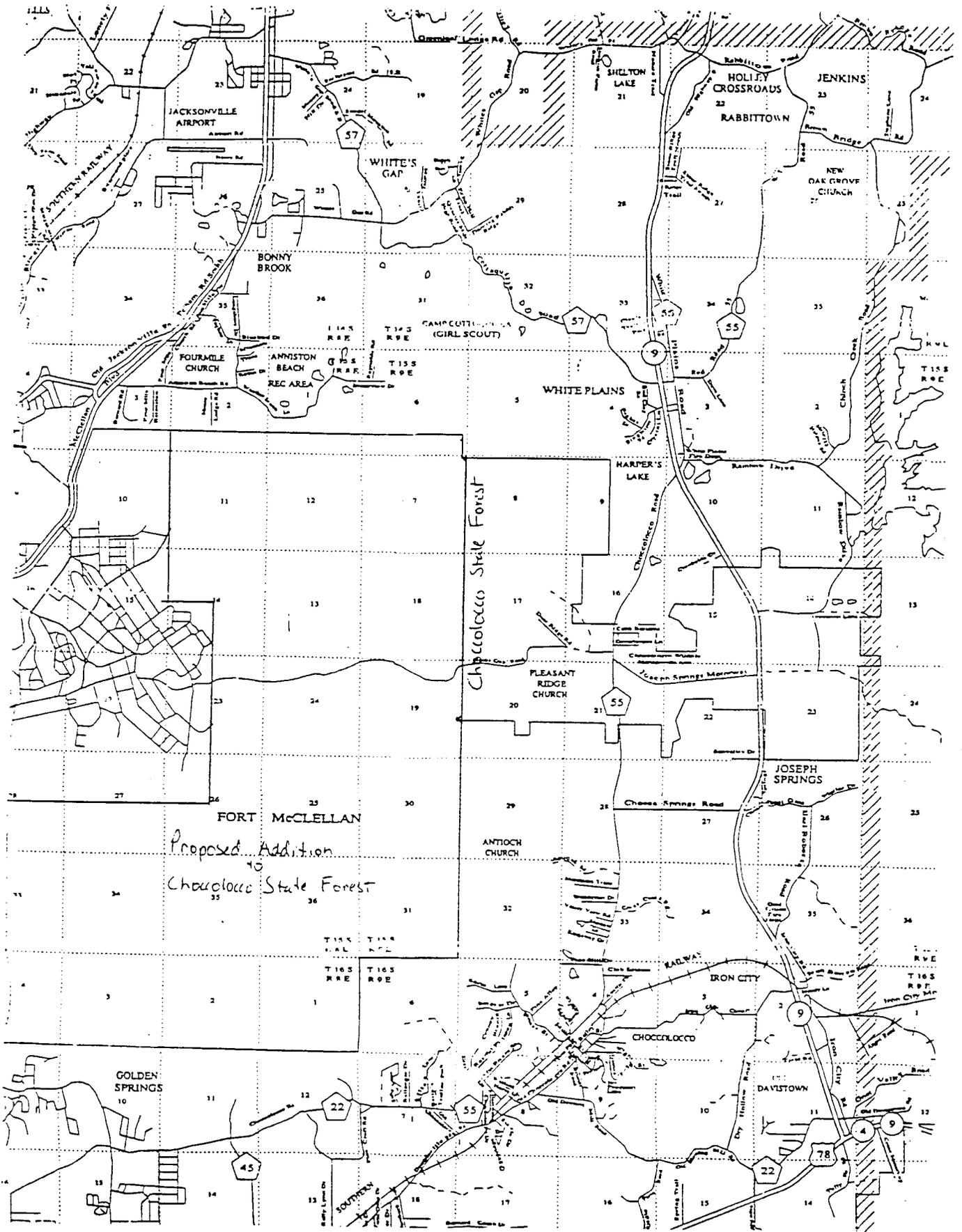
IMPLEMENTATION:

As part of the base closure procedure, the Army will transfer ownership of the undeveloped portions of Fort McClellan to the Alabama Forestry Commission, except those areas contaminated with chemical weapons or other hazardous materials and areas with unexploded ordinance (impact areas).

The Alabama Forestry Commission will establish an office in the Fort complex in close proximity to the Alabama National Guard Headquarters so that coordination between training exercises and other forest activities can be easily effected. The forest manager will be responsible for coordinating all activities and the use of the property.

The Alabama Forestry Commission will conduct an inventory of the property to determine silvicultural needs and other potentials. A forest management plan would be developed based on that inventory that will detail silvicultural activities and recreational and other development. Areas capable of supporting forest would be maintained in a forested condition, with harvested areas quickly regenerated. Areas not capable of supporting forests would be maintained in grasses or other herbaceous vegetation to benefit wildlife.

The Alabama Forestry Commission will put the property under lease to the Alabama Department of Conservation for wildlife management as an addition to the Choccolocco Wildlife Management Area. Hunting and fishing activities will be coordinated through the forest manager. Other recreational uses of the property, such as bicycle and hiking trails, camping areas and wildlife viewing areas will be established with the assistance of local organizations and groups.



Auburn University

Auburn University, Alabama 36849-5418

School of Forestry

September 2, 1996

Mr. Curtis Flakes
Mobile District Corps of Engineers
ATTN: CESAM-PD-EC
P.O. Box 2288
Mobile, AL 36628

Dear Mr. Flakes,

I would like to comment on the Public Scoping Meeting concerning the disposal and reuse of surplus property at Fort McClellan. I propose that consideration be given to the existing montane longleaf pine ecosystem that occupies much of the Main Post.

The School of Forestry has been involved in longleaf pine research for over 12 years. Several projects have taken me to Fort McClellan and the surrounding area. The Fort is a very unique area, containing what is probably the largest intact remnant of a montane longleaf pine ecosystem left in the world. Efforts are underway on the neighboring Shoal Creek District of the Talladega National Forest to restore some of these montane ecosystems. Due to the activities on Fort McClellan associated with the Department of the Army' mission, the frequent fires seen on the base have saved intact ecosystems of what once covered much of the area.

As you may well know, longleaf pine forests were once the most extensive forest ecosystem in North America dominated by a single species. Today, this ecosystem is even more threatened than wetlands which we hear about in the news so often. The montane longleaf ecosystem is even more threatened. Fort McClellan and the Talladega National Forest (Shoal Creek and Talladega districts) represent the only areas where these systems still exist.

Preservation of existing stands and restoration of degraded stands should be a primary objective for the Department of the Army, or whomever takes over the property after the base closure. This is especially true with your montane ecosystems. Prior to settlement, much of the area in and around Fort McClellan was dominated by longleaf pine. Harper in his 1943 Monograph - Forest of Alabama discusses the travels of Dr. Charles Mohr through the area in the late 1890's. Mohr said "Yesterday

A LAND-GRANT UNIVERSITY

morning I visited the pine forests from which the supplies of this large and well-conducted establishment, at Hollins,.... are drawn. There I found the foothills and narrow valleys between them, covered with a truly magnificent forest of *Pinus palustris*, yielding to the acre as much merchantable timber as the best class of pine lands in the coast pine belt from Alabama to Texas."

These forests had maintained themselves for thousands of years without the assistance of man. Due to human activities, these forests are now endangered. Our assistance is now required to restore these forests over there former range wherever possible. Fort McClellan presents a great opportunity to reverse the trend in the conversion of longleaf pine ecosystems to other uses. Should this the preferred option it must be realized that fire will play a critical role in this endeavor. If this system is to be saved fire has to be used to restore and maintain this endangered ecosystem.

"Preservation" of longleaf pine ecosystem on Fort McClellan should take precedent over any other option. However, I do not mean preservation in the strictest sense of the term but of saving and managing the montane longleaf pine ecosystem.

If you have any questions or if I can be of any help please let me know. Best wishes in your efforts.

Sincerely,

John S. Kush
Senior Research Associate
School of Forestry
Auburn University
108 M. White Smith Hall
Auburn University, AL 36849-5418
Phone: (334) 844-1065
FAX: (334) 844-1084

Auburn University

Auburn University, Alabama 36849-5414

College of Sciences and Mathematics

Department of Zoology and Wildlife Science
331 Funchess Hall

Telephone: (334) 844-4850
ATTNet: 221-4850
FAX: (334) 844-9234

Phone: 334-844-9269
Fax: 334-844-9234
E-mail: Geoffrey.Hill@ag.auburn.edu

1 August 1996

Mr. Curtis Flakes
Mobile District Corps Engin.
ATTN: CESAM-PD-EC
PO Box 2288
Mobile AL, 36628

Dear Mr. Curtis,

I will not be able to attend the Public Scoping Meeting that will be held to discuss the preparation of the Environmental Impact Statement for the disposal of Fort McClellan. Nevertheless, I wanted to convey my strongest recommendation that some means be found to preserve that the large forest tracts presently contained in Fort McClellan.

For two months in 1996, I conducted a study of the effects of forest fragmentation on nest predation of Neotropical migrant birds. I found a significant increase in the proportion of nests lost to predators as the size of forest fragments decreases. This study complements the work of Dr. Randy Webb and Eric Soehren who found decreasing numbers and diversity of breeding Neotropical migrant birds as forest size decreased.

Over the last several years, I have traveled widely throughout Alabama conducting surveys of breeding Neotropical migrant birds. I have been struck by how little remains of the once vast hardwood forests that originally blanketed the northern third of Alabama. Development, conversion of forest land to cropland, and conversion of hardwood forests to commercial pine plantations has left us with only remnant hardwood forests. We simply cannot afford to lose any more large blocks of hardwood forests.

The forested lands of Fort McClellan offer a tremendous opportunity for us to show that as a society we realize the importance of preserving what remains of the natural world. Most of the forested land on Fort McClellan has not been cut since the turn of the century and supports large populations of many species of Neotropical migrant birds that are of management concern because of continent-wide populations declines: Worm-eating Warblers, Scarlet Tanagers, Yellow-throated Vireos, Yellow-billed Cuckoos, Louisiana Waterthrushes, Wood Thrushes, and Ovenbirds. Unlike most of the forested areas in nearby Talladaga National Forest, the forests on Fort McClellan are not fragmented. Fort McClellan has a larger block of unfragmented forest than even the Sipsey Wilderness in the Bankhead National Forest.

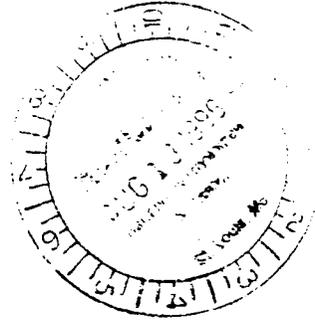
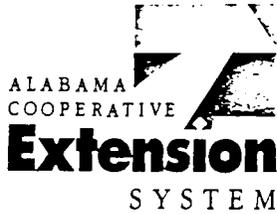
I strongly recommend that the forested portions of Fort McClellan be maintained with no development. Any road building, timber harvest, or construction of recreational facilities would negatively impact wildlife and destroy the wildness of this unique area.

Sincerely,



Dr. Geoffrey Hill, Assistant Professor

Basic Life Sciences • Field Zoology • Marine Biology • Wildlife Sciences



State Headquarters, Office of the Director
Auburn University, AL 36849-5612
Telephone (334) 844-5323
FAX (334) 844-5544
E-mail wsmith@acenet.auburn.edu

Friday, August 9, 1996

Robert B Bax, Vice President/Project manager
Harlan Bartholomew & Associates
400 Woods Mill Road, Suite 330
Chesterfield, Missouri 63017

RE: Notification of Environmental Impact Statement and Request for Information
Disposal and Reuse Environmental Impact Statement for Ft. McClellan, Alabama

Dear Mr. Bax

This letter is to acknowledge receipt of your July 19 letter on this subject. The Alabama Cooperative Extension System has no information that would assist in developing the affected environmental portion of the Fort McClellan Disposal and reuse EIS.

An obvious key environmental issue impacting on potential reuse of Ft. McClellan property is the disposal of ordinance that is either stored at Ft. McClellan or left on the ranges. Another key issue is the location and disposition of waste disposal sites that probably exist on the property from decades of use as a military training facility.

Please do not hesitate to call upon us if the expertise of the Alabama Cooperative Extension System can assist in any way.

Sincerely,

A handwritten signature in cursive script, appearing to read "W. Gaines Smith".

W. Gaines Smith, Interim Director

ALABAMA AND AUBURN UNIVERSITIES AND TU SIEGHE UNIVERSITY, COUNTY GOVERNING BODIES AND USDA COOPERATING



August 7, 1996

Mobile District Corps of Engineers
ATTN: CESAM-PD-EC (Mr. Curtis Flakes)
109 St. Joseph Street
Mobile, AL 36602

Dear Mr. Flakes,

I am writing on behalf of the Alabama Environmental Council to ask that several issues be addressed during the NEPA process associated with the closure of Fort McClellan. While the developed areas of the Fort should be used to enhance the economy of the local area, the undeveloped areas of the reservation, particularly the mountains, should be assessed for their special resources before closure plans are drafted.

Fort McClellan is very special because it contains one of the largest tracts of unfragmented forest in Alabama. The undeveloped lands of the Fort provide important habitat to many populations of neotropical migratory birds that need unbroken habitat. The Fort has encouraged studies of these bird populations. Moreover, the Department of Defense has a strategic plan associated with the Partners in Flight Program that promotes the identification and protection of important habitats. How will NEPA analysis evaluate the impact of reuse alternatives that fragment these forests and degrade habitat for sensitive birds?

The unbroken nature of the mountain forests of Fort McClellan has allowed fire to travel across the landscape, and this has helped to maintain one of the best examples of the mountain longleaf pine community. Plans for the continued maintenance of this community are being developed. If these lands are broken up by land use alterations then widespread controlled burning could not be practiced and the natural community would decline. How is the NEPA process going address the impacts of reuse alternatives that prevent the maintenance of the fire dependent longleaf pine natural community?

The longleaf natural community contains significant amounts of old growth, and this is part of the reason the community contains its original diversity. The Fort also contains other types of old growth such as xeric oak-hickory which contributes to the overall diversity of the area. How will the protection and management of these forests be

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evaluated in the NEPA analysis? Also, the nearby Talladega National Forest contains colonies of the federally endangered red-cockaded woodpecker which is dependent on old growth longleaf pine. The National Forest is considered important habitat for a recovery population within the U.S. Fish and Wildlife Service's species recovery plan. The Fort contains even higher quality habitat within close proximity. How is the NEPA process going to consider the possibility of expanding the recovery population boundary to include parts of Fort McClellan?

The main post provides habitat for the federally endangered gray bat. Also, the base contains one of the largest colonies of the white fringeless orchid which is listed as a species of concern by the U.S. Fish and Wildlife Service. The NEPA process should evaluate the potential effects upon these species habitat which could be produced by side-effects associated with intensive reuse alternatives such as forest fragmentation, changes in fire regime, environmental cleanup and increased human disturbance. The Fort has created an Endangered Species Management Plan, and it provides a base line for existing Department of Defense stewardship of the land on the base. The NEPA analysis should use this plan as baseline and evaluate any changes in resource protection and management that could result from reuse alternatives.

The Fort also contains many small wetlands in the mountains that are probably not on any National Wetland Inventory Maps. How will the NEPA process evaluate possible filling or discharges into these federally regulated wetlands? The undeveloped portions of the Fort contain many archeological sites that date back well into the preColumbian period. How will the NEPA process address the effects of reuse alternatives on the preservation of significant and federally protected archaeological sites?

Fort McClellan has been used for artillery training since the turn of the century. The undeveloped portions of the base are full of unexploded munitions which would have to be removed for any intensive reuse alternatives. The location and removal of these munitions would require significant earth moving activity in areas that contain steep and highly erodible slopes. Resulting erosion and eventual sedimentation onto lowlands could cause seriously negative environmental impacts, and it may be difficult to comply with the Clean Water Act, Executive Orders on Wetlands, the Endangered Species Act, and other federal laws. How is the NEPA process going to consider the effects of the survey and removal of unexploded munitions associated with unrestricted reuse alternatives?

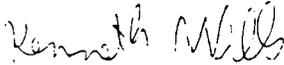
Fort McClellan currently provides opportunities for the surrounding civilian community to hunt and fish. Other opportunities such as hiking and picnicking are offered on a more limited basis. All of these opportunities provide important recreational and economic benefits to the surrounding communities. I know these values well because I

grew up in the area and used the base for hunting, fishing, and other recreational activities. As public use of the region's private lands become increasing limited the Fort's recreational opportunities will become even more important. The Fort role as recreational green space close to substantial urban and suburban populations is important and could be greatly enhanced in the future. How will the NEPA process analyze the possible loss of this area from the region's recreational land base and loss of economic benefits associated with the recreation?

The Legacy Resource Management Program gives priority to identifying lands containing significant biological resources on closing military reservations. These lands are to be recommended for transfer to other federal land management agencies. How is the NEPA process going to meet these obligations of conserving significant ecological resources on lands to be disposed of?

We ask that the Army Corps of Engineers and other responsible parties address all of the above questions and issues in detail. This information is necessary if we are to make reuse decisions that protect the special resources of Fort McClellan. Please keep us informed throughout the NEPA process.

Sincerely,



Kenneth Wills
Natural Resource Planner and Biologist



B.A.S.S., Inc.

P.O. BOX 17900 • MONTGOMERY, AL 36141-0900 • (334) 272-9530 • FAX (334) 279-7148

BRUCE SHUPP

CONSERVATION AND RESOURCE DIRECTOR

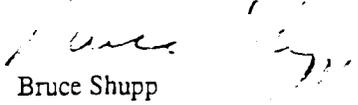
July 24, 1996

Mr. Curtis Flakes
Mobile District Corps of Engineers
ATTN: CESA-PD-EC
P.O. Box 2288
Mobile, AL 36628

Dear Mr. Flakes,

B.A.S.S., Inc. will not be attending the August 6, 1996 scoping meeting of the environmental impact statement (EIS) for the disposal and reuse of surplus property at Fort McClellan, Alabama. However, we would appreciate reviewing all the information distributed at the scoping meeting and to remain active on your mailing list throughout the EIS process. Thank you.

Sincerely,


Bruce Shupp

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The Longleaf Alliance

111 M. White Smith Hall
Auburn University, AL 36849-5418
E-Mail: gjerstad@forestry.auburn.edu

(334) 844-1020
(334) 844-1084 FAX

September 5, 1996

Mr. Curtis Flakes
Mobile Corps of Engineers, ATTN: CESAM-PD-EC
P.O. Box 2288
Mobile, AL 36628

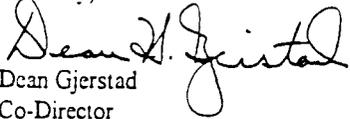
Dear Mr. Flakes:

I am responding to the Environmental Impact Statement to identify the environmental, social, and economic impacts associated with the disposal and reuse of surplus property at Fort McClellan, Alabama. As co-director of the Longleaf Alliance my objective is to encourage the maintenance of existing longleaf forests and to prevail on land managers to consider the restoration of longleaf where appropriate. The Longleaf Alliance is a partnership of private landowners, forest industries, state and federal agencies, conservation groups, universities and others interested in promoting a region wide recovery of longleaf pine forests.

Fort McClellan provides an exceptional opportunity to assist in the recovery of the unique montane longleaf pine that is distinctively different from coastal plain longleaf pine. Whereas 90+% of longleaf ecosystems are found in the coastal plain, montane longleaf is restricted to a few remnant stands primarily found in northeast Alabama. Unfortunately the remnant montane longleaf forest is being lost via the deliberate and unintentional conversion to other species. In many cases, the mature longleaf is removed and the area is replanted to loblolly pine or converted to golf courses and housing developments. In the absence of fire, unintentional conversion to hardwood is occurring. Longleaf is adapted to fire and fire is a crucial form of disturbance needed for the establishment and existence of longleaf ecosystems. Longleaf seed requires full sunlight and mineral soil to germinate and grow. Competition at this stage from other trees including hardwoods and other pine species will prevent longleaf from becoming established. In addition, numerous species of plants, invertebrates, and vertebrates are highly adapted to the longleaf ecosystem and cannot survive in other ecosystems. Thus, the conversion of montane longleaf to hardwood will result in a drastic change of the associated plant and animal community.

The US Department of Army as the manager of public lands has the distinct opportunity to restore and maintain the montane longleaf ecosystem. Your goal should in my opinion be to maintain and restore the montane longleaf ecosystem through appropriate management programs. Hopefully a portion of the surplus property that is in longleaf pine will be retained and managed to maintain the montane longleaf ecosystem. The Longleaf Alliance looks forward to working with the Department of Army in this most important effort.

Sincerely,


Dean Gjerstad
Co-Director

Board of Trustees

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Mobile

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Huntsville

Markel R. Wyatt
Mobile

VP/State Director
Kathy Stiles Cooley

Pepper Place 2821C • 2nd Avenue South • Birmingham, Alabama • 35233 • 205-251-1155 • Fax 205-251-4444

TO: Kathy Cooley
FROM: Chris Oberholster
DATE: August 6, 1996
RE: Ecological Significance of Main Post of Fort McClellan

According to numerous surveys and scientific studies of Fort McClellan conducted over the years, including the inventory of rare species and significant natural areas completed in 1994 by TNC scientists of the Alabama Natural Heritage Program (ALNHP), the Main Post is clearly of outstanding ecological and biological significance. Based on the available information and my first-hand experience gained in the course of inventory work conducted on Fort McClellan between 1992 and 1994, I have the following comments on its ecological significance and on the implications of reuse on the outstanding ecological resources present.

1. Based on the work of researchers from Auburn University and TNC scientists, the Main Post is known to contain one of the most exemplary examples of the unique and threatened mountain longleaf pine forest community. Not only is it special for its size and quality, but is even more significant because of its occurrence within a relatively intact, unfragmented landscape matrix together with other natural habitats characteristic of the mountains of Alabama, such as forested mountain seeps, Virginia pine forests, rocky talus slopes, and chestnut oak and other hardwood dominated forests.

The core of this area has been delineated in the report prepared by ALNHP as the Mountain Longleaf Community Complex, and is one of the Special Interest Natural Areas (SINA's) identified on Main Post. In fact, most if not all, of the other identified SINA's are either embedded within or are near this large block of mountainous land. The NEPA analysis of reuse options needs to address potential impacts of the various reuse alternatives on the integrity of this unique ecological resource.

2. Recent studies of migratory birds on Fort McClellan have revealed that the Main Post provides habitat for a number of species known to be particularly sensitive to forest fragmentation. The NEPA analysis needs to address the impacts to these species of any reuse alternatives involving fragmentation of the forest cover, for example logging, construction of new roads and other infrastructure, etc.

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3. Red-cockaded woodpeckers occurred on the Main Post as a breeding resident until at least the 1970's. Active colonies occur on nearby Talladega National Forest which is a recovery population for the species. The NEPA analysis needs to address the potential for including Main Post within the boundaries of the recovery population to facilitate recovery of the species.

4. Fort McClellan has been found to harbor one of the largest remaining populations of the white fringeless orchid, a federal species of concern, in a large mountain seep within the mountain longleaf community complex. Numerous populations of several other rare plant and animal species occur scattered across this large forested complex of some 12,000 acres. Any reuse activities being considered in the NEPA analysis must take into account impacts to these populations.

5. The gray bat, a federally endangered species, has been documented along stream corridors on Main Post. Potential impacts of all reuse alternatives on the riparian and other foraging habitat of this listed species need to be taken into account.

6. The streams of the Main Post harbor several rare aquatic animals, most of which are invertebrates which require clear, cool, running water to survive. Since the mountains on the Post form the primary catchment area for these streams, as well as the numerous springs and seeps, any reuse alternatives involving removal of forest cover or soil disturbance in the catchment, would result in degradation of these significant resources, due to erosion, sedimentation, increased turbidity and water temperature, etc. These impacts need to be comprehensively addressed in the NEPA analysis.

7. Those portions of the Main Post of Fort McClellan harboring ecologically significant features need to be managed to perpetuate these features by an agency or organization with demonstrated concern for and proficiency in the conservation of such significant resources. This issue of the need to provide for responsible stewardship of areas of known ecological significance needs to be addressed.

8. Certain components of the landscape in the mountain longleaf pine community complex require fire at regular intervals in order to maintain ecological health, for example to ensure establishment of new longleaf pine seedlings and to maintain vigorous populations of many of the herbaceous plant species such as grasses and legumes which are important sources of food for wildlife. Fragmentation of the forest cover would interfere with widespread prescribed burning, and lead to the deterioration and eventual loss of the fire-dependent habitat types.

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The NEPA analysis needs to address this concern in a substantive way. Attention will need to be focussed on reuse alternatives which would entail or lead to forest fragmentation, fire suppression, or the use of ecologically inappropriate fire regimes (e.g. burning an area only in winter can be detrimental in the long term for some fire-dependent communities).

9. Reuse alternatives involving removal of the forest canopy and/or disturbance of the soil, such as might occur with attempted removal of contaminants or unexploded ordnance, would have devastating negative impacts on the ecosystem, in the form of erosion of the steep, highly erodible slopes, siltation of streams and seeps, and the loss of habitat for native plants and animals. The impacts associated with the various reuse alternatives need to be addressed comprehensively in the NEPA analysis.

If you are interested in providing comments concerning the disposal and reuse of Fort McClellan, please provide your written comments below and send to the address noted, or leave this form in one of the comment form collection boxes at the August 6, 1996 Public Scoping Meeting.

When drafting this EIS a few factors should be considered.

- ① In determining which companies will get the contracts to complete all the work done, a preference should be given to local contractors. This should be done if it fits in the budget and is economically feasible.
- ② Fort McClellan is going to cause economic disaster when it closes. One way to offset this recession will be to build a highway bypass around Anniston from I-20. Without this bypass economic development will be difficult, in trying to attract large businesses.
- ③ You will need to think about the possibility of adding a large ^{new} shopping mall to the Anniston area. The environmental impact of that mall must be considered. The greater Anniston area is the ~~the~~ only area in the nation over #100,000 residents without a major shopping center. This must be considered in order offset McClellan's closing.
- ④ When writing the EIS make sure that in the Cost Analysis, human lives and jobs are given greater ~~the~~ weight before endangered species. Another spotted owl incident would destroy the economy.
- ⑤ Save or construct as many recreation sites as possible to increase or maintain the quality of life.

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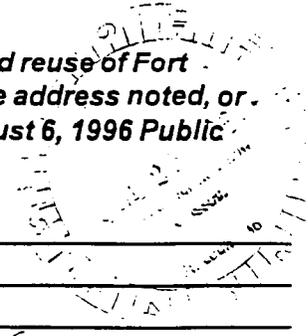
SEND COMMENTS TO:

Mobile District Corps of Engineers
ATTN: CESAM-PD-EC (Mr. Curtis Flakes)
109 St. Joseph Street
Mobile, Alabama 36602

YOUR NAME:

Dan Craig
Address:
PO Box 490
Ashland AL # 36251

If you are interested in providing comments concerning the disposal and reuse of Fort McClellan, please provide your written comments below and send to the address noted, or leave this form in one of the comment form collection boxes at the August 6, 1996 Public Scoping Meeting.



To who it may concern:

Comment:

As a mechanical Engineer who is very well acquainted with the land, and has done lots of work on the Ft. McClellan base. I would like to suggest that the Germans who are wanting to build a New Automobile Factory in Alabama, be contacted (before they plan to build a Factory in Vance, Alabama) with offers made to them that they could not resist, to put their new plant on grounds (property) around the 3100 area on the old Ft. McClellan Base, this would help the County, the City and all employees that need to go back to work, with a nice decent wage scale.

This needs to be done before the committee that has been appointed (of which I do not appear or some of the members) blows and strews the money that has been appropriated for something like this.

Some of the property on the Ft. McClellan base was practically condemned and taken from our forefathers, but people such as I doesn't have any ways to prove it, except what our forefathers told us.

Is there anyway we can find out about this?

(additional space on the back) >>>>

SEND COMMENTS TO:

Harland Bartholomew & Associates, Inc.
400 Woods Mill Road South, Suite 330
Chesterfield, MO. 63017

YOUR NAME:

Ben Hollingsworth American Indian

Organization: Building Trades, Plumbers + Steamfitters

Address:

*P.O. Box 29
Weaver, AL. 36277
(205) 820-5046*

ADDITIONAL COMMENTS

I will not be making your public meeting, August 6, but if there is anyway or anything I can do to help you, please contact me.



printed on recycled paper

Fort McClellan
Disposal and Reuse
Environmental Impact Statement

Comment Sheet

If you are interested in providing comments concerning the disposal and reuse of Fort McClellan, please provide your written comments below and send to the address noted, or leave this form in one of the comment form collection boxes at the August 6, 1996 Public Scoping Meeting.

1. Preserve the foothills of mountain range of Fort McClellan for one of three programs:
1. Forever Wild Program
2. Add to the Choctawhatchee Wildlife Management Area.
3. Introduce to U.S. Congress to designate the property as a Wilderness Area.
I am totally against developing this portion of (Mountain Range) of Ft McClellan for commercial use.

2. Utilize the existing facilities on main post for minimum or medium correctional facility. This would resolve many prison/jail overcrowding problems. Also utilizing these facilities as a correctional facility would not require an expensive environmental clean-up as would a total re-development of the property.

3. Portions of the main post could be used as a State Managed Recreation Complex, i.e. parade fields, existing sport complex, ball fields.

(additional space on the back) >>>>

SEND COMMENTS TO:

Mobile District Corps of Engineers
ATTN: CESAM-PD-EC (Mr. Curtis Flakes)
109 St. Joseph Street
Mobile, Alabama 36602

YOUR NAME:

Joe Johnson
Address: 1670 Clara Ln.
Wetumpka Al. 36277

ADDITIONAL COMMENTS

d. I do not have confidence in our local leaders
to re-use the property nor preserve the property
as I feel it should be. I feel that developers
aims are to exploit the property for monetary gains
not their personal benefit.



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Fort McClellan
Disposal and Reuse
Environmental Impact Statement

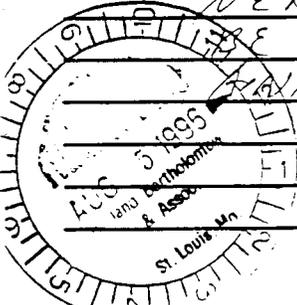
Comment Sheet

If you are interested in providing comments concerning the disposal and reuse of Fort McClellan, please provide your written comments below and send to the address noted, or leave this form in one of the comment form collection boxes at the August 6, 1996 Public Scoping Meeting.

I WOULD LIKE TO SEE FT MCCLELLAN
DIVIDED BETWEEN THE NATIONAL GUARD, A
PARK OR WILDLIFE RESERVE AND A
REGIONAL LANDFILL.

A PARK OR WILDLIFE RESERVE WOULD
MAKE IT UNNECESSARY TO TEAR UP THE
FORESTS TO REMOVE OLD MUNITIONS. IT WOULD
ALSO PROTECT THE DEER, TURKEYS AND OTHER
WILDLIFE, INCLUDING BLUEBIRDS, THAT HAVE
LEARNED THE FORT IS A SAFE PLACE TO LIVE.

A REGIONAL LANDFILL ON THE FORT WOULD
SOLVE SOME OF THE PROBLEMS THAT HAVE
BEEN RAISED AT OTHER SITES IN THE AREA.
WITH THE PROPOSED BYPASS, HWY 431 AND
HWY 78 TRUCK ACCESS WOULD BE GOOD.
ALSO THERE WOULD BE NO ONE LIVING
NEXT TO THE LANDFILL AND THERE WOULD
BE ONE OR MORE HILLS BETWEEN IT AND
ANNISTON.



(additional space on the back) >>>>

SEND COMMENTS TO:

YOUR NAME: LAURA MEEDS
26 PELHAM HOTS
ANNISTON, AL 36206
BLUEBIRDS OVER ALABAMA
Organization:
SILVER LAKES BLVD
Address:
GLENCOE IAL

Mr. Curtis Flakes
Mobile District Corps of Engineers
ATTN: CESAM-PD-FC
P.O. Box 2288
Mobile, Alabama 36628

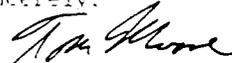
Dear Mr. Flakes,

Many options are being discussed concerning "reuse" of the American public's property at Fort McClellan, Alabama. I hope that some options other than selling it off to be destroyed by rich developers will actually be considered. The area contains many resources that would be of great benefit to the public that already owns them, and that would be lost to all but the bank accounts of the moneyed development and timber interests and those civil servants who facilitate the theft of those resources from the public.

Several endangered, threatened, or rare species of plants and animals currently exist on the property. Archaeological sites of some importance exist there now. Recent history shows us that such sites of historical and, to the descendants of indigenous people, religious significance are routinely destroyed if some jackass millionaire wants another shopping plaza on the site.

If the members of the upper hierarchy wish to be remembered as worthy custodians of the public trust rather than those who sold their souls to the Devil with landscaping greethogs from hell as the middlemen, please help convince them that this countryside should remain with its current owners.

Sincerely,



Tom Moore

8/20/76

Norman Morrison
126 MATTISON OXFORD, AL 36203
205-631-9713

Don Walters
Outdoors
Anniston Star
W 10th
Anniston, AL 36201

M-16-96

Dear Don,

About your column Sunday.

In most matters I am in total agreement with you, however where it concerns conservation of our local forests I am in 150% agreement.

You mentioned my old standby, the *biological desert*. Well, several years ago, one day, I was railing to your predecessor there at the Star about the increasing number of clear cuts out at Choccolocco, and the forest service's predeliction to going back with pine trees. Lo and behold, the very next week he did a piece on why pine forests were OK, inspired, he said, by some feller who came into his place of business railing away, and even threw in the old biological desert term to make sure I knew it was me he was talking about. (We're still pals, just a friendly little difference of opinion.)

I could see the point he was making. Short term, clear cuts can enhance wildlife. The problem out at Choccoloco was that the forest service wasn't cutting to enhance wildlife, only to enhance whatever strange goals they had at the time. Hence, they simply raped the environment, and my hunting places in particular. Worse, they went back with unnatural blocks of pines. You've seen it. I still feel like there is somewhere out there in nature a super pine tree predator which will make the pine beetle look like a chigger on an elephant, and that all those nice rows of pine trees will be very tempting indeed.

As for the mature pinelot. Seen Sportsman Showcase with Ken Tucker lately? Every year he hunts on some property down in south Alabama which looks remarkably like the old fort property off Hwy 9 at the check shack. Away out there in the middle of this lovely pine thicket, there's a food plot.

After mere moments of waiting, a herd of the scruffiest, poorest looking deer you ever saw will run out to eat the grass in the plot, which has already been clipped to a height of around a quarter inch or so. Where else they got to go for supper? Two years in a row he's shot deer with mutant half-racks.

I don't hold our local forest service folks liable. I've never talked to one yet that thought much of clear cutting. If there is one place I have to fault the republicans, it is their nasty little habit of going straight to the heart of the forest, then cutting it out. Our interests have always been administered to by folks in sterile little Washington offices. To them the Talladega National Forest is just some little green place on a map.

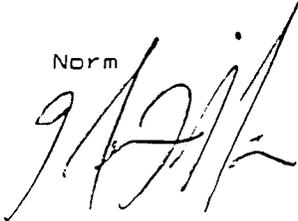
Thankfully, wholesale deforestation seems to be on the wane in Choccolocco. Up on Cheaha, there's not much left to cut. I can't speak for the tree farms, except to say that as far as I know, they are still there producing copious amounts pine pollen for my nose.

Who has made the money from my forests? Not me. Can't say as I've seen a nickel. One of my arguments with the forest service was that after cutting half the place down they didn't have enough money budgeted locally to keep the toilet traps out at Pine Glen empty. They sort of solved the problem by not replacing the toilets that vandals stole and broke, by and by. But again, we have good men and women working in the woods around here. It's not their fault that their bosses don't give a rat about our woods.

Now, we come to the Fort. Yes, I've read the paper and seen the casual talk about removing those pesky trees from the environment out there. Some of those ridgetops would make an excellent location for a raft of executive homes, don't you think? Why, Don, we can live in harmony, you and I, with the executive homes. I believe the term is ah, *multiple-use*? They use it and we lose it?

I sit here ready to do what I can to do my part for the woods scene. I'm fresh out of volunteer and community service causes just now. Can't say as I've heard the phone ring lately. Put me down in your database as woods-hunting friendly, Don. You hear of something, let me know. I'll be there.

Norm

A handwritten signature in black ink, appearing to be 'Norm', written in a cursive style.

If you are interested in providing comments concerning the disposal and reuse of Fort McClellan, please provide your written comments below and send to the address noted, or leave this form in one of the comment form collection boxes at the August 6, 1996 Public Scoping Meeting.

I AM VERY CONCERNED ABOUT THE IMPLICATIONS OF THE CLOSING OF FORT McCLELLAN. I HAVE HEARD ESTIMATES OF \$45-55 MILLION AS THE COST OF ~~CLOSING THE~~ CLEANING UP THE ENVIRONMENTAL DEVASTATION AT FORT McCLELLAN. I WOUDDER ABOUT THE ARMY'S RESOLVE TO DO THIS QUICKLY AND EFFICIENTLY, PARTICULARLY IN VIEW OF THEIR FAILURE TO CLEAN UP OTHER BASES THAT ARE IN EVEN GREATER NEED, MOST NOTABLY, ROCKY FLATS, COLORADO, WHICH HAS BEEN CHARACTERIZED AS THE MOST POLLUTED LOCATION ON EARTH.

I AM ALSO CONCERNED THAT THE ARMY WILL CREATE THE SAME ENVIRONMENTAL MESS AT FORT LEONARD WOOD THAT THEY HAVE MADE AT FORT McCLELLAN. I SUGGEST VERY STRONGLY THAT THE WHOLE IDEA OF MOVING FORT McCLELLAN'S OPERATIONS TO FORT WOOD BE RECONSIDERED. PERHAPS THE ARMY SHOULD BE ASKED TO CLEAN UP FORT McCLELLAN AND SHOW THEY CAN OPERATE IN AN ENVIRONMENTALLY SAFE MANNER, BEFORE THEY MOVE TO FORT WOOD.

(additional space on the back) >>>>

SEND COMMENTS TO:

YOUR NAME: THOMAS J. SAGER

Harland Bartholomew & Associates, Inc.
400 Woods Mill Road South, Suite 330
Chesterfield, MO. 63017

Organization: HEARTWOOD

Address: 8 LAIRD AVE
ROLLA, MO 65401



Fort McClellan
Disposal and Reuse
Environmental Impact Statement

Comment Sheet

If you are interested in providing comments concerning the disposal and reuse of Fort McClellan, please provide your written comments below and send to the address noted, or leave this form in one of the comment form collection boxes at the August 6, 1996 Public Scoping Meeting.

Very few people among the civilian population in and around Northeast Alabama have first hand knowledge of how the Army has preserved the environment of Fort McClellan. The only people really familiar with the wilderness areas of the fort are a few civilian employees, the military, and the hunters. As a hunter, hiker, wildlife photographer, and outdoor writer in this area, I have had numerous opportunities over the past 25 years to walk the mountainous terrain. I know first hand what a pristine wilderness it really is.

Thanks to the Army and its environmental policies, the forts woodland has been maintained in the same eco-status that was here when the Creek and Cherokee Indians lived in these mountains.

Unlike Mount Cheaha and The Little River Canyon in the Talladega National Forest, the forts wooded areas have not been abused by our civilized society. You can walk or drive through the forts mountain roads and look down into the deep valleys and ravines and not see discarded stoves, waterheaters, automobiles, and garbage. The clear mountain streams are not littered and polluted with tires, plastic, and styrofoam trash. The forts past policies have kept the age old trees from being stripped from the land by clearcutting -- something we see entirely too much of in this state. In the past, the Army has wisely chosen to keep it's natural forest as nature intended and provide for it's wildlife.

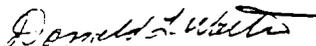
Alabama is a very poor state when it comes to preserving land for public use. We currently have 31 wildlife management areas encompassing some 600,000 acres within The Department of Conservation. Of that 600,000 acres, only about 35,000 acres actually belong to the state. Ninety four percent of our public hunting, hiking, camping, and fishing areas are actually owned by private landowners and corporations. There isn't

(additional space on the back) >>>>

SEND COMMENTS TO:

Mobile District Corps of Engineers
ATTN: CESAM-PD-EC (Mr. Curtis Flakes)
109 St. Joseph Street
Mobile, Alabama 36602

YOUR NAME:


Donald L. Walters

Address:

115 Jill Lane
Anniston, AL 36201

ADDITIONAL COMMENTS

much land left for the state to acquire -- and for sure nothing like the woodland of Fort McClellan.

The Fort is being viewed by some individuals who see development and tree harvesting. Others, like myself, see a chance to save a rare piece of Alabama for everyone to use that has been untouched by our civilized disorder called progress.

Saving the forts natural forest doesn't necessarily mean this acreage would be dormant. Studies conducted in the 16 northern most counties of Alabama show that tourism nets \$963 million into the economy annually. That figure supports 25,849 full time jobs. Hiking, camping, mountain bike riding, outdoor photography, educational venues, hunting, and fishing are a booming business. The Alabama Bureau of Tourism has already shown an interest in the future potential of the forts rugged terrain if preserved.

Whoever becomes the caretaker of the forts wooded areas after the base closure, should do so with the understanding that it is not to be cut or developed in any way.

Dr. Randy Webb, Certified Senior Ecologist
Net Work Associates, Ecological Consulting
200 Park Ave. - Eugene, OR 97405
541/689-1460

29 July 1996

Mr. Curtis Flakes
Mobile District Corps of Engineers
ATTENTION: CESAM-PD-EC
PO Box 2288
Mobile, AL 36628

Dear Mr. Flakes,

I am writing to address scoping comments and issues with respect to identifying impacts for the Environmental Impact Statement on the closing of and possible disposal of lands from Ft. McClellan, Alabama. My name is Don R. ("Randy") Webb. I am a Ph.D. professional ecologist, a former college professor, and am certified as a Senior Ecologist by the Ecological Society of America, the professional scientific society of ecologists in the United States. For the past three years I have studied the effects of forest fragmentation on species of Neotropical Migratory Birds (NTMBs) on Main Post, Fort McClellan, Alabama. We found 18 species of NTMBs on the Fort. NTMBs include many of our most beautiful birds such as warblers, flycatchers and others. Most species eat large numbers of insects. Besides public enjoyment of their songs and by watching these birds, they may also be very important in preventing outbreaks of destructive insect pests in our forests. These birds are migratory and overwinter in other countries, and are protected by the Migratory Bird Treaty Act. For the past two years I have also studied Appalachian Cottontails (*Sylvilagus obscurus*) on the Fort. I have personally spent over 1,000 hours in the field on post and am very familiar with the forested areas of the Fort. Based on my extensive experience on post, my field studies, and the ecological and statistical analysis of the data I and my assistants collected, I am able to make the following statements with a high level of assurance:

NTMBs require large blocks of mature forest (late successional/old-growth forest) to survive. Roads or other developments such as clearings for buildings, pipelines, or electric lines divide forested habitat into smaller fragments. Even if large amounts of small fragments exist, they may be of no value to the birds. My studies show that small forest fragments are not able to support viable populations of NTMBs. But, what is the reason for this? Most studies have found that the reason that small fragments of forest are not valuable to NTMBs is because roads and other clearings allow predators to attack the birds and their nests. Dr. Jeff Hill, at Auburn University, is currently studying the reasons for the inadequacy of small forest fragments on the

Mr. Curtis Flakes

July 31, 1996

Page 2

Fort. I believe his findings also show that nest predators are much more likely to attack nests in small forest fragments. These birds need contiguous (unfragmented) areas of mature forest on the Fort.

The contiguous forested areas on post, particularly the montane longleaf pine forests and mixed hardwood areas, are an important and significant biological resource and are crucial to maintaining NTMBs in the area. The land on the Fort is especially important because there is so little late-successional/old growth forest left anywhere in the region. The lands of the adjacent Talladega National Forest are heavily logged and clear-cut, and the other nearby lands are heavily urbanized. The longleaf pine ecosystem type has been rendered extremely rare by many decades of logging and is now considered an endangered ecosystem (Noss, R. F., E. T. LaRoe, J. M. Scott. 1995. Endangered Ecosystems of the United States: A Preliminary Analysis of Loss and Degradation. Biological Report 28. U.S. Dept. of the Interior, National Biological Service. Washington, DC.). Therefore, any reductions in forest cover on the Fort could have adverse regional or national impacts. These cumulative impacts would thus extend far beyond the borders of the Fort.

Any logging, clearing of land for development or other activities that disturbed the forest canopy would harm NTMB populations on post. Any forested area of more than several acres in size should be left undeveloped to maintain NTMB species. Any land conveyance should protect the forested areas of the Fort to prevent loss of this important biological resource. Fragmentation destroys habitat by cutting it into smaller pieces, even if the same area of land is present after fragmentation. Therefore, construction of roads, pipelines, or electrical lines would harm NTMB populations.

Higher elevation areas of the Fort contain blueberry and sparse forest which are typical habitats for the Appalachian Cottontail. Because of its apparent rarity, this species was listed as a candidate species pursuant to the Endangered Species Act. In my judgment this species may well be extant on the Fort. These areas should also be protected in any land conveyance. Finally, the Fort once served as habitat for the Red-cockaded Woodpecker (*Picoides borealis*) which is listed under the Endangered Species Act. Many of the lands on the Fort are suitable for reintroduction, and could facilitate recovery of this species.

While conducting my field work on the Fort, I noted the presence of ordnance casings and 55 gallon drums which may have been used to store hazardous materials. Although I do not know whether the ordnance was live or what was contained in the drums, I am concerned that development or heavy public use of the Fort may expose members of the public to explosives and toxic materials.

Sincerely,

Dr. D. R. Webb

6 August 1996

Mr. Curtis Flakes
Mobile District Corps of Engineers
ATTN: CESAM-PD-EC
PO Box 2288
Mobile, AL 36628

Dear Mr. Flakes,

The EIS for the closure of Fort McClellan, near Anniston, Alabama should include alternatives which include retention of the entire area by the federal government for use as a wildlife refuge and environmental education center. This use would be similar to that of the Presidio in San Francisco, California. The fort provides important environmental benefits as a watershed and source of clean water, for hunting, and other types of outdoor recreation. The fort is right next to the Anniston Museum of Natural History and a city park.

The Fort could be managed as a national reserve managed by the National Park Service (like the Little River Canyon) or as a Wildlife Refuge, managed by the US Fish and Wildlife Service. Any conveyance of Fort lands into private hands, to the state or to the US Forest Service without restrictions on logging, road-building or development would almost certainly have major and significant adverse environmental impacts.

Sincerely,



Randy Webb
4316 18th St.
San Francisco, CA 94114

A.2.2 SCOPING REPORT

As part of the scoping process, the analysis team developed a Scoping Report to summarize the comments received from the public, review agencies, and special interest groups and organizations. The eight-page report has been reproduced in its entirety as part of this appendix on the following pages.



Scoping Report

1.0 INTRODUCTION

Following is a summary of the scoping process which was conducted in support of the Environmental Impact Statement (EIS) for the Disposal and Reuse of Fort McClellan, Alabama. This report describes the scoping process and summarizes the comments received from the public, review agencies, and special interest groups/organizations during the scoping period.

2.0 GENERAL

The EIS process is designed to involve the public in the Federal decision making process. The first step in the preparation of an EIS is to determine the range, or scope, of issues to be addressed in the document. This is accomplished through an established scoping process required as part of the EIS process (40 CFR 1501; AR200-2; US Army BRAC NEPA Manual)

2.1 Notification Procedures

The public was initially notified of the Army's intent to prepare an EIS by publishing a Notice of Intent in the 28 September 1995 issue of the Federal Register. Subsequently published was a legal notice for a public scoping meeting to be held on August 6, 1996 (Appendix D). This legal notice was published in the Oxford Independent (July 26 & August 2, 1996); Jacksonville News (July 24 & July 31, 1996); and the Anniston Star (July 20 & 21, 1996). In addition, press

releases (Appendix D) inviting the public to express their views at the referenced scoping meeting were distributed to seventeen local/regional newspapers, television stations and radio stations.

Announcements or "scoping fliers" were mailed to public agencies, public interest groups and organizations, political representatives, and individuals known, or thought to have, an interest in the disposal and reuse of Fort McClellan. The fliers (Appendix E) consisted of a one-page description of the purpose of the meeting, with an invitation to attend the meeting and/or submit written comments identifying key issues that should be considered as part of the EIS. A separate comment sheet, with return mailing address, was included with the flier. More than 750 notices were mailed on July 19, 1996, approximately two weeks prior to the scheduled scoping meeting.

2.2 Location and Time/Date of Meeting

The public scoping meeting was held on August 6, 1996, at 7:00 p.m. at the Fort McClellan Post Theater, Building 2101, Fort McClellan, Alabama. An informational flyer, comment sheet, and registration card were provided to all attendees at the public scoping meeting. A total of 30 individuals completed registration cards, with total attendance of approximately 40. Thirty-three individuals are identified in the list of attendees (Appendix A). Nine individuals provided oral statements. In addition to individuals, the following organizations/groups and agencies were represented at the meeting:

- Alabama Department of Conservation and Natural Resources
- Alabama Environmental Council
- Alabama State Forestry Commission
- Alabama State Parks
- Alabama Natural Heritage Program
- Anniston Housing Authority
- Anniston Star Newspaper
- Bob Riley for Congress Committee
- Calhoun Veterans Council
- East Alabama Regional Planning & Development Commission
- ECG, Inc.
- Fort McClellan, Public Affairs Office
- Jacksonville State University
- Johnson Controls, Inc.
- Military Order of the Purple Heart
- The Nature Conservancy
- U.S. Army Reserves Command(USARC)
- U.S. Department of Agriculture - Natural Resources Conservation Service
- U.S. Department of Housing and Urban Development
- U.S. Army Corps of Engineers
- 81st Regional Support Command - Army Reserve

2.3 Additional Comments

In addition to oral and written comments received at the public scoping meeting, 23 additional written comments were received during the 30 day comment period following the August 6, 1996 meeting.

3.0 SUMMARY

The Fort McClellan BRAC EIS process includes a number of elements designed to obtain input from review agencies, the general public and various interest groups and organizations. A thorough scoping process was conducted as part of the initial stage of this EIS. This process included correspondence with Federal and state review agencies, conducting a public scoping meeting, and accepting and compiling all written comments provided in response to the scoping initiative.

A total of 32 responses (9 oral and/or written/oral comments received at the public meeting and 23 written comments received during the 30 day comment period) were received. Several of the written comments submitted were read aloud as oral statements at the public scoping meeting. Table 1 identifies the comments received according to the issues of concern.

3.1 Public/Special Interest Group Comments

The key areas of concern to the public and special interest groups that were identified as result of the scoping process are identified below.

- **Preservation of the Disposal Area** Many comments were received expressing the need to preserve the disposal area as natural habitat. The method and extent of preservation varied in the comments. The majority of these comments wanted to preserve the area as a nature conservation area; several comments would prefer the area to be untouched, while others preferred to have it managed for multiple use recreational purposes.
- **Biological Resources** Concerns were identified regarding potential impacts to biological resources that exist within the disposal area. The majority of these comments were associated with the potential development of the area. Concerns focused on: unique habitats (mountain longleaf pine ecosystem, unfragmented forest areas, natural areas); Federally-listed threatened and endangered species; state-listed species; neotropical migratory birds; and general wildlife populations and vegetation in the area.
- **Use of the Area for Recreation** The future use of the area for recreation, specifically hunting and fishing was identified as a concern. Most of the comments did not want any development of the disposal area and wanted to have the area transferred to a state or federal agency for management as a wildlife management area or recreational area. Several

comments mentioned hunting , fishing, hiking, picnicking and other recreational pursuits as activities desired to occur in the disposal area.

- **Unexploded Ordnance** Several comments were concerned with the issue of unexploded ordnance in the disposal area. Concerns included public safety but most focused on the impacts to the highly erodible areas on the installation and the impact to the land associated with cleaning up or removing the ordnance.
- **Hazardous Wastes** Several comments mentioned the issue of hazardous wastes and materials occurring on the installation and the need to conduct remediation of any contaminated areas in a responsible manner.
- **Reuse of the Fort** The public consistently identified concerns regarding the future use of the disposal area. Most wanted the natural/forested area to remain undeveloped. Suggestions for reuse of the cantonment/developed areas of the disposal area were varied and included, environmental education center, correctional facility, automobile plant, shopping mall, and landfill.
- **Other Issues** Additional concerns included the use of the historic buildings on the installation, the status of archeological sites , economic impacts associated with the base closure, and social impacts.

3.2 Local and State Agency Comments

The areas of comment and concern to the local and state agencies identified as a result of the scoping process were as follows.

Alabama Cooperative Extension System The ACES indicated two areas of concern as they relate to the reuse of Fort McClellan. The disposal of ordnance and the location/disposition of waste disposal facilities.

Alabama Department of Conservation and Natural Resources - Alabama Natural Heritage Program The ADCNR identified six areas of concern relevant to the Fort McClellan EIS. These include the following: 1) Sensitive fauna and flora including 11 plant species (2 are former candidates for federal listing) and 3 animal species (the endangered red-cockaded woodpeckers well as 2 former candidate invertebrates - a snail and a butterfly species) are dependent upon the integrity of the local forest; 2) The mountain longleaf pine ecosystem of the Main Post represents the best remaining example of this community on a landscape scale; 3) the maintenance of the mountain longleaf pine ecosystem at the Fort requires periodic fires; 4) reuse alternatives that require the clearing of the forests and the excavation of the mountainsides would: destroy the integrity of the natural ecosystem; pose erosional hazards on the steep terrain; and increase siltation of streams and seeps which harbor sensitive wildlife; 5) The importance of contiguous forests in the areas for neotropical birds; and 6) Eleven Special

Interest Natural Areas (SINA) have been identified on the Post. The most important SINA is the 12,000-acre mountain longleaf pine ecosystem which also maintains the smaller SINA's in the area. These SINA's and the sensitive, rare, and endangered species they support should be protected.

Alabama Department of Conservation and Natural Resources - Game and Fish Division

The ADCNR - Game and Fish Division's concerns centered on the Department's interest in obtaining title to suitable undeveloped areas of Fort McClellan adjacent to the Choccolocco Wildlife Management Area for multiple uses, including hunting, hiking, birdwatching, photography, camping, and fishing. An expression of interest (request for title transfer) for specific portions of the installation was submitted to the Fort McClellan Reuse and Redevelopment Authority on January 12, 1996.

Alabama Department of Agriculture and Industries The ADAI indicated no concerns or issues at this time.

Alabama Forestry Commission The AFC provided oral and written comments. The AFC would like to acquire the 17,000 acres of available forest land to manage as a multiple use forest. The AFC has prepared a proposal detailing their management strategy. Additionally, the AFC has reiterated in a second comment sheet that issues such as threatened and endangered species, forest fragmentation, migratory birds, and the longleaf pine ecosystem were issues raised at the public meeting. The AFC indicated that endangered species, forest fragmentation and the longleaf pine ecosystem would be protected if they are given the land to manage.

Auburn University - Dr. Hill The concerns of Dr. Geoffrey Hill of Auburn University center around the need to protect the large forest tracts at Fort McClellan. In particular this protection is needed to minimize forest fragmentation and its influence on neotropical migratory birds.

Auburn University - Mr. Kush Mr. Kush emphasized the need to preserve and manage the mountain longleaf pine ecosystem that occupies large portions of the Main Post area at Fort McClellan.

Jacksonville State University JSU made an oral comment at the public meeting clarifying the address that comments should be sent to pertaining to the public scoping process.

3.3 Federal Agency Comments

The areas of comment and concern to the federal government agencies identified as a result of the scoping process were the following:

U.S. Department of Agriculture - Forest Service The Forest Service listed a variety of standard EIS issues including the following: land-use; socio-economic impacts; threatened, endangered, and sensitive species; wetlands; cultural/historical resources; air quality; water

quality; vegetative community effects and restoration; hazardous waste; visual quality; and special uses (i.e. power line right-of-ways crossing National Forest land). The Forest Service elaborated on each of these issues in its comment letter. The issue of the potential for Fort McClellan lands to include areas that were once longleaf pine community was also addressed. The Forest Service also provided a copy of "The Southern Appalachian Assessment" report as a potential resource document for the affected environment section of the EIS document

U.S. Department of Agriculture - Natural Resources Conservation Service The NRCS indicated one area of concern. The NRCS indicated that the EIS should discuss erosion control methods and that planning for the future prevention of erosion on the land should include on-site and off-site effects of erosion on the environment.

U.S. Department of Commerce - National Oceanic and Atmospheric Administration NOAA had no concerns as this action will not impact marine, estuarine, or anadromous fishery resources.

U.S. Department of the Interior - Fish and Wildlife Service The USFWS raised a variety of preliminary issues. The main subjects of concern raised included the possible impacts of disposal and reuse on endangered and rare species and unique habitats. The USFWS noted that the long leaf pine ecosystem, found on large parts of the Main Post tract of land, maybe the best remaining example of mountain longleaf pine ecosystem in the world. The quality of this system is attributed to the periodic fires(associated with military activities) in the area and the lack of development in the area. Additionally the USFWS indicated that the longleaf pine ecosystem is important to neotropical birds and other avifauna in the area. Additionally the USFWS noted concern over any development of the Main Post tract including the removal of unexploded ordnance and the impact of unexploded ordnance removal and development of the area on the local stream systems (i.e. fish and mollusc populations in particular) as well as effects to the terrestrial systems and wildlife.

U.S. Department of Transportation - Federal Highway Administration The FHWA has no comments regarding the project at this time.

U.S. Department of Transportation - Federal Railroad Administration The FRA indicated that this action falls outside the purview of the agency. Consequently the FRA has no comments pertaining to this action.

3.4 List of Commenting Individuals/Special Interest Groups/Agencies

INDIVIDUALS

Mr. Dan Craig
Mr. Bob Hewett
Mr. Joe Johnson
Mr. Tom Moore
Mr. Thomas J. Sager
Mr. Donald L. Walters
Mr. George Warren
Dr. Randy Webb

SPECIAL INTEREST GROUPS/ORGANIZATIONS

Alabama Environmental Council
B.A.S.S., Inc.
Bluebirds Over Alabama
Bob Riley for Congress Committee
Building Trades, Plumbers & Steamfitters Union
ECG, Inc.
The Longleaf Alliance
The Nature Conservancy

STATE AGENCIES

Alabama Cooperative Extension System
Alabama Department of Conservation and Natural Resources -
Alabama Natural Heritage Program
Alabama Department of Conservation and Natural Resources -
Game and Fish Division
Alabama Department of Agriculture and Industries
Alabama Forestry Commission
Auburn University
Jacksonville State University

FEDERAL AGENCIES (See Appendix B)

U.S. Department of Agriculture - Forest Service
U.S. Department of Agriculture - Natural Resources Conservation Service
U.S. Department of Commerce - National Oceanic and Atmospheric Administration
U.S. Department of the Interior - Fish and Wildlife Service
U.S. Department of Transportation - Federal Highway Administration
U.S. Department of Transportation - Federal Railroad Administration

4.0 TRANSCRIPT

The entire public scoping meeting was documented by a court recorder in the form of a meeting transcript, a copy of which has been included as Appendix C to this Scoping Report.

5.0 COMMENT PROCESSING AND USE

The public was informed during the course of the meeting that all scoping comments would be carefully considered, including any additional written comments received within 30 days of the scoping meeting. All scoping comments received were compiled into appropriate categories and will be reviewed by the EIS study team. These comments will assist the study team to focus the Fort McClellan Disposal and Reuse EIS impact analysis on issues of primary concern to the public.

A.3 DRAFT EIS REVIEW COMMENTS AND RESPONSES

A.3.1 INTRODUCTION

A.3.1.1 Public Review and Comment Period

The Notice of Availability (NOA) for the Draft EIS was published on December 19, 1997. The NOA initiated a 45-day public review and comment period which extended through February 2, 1998.

A.3.1.2 Public Hearing

A public hearing was held on January 15, 1998 at the Anniston City Meeting Center. The public meeting provided an opportunity for all interested parties to present oral and written comments on the Draft EIS. The public meeting also served as a forum for comments on the Draft Cultural Resources Programmatic Agreement (Section 106 of the National Historic Properties Act) for FMC which was included in the Draft EIS.

A.3.2 REVIEW COMMENTS AND RESPONSES

All verbal and written comments received at the Public Hearing, and all other written comments received during the 45-day comment period (December 19, 1997 through February 2, 1998) have been incorporated in this Appendix, and considered in the development of the Final EIS. This subsection of Appendix A includes:

- 1) a transcript of the public hearing, including oral comments from the public;
- 2) copies of written comments received from Federal, state and local agencies;
- 3) copies of written comments received from elected officials;
- 4) copies of written comments received from organizations and interest groups;
- 5) copies of written comments received from individual citizens; and
- 6) a response to each substantive oral or written comment.

Each issue identified has been noted with a reference number in the margin of the comment page. The reference number identifies the specific commentor and the specific substantive comment(s). Each set of comments is followed by a table of responses that are keyed to the issue reference numbers. Where appropriate, the responses indicate what portion(s) of the Final EIS have been modified or expanded to address the comment.

A.3.2.1 Transcript of Public Hearing

The transcript of the entire public hearing held on January 15, 1998 at the Anniston City Meeting Center is provided in the following pages. Several pages of the transcript have been hand edited by the Army to correct transcription errors made by the court reporter.

Oral comments were made by the following persons at the public hearing:

TR-1 Mr. Pete Conroy
Environmental Policy & Information Center, Jacksonville State University
See pages A-120 through A-122 (pages 60-62 of the public meeting transcript); and

TR-2 Mr. Rob Richardson
Fort McClellan Development Commission
See page A-123 (page 63 of the public meeting transcript).

Responses to oral comments are provided following the public hearing transcript.

1 PUBLIC MEETING

2

3 To Discuss the

4 DRAFT ENVIRONMENTAL IMPACT STATEMENT

5

6 For the

7 DISPOSAL AND REUSE OF FORT MCCLELLAN, ALABAMA

8

9

10

11 January 15, 1998

12 7:00 p.m.

13 Anniston City Meeting Center

14 1615 Noble Street

15 Anniston, Alabama

16

17

18

19

20 TAKEN BEFORE: Melissa Ratcliff

21 TRANSCRIBED BY: Michele Lee,

22 Court Reporter and

23 Notary Public

ORIGINAL

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1 MR. REDDY: May I have your
2 attention, please. According to my watch it
3 is now after 7:00 p.m., and I would like to
4 welcome you to tonight's public meeting. And
5 if you can please move up as close as
6 possible up front, that would be great. I
7 appreciate it.

8 Good evening, my name is
9 Lieutenant Colonel Tim Reddy. I am the
10 deputy district engineer for the Mobile
11 District Corps of Engineers. Our office is
12 providing support to Fort McClellan in the
13 preparation of an Environmental Impact
14 Statement, or EIS as we will refer to it
15 tonight, for the planned disposal and reuse
16 for portions of Fort McClellan. I will be
17 the moderator for tonight's meeting.

18 First of all, it's a small crowd,
19 but I'd like to thank those who came out in
20 attendance. We really do care about the
21 comments you have.

22 First of all, some admin matters.
23 There's no smoking in the auditorium; and



1 secondly, the water fountains one is outside
2 door, there's another located with the men's
3 and women's room, which you go outside this
4 door, take a left, go down the hall, and both
5 men's and women's bathrooms are located
6 midway down the next hall.

7 Now, let me introduce some of the
8 people here with me tonight. Don't worry
9 about writing them down because we have
10 identified key contacts and phone numbers in
11 the back of the brochure that was provided to
12 you as you entered the meeting. If you got
13 the four-page brochure, at the very back
14 page, it has all those points of contact as
15 well as their phone numbers.

16 First, I'd like to introduce to
17 you Colonel Michael Sudnik, who is the chief
18 of staff at Fort McClellan. Colonel Sudnik
19 will be providing some welcoming remarks in a
20 few moments.

21 Next, I would like to introduce
22 Mr. David Taylor of the US Army Training and
23 Doctrine Command, or as we call it, TRADOC.

1 TRADOC is the major command that is
2 responsible for Fort McClellan, and
3 Mr. Taylor is the chief of the Base
4 Realignment and Closure Office, or BRAC,
5 office for TRADOC. And his office is located
6 at Fort Monroe, Virginia.

7 I would also like to introduce
8 Mr. Curtis Flakes, who is from the Mobile
9 District US Army Corps of Engineers.

10 Mr. Flakes is the Corps' Project Manager for
11 the preparation of the EIS and is responsible
12 for directing our consulting team.

13 Also with us tonight is Mr. Rob
14 Richardson. There he is. He is of the Fort
15 McClellan Development Commission. His group
16 has a critically important role in
17 determining how lands that are available for
18 disposal at Fort McClellan will be reused.

19 I'd like to introduce Mr. Gary
20 Harvey, who is with the Fort McClellan BRAC
21 Base Transition Coordinating office. He is
22 the interface for the federal agencies, the
23 Fort McClellan Development Commission and



1 Community for the reuse of Fort McClellan,
2 and he's very helpful because he helps cut
3 through all the red tape and also the
4 government bureaucracy.

5 Finally, I'd like to introduce
6 Mr. Greg Knauer, representing the consulting
7 team of Harland Bartholomew and Associates
8 and Parsons Engineering Science. Mr. Knauer
9 serves as the deputy project manager for
10 their firm in preparation for the EIS. He
11 will be providing you with an overview of the
12 EIS process in a few minutes.

13 Also, there's a variety of support
14 staff that are also here tonight to assist in
15 answering any questions that you might have
16 regarding the EIS process or related issues.

17 At this time, I would like to move
18 on to the second item on the agenda by
19 turning over the floor to Colonel Sudnik to
20 provide some additional remarks.

21 MR. SUDNIK: Thank you, Colonel
22 Reddy. Good evening, ladies and gentlemen.
23 On behalf of my boss, Major General Wooten, I

1 want to welcome you, our neighbors, to the
2 public meeting dealing with the future of
3 Fort McClellan's properties.

4 The meeting tonight is very
5 important to you, the general public, and
6 surrounding communities as well as our team
7 at Fort McClellan. Tonight we will continue
8 the process used to prepare the Final
9 Environmental Impact Statement. This process
10 includes bringing together the public and
11 concerned groups as well as local, state and
12 federal agencies to learn about the proposed
13 actions, identify issues of concern, and
14 comment on the Draft Environmental Impact
15 Statement. This meeting is an important
16 means of receiving feedback from you, the
17 public. Your input will assist in refining
18 the Final Environmental Impact Statement.
19 And I thank you again for your participation
20 tonight.

21 We at Fort McClellan fully support
22 these efforts and will assist the Mobile
23 District Corps of Engineers and Parsons

1 Engineering Science in the completion of this
2 study. We will also support the Fort
3 McClellan Development Commission as it plans
4 and implements the reuse of Fort McClellan
5 surplus properties.

6 Again, welcome. And at this point
7 in time I will turn the podium to Lieutenant
8 Colonel Reddy.

9 MR. REDDY: Thank you, sir. Let's
10 move on to item three on the agenda to
11 explain how this meeting will be conducted.

12 Next slide. First of all, the
13 purpose of this public meeting -- well, the
14 Mobile District provides the engineering,
15 construction, real estate, and environmental
16 support services to Fort McClellan. We have
17 been asked by the headquarters, Training and
18 Doctrine Command, or TRADOC, to prepare an
19 Environmental Impact Statement for the
20 disposal and reuse of Fort McClellan.
21 Headquarters TRADOC is the Army's proponent
22 for the Environmental Impact Statement and
23 the major command responsible for executing

1 the closure and disposal of Fort McClellan.

2 I want to thank you for joining us
3 tonight. The primary purpose of our meeting
4 is to hear your comments on the draft of the
5 EIS that has been circulated and made
6 available for private review. Additionally,
7 we would like to hear any comments regarding
8 the draft programmatic agreement on cultural
9 resources which is included as appendix B in
10 EIS. Regarding the review of this document,
11 we would like you to know that one hundred
12 and twenty-five copies of the Draft EIS were
13 distributed to a wide range of elected
14 officials; local, state, and federal
15 agencies; and members of the general public.
16 In fact, Section 8 of the Draft EIS provides
17 a list of the organizations and persons that
18 were provided with a copy of the report.

19 The list was also based on those
20 persons and organizations that expressed an
21 interest in the proposed action as part of an
22 early scoping process including a meeting we
23 held here at Fort McClellan in August of

1 1996. In addition to the distribution of the
2 Draft EIS to those persons on the mailing
3 list, a notice of availability was published
4 in the Federal Register, and public notices
5 were included in the Anniston Star, the
6 Oxford Independent, and Jacksonville News.
7 We also sent press releases to other local
8 and regional media contacts.

9 Next slide, please. If you have
10 not had an opportunity to review a copy of
11 the Draft EIS and wish to do so, you will
12 find a copy at various locations in the area.
13 And as you can see here, they're all included
14 from the Fort McClellan Community Library,
15 the Jacksonville State University's Library,
16 the Jacksonville Public Library, of course
17 the Mobile District US Army Corps of
18 Engineers, the Calhoun County Public Library,
19 the Oxford Public Library, the US Army
20 Chemical School Library, and the Ramsey
21 Library at the US Army Military Police
22 School. Or if you would like your own copy
23 to review, you may leave your name and

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1 address with one of us tonight, and we will
2 send you a copy.

3 Next slide, please. There are a
4 number of key players that must work together
5 to prepare a successful EIS for the disposal
6 and reuse of Fort McClellan. Fort McClellan
7 itself and the support staff that works at
8 the installation on a daily basis have served
9 as the focal point for many aspects of the
10 study.

11 Next slide, please. The US Army
12 Training and Doctrine Command is the
13 proponent for the EIS and is responsible for
14 submittal of the EIS to the Department of the
15 Army for signature. As mentioned before, the
16 Mobile District is responsible for directing
17 the contract to prepare the EIS. Other key
18 players include the Fort McClellan
19 Development Commission and its predecessor,
20 the Fort McClellan Reuse and Redevelopment
21 Authority, federal and state regulatory
22 agencies, and the general public.

23 Next slide, please. Now, I'd like

1 to spend a few minutes to explain how our
2 meeting will be conducted tonight. First,
3 let me tell you that this entire meeting is
4 being recorded, and a transcript will be
5 prepared and become part of the official
6 record for the EIS. As you entered, you were
7 asked to fill out an attendance card. We do
8 this for two reasons: First, so that we have
9 a record of those in attendance so that we
10 can keep you informed about the progress of
11 the Environmental Impact Statement; and
12 second, the registration card helps us
13 identify those of you who wish to make a
14 statement at this meeting. If you did not
15 fill out an attendance card at the door, you
16 may raise your hand at this time, and one of
17 our staff will provide you with one.

18 I would like to highlight the key
19 role that the Fort McClellan Development
20 Commission plays. The Fort McClellan
21 Development Commission is responsible for the
22 development of the reuse plan for the Fort
23 McClellan excess properties. I'm sure you're

1 well aware of their work and the recent
2 completion of their final reuse plan. If you
3 desire more information on the reuse plan,
4 you should contact that commission itself.

5 Next slide. Before we open the
6 floor to receive your comments, we are going
7 to provide you with an overview of the EIS
8 process. This overview will take about
9 thirty minutes. We also hope that you picked
10 up copies of the printed summary information
11 that were available at the registration desk
12 since it will also help to explain how the
13 EIS has been prepared. If you did not get a
14 copy of this information, you can pick it up
15 on your way out of the meeting tonight.

16 Next slide, please. We'd also
17 like to call your attention to the standard
18 comment sheets that are available at the
19 meeting's registration area. We encourage
20 you to comment on matters concerning the
21 Draft EIS that you would like the study team
22 to address in refining the Final EIS. Your
23 completed comment sheets may be left in the

1 collection boxes available at this meeting.
2 You may also mail completed comment sheets
3 along with any other written materials that
4 you would like to enter into the public
5 meeting record to the address shown on the
6 sheet. Please be aware that all additional
7 comments should be submitted before the close
8 of the comment period on February 2nd, 1998,
9 which is forty-five calendar days from the
10 date the notice of availability was published
11 in the Federal Register, and that date was
12 December 19th, 1997.

13 Next slide. For those of you who
14 would like to make a statement for the record
15 tonight, we will open the floor for your
16 comments at the end of our presentation.
17 When you speak, please use the portable
18 microphone that one of our staff will bring
19 to you so that your comments can be heard by
20 the rest of the audience and recorded for
21 inclusion in the official record. You may
22 also send any comments on the draft
23 programmatic agreement on cultural resources

1 to the address on the comment sheet.

2 Next slide. All public comments
3 will be documented as part of the EIS
4 process. This documentation will include all
5 written comments provided prior to this
6 meeting, written comments provided at this
7 meeting, oral comments provided at this
8 meeting, and all additional written comments
9 received before the close of the comment
10 period on February 2nd, 1998. The EIS study
11 team will use these comments to ensure that
12 the EIS addresses issues that are of the
13 greatest interest and concern to the public.

14 Next slide. At this time, I'm
15 going to turn the microphone over to
16 Mr. David Taylor who will provide an overview
17 of the draft process.

18 MR. TAYLOR: Thank you, Colonel
19 Reddy. I am the chief of Base Realignment
20 and Closure, TRADOC. As was mentioned
21 earlier, Training and Doctrine Command ^{at} ~~in~~
22 Fort Monroe, Virginia is responsible for the
23 execution of the ^{Commission} ~~commission~~ recommendations,

1 which are now statute for Fort McClellan. We
2 were tasked ~~to do this~~ by the Department of
3 the Army for the implementation. One of the
4 key items that's involved is in fact what
5 we're doing tonight on that. My office is
6 also responsible to ensure compliance with
7 the Natural Historic Preservation Act,
8 Section 106. And that's the reason we are
9 also asking for any public comments upon that
10 document that's in Appendix B of the Draft
11 EIS.

12 Next chart, please. As most of
13 you are aware, our nation has been ~~reduced~~ ^{reducing} in
14 the size of our military forces now for
15 several years ⁽¹⁾ and that this was in response
16 to the changing military situation, security
17 requirements that came about as a result of
18 winning the Cold War ⁽¹⁾ and the breakup of the
19 Soviet Union. This reduction in the Army's
20 forces has resulted in many installations
21 across the nation being closed and some
22 missions being realigned with other
23 installations in order to ^{improve} ~~approve~~ the

1 operation efficiency of the Army and the
2 Military forces and also to meet budget
3 reductions that have been ongoing.

4 Next chart, please. The Base
5 Realignment and Closure process that was used
6 to identify installations to be closed and
7 those to gain new missions was established by
8 the Defense Base Closure and Realignment Act
9 of 1990. It's the second such act, ~~public~~ *PUBLIC LAW*
10 101-510. Based upon the authority provided
11 by that statute, it was determined by a
12 realignment ~~commission~~ *COMMISSION* that Fort McClellan
13 would be closed and surplus property would
14 become available for disposal and reuse by
15 the local community.

16 *COMMISSION* Those recommendations of the
17 ~~commission~~ were accepted by the president,
18 forwarded to Congress, and Congress had ~~sixty~~ *45*
19 legislative days in which to act upon them --
20 actually, to ~~approve~~ *disapprove* them. They did not do
21 so. So as a result, they have ~~in fact~~ *in fact* become
22 a requirement for the ~~secretary~~ *SECRETARY* of ~~defense~~ *DEFENSE* to
23 execute.



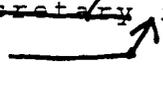
1 Next chart, please. This is the
2 Commission ~~of Recommendation~~ ^{recommendation}. I'm sure many
3 of you are familiar with it. The action
4 we're discussing tonight focuses on the first
5 bullet, the closure of Fort McClellan.
6 Actually, it really focuses on the actions
7 resulting from the closure of Fort McClellan,
8 and that is the disposal and reuse of the
9 property. The actual closure of Fort
10 McClellan is not subject to NEPA analysis.
11 It was exempted by the ~~public law~~ ^{Public Law} 101-510
12 that established the commission. Those
13 decisions in the act ~~to the president~~ ^{of President} were
14 exempt from that detailed requirement.

15 The next chart, please. Just for
16 your information background, this reflects
17 where the active proponent missions were
18 realigned to. I can tell you that the
19 actions required to accomplish this ~~and to~~ ^{at the}
20 ~~gain~~ ^{gaining} locations is being accomplished. NEPA
21 documentation has been completed on all the
22 ~~remaining~~ ^{gaining} locations, and where military
23 construction is required, that is ongoing.

1 Basically the Army's plan to accomplish the
2 closure of Fort McClellan in September of
3 1999 is on schedule. And at this point, we
4 do not foresee anything that would preclude
5 that from occurring.

6 Next chart, please. This is a
7 chart that lays out or gives you, if you
8 will, an overview of the actions that come
9 together in the execution of a BRAC action.
10 The first bullet, which is the realign
11 ~~drawn-out~~ ^{draw-down} process ^{to} ought to be very candid
12 for you having done this for many years now ^{to do}
13 ~~in~~ ⁱⁿ many respects, that's the easiest ~~dot~~.

14 The military is good at moving people. We
15 send them off to war ^{and} operations, that kind of
16 thing. It takes ^{on track} planning, and we are good at
17 it, and that's ~~(incredible)~~.

18 The second bullet, the one that's
19 highlighted ^{is} about the one we are
20 addressing tonight. It results -- this
21 action results in a ~~record decision~~ ^{Record of Decision}. The key
22 action that is required, the ~~record decision~~ ^{Record of Decision}
23 will be signed by the ~~assistant secretary~~ ^{Assistant Secretary} in
^{of the Army} 

1 Washington. ^{That's} ~~But that's~~ required before the
2 Army can dispose of property and before true
3 reuse can begin.

4 The other three major categories
5 there, environmental cleanup, property
6 transfer and disposal, reuse planning and
7 draft process, I'm not going to touch upon
8 very much tonight at all. You know who does
9 reuse planning. That's the Fort McClellan
10 Development Commission. Environmental
11 cleanup has ~~some~~ processes of its own that
12 are open to the public. Property Transfer
13 and Disposal is also driven by other federal
14 statutes. In fact, most of these actions are
15 controlled by federal statutes ~~and~~.

16 Next chart. I do want to touch
17 upon a couple of environmental laws; the
18 first one ^{is why} ~~while~~ we're here, the second one we
19 can touch on a little bit more because we are
20 also asking for public comments, if any, on
21 the ~~programmatic agreement~~ ^{Programmatic Agreement} that is proposed
22 to be completed with the ~~state historic~~ ^{state Historic}
23 ~~preservation officer~~ ^{preservation officer}, Mr. Larry ~~Oates~~ ^{Oaks}, as



1 well as the ^{Advisory} Council ^{on} of Historic Preservation
2 in Washington, D.C.

3 The other acts that you see there
4 we must also comply with, ^{to} meet the
5 requirements ^{for} of transfer of property. And
6 there is many more. That's just some of the
7 more important ones on the environmental
8 part.

9 Next chart, please. I would like
10 to take just a few minutes -- couple of
11 minutes, because I do want to get ^{Comments on} ~~(inaudible)~~
12 the Section 106 requirements. Transfer of
13 historical ^{and} cultural resources outside the
14 federal control is considered ^{an} adverse action
15 under that statute. As a result of that, we
16 enter into consultations with the ^{state} ~~state~~
17 ~~Historic Preservation officer~~ ^{Historic Preservation officer}, and eventually
18 we wind up with the ^{Advisory} ~~(inaudible)~~ Council ^{on} ~~of~~
19 Historic Preservation. We also encourage
20 others who have an interest in ^{this} ~~that~~ to be a
21 coordinating party. In this case, the Fort
22 McClellan Development Commission has come
23 forward and said ^{this} ~~to~~ want to be a consulting



1 party. I am glad they did that. It is
2 important because they are equally involved
3 in the reuse of those properties, these
4 historical properties. And their plan needs
5 to accommodate that, and it does. Okay. *The consultation's*
6 will result in a ~~programmatic agreement~~ *Programmatic Agreement* that
7 basically lays out and encompasses the
8 restrictions to a property owner, future
9 property owner of those properties and what
10 they must do on ~~that~~ and some
11 responsibilities for the ~~state~~ *SHPO*.

12 Next chart, please. But
13 basically, it will allow us to dispose of the
14 properties. The Section 106 process
15 relationships, we need to complete that
16 process before we can transfer a historical
17 or cultural resource ^{or} archaeological site. If
18 we have not gotten through the ~~programmatic~~ *Programmatic*
19 ~~agreement~~ *Agreement* -- and I fully expect that we will.
20 There are no indications we will not. I
21 expect to have the ~~final programmatic~~ *Final Programmatic*
22 ~~agreement~~ *Agreement* signed in the Final EIS. But if
23 for some reason we are not able to actually

1 have the signed document, the Army will
2 commit to complete it, and if necessary,
3 we'll do individual consultations on each
4 individual historic property when the time
5 comes to transfer. I doubt that that will
6 occur.

7 Okay. Next chart, please. Again,
8 back to -- just keep in mind that there are
9 many processes that are involved and that
10 they're all driven by federal statute, our
11 ~~common sense~~ ^{commitment} for the disposal of property,
12 environment cleanup; for instance, many great
13 opportunities for the public to participate.
14 Mr. Knauer will mention some of those later.
15 I will say that before any property is
16 transferred, there is a ~~final~~ ^{finding of suitability to} ~~(inaudible)~~
17 ~~transfer~~ ^{transfer} that involves regulatory review as
18 well as a public review and comment on it.
19 And of course, the property transfer and
20 disposal is controlled by federal statutes
21 ~~there.~~

22 Last chart, please, for me. What
23 I will say is that the Army is committed to



President's Five-Part Plan

1 the ~~president's~~ ~~five part~~ plan that he
2 announced in 1993 for the economic recovery *of the community.*

3 We support the Fort McClellan Development
4 Commission in their efforts, and we will try
5 to dispose of the property in accordance with
6 ~~that~~ *than* plan unless there is some federal
7 statutory requirement *regulations on* some decision much
8 higher than me that restricts that. So far,
9 I have not really seen that come into play.
10 We seem to have always been able to work out
11 the restraints, if you will, on it and arrive
12 at it during the ~~first~~ proposal.

13 We also ~~of~~ *o* course *o* want to support
14 the Fort McClellan personnel, particularly
15 our civilians there. Their lives are being
16 disrupted also. And we do try to resolve
17 issues as quickly as possible. Sometimes
18 they are very difficult and take a while to
19 work through. We at least want to identify
20 those that may *impede* ~~give impediment~~ to the
21 completion of the actions ~~in accomplishing~~
22 ~~the actions~~ that are needed to dispose of the
23 property so the community can in fact achieve



1 reuse of the property and get into economic
2 recovery.

3 I would now like to turn the
4 microphone back over to -- actually, turn it
5 over to Mr. Knauer who will provide an
6 overview of the EIS process. And then we'll
7 open it up to public comments.

8 MR. KNAUER: Thank you,
9 Mr. Taylor. Good evening. My goal tonight
10 is to help you gain a better understanding of
11 the actions that are evaluated in the Fort
12 McClellan Disposal and Reuse EIS and how the
13 document is structured. In addition, I would
14 also like to mention up front that we are not
15 here to discuss the closure of Fort McClellan
16 since that decision has been made and is
17 required by law. The Draft Environmental
18 Impact Statement, the Draft EIS, that we are
19 here to discuss tonight is a comprehensive
20 document, and I'm sure that some of you have
21 not had an opportunity to review it in
22 detail. Therefore, I will provide you with
23 an overview of the format, contents, and

1 major conclusions presented in the Draft EIS.

2 My presentation will start with an
3 overview of the pertinent regulations guiding
4 the preparation of the EIS. I'll then
5 mention some of the key issues that were
6 addressed by the EIS and describe the major
7 sections included in the document. Finally,
8 I'll discuss some of the ways that we intend
9 to continue to keep the public and key review
10 agencies informed about the EIS process and
11 show you a general schedule for completion of
12 the study.

13 The Draft EIS was prepared in
14 compliance with the National Environmental
15 Policy Act of 1969, generally referred to as
16 NEPA. This act established broad policies
17 for the environmental analysis of potentially
18 significant federal actions and established
19 the Council on Environmental Quality. The
20 council's regulations implement the National
21 Environmental Protection Act and provide
22 policy guidance to federal agencies.

23 The CEQ regulations specified that

1 each federal agency must also prepare
2 additional regulations to identify procedures
3 that will be applied to meet the intent of
4 NEPA. In the case of the US Army, this
5 requirement is fulfilled by Army Regulation
6 200-2, which is titled Environmental Effects
7 of Army Actions.

8 The EIS that we are here to
9 discuss tonight focuses on two major elements
10 including the Army's primary action of
11 disposing of approximately seventeen thousand
12 three hundred acres of property that are
13 excess to their needs and the related but
14 secondary action of reuse of this excess
15 property by other non-Army entities.

16 In order to understand the scope
17 of the EIS we are here to discuss tonight, it
18 is important to note items that were not
19 evaluated in the document.

20 This EIS does not evaluate the
21 impacts of relocating the Chemical School and
22 Military Police School to Fort Leonard Wood
23 or the move of the Defense Polygraph

1 Institute to Fort Jackson, South Carolina.
2 The impacts of these actions were analyzed in
3 separate NEPA documents for each gaining
4 location.

5 Let me emphasize again that the
6 EIS did not evaluate the merits of or
7 alternatives to closing the installation.
8 The decision to close Fort McClellan Garrison
9 is mandated by the Base Closure and
10 Realignment Act, and this decision is
11 excluded from the requirement for NEPA
12 analysis in accordance with the provisions of
13 the act.

14 Furthermore, this EIS did not
15 evaluate the planned retention and operation
16 of the National Guard Enclave within the
17 current installation boundaries because this
18 property is not being disposed of and the
19 Army does not anticipate any major change in
20 the mission performed on these lands.
21 Rather, the EIS focuses on the disposal of
22 property available for reuse and the
23 community's reuse plans for this property.



1 The scoping process was designed
2 to solicit public comments on issues or
3 concerns to be addressed early in the EIS
4 process. Public comments were solicited
5 through mailings, media advertisements, and
6 both agency and public scoping meetings. A
7 total of thirty-two responses were received.

8 Many comments were received
9 expressing a desire to preserve the disposal
10 area as natural habitat. The method and
11 extent of preservation varied in the
12 comments. The majority of these comments
13 stressed designation of the area for nature
14 conservation. Several respondents would
15 prefer the area to be untouched while others
16 preferred to have it managed for multiple use
17 recreational purposes. Specific issues
18 addressed were:

19 Mountain Longleaf Pine Ecosystem.
20 Most concerns focused on the Mountain
21 Longleaf Pine ecosystem, unique habitats,
22 unfragmented forest areas, and natural areas.
23 Biological Resources. The

1 concerns were identified regarding potential
2 impact to biological resources that exist
3 within the disposal area. These include
4 federally-listed threatened and endangered
5 species, state-listed species, neotropical
6 migratory birds, general wildlife population,
7 and special interest natural areas and
8 vegetation in the area.

9 Use of the area for recreation.
10 The future use of the area for recreation,
11 specifically hunting and fishing, was
12 identified as a concern. Some respondents
13 did not want any development of the disposal
14 area and wanted to have the area transferred
15 to a state or federal agency for management
16 as a wildlife management area or recreational
17 area. Several comments mention hunting,
18 fishing, hiking, picnicking, and other
19 recreational pursuits as activities that
20 should occur in the disposal area.

21 Several comments were provided
22 regarding the potential of unexploded
23 ordnance in the disposal area. Concerns



1 included public safety, but most focused on
2 the potential for environmental impacts and
3 ecological damage that could result from the
4 removal particularly in the forested and
5 mountainous areas.

6 Several comments also mention the
7 issue of hazardous wastes and materials
8 occurring on the installation and the need to
9 conduct remediation of any contaminated areas
10 in a responsible manner.

11 Reuse of the installation: The
12 public identified concerns regarding the
13 future use of the disposal area. As stated
14 above, most scoping respondents wanted the
15 natural/forested areas to remain undeveloped.
16 Suggestions for reuse of the cantonment
17 developed portions of the disposal areas were
18 varied. Specific suggestions included an
19 environmental education center, correctional
20 facility, automobile plant, shopping mall,
21 and a landfill.

22 We provided the comments received
23 on reuse of the Fort McClellan Reuse and



1 Redevelopment Authority for their
2 consideration in developing the community's
3 reuse plan.

4 Additional concerns included the
5 use of the historic buildings on the
6 installation and the status of archaeological
7 sites and the social and economic impacts
8 associated with the closure of Fort
9 McClellan.

10 Primary sections of the EIS
11 generally included five primary areas. The
12 information in Section 1 has already been
13 discussed in general terms. And the rest of
14 my presentation will focus on Sections 2, 3,
15 4, and 5. Section 2 defines the proposed
16 action. Section 3 identifies alternatives to
17 accomplish the action which are analyzed in
18 Section 5. Section 4 describes the existing
19 environment that may be affected by the
20 action and is the environmental baseline used
21 for Section 5 analysis. Section 5 provides
22 the environmental consequences or impacts
23 that are expected to occur as result of the

1 action, in this case, disposal and reuse, and
2 measures that may be taken by the Army or
3 those entities that implement reuse plans to
4 mitigate any significant negative
5 environmental impact.

6 Let's take a closer look at these
7 four sections as they are presented in Draft
8 EIS.

9 The proposed action is defined as
10 the disposal and reuse of those portions of
11 Fort McClellan that will become available as
12 a result of implementing the mandated closure
13 of the installation. The EIS describes the
14 process that will be used by the Army to
15 prepare the property for disposal and how the
16 property will be made available for reuse.

17 Those of you who are familiar with
18 Fort McClellan know that the installation is
19 divided into three distinct areas including:
20 The Main Post, which includes approximately
21 nineteen thousand acres shown as yellow in
22 this slide; Choccolocco Corridor, which
23 includes about forty-five hundred acres of

1 land shown in the green color; and the Pelham
2 Range, which includes approximately
3 twenty-five thousand acres as shown in gray.
4 Together these areas provide approximately
5 forty-five thousand acres of land area.

6 The Army has conducted studies to
7 determine the final boundaries of the
8 property to be retained for use by the Army
9 National Guard and Reserve units. These
10 efforts were coordinated with the Fort
11 McClellan Reuse and Redevelopment Authority.
12 The surplus property area or the area to be
13 available for reuse is approximately
14 seventeen thousand three hundred acres. All
15 of the surplus property is located within the
16 Main Post area, which is shown in the yellow.

17 The entire Pelham Range area will
18 continue to be used as part of the National
19 Guard Enclave.

20 The Choccolocco Corridor, which is
21 the area shown in green, is state forest
22 property which is used by the Army for
23 training under a lease agreement with the

1 state of Alabama. The lease agreement for
2 this area expires in 1999 but may be
3 terminated earlier. Control of this property
4 will revert to the state upon the end of the
5 lease, upon lease termination. This corridor
6 is a significant natural resource since it
7 maintains a forested link between the
8 Talladega National Forest lands and Fort
9 McClellan woodland areas.

10 A major element of the EIS process
11 involves the identification of alternatives
12 that could be used to implement the proposed
13 action of property disposal and reuse. These
14 alternatives become the basis for the
15 evaluation of impacts that are expected to
16 occur under each alternative. The results of
17 the process can then be reviewed by the
18 public and used by the Army to make informed
19 decisions regarding how to proceed with
20 disposal. The analysis provides information
21 to the community of the impacts of various
22 plans for the reuse of the excess property.
23 It should be noted that the Army does not

1 have a preferred reuse alternative. Reuse
2 planning is the responsibility of the local
3 community. In general, the Army supports the
4 reuse plan developed and adopted by the local
5 community.

6 Alternatives for the EIS were
7 developed for each of the two major elements
8 of the planned BRAC action. The first
9 element of the action, property disposal, was
10 identified as the primary action to be
11 implemented by the Army. The alternatives
12 for property disposal are structured to
13 assist the Army in deciding whether to
14 dispose of the property with or without
15 certain restrictions or encumbrances as they
16 are referenced in the EIS.

17 Typical encumbrances may include
18 Army property cleanup activities and related
19 easement requirements, jurisdictional wetland
20 sites, regulatory flood plains, historic
21 properties, and other resources that are
22 protected by the law. The unencumbered
23 disposal alternative will identify and

1 evaluate the potential to remove or reduce
2 these encumbrances so that the property can
3 be disposed of with fewer or no restrictions
4 to future use.

5 In addition, to Army must consider
6 a no-action alternative. Given the legal
7 requirement to close Fort McClellan, the
8 no-action alternative is structured to
9 consider the impacts associated with closing
10 the installation and maintaining all excess
11 lands in a caretaker status. Under caretaker
12 conditions, the installation would be closed
13 and active Army missions would be relocated
14 to other locations.

15 The excess properties would then
16 be maintained by the government at a minimum
17 care level and a small number of support
18 staff. Subsection 3.2 of the Draft EIS
19 provides more information on the specific
20 provisions of the no-action alternative.

21 The excess property study areas at
22 Fort McClellan includes natural or man-made
23 features that represent constraints or

1 encumbrances to reuse of the property. For
2 example, Fort McClellan includes regulatory
3 flood plains and wetlands that constrain the
4 type and intensity of use that could occur in
5 disposal areas. The encumbered disposal
6 alternative was formulated to consider the
7 effects of the Army imposing certain reuse
8 encumbrances or restrictions as a condition
9 of disposal and reuse. These encumbrances
10 would be added as conditions of property
11 disposal by the Army to: Protect future Army
12 operating requirements such as the need for
13 access to certain land areas to monitor
14 environmental cleanup activities; make the
15 property available for reuse as soon as
16 possible imposing land use restrictions or
17 other restrictions on future owners through
18 the use of the deed restrictions or
19 covenants. Many restrictions are the result
20 of federal statutes and regulations such as
21 the protection of wetlands, historical
22 properties, archaeological sites, and
23 endangered species. Others may deal with



1 land use restrictions and controls for the
2 protection of the environment such as
3 maintaining environmental remediation
4 measures or restrictions on digging due to
5 depth of UXO, unexploded ordnance, removal.

6 The unencumbered disposal
7 alternative identifies and evaluates the
8 potential to remove these encumbrances so
9 that the property can be disposed of with
10 fewer or no Army-imposed restrictions to
11 future use. For example, if the future use
12 of an area is constrained by the presence of
13 sensitive or cultural resources, the
14 unencumbered disposal alternative considers
15 the potential to remove these development
16 constraints consistent with applicable laws
17 and regulations. In the case of an existing
18 wetland area, this alternative would consider
19 the merits of completing formal delineation
20 of the wetlands and preparing and
21 implementing an approved plan to mitigate
22 impacts of these wetlands, thereby making
23 these lands more readily available for

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1 development.

2 Three reuse alternatives shown
3 here, which are based upon the Fort McClellan
4 Development Commission plan, are discussed
5 and evaluated. These reuse alternatives
6 represent the full range of reasonably
7 foreseeable redevelopment alternatives. The
8 reuse alternative most closely reflecting the
9 FMDC plan is the medium high intensity reuse.
10 The two other reuse alternatives, medium
11 intensity reuse and medium low intensity
12 reuse have also been developed from the FMDC
13 plan. These alternatives maintain the reuse
14 concepts of the FMDC plan but include
15 different reuse intensities which are broad
16 enough to encompass the community's reuse
17 plan.

18 To assist in the evaluation of
19 impacts associated with the reuse
20 alternatives, the Fort McClellan disposal
21 area was divided into two areas. Area one is
22 focused on the FMDC reuse plan for
23 redevelopment and job creation. This area

1 includes the main cantonment area and
2 adjoining developed areas that have
3 relatively few environmental restrictions and
4 high reuse potential. This area also
5 includes the Reserve Component Enclave.

6 Area two is designated as a
7 passive recreation area in the FMDC reuse
8 plan. This area is primarily the Choccolocco
9 Mountains area east and south of the main
10 garrison. This area is currently used
11 primarily for field training and for weapons
12 firing ranges. For EIS impact evaluation
13 purposes, several passive reuse alternatives
14 were developed for this area that include a
15 wide range of reuse options.

16 We understand that the Fort
17 McClellan Development Commission's final
18 reuse plan considers incorporating the
19 establishment of a national wildlife refuge
20 managed by the Fish and Wildlife Services
21 within area two. The reuse of this area as a
22 wildlife refuge is compatible with the reuse
23 alternatives evaluated in the Draft EIS.

1 It is important to note that reuse
2 is evaluated as a secondary action in that
3 reuse will ultimately be implemented by other
4 or non-Army entities. The Army has used the
5 local reuse plan prepared by the Fort
6 McClellan Reuse and Redevelopment Authority
7 that was available in June 1997 as the
8 primary basis for the impact analysis. Since
9 then, the final reuse plan has been developed
10 and adopted by the community. Our initial
11 review of the adopted reuse plan is that
12 there are little, if any, changes in land
13 use. As part of the preparation of the Final
14 EIS, we will make a detailed comparison and
15 update the Draft EIS accordingly.

16 In order to evaluate the potential
17 impacts of the proposed action, it was
18 important for the EIS team to understand the
19 current environment at the installation.
20 Therefore, the next major section of the EIS
21 includes a description of existing
22 conditions. This description of existing
23 conditions addresses all aspects of the

1 environment including land use patterns, air
2 quality, noise conditions, water resources,
3 geological features, biological resources,
4 and cultural resources.

5 The document also defines all
6 existing permits and regulatory
7 authorizations, sociological resources,
8 economic development, and issues relating to
9 the quality of life.

10 Finally, the EIS describes Fort
11 McClellan's existing utility and roadway
12 systems and prior use of hazardous toxic
13 materials and ordnance. All of these issues
14 are addressed in the EIS. However, we know
15 that the public is particularly concerned
16 about what steps the Army will take to
17 restore or clean up any properties that have
18 been contaminated by prior Army actions. I
19 would like to spend a few moments commenting
20 on this.

21 There are a number of federal and
22 state statutes and regulations that direct
23 these efforts. Mr. Taylor mentioned several

1 in his remarks. There are a number of
2 separate studies that will be completed to
3 fully define all sources of environmental
4 contamination at Fort McClellan and to
5 determine how the Army will proceed with the
6 restoration of these sites. Mr. Ron Levy of
7 the Fort McClellan Directorate of Environment
8 is the installation point of contact for
9 these efforts and is available to answer any
10 questions you may have tonight or as the
11 cleanup process continues.

12 You should also be aware of the
13 entities that have oversight and community
14 advisory roles in the cleanup effort. These
15 entities include the BRAC Cleanup Team,
16 consisting of members from the U.S.
17 Environmental Protection Agency and the
18 Alabama Department of Environmental
19 Management. Tonight it is represented by
20 Mr. Chris Johnson, who is here in the back.

21 In addition, the Restoration
22 Advisory Board and the Fort McClellan
23 Development Commission will provide advice

1 and recommendations to the base cleanup team
2 regarding cleanup priorities and issues. The
3 EIS documents the role of each of these
4 groups and the process that the Army will use
5 to make decisions regarding the restoration
6 actions. The findings of these separate
7 studies are summarized in the EIS to the
8 extent that they are available within the
9 time frame allowed for the completion of the
10 EIS.

11 The last major section of the EIS
12 analyzes and describes the environmental
13 consequences or impacts that could occur as a
14 result of implementing each the disposal and
15 reuse alternative. This analysis identifies
16 both beneficial and adverse impacts and
17 considers the full range of environmental
18 resources that may be affected.

19 Our analysis of potential impacts
20 was based on a number of factors. First, as
21 noted before, the baseline for describing the
22 affected environment and for comparing
23 impacts associated with the disposal and



1 reuse alternatives was based on operating
2 conditions at Fort McClellan at the time the
3 decision to close the installation was made
4 in 1995. Second, we considered the direct,
5 indirect, and cumulative impacts of both the
6 Army's primary action of disposal and the
7 community's reuse plan.

8 This process provides the Army
9 with information required to meet its
10 responsibilities under NEPA and to make an
11 informed decision regarding the ultimate
12 disposal of the property. The EIS should
13 also be useful to the community and local
14 officials in protecting human health and the
15 environment as they implement their reuse
16 plan. We have provided results of our study
17 efforts and supporting documentation
18 throughout our study process to the Fort
19 McClellan Reuse and Redevelopment Authority
20 staff to assist them in making informed
21 choices in the development of their reuse
22 plan for the community's consideration.

23 If you recall my comments on the

1 structure of the alternatives for the Army's
2 primary actions of disposing of excess
3 property, you remember that the EIS evaluated
4 three disposal options including the
5 no-action encumbered disposal and
6 unencumbered disposal alternatives.

7 The no-action, or caretaker,
8 status has either no impact or minor impact
9 on most resource areas. In general, the
10 longer the period of caretaker status, the
11 greater the impacts will be. This is
12 particularly true for the Mountain Longleaf
13 Pine ecosystem, which could be adversely
14 affected under a long-term caretaker period
15 if an effective prescribed burn management
16 program is not initiated. Significant
17 adverse impacts on the local economy would
18 occur since caretaker status will not
19 facilitate economic redevelopment of Fort
20 McClellan excess lands.

21 Disposal alternatives include
22 encumbered and unencumbered disposal.
23 Unencumbered disposal is not selected based

1 on the anticipated adverse environmental
2 impacts to biological resources, soil, water,
3 and other resources at Fort McClellan.
4 Unencumbered disposal eliminates the
5 protection afforded natural resources and
6 requires extensive unexploded ordnance and
7 hazardous waste cleanup levels prior to
8 disposal which would have adverse ecological
9 impacts. UXO clearance and removal
10 activities required for unencumbered disposal
11 are expected to have significant adverse
12 impacts on soils, water, and biological
13 resources.

14 Additionally, removal of all UXO
15 may not be feasible from a technical
16 standpoint, and the costs of certain removal
17 options may be prohibitive. UXOs which
18 cannot be removed without significant
19 ecological damage may result in certain
20 parcels remaining under federal ownership.
21 This will be confirmed during the ordnance
22 and explosive studies mentioned earlier.
23 These studies will provide opportunities for

1 public participation.

2 This action under encumbered
3 disposal results in actions that are timely,
4 support the Army requirements, and are
5 compatible with the FMDC reuse plan.

6 Therefore, the encumbered disposal
7 alternative is the preferred Army action.

8 The environmental consequences of
9 implementing each of the three reuse
10 alternatives are discussed and evaluated.
11 The magnitude of impacts vary with reuse
12 intensity. Impacts to all resource
13 categories under each reuse alternative are
14 presented in Subsection 5.4 of the Draft EIS.
15 Significant impacts are discussed for the
16 following resource categories:

17 Beneficial impacts. Economic
18 short- and long-term significant beneficial
19 impact would occur under all these
20 alternative. This will be facilitated by the
21 rapid turnover in property by the Army.

22 Adverse impacts include air
23 quality and infrastructure. These impacts

1 are the result of the reuse of the property
2 for the creation of jobs which significantly
3 adds to vehicle trips. The community's reuse
4 plan includes proposed improvements on the
5 highway and road system of Fort McClellan and
6 the surrounding community that will mitigate
7 the transportation impacts. Compliance with
8 the National Ambient Air Quality Standards
9 and the air permit process established by the
10 Clean Air Act and the Alabama Department of
11 Environmental Management should prevent a
12 significant adverse impact from occurring.

13 The minor adverse impacts of reuse
14 alternative will include the following
15 resources: Land use, noise, water resources,
16 geology, infrastructure, unexploded ordnance,
17 biological resources, sociological, and
18 quality of life.

19 Before discussing the potential
20 actions or mitigations to minimize
21 environmental impacts, two special topics
22 should be addressed. These are the
23 biological resources and the National Center



1 for Domestic Preparedness.

2 Reuse alternatives, biological
3 resource impacts. In general terms, impacts
4 associated with reuse within the FMDC
5 redevelopment area, area one, will be similar
6 among the three reuse alternatives since much
7 of the area is already developed, since it
8 contains the current FMC cantonment area.

9 And the general type of land use is the same
10 under each reuse alternative with differences
11 associated with the intensity of use.

12 Consequently, the reuse impacts to
13 the biological resources in this portion of
14 Fort McClellan will be similar among the
15 reuse alternatives. Impacts to biological
16 resources within the FMDC passive recreation
17 area, area two, vary among the three reuse
18 alternatives since the type and extent of the
19 management activities and public access are
20 different under each alternative.

21 For the Mountain Longleaf Pine,
22 impacts to vegetation, specifically the
23 Mountain Longleaf Pine ecosystem, would occur

1 due to loss of forest habitat, including
2 unfragmented, fragmented, and interior forest
3 habitats. Overall, forest habitat loss will
4 be highest in the medium high intensity reuse
5 alternative and lowest in the medium low
6 intensity reuse alternative. However, under
7 the MLIR alternative, significant adverse
8 impacts to the Mountain Longleaf Pine
9 ecosystem would occur since forestry
10 management practices cannot include the
11 continuation of prescribed burns. Without
12 range fires or a prescribed burn program,
13 long-term significant adverse impacts to the
14 Mountain Longleaf Pine ecosystem are expected
15 to occur at Fort McClellan.

16 The U.S. Fish and Wildlife Service
17 is working with the FMDC and is considering
18 the potential to establish an ecosystem
19 refuge or similar natural area and may
20 present a proposal to obtain or manage lands
21 included in area two. If this proposal is
22 formally made to the Army prior to completing
23 the preparation of the Final EIS, the

1 proposal will be included and evaluated in
2 that document. Such a proposal is expected
3 to be consistent with the medium high and
4 medium intensity reuse alternatives for area
5 two detailed in the Draft EIS. Fish and
6 Wildlife Service plans to conduct a more
7 detailed analysis of their proposal and
8 management plans. Their representative is
9 here from Fish and Wildlife Services from the
10 Alabama regional office, Bill Garland
11 (phonetic).

12 The Fort McClellan Development
13 Commission has stated that their final reuse
14 plan will also include the establishment of a
15 National Center for Domestic Preparedness for
16 training first responders to domestic
17 terrorist acts. The focus of the training
18 would be to prepare relevant state and local
19 officials to deal with chemical, biological,
20 or nuclear terrorist acts, to handle
21 incidents dealing with hazardous materials.
22 However, the details of the plan were not
23 available in the reuse plan used for

1 preparation of the Draft EIS.

2 The Department of Justice is
3 designated as the agency charged with
4 directing and coordinating activities at the
5 center. FMDC is working with the Department
6 of Justice and the Army on proposals and
7 detailed plans, including the use of the
8 chemical defense training facility. If a
9 more concrete proposal is released by the
10 Department of Justice prior to completing the
11 preparation of the FEIS, it may be considered
12 as part of the reuse alternatives. However,
13 the Department of Justice, as the federal
14 proponent for the National Center for
15 Domestic Preparedness, would be responsible
16 for completing detailed NEPA analyses.

17 The Draft EIS identifies a number
18 of mitigation actions that the Army is
19 committed to during the implementation of the
20 encumbered disposal alternative. To avoid,
21 reduce, or compensate for adverse impacts
22 that might occur as a result of encumbered
23 disposal, the Army would transfer property



1 with covenants, restrictions, or notices as
2 appropriate, for residual environmental
3 contamination, lead-based paint, asbestos,
4 unexploded ordnance clearance actions,
5 protection of historic and cultural
6 resources, and protection of the gray bat;
7 continue required cleanup process and
8 remedial actions; complete the EE/CA process
9 and any necessary unexploded ordnance
10 investigations to delineate the extent of UXO
11 on excess of Fort McClellan property and
12 provide recommendations and/or notification
13 regarding removal actions and use
14 restrictions; retain federal ownership of
15 property where clearance or removal of UXO
16 would cause significant adverse and
17 unacceptable ecological damage; continue to
18 work with the FMDC to ensure that to the
19 maximum extent feasible encumbered disposal
20 transactions are consistent with the adopted
21 community reuse plan and implementation
22 strategy; prior to final disposal, conduct
23 complete cultural resource surveys of Fort

1 McClellan property to the maximum extent
2 possible so as to ensure no adverse impacts
3 on the resources that might be present; until
4 final disposal, maintain installation
5 buildings, infrastructure, and natural
6 resources in a caretaker status to the extent
7 provided by Army policy and regulations.

8 The EIS study process includes a
9 number of key elements designed to solicit
10 input and is designed to involve the public
11 in federal decision making. As shown on this
12 slide, the Local Reuse Development Authority
13 is an integral part of the coordination
14 effort. They have worked with an independent
15 staff and the community in formulating reuse
16 alternatives and selecting and gaining
17 approval of a reuse plan.

18 The community's reuse plan has
19 served as the foundation of our reuse impact
20 analysis. This plan will receive priority
21 consideration by the Department of the Army
22 throughout the property disposal process.
23 Our EIS team has also communicated with the

1 Fort McClellan Reuse and Redevelopment
2 Authority on a regular basis to ensure that
3 the EIS addresses the full range of
4 alternatives that they have considered.
5 We've also coordinated directly with over one
6 hundred local, state, and federal agencies
7 and political representatives to submit input
8 to the EIS. We will continue to coordinate
9 with those agencies.

10 There are a number of formal
11 opportunities for all concerned individuals,
12 agencies, and organizations to comment and
13 participate in the EIS. The public
14 involvement effort began with an extensive
15 scoping process that included direct contact
16 with a large number of local, state, and
17 federal resource agencies and interest groups
18 and a public scoping meeting that was held at
19 the Fort McClellan Post Theater on August
20 6th, 1996. The results of the scoping
21 process are summarized in the Draft EIS.
22 Over one hundred copies of the Draft EIS were
23 distributed prior to the notice of

1 availability of the Draft EIS being published
2 in the Federal Register and local newspapers.
3 Since then, we have distributed twenty-five
4 additional copies in response to requests.
5 And tonight's meeting was widely advertised
6 to obtain the broadest input possible from
7 the community.

8 The next major element includes
9 the initial public meeting and all related
10 direct mailings, legal notices, and press
11 releases. All comments received tonight and
12 within forty-five calendar days from the date
13 of the notice of availability that was
14 published in the Federal Register on December
15 19th, 1997, will be carefully considered as
16 we finalize our study.

17 In addition, the public can review
18 and comment on the Final EIS, and all such
19 comments will be considered in preparing the
20 record of decision, or ROD, which is the
21 final product generated by the EIS process.
22 The ROD is required before the Army can
23 dispose of any of the surplus property.

1 As shown on this slide, a notice
2 of intent to prepare an EIS for disposal and
3 reuse of Fort McClellan was published in the
4 Federal Register towards the end of the
5 calendar year 1995. The second item shown on
6 this slide is the public scoping meeting we
7 conducted in August, 1996. The next major
8 milestone was the release of the Draft EIS,
9 which occurred in December of 1997. The
10 public hearing on the Draft EIS is being held
11 near the midpoint of the forty-five-day
12 period that is allowed for the public to
13 comment on the draft. The Final EIS will
14 then be prepared and distributed in the fall
15 of 1998. Also, as illustrated on this slide,
16 the completion of the EIS is closely tied to
17 the completion of approved reuse plans by the
18 FMDC.

19 This completes our overview of the
20 EIS process and milestones. We are now about
21 to get to the public comment section of this
22 meeting. All written and oral comments
23 received tonight and any additional written

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1 comments received by February 2nd of 1998
2 will be considered in the preparation of the
3 Final EIS. As mentioned earlier, the process
4 will give equal consideration to spoken and
5 written comments, and you may submit written
6 comments before February 2nd, 1998.

7 I'd now like to return the podium
8 back to Colonel Reddy.

9 MR. REDDY: Now we want to hear
10 from you. Your comments will become part of
11 the official record. If you turn in written
12 comments, please write your name and address
13 on them so we can enter them into the record
14 properly.

15 As I mentioned before, our purpose
16 tonight is to listen to your comments and
17 find out what issues in the Final EIS you
18 feel need to be addressed. We will also do
19 our best to answer any specific questions
20 that you may have regarding the Draft EIS and
21 the EIS process. If we can't answer your
22 questions tonight, we will see to it that the
23 issues you raise are considered in the study

1 process.

2 What I would like to do first is
3 recognize a distinguished person with us
4 tonight. He represents District 32 in the
5 Alabama House. We have Representative
6 Barbara Boyd. Thank you for coming. We
7 appreciate it.

8 Next what I would like to do is we
9 have one person right now who would like to
10 make an oral statement. He is Mr. Pete
11 Conroy. Sir, go to the microphone, please.

12 MR. CONROY: Thanks. I'll make my
13 comments as brief as possible. My name is
14 Pete Conroy. I'm the director of
15 Jacksonville State University's Environmental
16 Policy Information Center. I am the author
17 of the Fort McClellan Local Reuse Authority's
18 National Wildlife Refuge Feasability Study,
19 and I'm a member of the Preparational
20 Advisory Board at Fort McClellan. A lot of
21 issues are dealt with in the Draft EIS. And
22 really, I just want to deal with one tonight,
23 and that is the establishment of a national

TR-1.1



1 wildlife refuge. As referred to in the Draft
2 EIS and assuming the submission of the U.S.
3 Fish and Wildlife Service letter indicating
4 their interest in establishing another
5 national wildlife refuge, I'd like to
6 advocate that there be a more extensive
7 narrative further describing and evaluating
8 the establishment and compatibility of a
9 national wildlife refuge be operated by the
10 U.S. Fish and Wildlife Service and the
11 Alabama Department of Conservation, Game and
12 Fish Division.

13 Our community has shown a great
14 deal of support for the establishment of such
15 a refuge. Now, Fort McClellan Development
16 Commission, Senator Jeff Sessions,
17 Congressman Bob Riley, numerous organizations
18 and individuals favor the establishment of a
19 national wildlife refuge. And the reasons
20 for this are many. It would preserve and
21 enhance the natural Mountain Longleaf Pine
22 ecosystem. It would help perpetuate the
23 neotropical migratory or song bird resource,

TR-1.1 (continued)

1 would preserve a natural diversity and
2 abundance of (inaudible) with special
3 emphasis on endangered and threatened
4 species. It would provide compatible tourist
5 opportunities, wildlife-dependent
6 recreational opportunities such as hunting,
7 fishing, wildlife observation and
8 photography, and lastly, to promote an
9 understanding and appreciation for fish and
10 wildlife ecology.

11 I can't emphasize enough the
12 biological and ecological significance of
13 this Mountain Longleaf Pine ecosystem. I
14 mean, regardless of the final reuse option
15 selected for this habitat, it's imperative
16 that we protect it with a limitation of
17 development and the use of appropriate forest
18 management practices.

19 MR. REDDY: Thank you, sir. Now
20 I'd like to open up the floor for any other
21 individual here tonight who would like to
22 comment.

23 Please introduce yourself.

TR-1.1 (continued)

1 MR. RICHARDSON: Good evening. My
2 name is Rob Richardson. I'm the director of
3 the Fort McClellan Development Commission.
4 And on behalf of the commission, I want to
5 (inaudible) take this opportunity to welcome
6 the public to this scoping meeting and
7 congratulate the Army for moving forward on a
8 critical step to securing a record of
9 decision and also congratulate you on a very
10 well done presentation this evening, and for
11 the record, finally, indicate that the Fort
12 McClellan Development Commission will be
13 submitting its written commentary for your
14 review by the February 2nd deadline.

15 MR. REDDY: Great. Thank you.
16 Any one else?

17 (No response.)

18 MR. REDDY: It appears that all
19 who desire to make an oral comment have done
20 so. It is now time to bring this public
21 meeting to a close.

22 Last slide, please. We appreciate
23 the effort you made to attend tonight. Your

TR-2.1

1 comments will be fully considered and very
2 helpful in developing the Final EIS for the
3 disposal and reuse of Fort McClellan. Please
4 remember that if you want to send in
5 additional written comments, we need to
6 receive them by February 2nd, 1998, which is
7 the end of the forty-day comment period.

8 This public meeting is now closed.
9 Again, thank you very much for attending, and
10 good night.

11
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23

PROCEEDINGS ADJOURNED

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TABLE A.1 Responses to Public Hearing Comments	
COMMENT	RESPONSE
Pete Conroy (TR-1)	
TR-1.1	Comment noted. Additional detail regarding the USFWS wildlife refuge has been included in the Final EIS.
Rob Richardson (TR-2)	
TR-2.1	Comment noted.

A.3.2.2 Federal Government Agencies - Written Comments

Comments on the Draft EIS were received from the following Federal government agencies:

- FD-1 U.S. Department of the Interior, Office of Environmental Policy and Compliance;
- FD-2 U.S. Environmental Protection Agency; and
- FD-3 U.S. Department of Transportation, Federal Highway Administration.

Copies of the comments and responses are provided in the following pages.

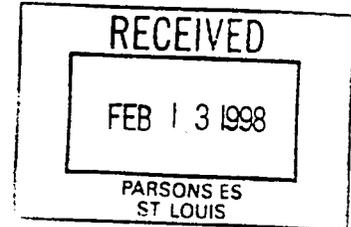


United States Department of the Interior

OFFICE OF THE SECRETARY OFFICE OF ENVIRONMENTAL POLICY AND COMPLIANCE

Richard B. Russell Federal Building
75 Spring Street, S.W.
Atlanta, Georgia 30303

February 10, 1998



ER-97/747

U. S. Army Corps of Engineers
ATTN: Mr. Curtis Flakes (PD-ES)
Mobile District
109 St. Joseph Street
Mobile, Alabama 36628-0001

Dear Mr. Flakes:

The Department of the Interior has reviewed the draft Environmental Impact Statement for the Disposal and Reuse of Fort McClellan, as requested.

General Comments

Certain portions of FMC have been identified in the draft EIS as possessing potential for public park and recreational use. Under Section 203(k)(2) of the Federal Property and Administrative Services Act (FPASA) of 1949, as amended by Public Law 91-485, Federal real properties which have been determined to be surplus to the needs of the Federal government may be conveyed to State and local governments for park and recreational purposes. These properties may be assigned to the Secretary of the Interior for further transfer by the National Park Service's (NPS) Federal Lands-to-Parks Program at 100 percent discount from fair market value. To ensure permanent protection of the resources, these properties must be dedicated in perpetuity for public park and recreational purposes.

In the draft EIS, the Fort McClellan Development Commission (FMDC), the Local Redevelopment Authority for FMC, identifies various parcels of FMC which would be appropriate for public park and recreational use and open space. The Community Reuse Plan which has been approved by the FMDC provides for public park, conservation, open space, and wildlife management uses. The portion of FMC identified as Area 1 includes the Active Recreation land use category (771 acres) which includes the existing Cane Creek Golf Course. Area 1 also includes the Other Recreation\Open Space category (2,109 acres). This category includes a 146-acre "town center" park, Riley Lake Park, Buckner Circle Park, and a 135-acre expansion of LaGarde Park. (In 1975, a 185-acre portion of FMC was conveyed through the Federal Lands-to-Parks Program to

FD.1-1

the City of Anniston for a new park. This property, now known as LaGarde Park, has been developed into a multi-purpose regional park.)

All 10,162 acres of Area 2 are included in the Passive Recreation and Open Space land use category. Area 2 is the eastern three-fifths of FMC and is comprised of steep forested slopes and wetlands. Proposed uses for Area 2 are passive recreation and open space.

NPS is pleased that the public's park, recreation, and open space needs have been considered in the planning for the reuse of FMC. The Community Reuse Plan is acceptable to the NPS as it would provide public park, recreational, and open space opportunities to meet current and future needs.

Previously, both the City of Anniston, Parks and Recreation Department, and the Alabama Department of Conservation and Natural Resources have indicated that they will submit applications for portions of FMC. The NPS will be pleased to assist State and local governments in applying for portions of FMC for public park and recreation and purposes.

The final environmental impact statement should include a specific reference that the identified park and recreation acreage will be assigned to the NPS under Section 203 (k)(2) of the FPASA for further conveyance to State and local agencies for public park and recreation purposes in perpetuity. The NPS will continue to assist the city of Anniston, Calhoun County, and the State of Alabama in applying for parkland through the Federal Lands-to-Parks Program.

The Fish and Wildlife Service (FWS) provided agency coordination and scoping comments for consideration in preparing the DEIS in a letter dated July 25, 1996. The primary FWS concern during the initial scoping phase involved impacts to the unique mountain longleaf pine forests, possible impacts on federally endangered and threatened species, and adverse environmental effects of unexploded ordnance (UXO) removal. We commend the Army on soliciting comments from a diverse range of agencies, organizations and individuals (Appendix A), and for preparing a detailed description and analysis of the existing biological environment (Appendix C). After a comprehensive review of this document, the FWS believes the primary biological issue of the Army's proposed action surrounds the future of the unique mountain longleaf pine forests. Both scoping comments, as well as the Army's summary conclusion (page C-19) describe the mountains of Main Post as the finest remaining example of the mountain longleaf pine component of the longleaf

FD.1-1 (continued)

FD.1-2

FD.1-3

pine ecosystem. While longleaf pine forests are critically imperiled throughout the Southeast, the mountain longleaf association has virtually disappeared. The FWS, therefore, believes the Record of Decision (ROD) should provide for the management and/or the transfer of this land to an agency or organization dedicated to protection and management of this sensitive area. In addition, the ROD should stipulate that the future manager be committed to a prescribed burning program that assures the continued existence of this fire adapted system. Without the continued introduction of fire, the existing unique longleaf pine ecosystem will disappear, and slowly evolve towards a hardwood forest community more typical of the surrounding region. The FWS would welcome the opportunity to work with the Army in selecting an option that insures continued maintenance of the unique character of these lands.

FD.1-4

While the significance and distribution of the mountain longleaf pine forests are well documented in the appendices, there is concern that the Environmental Consequences Section has not fully integrated these effects. In most situations, biological issues of concern (e.g. forest fragmentation, neotropical migratory birds, unique biological communities, rare species, high erosion potential, etc.) can be considered a secondary impact of degrading the mountain longleaf pine system. The tiering of effects should be incorporated into the analysis to clearly understand the significance of the mountain longleaf pine forests.

FD.1-5

The Army currently manages these lands as federal property under a wide range of federal laws, executive orders and Department of Defense (DOD) and Army regulations and guidelines. Many of these laws, regulations, and policies require positive actions involving the stewardship of federal lands. A transfer from federal ownership to private ownership should consider possible changes in management once regulations and policies governing these lands disappear. While this change in statutory protection is described in the DEIS, the environmental consequences of this change are not addressed.

FD.1-6

The undeveloped mountains on Main Post are referred to as a passive recreational area. It is unclear exactly what actions are contained in the definition of passive recreation. While some management actions may be compatible with maintaining the longleaf pine forests, others may not and therefore should be considered in the impact analysis.

FD.1-7

As described in the DEIS, disposal and reuse of the passive recreation area could involve a number of land holders and include a wide range of activities. It is important that a commitment be

FD.1-8

made by the Army to dispose of the mountainous area in a single manageable tract. Tract fragmentation and incompatible owners could make management programs such as prescribed burning difficult or impossible to implement.

FD.1-8
(continued)

The Army has made a commitment during the caretaker period to continue natural resource programs at reduced levels. The status of prescribed burning during this period, however, is unclear. This management activity is critical to the continued existence of the longleaf pine ecosystem. The present exposure of these lands to both training-related wildfires and prescribed burning would indicate that prescribed burning must be increased during the caretaker period to sustain existing conditions on Fort McClellan. The DEIS, however, indicates the Army expects to reduce or curtail prescribed burning during this period. Without a prescribed burning program, the Army has estimated significant long-term adverse effects to the mountain longleaf pine forest on Main Post. Because prescribed burning is critical to the continued existence of these forests and the duration of caretaker status is unknown, the Army should commit to continuing prescribed burning programs through funding and personnel while the land remains under military ownership. Prescribed burning could possibly be accomplished through agreements with other agencies ; however, the Army should commit to funding these actions while the land remains under its control.

FD.1-9

Mitigation of adverse impacts for disposal and reuse will be accomplished through the attachment of encumbrances to deed transfers. The Army considers implementation of the actual mitigative measures to be the responsibility of those that receive the property. In the case of natural resources, the present encumbrances only advise future owners to coordinate with regulatory agencies or to consider sensitive features in their planning process . With the change to private ownership, many of the requirements that currently guide actions on public land will no longer apply. In addition, the fragmentation of ownership could segment these impacts to the point where none of the impacts appear significant individually. The encumbrances as now stated would provide little protection to natural resources. Environmental consequences should estimate impacts based on statutory control and not on the assumption that guidance will remove adverse actions.

FD.1-10

The FWS strongly supports the Army's decision to retain in federal ownership those UXO-contaminated lands that cannot be cleaned up without causing significant and unacceptable ecological damage. The DEIS findings clearly indicate that significant environmental impacts would be expected from UXO clearance on Area 2). Clearance-generated adverse impacts to sensitive biological

FD.1-11

communities and erosion of steep slopes was a concern raised by the FWS during the initial scoping process (A-9). Because this forested area has received few disturbances in recent years, some extremely sensitive species and communities have been able to become established. Some areas, therefore, are particularly sensitive to even slight alterations and disturbances that would result from UXO removal. The FWS would welcome the opportunity to participate in the review process as this program progresses.

FD.1-11
(continued)

Specific Comments

(Page 2-3, line 25 - The 1160 acre Bureau of Land Management (BLM) tract is excluded from the disposal area and is to be returned to BLM. If the possibility exists that BLM will refuse to accept the land because of UXO contamination, the area should be included within the NEPA analysis.

FD.1-12

(Page 3-11) Figure 3-2 provides approximate boundaries for reuse plan areas. While this is recognized as only an estimate, the final boundary determination should consider environmental constraints for identifying areas suitable for redevelopment. As depicted on the figure, portions of the redevelopment area (Area 1) contain some very steep and inaccessible lands that should be considered not suitable for development (Figure 4-8).

FD.1-13

(Page 4-58, line 27) - Loblolly pine plantations are described as having been planted on 5,000 acres at Fort McClellan. These plantations, however are primarily confined to Pelham Range, with only minor acreage within the Main Post cantonment area.

FD.1-14

(Page 4-59, line 26) - The delineation of jurisdictional wetlands is incomplete. Extensive seepages and streams within the mountain area creates headwater wetlands that were not identified on National Wetland Inventory maps, The Army contracted Jacksonville State University to delineate these areas, but the findings of their surveys are not referenced, presented or analyzed in the DEIS

FD.1-15

(4-65, line 38) - The white fringeless orchid (*Platanthera integrilabia*) was observed in the Cave Creek seep during the summer of 1997. Approximately 20+ plants were located as part of the status survey for evaluating the need to list this species under the Endangered Species Act.

FD.1-16

(5-41, line 20) - The analysis should consider potential impacts related to exposure of infertile, highly mineralized soils, and possible problems associated with stabilizing these areas once disturbed. Of particular concern is the exposure and weathering of

FD.1-17

sulfide minerals from ground disturbing activities, and subsequent acidity and revegetation problems.

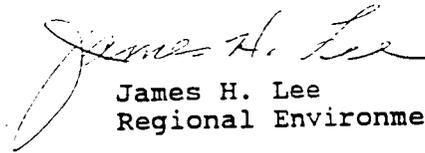
FD.1-17
(continued)

The Federal Lands-to-Parks Program - mentioned above - assists State and local governments in applying for property suitable for park and recreational purposes. For information on the program, please contact Mr. Bill Huie, NPS, Southeast Regional Office, 100 Alabama Street, S.W., Atlanta, GA 30303, or telephone 404/562-3175. If there are questions related to fish and wildlife resources, please contact the Fish and Wildlife Service Field Office, P. O. Drawer 1190, Daphne, AL 36526; telephone 334/441-5181.

FD.1-18

Thank you for the opportunity to review and comment on this draft EIS. If you have questions, please call me at 404/331-4524.

Sincerely,

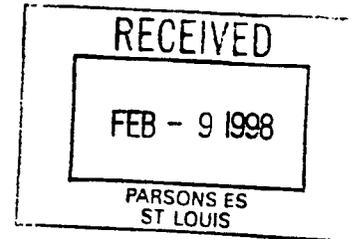


James H. Lee
Regional Environmental Officer

CC: OEPC, WASO
FWS-ES, RO, Bbell
FWS, Daphne, AL
NPS, SERO, BHuie



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET, SW
ATLANTA, GEORGIA 30303-8909



JAN 30 1998

U.S. Army Corps of Engineers
Mobile District
109 St. Joseph Street
Mobile, AL 36628-0001
ATTN: Mr. Curtis Flakes (PD-ES)

SUBJECT: Draft Environmental Impact Statement (EIS) on Disposal and Reuse of Fort
McClellan, Alabama

Dear Mr. Sir:

Pursuant to Section 309 of the Clean Air Act and Section 102(2)(C) of the National Environmental Policy Act (NEPA), EPA, Region 4 has reviewed the subject document; an evaluation of the consequences of various development/redevelopment scenarios for property which has become surplus to the government's needs because of the Base Closure and Realignment Act. Currently there are three reuse alternatives of increasing developmental intensity, i.e., medium low, medium, and medium-high; each has an encumbered and unencumbered option. The reuse plan which most closely reflects the goals of the Fort McClellan Development Commission (FMDC) is the medium-high intensity reuse (MHIR) with the encumbered option.

The EIS is well organized and the graphics improve understanding as to how the three reuse alternatives with options will affect environmental quality throughout the post. However, all disposal possibilities for the excess Army property, with the exception of the no-action scenario, focus on marketing the tracts for redevelopment. It was concluded by the FMDC that the MHIR option would best meet the area's future economic needs. It should be noted that MHIR is based on the highest growth scenarios for the region and will require substantial incentives to achieve its development objectives. Hence, from an environmental perspective this would be considered as a worst-case scenario with a lower level of development likely for the foreseeable future.

FD-2.1

Because of the complexity of the reuse process, this action is being examined pursuant to a number of statutes/authorities in addition to NEPA. For example, remediation actions carried out under the stipulations of the Comprehensive Environmental Response and Liability Act

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(CERCLA) will be conducted concurrently with the EIS process. Hence, the latter will only generically discuss the characteristics of the various sites and their necessary decontamination prior to disposal. However, we were pleased to note that the Army has committed to a policy that any of the eventual uses of a particular piece of property must be compatible with the health/safety of its future occupants and/or will not result in unacceptable impacts to the natural environment.

FD-2.2

Those undeveloped training areas of FMC which may have reuse limitation(s) associated with unexploded ordnance (UXO) are also being assessed separately from NEPA. Namely, the extent, location, and type of UXO together with cleanup/removal recommendations are being determined as part of the Engineering Evaluation/Cost Analysis (EE/CA). Since the EE/CA involves options, public input, and specific regulatory authorities, we view it as complementing the EIS process. The data from the EE/CA are currently being used to develop a plan which will address how/if these parcels are transferred to non-military ownership. As the process evolves and properties become available for transfer, they will receive an individual evaluation. In the event UXO removal proves too costly/environmentally damaging, a parcel may have to remain in federal ownership until such time as more efficient remediation technologies are developed or a compelling need for its use arises. In the event the latter does occur, the final EIS should acknowledge that actions associated with the EE/CA could result in some significant environmental ramifications. For example, a plot could undergo extensive land clearing and excavation to remove the buried UXO. This would have obvious on-site effects together with potential off-site consequences in the form of sedimentation. It was the logistical, technical, legal, and financial aspects of this UXO removal which were pivotal in all involved parties agreeing that retaining encumbrances on the subject property parcels was prudent.

FD-2.3

The property to be disposed encompasses approximately 17,360 acres of land in/around the Main Post area; however, the proposed divesture may also result in some effects to property currently held in a leased status from the State of Alabama. Even with this sizable transfer, substantial holdings will be retained for continued military use, e.g., a Reserve Component Enclave and the entire Pelham Range area. The Bureau of Land Management will retain control of 1,160 acres for its uses. Additionally, there will be a number of property easements required after the major transfer to address maintenance of utilities and other infrastructure. These easements have their own constellation of impacts which are discussed in the draft EIS. Notwithstanding all the sought after development associated with the proposal, almost 10,000 acres of the property will be held for use in various passive recreation activities.

As a result of our participation in preliminary scoping meetings and subsequent interagency coordination sessions, the major items which we raised for inclusion/assessment were adequately addressed in the text. Specifically, there is sufficient information to compare/contrast the reuse scenarios. Moreover, the short- and long-term ramifications of anticipated future activities, especially those dealing with the preferred medium-high intensity reuse alternative are reasonably evaluated against the no-action option. For a number of reasons cited in the document, the no-action option may actually have incrementally more adverse consequences for some factors than the action alternatives. For example, the long-leaf pine ecosystem would succeed to a mixed hardwood climax if routine prescribed burns were not continued. Appendix C

FD-2.4

provided an excellent overview of this important disclimax ecosystem and why it should be retained.

FD-2.4
(continued)

In a related matter, if/when subject properties are returned to the public domain, how will the current agreements between the Army and the USFWS be affected? Are the agreements necessarily transferred to the new owner(s)? If not, the observation that no adverse impacts are expected to threatened and endangered species should more precisely be changed to "in the absence of the current management regimen the long-term effects on these species are not known." Indeed, it is likely that adverse impacts will occur; this is certainly true from a habitat conversion standpoint.

FD-2.5

For this and other reasons, we concur with the Army's decision to maintain encumbrances on the property, i.e., future legal responsibilities will be maintained and environmental values sustained. Unfortunately, experience suggests the majority of the current mitigation/enhancement measures being carried out by the Army will likely be discontinued or, at least lessened, after the parcels are conveyed to the new owners.

FD-2.6

If the MHIR is ultimately selected and forecasted development actually occurs, traffic congestion in the area could become a major problem. For example, there will be a dramatic increase in automobile traffic being directly shunted onto State Highway 21. It was noted that planning is proceeding to address this and other forecasted level of service problems. While the exact details for these upgrades are presently unknown, general assumptions could be made now. For example, the FMDC is relying on the Eastern bypass and the associated interchanges as the cornerstone of its plan; hence, its reasonably foreseeable impacts by category should be identified in the final EIS even if they will be more specifically addressed in a subsequent NEPA evaluation.

FD-2.7

Similarly, there will be construction and/or subsequent operational impacts associated with the proposed National Center for Domestic Preparedness (NCDP). Details regarding this facility were also not available during the EIS preparation. We understand that Department of Justice will be tasked to prepare further NEPA documentation when the specifics of the NCDP are finalized. However, it would be helpful if an overview of its anticipated activities were presented in the final EIS. Notwithstanding our reservations on these particular matters, we strongly support the Army's decision to assess major future actions resulting from this transfer via the NEPA process.

FD-2.8

As noted, those subject areas on which we provided comment during the preliminary coordination have been satisfactorily addressed; however, some additional specific questions/observations have surfaced in the meanwhile. These comments are attached for assessment/inclusion in the final document.

On the basis of our review, we would have no significant objections to the reuse of FMC property at either the medium-low or medium intensity use levels, i.e., an emphasis on a reduced density of residential/industrial development with all of its lessened attendant impacts. However, we do have some environmental concerns about the long-term environmental ramifications of more intense development occurring from the preferred medium-high intensity use alternative.

FD-2.9

Therefore, we have assigned it a rating of EC-2. That is, we have identified specific potential environmental impacts that must be avoided during the redevelopment process. Additional information will have to be provided as it becomes available during the incremented development phases. We are especially interested in transportation impacts both from the standpoint of traffic, per se, and the unacceptable environmental consequences of constructing a major roadway complex in the region.

FD-2.9(continued)

Thank you for the opportunity to comment on the draft EIS. If you wish to discuss this matter in greater detail, Dr. Gerald Miller (404) 562-9626 of my staff will serve as initial point of contact on matters dealing with the NEPA evaluation whereas Mr. Bart Reedy (404) 562-8541 is the Federal Facilities contact.

Sincerely,



Heinz J. Mueller, Chief
Office of Environmental Assessment

Attachment

ADDITIONAL COMMENTS

OVERVIEW

Unexploded Ordnance/Explosives

The cleanup of unexploded material will be addressed via the proposed "Range Rule" which currently is in development. Since this document will be available in late 1998, the final EIS and Record of Decision will be able to use its results/conclusions in decision-making. While the details and administrative mechanics of this process remain to be determined, we do not necessarily believe that there will be a problem associated with transferring and/or transferred ranges. Hence, we are willing to have the matter assessed by the Engineering Evaluation/Cost process until the final stipulations of the "Range Rule" are proposed by DOD.

FD-2.10

Hazardous Materials and Waste Management

Descriptions of existing sites appear complete or will be so upon completion of the Community Environmental Response Facilitation Act requirements; however, as investigations proceed on these sites, other areas requiring removal/remedial actions may be discovered. Some buildings or facilities may be demolished before disposal. If/when this proves to be the case, an asbestos/lead base paint survey (performed by a registered Professional Engineer) will be necessary. In any case, CERCLA requirements dictate that necessary remedial actions are completed/in operation before a Finding of Suitability for Transfer for any parcel is recorded.

FD-2.11

Radiation Issues

Based on the absence of discussion, radioactive materials/waste characterizations are not an issue. Since radioactive waste activities are mentioned in Section 5.3.5.1, this matter should be clarified in the final EIS.

FD-2.12

SPECIFIC COMMENTS/SUGGESTED CLARIFICATIONS AND EDITS

Executive Summary, Page 2, Line 43. Suggested word change from original text to "Environmental Cleanup is conducted to a level that is protective of human health and the environment with potential special risk management considerations given to incorporate future reuse of the property."

FD-2.13

Executive Summary, Page 3, Line 5. If 4,000 acres cited for development includes the property proposed for construction of the Eastern Bypass and interchanges, this should be noted in the final EIS.

FD-2.14

Executive Summary, Page 3, Line 23. Suggested word change to "The Army removes the causes for the encumbrances, thereby allowing certification that the property is clean for transfer."

FD-2.15

Executive Summary, Page 3, Line 26. We concur with the Army's decision that the encumbered disposal alternative best meets all parties needs.	FD-2.16
Executive Summary, Page 4, Line 9. As noted, it should be emphasized that unencumbered property disposal of range areas was not selected because of removal of UXO poses significant technical, logistic, and financial difficulties.	FD-2.17
Executive Summary, Page 7, Line 35. To improve readability suggest change to , "...regional cumulative impacts analysis basis. For example, the impacts of the proposed action may be significant on existing transportation	FD-2.18
Executive Summary, Page 8, Line 5. With the continuing funding problems experienced at Formally Used Defense Sites (FUDS), natural attenuation of contamination may be unacceptable to the State and EPA. Further, natural attenuation requires extensive ongoing monitoring with active State and Federal involvement.	FD-2.19
Executive Summary, Page 8, Line 25. Prior to disposal, an acceptable plan for ensuring that all deed restrictions are actively monitored and reported must be developed. The deed restriction plan can not terminate at the time of property disposal.	FD-2.20
Executive Summary, Page 9, Line 7. Prior to disposal, an acceptable plan for ensuring that all deed restrictions are actively monitored and reported must be developed. As noted, the deed restriction plan can not terminate at the time of property disposal. Entities responsible for monitoring and reporting on the viability of and adherence to the expected deed restrictions need to be identified.	FD-2.21
Page 2-10, Line 1. The key to the reuse is the construction of the Eastern Bypass and associated interchanges. Therefore, a bullet should be inserted in this listing which identifies this anticipated action.	FD-2.22
Page 2-11, Line 10. Constructing a lake adjacent to the proposed "Town Center" will significantly affect the character of the impounded stream and its surrounding wetlands. This habitat conversion should be fully explored and the impacts discussed in the final EIS. We assume that the addition of 350 acres at the Lake Yahoo complex involves expansion of upland holdings rather than enlarging the lake, per se.	FD-2.23
Page 2-11, Line 37. This citation seems to conflict with the earlier statement that the CDTF will be retained by the National Guard. This point should be clarified in the final EIS.	FD-2.24
Page 2-12, Line 25. Suggest the following additional exposition, "EPA, ADEM, and the Army have already formed the BRAC Cleanup Team (BCT); it will be responsible for developing and overseeing cleanup decisions at FMC."	FD-2.25
Page 2-12, Line 43. To clarify, "the BEC did not form the BCT" rather it was first envisioned by EPA to orchestrate/facilitate the President's Five Part Plan.	FD-2.26

Page 2-13, Line 6. It is our understanding that the final Environmental Baseline Survey has not yet been completed.	FD-2.27
Page 3-3, Line 39. Does the phrase "environmental baseline information" refer to the Environmental Baseline Survey?	FD-2.28
Page 3-4, Line 4. The relationship (if any) of, "other types of constraints", to encumbered property should be discussed.	FD-2.29
Page 3-5, Line 12. The conditions under which a new owner can "choose" to lessen or remove preservation type deed restrictions should be described.	FD-2.30
Page 3-5, Line 21. The statement that the wastewater treatment plant is owned by the Army and operated by Operations Technologies is in disagreement with section 3.2.3 of the Draft Environmental Baseline Survey.	FD-2.31
Page 3-5, Line 38. For completeness, chemical warfare compounds, daughter products, and residual decontamination compounds are also of concern.	FD-2.32
Page 3-5, Line 41. Cleanup levels will be determined by evaluation of the risk to human health and the environment. See comment # 1.	FD-2.33
Page 3-6, Line 50. Were the "unencumbered disposal" option to become the preferred alternative, it would be incumbent on the Army to insure that access is provided to any and all sites subject to investigation and/or remediation. Presently this is a moot point since the "encumbered option" is the preferred alternative.	FD-2.34
Page 3-14, Line 19. We doubt this would be the case, but are there any circumstances in which an UXO would be exposed in a public use area and a determination made by the Army that a safety concern does not exist? A strict reading of this paragraph indicates that this scenario is plausible. This comment is applicable to all three reuse alternatives described.	FD-2.35
Pages 3-13 through 3-16. As we noted in the overview, the Army's ability to extend its present management practices after the property is transferred without encumbrances will be limited at best. Of particular concern is the fate of land with UXO contamination, wetlands preservation, actions adversely affecting threatened and endangered species and maintenance of the Long Leaf Pine disclimax.	FD-2.36
Page 5-13, Line 13. The procedure by which the Army will monitor, enforce, and actually inspect for adherence to the referenced restrictions on encumbered property once it is transferred needs to be discussed in greater detail. EPA is currently developing a policy to address deed restrictions and covenants, but that policy is not yet final and is not intended to address site specific restrictions. If EPA concurs with a FOST or FOSL that contains deed restrictions/institutional controls or protective covenants, that approval is predicated on the strict adherence of those restrictions or covenants. The FOST or FOSL is an agreement between the Army and a	FD-2.37a
	FD-2.37b

regulatory agency that certain activities will (or will not) take place. Failure of the Army to enforce the requirements of the agreement could render the FOST or FOSL void.

FD-2.37b
(continued)

Page 5-13, Line 13. The specifics of Alabama State law regarding deed restrictions to include their duration should be noted in the final EIS.

FD-2.38

Page 5-13, Line 13. There needs to be a means to monitor the removal of deed restrictions from property that is subdivided after the initial transfer. For example, a large tract of land is sold with a deed restriction prohibiting excavation because of the presence of UXO. Subsequently, the property is resold in smaller tracts for residential development where site preparation may require some digging.

FD-2.39

Page 5-13, Line 23. No encumbrances are listed to cover reuse restrictions resulting from chemical, radiological, or CWM contamination.

FD-2.40

It should also be pointed out that our concerns surrounding the ranges are not limited to the presence or absence of UXO. Nationally there are some ranges that are heavily contaminated with metals from particulate in addition to the presence of spent rounds. For example, we understand that at Fort McClellan, weapons cleaning (small arms through fused ordnance) was conducted at the range itself. Hence, there is the possibility that some ranges may have to be addressed under CERCLA. We suggest that the text be modified in the appropriate locations to reflect this potential.

FD-2.41

Summary Paragraph

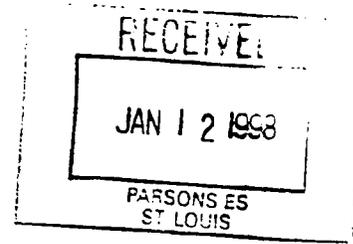
EPA has assigned a rating of EC-2 to the preferred alternative based on the unknowns associated with its potential environmental impacts; additional information will need to be developed to determine the actual long-term consequences of this more intensive reuse option.

FD-2.42

RATING: EC-2



U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
Georgia Division
61 Forsyth Street, S.W., Suite 17T100
Atlanta, Georgia 30303
December 22, 1997



IN REPLY REFER TO
HPD-GA

U.S. Army Corps of Engineers
Mr. Curtis Flakes, PD-ES
Mobile District, 109 St. Joseph St.
Mobile, Alabama 36628-0001

Subject: FHWA review of Draft Environmental Impact Statement (DEIS) for Disposal and Reuse of Fort McClellan, Alabama.

Dear Mr. Flakes:

Thank you for the opportunity to review the above document regarding the disposal and reuse of Fort McClellan provided by your transmittal of December 15, 1997.

We have completed our review of this document and have no comments regarding the proposed action.

Please contact Mr. Clyde Johnson at (404) 562-3657, if additional information is required.

Sincerely,

Larry R. Dreihaupt, P.E.
Division Administrator

FD.3-1

TABLE A.2 Responses to Federal Government Agency Written Comments	
COMMENT	RESPONSE
U.S. Department of the Interior, Office of Environmental Policy & Compliance (FD-1)	
FD-1.1	Comment noted.
FD-1.2	Parks and recreational acreage will be assigned to the National Park Service only if the final recipient of the land requests a public benefit conveyance and if the use is consistent with the Final FMDC reuse plan and concurrence from FMDC (for the EDC and assignment to the NPS under the FPASA) is received by the Army.
FD-1.3	Comment noted.
FD-1.4	<p>The Army supports the USFWS's plans to establish a National Wildlife Refuge for the protection and management of the MLP ecosystem.</p> <p>Language in the ROD, supporting the transfer of FMC land for the protection and management of the MLP ecosystem and assuring the use of fire as an important management tool, can occur only after the receipt of a formal request for the establishment of a wildlife refuge/reserve by USFWS (or similar agency). While the ROD can support the disposal of the MLP ecosystem with such an easement, it must also allow disposal if this is not possible. If a formal request is not submitted and approved, the Army may not be able to dispose of this area with such a restriction since the MLP ecosystem is not a Threatened or Endangered Species and consequently not afforded formal protection under the ESA. We are please that DOI (USFWS) has approved the Proposed Project Plan for the establishment of the National Wildlife Refuge. This would ensure the protection of the MLP ecosystem and we look forward to working with the USFWS to this end.</p>
FD-1.5	The environmental consequences section pertaining to biological resources has been updated to include indirect impacts to the MLP community.
FD-1.6	Concur. The Army acknowledges that there are a variety of natural resources programs undertaken by the Army, which benefit natural resources, that are not required (expected) to continue after disposal of excess property. Impacts associated with the discontinuation of these programs will be included in subsection 5.3.
FD-1.7	<p>Subsection 3.4.4.2 describes the activities within the passive recreation area for all three reuse alternatives.</p> <p>The Army concurs that some passive recreational activities are not compatible with the maintenance of the MLP ecosystem. The range of passive recreational activities included in the three alternatives, however, includes a broad spectrum of reasonably foreseeable reuses ranging from the protection and active management of the MLP (MHIR) to the lack of active management activities (MLIR).</p>
FD-1.8	<p>The Army supports the USFWS's plans to establish a National Wildlife Refuge for the protection and management of the MLP ecosystem.</p> <p>Language in the FEIS, supporting the transfer of a large tract of mountainous FMC land for the protection and management of the MLP ecosystem as a single tract, can occur only after the receipt of a formal request for the establishment of a wildlife refuge by USFWS (or similar agency) that is supported by the FMDC. If a formal plan is not submitted, the Army can consider disposal in parcels since the MLP is not a Federal Threatened or Endangered Species and consequently not afforded formal protection under the ESA.</p>

TABLE A.2 Responses to Federal Government Agency Written Comments

COMMENT	RESPONSE
FD-1.9	The impacts associated with the No Action Alternative are detailed in the EIS. As indicated in subsection 5.2.11.2, if caretaker status exists for a prolonged period of time adverse impacts to the MLP ecosystem are expected. The Army will attempt to negotiate with other agencies to conduct prescribed burning during the caretaker period (see subsection 3.2). The Army, however, cannot at this point commit funds to undertake an extensive prescribed burn program in the future; to do so would be a violation of Federal Statue (Anti-Deficiency Act).
FD-1.10	Do not concur. New owners of the disposed property must adhere to environmental laws. Therefore the level of protection afforded natural resources is therefore generally the same for all landowners. The Army does acknowledge, however that the level of natural resources stewardship associated with Army ownership compared to private ownership will not likely be the same. The Army believes that this issue has been adequately addressed in the DEIS document.
FD-1.11	Comment noted. The Army notes that no threatened or endangered species critical habitat exists within the excess properties including DEIS Area 2. The UXO removal process includes a public coordination/comment element to assure that the public's views regarding UXO removal and any impacts associated with the removal operations are addressed. Additionally the Base Transition Team and the BRAC Environmental Coordinator will coordinate all cleanup/removal activities with appropriate Federal, State, and local Agencies including the USFWS/USDOJ.
FD-1.12	Recent coordination with the BLM indicates that the BLM will not retain the 1160 acre parcel. Consequently, the BLM intends to have this parcel disposed of, by the Army, with the other FMC Main Post excess properties. This excess property will be disposed of in manner similar to the surrounding lands within Area 2. Impacts to the BLM parcel will be the same as those detailed for Area 2 and no further analysis is required. The Final EIS includes this change in excess property available for transfer.
FD-1.13	Most of the steep slopes within the disposal area are located within Area 2. There are, however, some steep slope areas within Area 1. The Army intends to work with FMDC and USDOJ to determine the most appropriate boundaries for the USFWS National Wildlife Refuge. It is anticipated that the location and presence of steep slopes within the disposal area will a factor in the discussions that will take place to determine the Wildlife Refuge boundaries. Impacts associated with the development/disturbance of highly erodible soils and steep slopes are addressed in subsection 5.4.
FD-1.14	Concur. The DEIS inadvertently included loblolly acreage at Pelham Range. The correct loblolly pine acreage at FMC Main Post is 300 acres. This will be corrected in the text as follows: of about 300 acres of loblolly pine at FMC Main Post.

TABLE A.2 Responses to Federal Government Agency Written Comments	
COMMENT	RESPONSE
FD-1.15	<p>The JSU study results are not yet available. Should the information become available prior to the completion of the FEIS the data will be incorporated into the document. In lieu of specific information from the JSU study the following additions to the text will be made in subsection 4.11.3:</p> <p>...as headwater seeps. "Not included in the wetland inventories completed to date are an unknown number of seeps (e.g. Marcheta Hill Orchid Seep) which maybe jurisdictional wetlands. FMC is currently identifying and investigating these seeps and has published a draft report entitled "Botanical Study of Upland Seeps on Fort McClellan, Alabama with Special Attention to <i>Platanthera integrilabia</i>."</p>
FD-1.16	The sentence will be written to incorporate this information as follows: ... This species was also found in 1992 and 1997 in the Cave Creek Seep.
FD-1.17	This potential impact has been reconsidered and the following additions (to the Medium-High Intensity Reuse Alternative, direct impact discussion located in subsection 5.4.6) text discussion have been made: ... impacted areas. "The minimization of soil erosion and the reestablishment of vegetation in disturbed soils areas is an important consideration. Should redevelopment activities result in the exposure of infertile, highly mineralized soils (e.g. sulfide minerals), revegetation will be difficult and erosion related impacts would increase."
FD-1.18	Comment noted.
U.S. Environmental Protection Agency (FD-2)	
FD-2.1	Comment noted.
FD-2.2	Comment noted. The Army appreciates EPA's support of the Army's Encumbered Disposal Alternative.
FD-2.3	Concur. UXO removal activities may cause significant adverse impacts depending on the location and extent of the removal actions. These impacts are described in subsections 5.3.8 and 5.4.8. Ecological site specific impacts and alternatives for UXO removal (including no action, i.e., do not remove) will be analyzed in the EE/CA along with any institutional controls that may be necessary to ensure the public's safety.
FD-2.4	Comment noted.
FD-2.5	<p>Current agreements between the USFWS and the Army will no longer be valid for FMC excess lands upon transfer of the excess lands to the new owner(s).</p> <p>Endangered species protection measures are included as PDF's in the BA prepared in consultation with the USFWS. The protective provisions included in the BA are included in subsection 5.6 and will be applicable as deed restrictions.</p>
FD-2.6	Comment noted.

TABLE A.2 Responses to Federal Government Agency Written Comments	
COMMENT	RESPONSE
FD-2.7	<p>The upgrades to the highway system associated with the MHIR are presented in subsections 2.4 and 5.5.2.2. Impacts associated with these upgrades are addressed under the various resource elements discussed within subsections of 5.5.5.1.</p> <p>The Alabama Department of Transportation has submitted a draft Final Environmental Assessment to the Federal Highway Administration for approval to release to the public. They expect to hold public hearing on the Eastern By-pass and complete the EA by this fall. The FMDC has indicated that over \$40M in federal funding has been approved for the construction of the Eastern By-pass. As noted in the FEIS, the Eastern By-pass is one of the recommended mitigation measures for reducing transportation impacts of reuse. Its construction will significantly reduce the traffic using the current US 431 and State Highway 21 between Interstate 20 and FMC.</p> <p>No changes to the text in the FEIS are required.</p>
FD-2.8	<p>Additional details pertaining to the NCDP have been included in subsections 2.4, 3.4 and 5.5.2.2. It is anticipated that training activities at the NCDP will be similar to the training currently undertaken at the CDTF, consequently impacts from training will be similar to those of baseline conditions.</p> <p>DOJ has completed an Environmental Assessment for the operation of the NCDP prior to FMC's closure. FMC has completed a Record of Environmental Consideration for NCDP's use of existing facilities prior to FMC's closure. DOJ also plans to complete a separate NEPA analysis of NCDP operations after the closure of FMC.</p>
FD-2.9	<p>Comment noted. See response FD-2.7 for information on the environmental analysis being conducted for the Eastern By-pass by the Alabama Department of Transportation.</p>
FD-2.10	<p>Comment noted. The Army appreciates EPA's willingness to use the EE/CA process for assessing UXO removal actions pending the completion of the "Range Rule": by DOD. We look forward to EPA's and the State's active participation in the UXO process.</p>
FD-2.11	<p>Necessary remedial actions for CERCLA hazardous substances will be either completed or demonstrated to be operating successfully before a Finding of Suitability to Transfer is made. Non-CERCLA substances, such as lead based paint and asbestos, will be addressed pursuant to existing laws and DOD guidance. Information on any non-CERCLA materials will be included in the FOST and will be provided to the future owner as part of the transfer process. Restrictions, if appropriate, on use of the property until abatement or removal is conducted will be part of the transfer documentation.</p> <p>Regarding buildings planned for demolition, it is current guidance that no remediation for asbestos shall be performed, and buildings containing lead based paint will be neither inspected nor abated.</p>

TABLE A.2 Responses to Federal Government Agency Written Comments	
COMMENT	RESPONSE
FD-2.12	<p>The term utilized in section 5.3.5.1 of the Draft EIS was a generic term encompassing the broad range of hazardous and radiological materials. This general term has been replaced by the more accurate term "hazardous materials" in the text.</p> <p>Radiological materials at FMC are discussed within subsection 4.9.1 in the text. Radiological contamination projects undertaken to date at FMC include the Hot Cell Remediation Project and the Radiological Laboratory Closeout Project. Details on these projects have been added to subsections 4.9, 5.2.9, and 5.3.9. No adverse impacts associated from these materials have been identified. Should additional radiological materials be identified under future BRAC cleanup studies, any contamination would be dealt with by the BCT under the CERCLA process.</p> <p>No additional changes in the text are required.</p>
FD-2.13	Concur. Will change subsection ES.4 to read: "...and that environmental cleanup is conducted to a level that is protective of human health and the environment with potential special risk management considerations given to incorporate future reuses of the property."
FD-2.14	The Eastern Bypass and interchanges are included in the 4,000 acres to be developed. The sentence (located in subsection ES.4) has been reworded as follows: ..."Approximately 7,200 acres of the 18,520 acres comprising the disposal area is proposed for development (including highway improvements associated with the Eastern Bypass), with the remaining areas reserved for passive recreation, development reserve, and open space...."
FD-2.15	Concur. The sentence (located in subsection ES.5) has been reworded to read ... "or the Army removes the causes for the encumbrances, prior to disposal, thereby allowing certification that the property is available for transfer without encumbrances."
FD-2.16	Comment noted.
FD-2.17	Comment noted. The issues noted in addition to environmental impacts are included in the paragraph.
FD-2.18	Comment noted. No change required.
FD-2.19	Cleanup activities at FMC will be completed with BRAC or Army funds not FUDS funds. Natural attenuation appropriateness, as a remedial action, will be considered at appropriate sites during the CERCLA process.

TABLE A.2 Responses to Federal Government Agency Written Comments

COMMENT	RESPONSE
FD-2.20	<p>The deed restrictions are parcel/site specific and will be established at time of disposal. Deed encumbrances will run with the land or provide the conditions for their modification or lifting. Deed restrictions and institutional controls have a long history in property law and their use in non-environmental context is quite common. Such uses include easements for infrastructure and community planning, e.g. zoning, planned neighborhoods, building or grading permits, etc., and conditions imposed for public benefit and homeless assistance conveyances. Some of these may be a result of the Army's disposal action such as easements for existing utility systems. Others may be imposed by FMDC planning, developers, or the local jurisdictions. Normally, Army imposes deed restrictions and institutional controls as a result of federal statutes, such as the National Historical Preservation Act, the Endangered Species Act, CERLA, etc. The Army has used and will continue to use institutional controls in remedial activities during cleanup and as part of the final remedy as mechanisms to protect property users and the public from existing site contamination that continues to be present during use of the site. Generally, ICs for environmental sites are used to ensure protection of human health and the environment, protect ongoing remedial activities and to ensure viability of the remedy, and provide access for ongoing or future remedial activities that are the responsibility of the Army. ICs are specifically provided for by CERCLA and the National Contingency Plan.</p> <p>Enforcement of the deed restriction and ICs is dependent on the parcel, its reuse and site conditions at the time of property disposal. Generally, the Army is not an enforcer of deed restrictions, rather the Army looks to the interested party for whom the interest is created. In some cases, this is the Army. Where there is a proprietary interest, such as an easement, the holder of that interest is expected to exercise the enforcement. Enforcement of non-proprietary interest will depend on the interest and the purpose for which the restriction is created. Additional information is available on the DOD BRAC environmental homepage at HTTP://WWW.DTIC/MIL/ENVIRO/DOD/ENVBRAC.HTML. Of a particularly interest are the pamphlets "Institutional Controls, What they are and how they are used" and "A Guide to Establishing Institutional Controls at Closing Military Installations." (See response FD-2.38 for information on Alabama case law on restrictive covenants.)</p>
FD-2.21	<p>The deed restrictions will include notices identifying, to the new owners, which regulatory agencies are responsible for coordination and enforcement of each environmental encumbrance.</p> <p>The deed restrictions will be established at the time of disposal and will be included in the deeds.</p>
FD-2.22	<p>Concur. A bullet indicating that the Eastern Bypass as an integral part of the reuse plan will be added to the listing of key features of the FMDC Reuse Plan listed in subsection 2.4.</p>

TABLE A.2 Responses to Federal Government Agency Written Comments	
COMMENT	RESPONSE
FD-2.23	<p>The final reuse plan indicates that a small lake and public park will be included in a 98 acre parcel in the Town Center area. The lake in the final plan is smaller than in the draft plan used in the DEIS.</p> <p>The text will be adjusted to reflect the proposed size of the lake. It is anticipated that impacts to wetlands and streams will be minor as this area is already developed at FMC.</p> <p>It is the Army's understanding that planned redevelopment activities at the Yahoo Lake complex involve upland habitats. No wetland impacts are anticipated based upon current available information.</p>
FD-2.24	<p>Concur. Final EIS text and figures have been corrected. As noted on Table 2.1, the CDTF is anticipated to be used for chemical agent protective purposes training by the DOJ for the NCDP. NGB may also use the facility for training in responding to the use of weapons of mass destruction. CDTF is approved for retention in the RC enclave, but ownership and responsibility for operation could pass to DOJ. The Army notes that while it is anticipated that DOJ will be the ultimate owner of the CDTF it is possible that it may remain with the ALARNG under a ALARNG/DOJ joint use agreement. The important issue is the development of the NCDP and not who the ultimate government owner of the property will be.</p>
FD-2.25	<p>Concur. The following sentence will be added to the text in subsection 2.6.1.1: "...The U.S. Environmental Protection Agency (EPA) Region IV, the Alabama Department of Environmental Management (ADEM), and the Army have already formed the BRAC Cleanup Team (BCT), which will be responsible for the development and overseeing of the cleanup decisions and activities at FMC."</p>
FD-2.26	<p>Concur. The statement in the DEIS is specific to the FMC BCT formation and does not include the generic aspects of the BCT associated with the President's Five Part Plan.</p> <p>No change required.</p>
FD-2.27	<p>Concur. The Final EBS was not completed until January 1998. The Final EIS will incorporate the information included in the Final EBS where appropriate throughout the document.</p>
FD-2.28	<p>No. The term "environmental baseline information" is a generic term referring to information from a variety of sources used to help in the development of reuse plans. The EBS would, however, be included in this type of information.</p>
FD-2.29	<p>The "other types" of constraints are advisory in nature. The text has been corrected by moving regulatory floodplains from the "other types" list to the encumbrances list. Additionally the advisory nature of the "other types" will be indicated in the text.</p>
FD-2.30	<p>As indicated in the text, deed restrictions can only be lessened based upon consultation and approval of the SHPO. The SHPO is not required to lessen restrictions but may consider modifications to restrictions as long as appropriate mitigation can occur. The discussion concerning Cultural Resources located in the subsection 3.3.1 discussion of Encumbrances Identified at FMC has been clarified to address the issue of future restrictions.</p>
FD-2.31	<p>The text in the Draft DEIS is correct and represents current conditions. The text in the EBS is dated and reflects previous conditions.</p> <p>No changes are required.</p>

TABLE A.2 Responses to Federal Government Agency Written Comments	
COMMENT	RESPONSE
FD-2.32	<p>The text lists a variety of generic contaminants typical of CERCLA sites at FMC and other DOD installations. To date CWM contamination identified at FMC has been minor and uncommon.</p> <p>The sentence, in the subsection 3.3.1 discussion of Remedial Activities, has been rewritten to incorporate a wider range of potential contaminants as follows:..... ", metals, dioxin, and other CERCLA contaminants."</p>
FD-2.33	The sentence, in the subsection 3.3.1 discussion of Remedial Activities, has been reworded as follows: "building or area and will be protective of human health and the environment with potential special risk management considerations given to incorporate future reuse of the property."
FD-2.34	Comment noted. Unencumbered disposal would require complete remediation of a parcel.
FD-2.35	The discussion concerning UXO located in the Human Safety Management discussions located in subsections 3.4.4.2.1, 3.4.4.2.2, and 3.4.4.2.316 line 07 will be clarified by deleting the words "deemed to be a safety concern"...
FD-2.36	Concur. The Army will not extend its current natural resources management practices to excess lands after transfer.
FD-2.37a	See response to FD-2-20.
FD-2.37b	Comment noted. "FOSTs and FOSLs are prepared by the Army and document the environmental conditions of the parcel(s) designated for transfer or lease. The Army coordinates/consults with the regulator agencies during the process of preparing the FOST or FOSL. The public is also provided an opportunity to comment on FOSTs. The FOST/FOSL documents that a parcel(s) is suitable for transfer or lease for the intended purpose, if known, because the requirements of CERCLA Section 120(h)(3) have been met for the property, taking into account the potential risk of future liability. FOSTs and FOSLs typically identify any land use restrictions and institutional controls which will be in the deeds or as lease conditions. FOSTs and FOSLs are not agreements between the Army and the regulatory agencies. Any disagreements or unresolved comments that EPA or other regulatory agencies have with the FOST/FOSL are attached to the FOST/FOSL document. A copy of the signed FOST or FOSL is a part of the transfer or lease package provided to the recipient or lessee of the property. FOSTs/FOSLs are not agreements between the Army and the regulatory agencies."

TABLE A.2 Responses to Federal Government Agency Written Comments

COMMENT	RESPONSE
FD-2.38	<p>A review of Alabama case law on restrictive covenants provides the following principles:</p> <ol style="list-style-type: none"> 1 Restrictive covenants create equitable easements in favor of the owners of the several lots subject to such covenants which may be enforced by any of lot owners. <i>Allen v. Axford</i>, 285 Ala. 251, 231 So. 2d 122 (1969); <i>Bearman Hills Dev. Co. v. Marr</i>, 285 Ala. 141, 299 So. 2d 776 (1969) 2. Restrictive covenants are not favored in law and are strictly construed in favor of the free use of property. <i>Hill v. Rice</i>, 505 So. 2d 382 (Ala. 1987); <i>Ervin v. Delancey Const., Inc.</i>, 596 So. 2d 593 (Ala. 1992). 3. When a municipality acquires land that is subject to an enforceable covenant, the condemning authority acquires the land free from the covenant. <i>Dothan Area Chamber of Commerce v. Shealy</i>, 561 So. 2d 515 (Ala. 1990). 4. Restrictive covenants in deeds will be enforced even though other lots in the subdivision have violated the restrictions without obligation. <i>Baker v Heatherwood Homeowners Ass'n</i>, 587 So. 2d 938 (Ala. 1991). 5. When the language of the covenant is found to be ambiguous, the intent of the developer is to be given great weight by the court in discerning the meaning of the covenant. <i>Cooper v. Powell</i>, 659 So. 2d 93 (Ala. 1995), 6. When there is no ambiguity in the language of a restrictive covenant, the language of the restriction is entitled to be given the effect of its plain and manifest meaning. <i>Laney v. Early</i>, 292 Ala. 227, 292 So. 2d 103, 107 (1974). 7. In determining whether restrictive covenants should be set aside, the effect of the restrictions upon the value of all property subject to the covenant must be considered. <i>Laney v Early</i>, supra, at 107-108. <p>Regarding the duration of restrictive covenants, the issue is whether or not the restrictive covenants run with the land. The Alabama Supreme Court case of <i>Lowenburg, et al. v. City of Saraland</i>, 489 So. 2d 562 (1986) provides and follows the principle of construction set out in <i>Allen v. Axford</i> 285 Ala. 251 So. 2d. (1969):</p> <p><i>" The paramount factor in' determining whether a covenant is one. running with land is intent of the parties. [Citations omitted] In determining this a court first looks to the instrument, and if this intent be not clear from the face of the instrument, the court will look to surrounding circumstances. [Citations omitted]"</i></p> <p>In <i>McMahon v. Williams</i>, 79 Ala. 288, it is stated:</p> <p><i>" One of the most practical tests, supported common sense and common business experience, is, whether the restriction imposed by the grantor or proprietor upon the granted premises would naturally operate to enhance the value of his adjacent premises, whether retained by him or conveyed to another. If this be so, it is a strong circumstance to indicate that the restriction was not intended for the mere personal benefit of the grantor, but as a permanent servitude beneficial to the owner of the land, whoever he may be, and appendant to the premises."</i></p>

TABLE A.2 Responses to Federal Government Agency Written Comments	
COMMENT	RESPONSE
FD-2.38 (continued)	<p>In Webb v. Jones, [163 Ala. 637, 50 So.887], the observation is made that:</p> <p><i>" If the provision was reserved for the benefit of the adjacent land retained, and not merely for personal advantage, covenants are said to touch and concern (the land)."</i></p> <p><i>" A restriction having attached and become appendant to the land, it runs with the land automatically whether such words as 'heirs and assigns,' perpetual,' 'running with land,' be used or not used."</i> 285 Ala. at 258, 231 So. 2d at 128.'</p> <p>The conclusions that can be reached from the above-cited Alabama cases is that while restrictive covenants are not favored in law they are enforceable and are given the effect of their plain and manifest meaning when there is no ambiguity in the language of the covenant. Furthermore, such restrictive covenants will constitute a permanent servitude when they relate to the property, are legally justified and concern the property. Little v. Hunter. 289 Ala, 6, 265 So. 2d 441 (1972). And finally, a unambiguous restrictive covenant that attaches and becomes appendant to the land, runs with the land automatically whether such word, as "theirs and assigns," "perpetual," or "running with land," are used or not used.</p>
FD-2.39	See response FD-2.20. Environmental or UXO deed restrictions are specific to the environmental/UXO site boundaries. If a subdivision of parcel includes any of a environmental/UXO site(s), then the restrictions will apply to that sub-parcel. Transfer documents also would address the conditions and process that allow for the removal of any environmental or UXO encumbrances.
FD-2.40	Should this type of contamination be found at a future date, the encumbrance associated with hazardous materials remedial activities will also apply to these contaminants. The BCT will assure that hazardous, toxic, radiological, and CWM contamination at FMC are appropriately remediated.
FD-2.41	<p>The Army considers UXO to be principally a safety issue. Under rare circumstances, the potential for CERCLA type contamination may exist. If any contamination of this nature is documented at FMC it will be investigated and cleaned-up under the direction of the BCT.</p> <p>The text will be modified to include this potential in Section 2.6.1.2.</p>
FD-2.42	Comment noted.
U.S. Department of Transportation, Federal Highway Administration (FD-3)	
FD-3.1	Comment noted.

A.3.2.3 State of Alabama Agencies - Written Comments

Comments on the Draft EIS were received from the following State of Alabama government agencies:

- ST-1 Alabama Historical Commission
- ST-2 Alabama Department of Conservation and Natural Resources

Copies of the comments and responses are provided in the following pages.



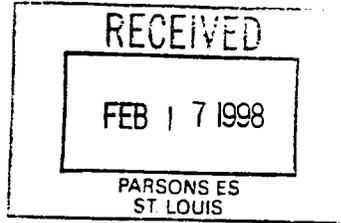
STATE OF ALABAMA
ALABAMA HISTORICAL COMMISSION

468 South Perry Street
MONTGOMERY, ALABAMA 36130-0900

F. LAWRENCE OAKS
EXECUTIVE DIRECTOR

TELEPHONE NUMBER
334-242-3184
FAX: 334-240-3477

January 26, 1998



Colonel William S. Vogel
Commander and District Engineer
U.S. Army Corps of Engineers
Mobile District
P.O. Box 2288
Mobile, Alabama 36628

Re: AHC 98-0289
Draft Environmental Impact Statement
Disposal and Reuse of Ft. McClellan
Calhoun County, Alabama

Dear Colonel Vogel:

Thank you for the opportunity to comment on the Draft EIS for the closure of Ft. McClellan. We have been in consultation with the BRAC offices regarding the Programmatic Agreement included in the DEIS which we are in general agreement with. A few outstanding issues which we are still discussing include the completion of the National Register boundaries for historic structures or districts and ensuring review of potential impact to these areas as well as completion of the archaeological investigations on the base. We have also been consulting with the BRAC offices regarding the issue of transferring properties with lessened covenants. We hope to have these resolved in the very near future.

ST-1.1

Again, we appreciate the fine work done by the Mobile District and we look forward to working with you through the completion of this project. Should you have any questions or comments, please contact Greg Rhinehart of our office.

Sincerely,

F. Lawrence Oaks
State Historic Preservation Officer

FLO/GCR

The State Historic Preservation Office
<http://preserveala.org>



STATE OF ALABAMA
DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
64 NORTH UNION STREET
POST OFFICE BOX 301456
MONTGOMERY, ALABAMA 36130-1456

FOR JAMES, JR.
GOVERNOR

February 2, 1998

DIVISION OF GAME & FISH
CHARLES D. KELLEY
DIRECTOR

JAMES D. MARTIN
COMMISSIONER

M. N. "CORKY" PUGH
ASSISTANT DIRECTOR

Mr. Curtis Flakes
U. S. Army Corps of Engineers
Mobile District
109 S. Joseph Street
Mobile, Alabama 36628-0001

RE: Draft Environmental Impact Statement
Fort McClellan, Alabama

Dear Mr. Flakes:

After a review of the Fort McClellan Draft Environmental Impact Statement for use of the property, we are in general agreement with the encumbered alternative Medium High Intensity Reuse. However, there are several considerations that need to be stressed in the selected alternative in the final Impact Statement.

1. The Mountain Longleaf Complex should be maintained, with allowed processes necessary such as prescribed fire, timber management, etc. This should also be true for the Special Interest Natural Areas present on the property.

ST-2.1

2. The preferred alternative should state that the undeveloped portion of the property could best be managed by and through a partnership between the Alabama Department of Conservation, Game and Fish Division, and the U. S. Fish and Wildlife Service.

ST-2.2

3. The alternative should emphasize that hunting and fishing, along with appropriate management of wildlife habitats and populations be allowed in the manner so deemed desirable by the U. S. Fish and Wildlife Service and Alabama Game and Fish Division partnership.

ST-2.3

Mr. Curtis Flakes
February 2, 1998
Page 2

4. We support the decision to retain in federal ownership the USX contaminated lands that cannot be reasonably cleaned up without creating significant changes to the ecosystems. It is also important that the undeveloped portion of Fort McClellan not be disposed of in a fragmented manner. Fragmentation would reduce the ability to properly manage and maintain the ecosystem.

ST-2.4

5. Sport shooting should be included in those activities allowed by use of existing ranges that are suitable and safe for such purpose.

ST-2.5

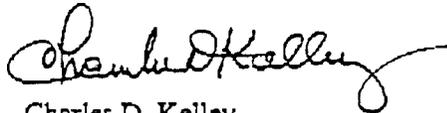
6. A reuse plan that involves the integrity of existing wetlands should require a mitigation plan when such wetlands are adversely affected.

ST-2.6

We welcome the opportunity to comment on this Draft Environmental Impact Statement and would appreciate consideration of our comments in the Final EIS.

Please keep us informed through the remainder of the process. If you have any questions or if we can be of help, please let us know.

Sincerely,



Charles D. Kelley
Director

CDK:GHM/wj

cc: Gary H. Moody

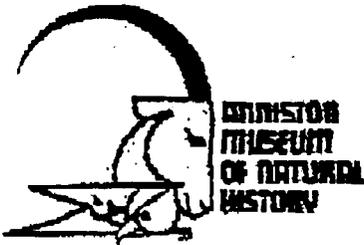
TABLE A.3 Responses to State Government Agency Written Comments	
COMMENT	RESPONSE
ALABAMA HISTORICAL COMMISSION	
ST-1.1	Comment noted. The Final Programmatic Agreement is included in Appendix B of the Final EIS.
ALABAMA DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES	
ST-2.1	Comment noted. The MHIR and MIR Alternatives for Area 2 include the use of fire to maintain the MLP ecosystem.
ST-2.2	<p>Comment noted. The Army supports the USFWS's plans to establish a National Wildlife Refuge for the protection and management of the MLP ecosystem.</p> <p>If the USFWS formally requests a portion of FMC excess property for the establishment of a National Wildlife Refuge (or similar conservation area) and the request is approved by FMDC then USFWS will address the management partnership with ADCNR.</p>
ST-2.3	<p>Comment noted. Hunting and fishing are included in all three reuse alternatives for Area 2. The ultimate extent of availability of the Area 2 lands for hunting and fishing will be associated with 1) the results of the EE/CA and 2) the ultimate disposition of the land.</p> <p>Based upon the potential for UXO contamination in portions of Area 2, which will be addressed during the EE/CA process (and subsequent DDESB review), it is possible that some portions of the area may have access and/or use restrictions which could limit hunting and fishing opportunities.</p> <p>If the USFWS formally requests a portion of FMC excess property for the establishment of a National Wildlife Refuge (or similar conservation area) and the request is approved by FMDC then USFWS will address the management partnership with ADCNR.</p>
ST-2.4	<p>Comment noted. The Army supports the USFWS's plans to establish a National Wildlife Refuge for the protection and management of the MLP ecosystem.</p> <p>Language in the FEIS, supporting the transfer of a large tract of mountainous FMC land for the protection and management of the MLP ecosystem as a single tract, can occur only after the receipt of a formal request for the establishment of a wildlife refuge by USFWS (or similar agency) that is supported by the FMDC. If a formal plan is not submitted, the Army can consider disposal in parcels since the MLP is not a Federal Threatened or Endangered Species and consequently not afforded formal protection under the ESA.</p>
ST-2.5	<p>Comment noted. Upon closure of Fort McClellan the ranges will be closed and targetry removed. The potential exists that upon the completion of the EE/CA Process, UXO removal actions may also be required at some ranges.</p> <p>If the USFWS formally requests a portion of FMC excess property for the establishment of a National Wildlife Refuge (or similar conservation area) and the request is approved by FMDC then USFWS will address the management and recreational activities with ADCNR.</p>
ST-2.6	The Section 404 coordination and permitting process will determine the specific wetland mitigation requirements for any wetlands adversely affected by reuse activities at FMC.

A.3.2.4 Local & Regional Agencies - Written Comments

Comments on the Draft EIS were received from the following local and regional agencies:

- LR-1 Anniston Museum of Natural History
- LR-2 Fort McClellan Development Commission

Copies of the comments and responses are provided in the following pages.



January 21, 1998

Mr. John Esson
Headquarters, US Army
Training and Doctrine Command
Directorate of the Environment
DCSBOS, ATBO-L
Fort Monroe, Virginia 23651-5000

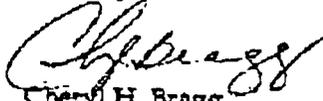
Dear Mr. Esson:

On behalf of the Board of the Anniston Museum of Natural History, I am writing to express support for the establishment of a National Wildlife Refuge (NWR) at Fort McClellan, Alabama. As a part of the reuse and redevelopment of the installation, nearly 12,000 acres of mountainous terrain are proposed to be transferred from the Department of Defense to the U.S. Fish and Wildlife Service. We believe that this will increase opportunity for recreation and tourism, enhance our economy, and protect a rare ecosystem. Thank you for your early endorsement and all that you have done in support of this project.

Because our museum represents one of the area's most significant tourist attractions and because of its natural history content, we see the potential for a significant level of cooperation between the refuge and our museum. Our 60,000-square foot museum is situated on 186 acres of land adjacent to the proposed refuge and is visited by nearly 100,000 people annually. There is an established, high-level interest in 'eco-tourism' which we believe would be enhanced through the designation of an NWR. If marketed along with other nearby natural attractions such as the Ladiga Rail-Trail, Talladega National Forest, Little River Canyon National Preserve, Cheaha Wilderness and State Park, etc., there could be a tremendous response from southeastern eco-tourists. It has also been suggested that there could be a cooperative approach to the establishment of an NWR welcome center. We would be interested in pursuing this concept.

Once again, we support the concept of a Mountain Longleaf National Wildlife Refuge and thank you for your active participation in making it become a reality.

Sincerely,


Cheryl H. Bragg
Interim Director

CHB/thk

600 Museum Drive • P. O. Box 1587 • Anniston, Alabama 36602-1587 • Phone 205/237-5786 • E-mail museum@nhl.net
Printed on recycled paper using soy-based ink

LR-1.1



1702 Noble Street, Suite 101, Anniston, AL 36201 Mail: P.O. Box 306, Anniston, AL 36202 email:fmdcal@aol.com
Telephone: 205 231 1724 Facsimile: 205 231 1726

Draft Environmental Impact Statement Commentary
February 2, 1998

by: *[Signature]*
Robert Richardson
2/27/98

I. Alternatives: No Action, Encumbered, and Unencumbered

The Draft Environmental Impact Statement (DEIS) establishes three property disposition alternatives: the no action alternative, the encumbered alternative, and the unencumbered alternative.

A. No Action Alternative

The no action alternative can be fairly characterized as the "do nothing" alternative. The hallmark of this action is the non-disposal of federal property. Real and personal property remain under Department of the Army ownership and management. The property is maintained in a permanent caretaker status. The No Action Alternative is of little assistance to the local community in developing the property.

LR-2.1

B. Unencumbered Disposal Alternative

The Unencumbered Disposal Alternative can be characterized as the "clean" alternative. Rather than not dispose of the property, or dispose of contaminated property, the Unencumbered Alternative requires the Department of the Army to clean the property to residential standards prior to disposal. This disposal alternative will best ensure the long-term remediation of the property. It is characterized by the Army's efforts to identify and evaluate the potential to remove encumbrances and by the existence of no, or fewer, Army-imposed restrictions to future use. In light of governing federal and state environmental laws, it is highly unlikely that large portions of Fort McClellan could be conveyed to the community in a timely fashion, if at all, because of the requirement to clean prior to conveyance. Funding and technology are similar impediments. This is particularly true of parcels contaminated with unexploded ordnance, hazardous and toxic sites, and industrial sites. The Unencumbered Disposal Alternative is, therefore, of little assistance to the local community in developing the property in a cost effective and timely manner.

LR-2.2

C. Encumbered Disposal Alternative

The final disposal alternative considered is the Encumbered Disposal Alternative. It is best characterized as the most viable alternative presented, even though it provides for the

LR-2.3

conveyance of contaminated property. Encumbered disposal allows for the conveyance of contaminated parcels where institutional controls, or encumbrances, are imposed to control future land use and development. Encumbrances are much like deed restrictions commonly used in traditional real estate transactions. The benefits of this alternative include the following: allowing expedited conveyance of property; best insures the provision of short-term municipal services; best protects the Army's future operating requirements; and allows property to be developed that otherwise would be retained in federal control. It is the Army's preferred alternative.

LR-2.3
(continued)

D. Conclusions

The disposition alternatives contained in the DEIS offer little in the way of "choice" to the local community and to the FMDC. The No Action Alternative precludes the conveyance and disposition of property. The community would not be able to develop Fort McClellan under this alternative. The Unencumbered Alternative would essentially require the complete remediation of the entire property. No parcel of property could be conveyed until remediation is in place. According to the Department of the Army, many parcels at Fort McClellan, including range impact areas and range fans, may never be remediated. It would take many years to ensure that remediation measures are in place to allow for the conveyance of property. The local community's job creation and economic development initiatives would suffer. The community would not be able to develop Fort McClellan under this alternative.

LR-2.4

The Encumbered Disposal Alternative, while providing for the early disposition of contaminated property consistent with the community's Comprehensive Reuse Plan, may also severely restrict development. While accommodating some development, it also requires many invasive constraints on the property's development; potentially including encumbrances on wetlands, regulatory floodplains, threatened and endangered species, cultural resources, utility systems, access and easements, lead-based paint and friable asbestos, and unexploded ordnance. In the end, the community may find that much of Fort McClellan is restricted from development. It almost certainly means that the UXO at Fort McClellan will never be entirely removed, but rather that it will be likely fenced in place. Additionally, the marketability of available parcels may be substantially impacted by adjacent and invasive institutional controls. As was noted in the DEIS, the community would be handicapped in developing Fort McClellan under this alternative:

LR-2.5

"...encumbrances could restrict development types and intensity, therein affecting the marketability and competitive position of the property for subsequent development by a private or other public entity (DEIS, page 5-14)."

E. FMDC Role In Defining Encumbrances

In the event that encumbrances are imposed on the disposition of the property, it is critical that the FMDC have ample opportunity to negotiate and define the institutional controls

that will govern future property development. The FMDC must have a full seat at the table in determining appropriate, viable land use controls.

II. Reuse Alternatives: Medium High Intensity & Fort McClellan Baseline

The DEIS identifies three reuse alternatives relative to development densities and their consequent impacts. In the document, the Army Corps of Engineers (ACE) asserts that the densities and impacts of the Comprehensive Reuse Plan are most accurately characterized as Medium Low Intensity, Medium Intensity, and Medium High Intensity. ACE concludes that the Comprehensive Reuse Plan, if implemented and successful over the life of the development program, will result in the Medium High Intensity reuse alternative. For this reason, it is the only alternative addressed in this commentary.

A. Medium High Intensity Reuse Alternative

In Section Five of the document, *Environmental and Socioeconomic Consequences*, ACE projects the likely impacts of the Comprehensive Reuse Plan on the natural and social environment. In Section 5.4, *Reuse Alternatives*, ACE assesses likely impacts in light of the three reuse alternatives: medium low intensity, medium intensity, and medium high intensity. The document clarifies that "The reuse alternatives are evaluated based on the assumption that the Army would implement its preferred alternative, encumbered disposal (DEIS, page 5-33)." Finally, it is noted that: "It is anticipated that FMDC would prefer to implement the MHIR Alternative, as this alternative encompasses many of the same elements and intensities as the FMDC's Preferred Land Use Plan (DEIS page 5-33)."

In section 5.4.2, *Land Use*, the direct and indirect impacts associated with the various reuse alternatives are detailed as they pertain to overall land use, air quality, noise, water resources, geology, infrastructure, solid waste, transportation systems, ordnance and explosives, hazardous and toxic materials, biological resources, fish and wildlife, vegetation and plant resources, wetlands, federal threatened and endangered species, cultural resources, sociological resources, economic development, and quality of life.

B. Inadequate Development of Baseline Data and Assumptions

As a generality, ACE concludes that the medium high intensity reuse will have adverse impacts, to severely adverse impacts, on many of the resource categories (noted immediately above) when compared to status quo baseline conditions. There appears little doubt that most of the impacts to resource categories are forecasted vis-a-vis existing baseline conditions (i.e. -a TRADOC operated military installation). For example, in describing the impacts to land use based upon the application of the medium high intensity reuse alternative, TRADOC notes that "adverse impacts to land use can be expected as the disposal area would be developed more intensely than under baseline conditions (DEIS, page 5-33)." As a generality, the document notes adverse, to severely adverse, impacts to land use, air quality, water resources, and transportation infrastructure over and above baseline conditions. These specific resources are assessed herein (below).

LR-2.6

i. *Fort McClellan Baseline*

ACE fails to establish, however, that the medium high intensity reuse alternative is any worse than status quo baseline conditions. It appears that the current environmental impacts inherent to Fort McClellan's operation as a military installation are not adequately distinguished from the projected impacts under the medium high intensity reuse. This is troubling because ACE characterizes the Comprehensive Reuse Plan as being most like the medium high intensity reuse alternative. At the same time, it characterizes the ongoing military training mission as relatively benign.

In section 3.4.3, *Application of Intensity Categories*, TRADOC establishes baseline conditions at Fort McClellan by noting that "...the overall use of FMC is characterized as low to medium low intensity (DEIS, page 3-9)." This statement appears to be solely based upon land use density and residential and employee populations. It does not, however, consider historic qualitative factors that have substantially impacted the natural environment at Fort McClellan. The medium high intensity reuse alternative is not considered vis-a-vis the on-going military mission, but only against a suspect measurement of floor to area ratio. For example, toxic sites, land fills, unexploded ordnance, troop movements, heavy machinery operation, incineration (two sites), golf course construction and management, heating and cooling plants, and other impacts are not adequately developed as baseline data upon which ACE is qualified to make judgment calls against the Comprehensive Reuse Plan.

LR-2.7

Stating that Fort McClellan represents a low to medium low intensity impact and then using that determination as a baseline to measure reuse alternatives does not pass the common sense test. How can the federal government classify Calhoun County's largest employer (with over 5,000 jobs) and a major university operating two incinerators and five central steam and chill plants as a low to medium low intensity use? How can the entity responsible for a total of four land fills (some of which are highly contaminated) and many toxic sites in and around a semi-circle of approximately 10,000 acres of unexploded ordnance be considered a low intensity use? How does one compare the impacts of a light industrial park subject to strict state and federal environmental laws to the impacts of explosive (and non-explosive) artillery rounds; to the impacts of heavy equipment and machinery cutting through the forest; and to the impacts of an army of soldiers training in the out-of-doors? These qualitative factors are absent from sterile baseline calculations assumed to exist because FAR is no greater than .008.

ii. *Land Use*

The DEIS does not factually support many of the assertions made by ACE relative to the impacts of the medium high intensity reuse alternative. For example, in analyzing the impacts of the various reuse alternatives in Section Five, *Environmental and Socioeconomic Consequences*, it is asserted that under the medium high intensity reuse alternative "[T]he total square footage of built floor space would increase to approximately 9 million square feet (including residential) from the approximately 6

LR-2.8

million square feet currently existing. A concurrent increase in floor to area ration (FAR) would also increase (DEIS, page 5-33)." Yet on Table 3.2, *DEIS Reuse Alternative's Attributes*, a total of 7,190,000 square feet of facility floor space is noted as a consequence of the medium high intensity reuse alternative. There is a substantial discrepancy in the numbers applied to establish FAR.

Using facility square foot area as depicted in Table 3.2 is also instructive in assessing overall impacts of the medium high intensity reuse alternative against current, baseline conditions. There currently are 6,083,000 square feet of facility floor space at Fort McClellan. Table 3.2 indicates that the medium high intensity reuse alternative will grow facility square footage to 7,190,000. The difference between the baseline and medium high intensity reuse alternative is only 1,107,000 square feet. Yet this difference, using the criteria established by ACE in determining that Fort McClellan is a low intensity use (namely, FAR), is so substantial that the Comprehensive Reuse Plan is considered a medium high intensity use. This is significant because the impacts of a seven million square foot development are not likely to be much worse than the impacts of six million square foot army base. The numbers do not substantiate the conclusions.

LR-2.8
(continued)

iii. Ambient Air Quality

Additionally, consider that the DEIS concludes that the medium high intensity reuse alternative will have "an overall net increase in emissions (DEIS, page 5-35)" that will negatively impact ambient air quality. Once again this assertion is not factually weighed against baseline conditions. The DEIS establishes three general sources of air pollutants that will contribute to a "net" increase over baseline: mobile sources, construction dust, and construction equipment. It is asserted that mobile source transmissions will be the most egregious: "Once the reuse areas are occupied by the various residential, commercial, and industrial tenants, an increase in vehicle traffic would generate additional mobile source emissions in the region. The anticipated change in vehicle emissions was calculated as the primary indicator of air quality impacts resulting from the land reuse because there are no specific industrial use proposals at this time (DEIS, page 5-35)."

While air pollution projections were asserted based on future potential development and, consequently, attributed to the development program, there exist no basis to contrast future mobile emissions from the status quo. In describing baseline conditions in Section 4, *Affected Environment*, ACE stresses: "It should be noted that the required air emissions inventory is for stationary sources only and does not include mobile sources. A mobile source emissions inventory has never been conducted at Fort McClellan (DEIS, page 4-11)." As such, on what authority does the Army assert that the development program will cause a net increase in air pollutants?

LR-2.9

By the Army's admission, it likely will not be caused by new industrial sources:

"...it is unlikely that there would be any significant adverse impacts on air quality (NAAQS exceedances) as a result of these new activities because the

operators of any new emission sources would be required to comply with all applicable Federal and state air quality regulations, including prevention of significant deterioration (PSD) regulations. These regulations include a requirement to obtain applicable permits that possibly specify emission limits and control technology. These regulations are designed to be protective of the environment and are meant to prevent an attainment area becoming a nonattainment area (DEIS, page 5-34).”

LR-2.9
(continued)

It should be noted that construction dust and construction equipment will likely have a temporal and limited impact on ambient air quality and are already causes of air pollution at Fort McClellan. In fact, the Army has constructed in excess of six million square feet of facilities at the installation to date and is, therefore, probably one of the greatest contributors of construction dust and equipment pollution in Calhoun County.

iv. Water Resources

The DEIS indicates that the “Implementation of the MHIR alternative would result in a long-term direct adverse impact to surface water (DEIS, page 5-38)” primarily caused by the increase in impervious surface area generally associated with new roof top construction and parking lot construction. In making this assertion, ACE assumes the full build out of the industrial and retirement development programs over the life of the project. It fails, however, to consider the impacts associated with a heightened stormwater management program that will be required as a consequence of this growth.

LR-2.10a

The final Comprehensive Reuse Plan notes the regulatory costs associated with full build-out, and includes a budgeted (albeit currently unfunded) line item for effective stormwater management in excess of \$18,000,000.00. Assuming that full build-out is ever achieved, it is highly unlikely that adequate stormwater management measures will not protect surface water. In fact, the stormwater management program is projected to include aesthetic water scaping to enhance and increase surface water resources. Due to the development program, there will likely be an increase in the number of lakes and ponds at Fort McClellan.

It should be additionally noted that officials at Fort McClellan have lamented about the poor state of stormwater management currently exercised by the Army. Complaints have ranged from poor management and maintenance practices to systemic structural and design inadequacies, including the direct run-off of stormwater into the sewage collection system. Officials have noted that the recent fish kill at Cane Creek, caused by a discharge from the Fort McClellan wastewater treatment plant, may have been prevented but for the inflow/infiltration problem exacerbated, in part, by the direct flow of stormwater into the collection system. These problems, if they truly exist, must be addressed in the development program and could prove to be very costly to repair. At any rate, rather than a direct adverse impact on surface water, the medium low intensity reuse alternative may actually improve surface water.

LR-2.10b

v. *Transportation Infrastructure*

The DEIS indicates that the medium high intensity reuse alternative will have "significant adverse impacts (DEIS, page 5-45)" on the area transportation system. It calculates that the development program will "generate an estimated 87,750 average daily vehicle trips (ADT) compared to 16,719 under baseline conditions (DEIS, page 5-45)." However, once again, ACE fails to adequately establish base line conditions. No justification is given to back the assertion that baseline ADT is 16,719. Note 1 of Table 5.3, *Summary of Trip Generation Estimates by Reuse Alternative*, indicates that trip generation rates are based primarily on average rates from the Institute of Transportation Engineers (1991) and refers the reader to Appendix G of the DEIS for detailed calculations. Appendix G does not contain any data relative to baseline conditions nor does it contain the average rates used from the Institute of Transportation Engineers. No data is offered to back the baseline assertion. The reader has no way of knowing upon what basis baseline calculations were determined.

It is instructive, however, to closely examine the medium high intensity reuse alternative data as presented in Table 5.3, page 5-45. The reader can calculate trips per acre by land use (noted below in **bold**) by dividing the total number of daily vehicular trips by the amount of development. The following calculations by land use may be relevant to determining baseline data:

Medium High Intensity Reuse Alternative

<u>Land Use</u>	<u>Amount of Development</u>	<u>Total Daily Trips</u>	<u>Trips/Acre</u>
Retail	228 acres	27,600	121
Office	116 acres	14,200	122
R&D	25 acres	2,000	80
Residential	515 units	3,600	6.9
Industrial	924 acres	25,000	27
Education/Training	202 acres	8,700	43
Active Recreation	771 acres	1,800	2.3

LR-2.11

Comparing the data above, particularly the trips/acre figure to existing land use patterns at Fort McClellan establishes a baseline ADT much higher than that asserted by ACE. While the calculations are certainly imprecise, they do present an "apples to apples" comparison to actual, existing land use patterns characteristic of the status quo as noted by ACE in the DEIS.

The DEIS outlines existing land uses in Table 4.2, *Cantonment Area Land Use, Fort McClellan*, on page 4-2. Using the data presented in that chart, it is possible to infer or extrapolate a substantially higher ADT than is indicated. Consider the following:

Baseline

<u>Land Use Category</u>	<u>Approx. Area</u>	<u>Trips/Acre</u>	<u>Total</u>
Family Housing	175	6.9 (residential)	6,966
Troop Housing	162	6.9 (residential)	1,207
Commercial Services	60	121 (retail)	7,260
Community Facilities	85	2.3 (active rec.)	195
Administration	45	122 (office)	5,490
Training & Operations	250	43 (educ./training)	10,750
Supply, Storage, Warehouse	231	27 (industrial)	6,237
Recreation	365	2.3 (active rec.)	839
National Guard	162	43 (educ./training)	6,966

In the absence of contrary data, one could use these imprecise calculations to conclude that the actual ADT at Fort McClellan today is approximately 39,055—substantially higher than baseline ADT as indicated in the DEIS. Perhaps an approximate two-fold increase over current ADT will be manageable (87,750), particularly in light of a completed eastern bypass. Of course, if the eastern bypass is not completed, the development program is not likely to reach full build-out. If full-build out is not realized, actual ADT will be less than the 87,750 calculated by ACE.

Again, it appears that ACE is making judgment calls relative to impacts at build-out without first establishing an adequate baseline upon which to make those determinations.

C. Cumulative Impacts

It is critical to note that overall, cumulative impacts of the medium high intensity reuse alternative on a regional basis may be relatively insignificant. This point is best made by the DEIS, which states: "Impacts of the proposed action may be significant on an individual resource category within the confines of the analysis area; however, these impacts may become less than significant on a regional cumulative impacts analysis basis (e.g. the impacts of the proposed action may be significant on existing transportation systems at several selected sites within the analysis, but these same impacts are not significant to the regional transportation network) (DEIS, page ES-7)."

LR-2.11
(continued)

LR-2.12

III. Proposed Special Uses

A. Mountain Longleaf Pine Ecosystem

The DEIS addresses, at some length, the importance of protecting the unique mountain longleaf pine ecosystem (MLPE). The FMDC concurs that the MLPE is an important resource that should be protected from future development. To this end, it has included in its reuse plan a strategy to create a National Wildlife Refuge consisting of approximately 10,000 acres of the Choccolocco Mountains. It is absolutely critical that the boundaries of the NWR be precisely determined by the FMDC. It is equally important that the Army ensure active recreational access to the NWR. This will require the clean-up of unexploded ordnance and, at the very least, an active education program to protect the health and welfare of its users. This burden should be assumed by the Army. Additionally, the FMDC anticipates negotiating the encumbrances that control access and development to the NWR with the Army, or alternatively, strongly recommends that the Department of the Interior negotiate same.

LR-2.13

B. National Center for Domestic Preparedness

The DEIS indicates that a detailed NEPA analysis for the stand-up of the National Center for Domestic Preparedness is the responsibility of the Department of Justice, its federal proponent (DEIS, page 2-11). This statement may not be accurate and should not be included in the DEIS. It is quite possible that the Army will retain ownership of the Chemical Defense Training Facility for continued use as a component to the NCDP. It is unclear, at this point, which federal entity, if any, will be required to conduct detailed NEPA analysis.

LR-2.14

Additionally, the DEIS notes that “[t]he FMDC has stated that their Final Reuse Plan will include the establishment of a National Center for Domestic Preparedness (NCDP) for training first responders to domestic terrorists acts; however, the details of the plan were not available in the reuse plan used for preparation of the DEIS (FMRRRA, 1996) (DEIS, page 2-11).” For the record, it should be noted that the FMDC advised TRADOC to include in its NEPA analysis (and in the DEIS) its intention to reuse the CDTF and other facilities for the NCDP on numerous occasions, even months before the release of the DEIS. Requiring “details of the plan” before including it in the DEIS treats the projected use differently than other projected uses for Fort McClellan after its closure. Consider, for example, that detailed plans for industrial reuse or for retirement reuse were not required by TRADOC for inclusion in the DEIS. However, these uses were considered in the DEIS. Similarly, detailed plans for the National Wildlife Refuge were not available for the DEIS, yet the NWR was considered in the document. The FMDC is unaware of any regulatory requirement mandating plan details for inclusion in a DEIS; such a treatment also defies custom and tradition when considering development impacts at closed installations in a DEIS. The truth is, more details were offered relative to the NCDP than

LR-2.15

any other reuse strategy or projected land use. There is no justifiable reason for excluding the impacts of the NCDP from the DEIS.

Finally, the DEIS states that "if a more concrete proposal is released by the Department of Justice prior to completing preparation of the FEIS, it may be considered as part of the reuse alternatives (DEIS, page 2-11)." The Army should consider this commentary as notice that more detailed plans do exist at this time for the NCDP. Plan details are available from the Justice Department and should be included in the FEIS.

LR-2.15
(continued)

IV. Other Considerations

A. Unexploded Ordnance

Pursuant to AR 385-64 (USAEC, 1995b), the Department of Defense Explosive Safety Board will review and approve the conveyance of all property likely to contain UXO as determined by an Engineering Evaluation and Cost Analysis. It is imperative to the FMDC that the Area 1 redevelopment area (7,200 acres of the "cantonment area") be completely cleaned of UXO. It is equally important that large areas of Area 2 (10,000 acres of passive recreation area) be completely cleaned of UXO. Specifically, the Eastern Bypass Corridor must be completely remediated. Also, active recreation space must be remediated to ensure access to the National Wildlife Refuge. The FMDC expects to be a full and complete partner with the Army in determining clean-up priorities and time frames. With regard to the Eastern Bypass, Deputy Under Secretary of Defense Sherri W. Goodman has committed, while at Fort McClellan, to expedite the EE/CA process for this essential corridor. She has also promised the use of new and innovative technologies to ensure swift and complete remediation. The FMDC expects that this commitment will be met.

LR-2.16

B. Economic Factors

In determining the economic impacts of the medium high intensity reuse alternative, ACE fails to consider two very important factors. First, it fails to cite President Clinton's Five Point Plan as the federal government's promise and commitment to heavily weigh the economic redevelopment of closed military installations when making disposition determinations. This should be factored into the FEIS. Second, the economic analysis included in the EIS should consider the negative market place stigma inherent to the abandonment of unexploded ordnance. The impact of UXO on property valuation and marketability should be included in the FEIS. This is important because the economic impacts, indeed the success of the development program, included in the Comprehensive Reuse Plan are based upon the assumption that all UXO is removed or otherwise safely and adequately remediated. Marketplace stigma and the unavailability of property will likely have a substantial impact in achieving full build-out.

LR-2.17

LR-2.18

C. FMDC and the Base Clean-up Team

The FMDC should be invited to all BCT meetings. Currently, BCT meetings are closed to the public and to the FMDC. The FMDC has requested on numerous occasions that it be included in BCT meetings. It is nothing short of ludicrous that the FMDC is barred from meetings designed to develop a remediation plan and priorities for the property. The FMDC, not the Army, not the EPA, and not ADEM will in all likelihood own the property in the future. No single, reasonable answer has been yet communicated to the FMDC as to why it cannot attend the meetings. This should be the BCT's first environmental priority. The Army should include the community in these decisions whenever and

LR-2.19

however it can. Perhaps valuable lessons regarding the necessity of community inclusion can be learned by studying the chemical demilitarization mission at the Anniston Army Depot.

LR-2.19
(continued)

D. Utility Transfers

The DEIS states that "the Army will negotiate the transfer of existing utility systems to appropriate providers (DEIS, page 2-4)." The FMDC is generally very disappointed in TRADOC's handling of the utility transfer issue and firmly believes that, to this point, it has been excluded from being a full partner in making utility disposition decisions. TRADOC has been unable, or unwilling, to articulate a cohesive, legal, workable utilities conveyance strategy. New policy promulgated by the Army this month requires that the LRA be afforded an opportunity to shape utility disposition. This has not been allowed to happen. TRADOC should not assume that it is the community's desire that "the Army ...negotiate the transfer of existing utility systems to appropriate providers." The FMDC should be formally consulted on the disposition of utilities.

LR-2.20

E. Caretaker Status

The DEIS states that "Under Caretaker status, the Army will conduct minimal maintenance procedures as required to preserve and protect those facilities and items of equipment to the extent allowed by regulation and available funding (DEIS, page 2-14)." The DEIS ignores the fact that the FMDC has made a formal request to the Army to become the Caretaker through a Community Cooperative Caretaker Agreement. The FEIS should note this fact and not assume that the Army will be the Caretaker. It should also note that TRADOC has endorsed, in concept, the Community Caretaker Agreement as a viable means of providing post-closure operations and maintenance.

LR-2.21

F. Landfills

Existing landfills are a key area of concern to the FMDC. Except for what is written in the Environmental Baseline Survey and the DEIS, little is apparently known of the contents of the landfills. The FMDC is particularly concerned about the location and contents of Landfill #1. TRADOC should move this landfill and restore the property to its original condition. Landfill #1 sits in the heart of the cantonment area and represents a serious constraint to future development. Its existence past closure may represent a serious threat to health and human safety and certainly will chill the development of the property, increasing marketing costs and decreasing land values. Landfill #1 is a possible CERCLA site. Also, Landfill #3 is of concern given its location to the City of Weaver. This landfill should be very closely monitored for contaminated leaching into the Weaver water system. Pump and treat systems should be installed to protect the local population. A detailed water plume should be mapped and made available to the public.

LR-2.22

G. Permits

In consultation with the Army, the FMDC requests that all permits be renewed and transferred to the FMDC as personal property following the closure of the installation.

LR-2.23

H. Historic District

The boundary lines of the Buckner Circle Historic District, as drawn in the DEIS and (apparently) approved by the State Historic Preservation Office, clearly includes residential units that are not historic in nature. The boundary of the historic district should be redrawn to exclude the modern residential units to the immediate north-east of the district. It is the intention of the FMDC to demolish these units in order to better protect the historic core of this important neighborhood.

LR-2.24

V. Conclusions

The DEIS should more accurately reflect baseline conditions at Fort McClellan if ACE intends to measure reuse alternative impacts against the status quo. Too many assumptions and assertions are used as baseline data in order to measure the impacts of the medium high intensity reuse alternative. The conclusions reached in the document relative to the impacts of this reuse alternative appear not to be based on fact, but merely speculation and conjecture. A sound assessment of baseline conditions should scrutinize status quo operations as strictly as ACE assessed the impacts of the medium high intensity reuse alternative. Only when this is done will the comparison between the two be fair and accurate.

LR-2.25

TABLE A.4 Responses to Local & Regional Government Agency Written Comments	
COMMENT	RESPONSE
Anniston Museum of Natural History (LR-1)	
LR-1.1	Comment noted. The Army supports the USFWS's plans to establish a National Wildlife Refuge for the protection and management of the MLP ecosystem.
Fort McClellan Development Commission (LR-2)	
LR-2.1	<p>The No Action Alternative is required, by law, to be analyzed within the EIS. Additionally the No Action Alternative serves as a benchmark to address impacts associated with the other reuse alternatives.</p> <p>The Army concurs that the No Action Alternative will have little economic benefit to the local Calhoun County community. Public access to the undeveloped portions of FMC will, however, continue under the No Action Alternative.</p>
LR-2.2	The Army concurs that under the UD Alternative, the economic benefits associated with the redevelopment of the FMC excess property will be delayed. Additionally the DEIS documents that the environmental impacts associated with the UD Alternative are much more severe than under the ED Alternative. Consequently the Army's preferred Alternative is ED.
LR-2.3	Concur.
LR-2.4	<p>The DEIS analyzes the No Action, ED, and UD alternatives. These alternatives are the standard alternatives evaluated under BRAC. The Army is not aware of any other reasonable alternatives to evaluate other than the three alternatives detailed in the DEIS.</p> <p>The Army concurs that the UD Alternative is inappropriate for this action. Under the UD Alternative, disposal by parcels could occur, in that as parcels are determined "clean" and available for reuse they would be conveyed to the appropriate new owner(s). Redevelopment could occur within each parcel as soon as the parcels are clean and clear of any potential encumbrances. In this manner redevelopment would not have to wait until the entire disposal area is cleaned up to be available for transfer.</p>
LR-2.5	The Army understands that encumbrances may limit the types of redevelopment that may be feasible at some locations within the disposal area. However, based upon the Army's analysis in the DEIS, the ED Alternative is the most appropriate alternative for this action. Additionally the ED Alternative incorporates input during the scoping process in which the protection of the natural resources at FMC was indicated to be an important issue by the great majority of agencies and citizens providing input. Encumbrances enhance the protection of natural resources and facilitate environmentally sustainable reuse. Additionally, it may not be possible to unencumber certain restrictions or desirable to unencumber other restrictions based upon the potential adverse impacts associated with UD.
LR-2.6	Concur.

TABLE A.4 Responses to Local & Regional Government Agency Written Comments

COMMENT	RESPONSE												
LR-2.7	<p>Do not concur.</p> <p>By definition in subsection 3.4.2, the Army uses five parameters to categorize and compare baseline and reuse development intensities: 1) residential density, 2) employee density - general space, 3) employee density - warehouse/storage space, 4) Floor Area Ratio (FAR), and 5) Development Ratio. These factors were used uniformly to characterize the baseline and reuse conditions.</p> <p>The baseline conditions associated with Army training activities not included in intensity category definitions are detailed within the resource groups in section 4.0. Consequently the conditions associated with Army activities are presented in section 4.0 of the document.</p> <p>Impacts of reuse compared to baseline conditions incorporate intensity based comparisons as well as baseline activity versus planned reuse activity comparisons. Consequently, the comparison between baseline and reuse alternative conditions in the document is valid. The low to medium low intensity classification of baseline conditions does not represent a preconception of intensity activity, but rather was so identified subsequent to the establishment of the three reuse intensity alternatives. Thus, the intensity level of baseline conditions based upon the above intensity parameters was compared to the intensity levels of the three reuse alternatives to arrive at its "low to medium low" intensity level classification.</p>												
LR-2.8	<p>Do not concur. The total square footage of built floor space under the MHIR Alternative is approximately 9 million square feet. The 7,190,000 square feet in Table 3.2, as noted in the "remarks" column, includes only commercial, industrial and institutional uses, and does not include residential floor space. Adding the residential space (1,884,000 square feet) to the industrial/commercial/institutional space would result in approximately 9.07 million square feet of total built floor area.</p> <p>The current 6,083,000 square feet of built floor space at FMC includes approximately 3 million square feet of industrial/commercial/institutional space and approximately 3 million square feet of residential space.</p> <p>There is considerable difference in the amount of total built space between the current facilities and the MHIR Alternative. The following compares the floor space between current FMC facilities and MHIR Alternative facilities:</p> <table border="1"> <thead> <tr> <th><u>Category</u></th> <th><u>Current FMC</u></th> <th><u>MHIR Alternative</u></th> </tr> </thead> <tbody> <tr> <td>Indust/Comm/Instit.</td> <td>3.1 million</td> <td>7.2 million (rounded)</td> </tr> <tr> <td>Residential</td> <td>3.0 million</td> <td>1.9 million (rounded)</td> </tr> <tr> <td>Total</td> <td>6.1 million</td> <td>9.1 million (rounded)</td> </tr> </tbody> </table>	<u>Category</u>	<u>Current FMC</u>	<u>MHIR Alternative</u>	Indust/Comm/Instit.	3.1 million	7.2 million (rounded)	Residential	3.0 million	1.9 million (rounded)	Total	6.1 million	9.1 million (rounded)
<u>Category</u>	<u>Current FMC</u>	<u>MHIR Alternative</u>											
Indust/Comm/Instit.	3.1 million	7.2 million (rounded)											
Residential	3.0 million	1.9 million (rounded)											
Total	6.1 million	9.1 million (rounded)											

TABLE A.4 Responses to Local & Regional Government Agency Written Comments

COMMENT	RESPONSE
LR-2.9	<p>Do not concur. Based upon the Army's comparison of baseline to reuse alternative conditions, adverse impacts to air quality are anticipated. It should be noted that approximately 28% of the baseline FMC population are trainees and are not allowed to have vehicles. Additionally the baseline traffic ADT has been revised in the FEIS to adjust for traffic not using the Summerall and Baltzell Gates. Therefore, the following changes have been made to the text in order to clarify this issue.</p> <p>The following sentence has been added to subsection 5.3.2: "...A mobile source emissions inventory has never been conducted at Fort McClellan (For impact analysis purposes the baseline mobile source emissions were estimated based upon a baseline traffic volume of approximately 29,375 ADT; see subsection 4.7.5)."</p> <p>The following discussion has been added to subsection 5.4.3 in the discussion of the Medium-High Intensity Reuse Alternative: "...Vehicle miles traveled were determined based on the average daily trips. Although a mobile source emissions inventory has not been conducted at FMC, the baseline number of trips per day established was 29,375 for the MHIR. Implementation of this alternative is predicted to increase the number of trips per day to 87,750, or an increase of 58,375 trips per day over baseline conditions. The estimated increase in mobile source emissions is provided in Table 5.1. The assumptions and detailed calculations for determining mobile source emissions are provided in Appendix G."</p> <p>The following discussion has been added to subsection 5.4.3 in the discussion of the Medium Reuse Alternative: "...The average daily trips are approximately 68% of MHIR Alternative, primarily as a result of the decreased intensity for development. Although a mobile source emissions inventory has not been conducted at FMC, the baseline number of trips per day established was 29,375 for the MIR. Implementation of this alternative is predicted to increase the number of trips per day to 59,800, or an increase of 30,425 trips per day over baseline conditions. Table 5.1 presents the estimated increase in vehicle emissions that would result under the MIR Alternative. These estimates are based on fewer daily trips compared to MHIR Alternative."</p> <p>The following discussion has been added to subsection 5.4.3 in the discussion of the Medium-Low Intensity Reuse Alternative: "...The average daily trips are approximately 50% of MHIR Alternative. Although a mobile source emissions inventory has not been conducted at FMC, the baseline number of trips per day established was 29,375 for the MLIR. Implementation of this alternative is predicted to increase the number of trips per day to 44,150, or an increase of 14,775 trips per day over baseline conditions. Table 5.1 presents the estimated increase in vehicle emissions that would result under the MLIR Alternative. These estimates are based on fewer daily trips compared to MHIR Alternative."</p>

TABLE A.4 Responses to Local & Regional Government Agency Written Comments	
COMMENT	RESPONSE
LR-2.9 (continued)	<p>The following discussion has been added to subsection 5.5.5.1.3 in the discussion of the Cumulative Impacts of Reuse: ".... "Therefore there is a long-term significant adverse impact on air quality and mitigation is required. The significant adverse impact is due to the increase in CO, NOx, and VOC emissions, primarily from mobile sources. The increase in construction dust is offset by a decrease in emissions from, fire fighting training, fog oil training of the chemical school (training of reserve units on Pelham Range is expected to continue), and prescribed burning (no prescribed burning under the MLIR). Construction equipment emissions are a contributing factor to the CO and NOx emissions, although vehicle emissions are the primary source. "</p> <p>The following discussion has been added to subsection 5.5.5.3.3: "...A long-term significant adverse impact would be expected and mitigation is required, primarily because of mobile sources, although this Alternative has less adverse impacts to air quality compared to the MHIR and MIR Alternatives."</p>
LR-2.10a	<p>An increase in impervious acreage is considered an adverse impact to surface water. The addition of more impervious acreage associated with the redevelopment of FMC is therefore considered an adverse impact. Approximate increases in impervious acreage associated with reuse are: MHIR - 984acres; MIR - 903 acres; and MLIR - 855 acres.</p> <p>This substantial increase in impervious acreage is expected to result in adverse impacts to surface water unless improvements to stormwater systems are made to mitigate this impact. Additionally the development of two additional golf courses planned under the FMDC reuse plan increases the potential for more pesticides and herbicides to enter surface water.</p> <p>The text in the Final EIS will include a statement in subsection 5.4.5.1 indicating that adverse impacts maybe reduced if appropriate and effective new stormwater control systems are installed as part of the redevelopment action.</p>
LR-2.10b	<p>Comment noted. The Army is not certain which part of the stormwater management system FMDC is addressing. NPDES permits for stormwater discharge clearly state certain requirements and failure to abide by the permit requirements may result in fines or imprisonment. The Army has invested considerable time and money to ensure that the FMC industrial sites are appropriately permitted for stormwater discharges.</p> <p>In general the stormwater management practices at FMC have been enhanced by the preparation and utilization of a Soil Erosion Management Plan and a Stormwater Pollution Prevention Plan. Recent projects to control erosion and reduce stormwater pollutant runoff include: erosion control at the active landfill; installing concrete around the fuel pumps at motor pools, and land reclamation at the former demolition debris landfill.</p> <p>The wastewater collection system at FMC is typical for a city the age of FMC. Over the last 10 years there have been several projects to slipline the sewers.</p>

TABLE A.4 Responses to Local & Regional Government Agency Written Comments	
COMMENT	RESPONSE
LR-2.11	<p>Do not concur. Section 4.7.5 (Affected Environment) notes the installation baseline ADT's for Summerall Gate (7,700) and Baltzell Gate (9,000) per the ADOT (Alabama Department of Transportation). The majority of installation traffic uses these two gates for entrance/exit. (Please note that the baseline traffic volume has been adjusted in the FEIS to account for traffic using the other gates at FMC).</p> <p>The matrices in Appendix G indicate the average trip generation rate (trips/unit of measurement) used to calculate total daily trips generated for each land use category. These trip generation rates are based upon average rates cited in the <u>Institute of Transportation Engineers, Trip Generation</u>.</p> <p>Trip generation is generally not a function of acreage (acres of development), but rather a result of building floor area and employees. In addition; 1) a higher percentage of baseline installation traffic is internal (does not enter or exit the installation) and 2) approximately 28 percent of the FMC population are trainees and do not have cars.</p>
LR-2.12	Comment noted.
LR-2.13	<p>Comment noted. The Army supports the establishment of a National Wildlife Refuge by the USFWS to protect and manage the MLP ecosystem. Furthermore the Army supports the resolution of the boundary, recreational use, and related issues at the local level (USFWS and FMDC reaching agreement on these issues).</p> <p>Assuming that a formal proposal is presented and excepted for the establishment of the National Wildlife Refuge by the USFWS the Army would expect to enter into a Memorandum of Agreement (MOA) with the USFWS delineating the Army's responsibilities for UXO within the Refuge. The MOA will address the use restrictions determined to be appropriate based upon the property's suitability.</p>
LR-2.14	Do not concur. The NCDP is a Department of Justice (DOJ) Action. The DOJ will be the lead agency for the NEPA analysis regardless of what entity ultimately owns the current CDTF facility. Among the alternatives that maybe analyzed under the NCDP NEPA process is the evaluation of ownership of the facility.
LR-2.15	<p>Comment noted. The Final EIS contains additional information on the NCDP. This information was not available for inclusion in the Draft EIS and was not included in the version of the reuse plan available for use in the Draft EIS. Training and use of the NCDP is anticipated to be similar to that which currently occurs at the CDTF, consequently impacts to the environment are expected to be similar to baseline conditions. Although the Final EIS includes additional information and analysis concerning the NCDP, it should be noted that the primary NEPA analysis for the establishment of the NCDP will be the responsibility of the DOJ, since the establishment of the NCDP is a DOJ action.</p> <p>The analysis of the development of the USFWS MLP Wildlife Refuge in the Draft EIS was based on limited information available at the time of the preparation of the Draft EIS. The general analysis and inclusion of refuge type alternatives and analysis in the Draft EIS, were principally the result of strong public and agency interest in this subject as indicated during the Public Scoping Process. Additional information associated with the refuge are also included in the Final EIS.</p>

TABLE A.4 Responses to Local & Regional Government Agency Written Comments

COMMENT	RESPONSE
LR-2.16	Comment noted. The Army recognizes it's obligation to transfer property in a condition that is safe for it's intended reuse. The Army also recognizes the importance of Area 1 and the Eastern Bypass to the redevelopment efforts of FMDC and the Calhoun County community. It should be noted, however, that the EE/CA process and the DDESB review may result in some lands being retained under federal ownership if the clearance/removal of UXO would cause 1) significant adverse and unacceptable ecological damage, 2) is not technically feasible, or 3) is not prudent management of the resources. It should be noted that the EE/CA process has a public participation element in which the public, regulatory agencies, and the FMDC can comment on the results and recommendations of the EE/CA.
LR-2.17	Comment noted. A discussion of the President's Five-Part Plan of 1993 will be added to subsection 5.4.14.
LR-2.18	Section 5.3.8 (Ordnance and Explosives) will be modified to note the potential for indirect impacts of ordnance removal/retention on subsequent economic redevelopment under the Unencumbered and Encumbered Disposal Alternatives respectively. Section 5.3.14 (Economic Development) will be modified to note the potential for direct impacts of ordnance removal/retention on subsequent economic redevelopment under the Encumbered Disposal Alternative.
LR-2.19	Comment noted. The top BCT cleanup priority has been and continues to be the remediation of the Eastern Bypass corridor. This prioritization was the result of mutual agreement between the BCT and the FMDC in accordance with the President's Five Point Plan for rapid return of property to the economic benefit to the local community. The Army notes that the BEC has solicited the FMDC and its predecessor the FMRRRA on several occasions asking them to submit their request, to join the BCT, in writing as to the role they might fill on the BCT as outlined in Chapter 2 of the BRAC Cleanup Plan (BCP) Guidebook. To date, no formal written request to join the BCT has been made by FMDC/FMRRRA.

TABLE A.4 Responses to Local & Regional Government Agency Written Comments

COMMENT	RESPONSE
LR-2.20	<p>Comment noted. As discussed with FMRRRA staff in 1995, TRADOC's goal has been and remains to dispose of the utility systems at Fort McClellan as the earliest feasible date in accordance with applicable regulations and policy guidance, while considering the local communities' desires and also ensuring the Army's continuing requirements are met. The methods of disposal were pointed out, to include the potential to transfer the systems to the LRA by economic development conveyance (EDC), public benefit conveyance (water and sewer only) or negotiated sale.</p> <p>By letter of March 12, 1997, the Fort McClellan Reuse and Redevelopment Authority (FMRRRA) Chairman deemed it essential that ownership transferred prior to closure to utility providers and supported the Army's efforts to "privatize" Fort McClellan's utilities. We have been working towards that end and FMRRRA (FMDC) members have been invited to and attended discussion with potential utility providers.</p> <p>In September 1997, TRADOC provided guidance to Mobile District, Corps of Engineers, for utility disposal for Fort McClellan. This guidance has been discussed at several IPRs at Fort McClellan which FMRRRA (or its successor organization, FMDC) staff attended. The process that TRADOC directed Mobile District, Corps of Engineers to follow is consistent with the latest DA policy letter dated December 16, 1997, regarding privatization/disposal of BRAC utilities systems.</p> <p>In an outreach to the FMDC and in response to their expressed concerns, TRADOC arranged to brief and discuss the disposal of utilities with the FMDC on March 17, 1998. Unfortunately, only the FMDC's Executive Director attended. The following points were made:</p> <ul style="list-style-type: none"> - DOD's policy is to dispose of the utility systems as early in the base closure process as possible. - A primary consideration is having utility providers that can provide services to foster economic redevelopment. Therefore the qualifications and financial capability of the provider are of greatest importance. - Disposal must comply with various federal and state statutes and regulations. In addition to Base Closure legislation, the National Environmental Policy Act, the Federal Property Management Act and other statues must be complied with. Purveyors must be able to comply with State of Alabama statues and Alabama Public Service Commission rules and regulations. - Record of Decision for the Fort McClellan disposal and Reuse Environmental Impact Statement must be completed before disposal can occur. - Utility systems area transferred in an "as is" condition and will not be improved before transfer. - Recipients must be able to enter into contract for provision of service with federal agencies.
LR-2.21	<p>Comment noted. The discussion of caretaker status in the DEIS describes the anticipated level of post-closure operations and maintenance that will occur. The ultimate provider of the caretaker services will not influence the level of caretaker activity.</p> <p>The FEIS will include a statement indicating that one of the options available to the Army is the potential of FMDC providing the caretaker services under a Community Caretaker Agreement.</p>

TABLE A.4 Responses to Local & Regional Government Agency Written Comments	
COMMENT	RESPONSE
LR-2.22	<p>Do not concur. Both landfills have been designated by the BCT as sites that require further site investigation. To take action prior to the completion of appropriate investigations and studies, as advocated by FMDC in this paragraph, could lead to the unnecessary and potentially wasteful expenditure of resources on sites which have not been characterized as to the extent of their human health and safety threat. The Army cannot commit to the complete removal of the landfill.</p> <p>It is anticipated that Unencumbered Disposal of Landfill #1 will not be environmentally or economically feasible. Remediation activities at Landfill #1 will be determined by the BCT under the CERCLA process.</p> <p>Remediation and monitoring activities at Landfill #3 will be determined by the BCT under the CERCLA process. The Army notes, however, that some remedial activities at Landfill #3 were undertaken prior to the BRAC 95 decision to close FMC.</p>
LR-2.23	<p>Comment noted. By definition, personal property includes all property except land, fixed-in-place buildings, naval vessels, and records of the Federal Government. Permits fall in this last category. Section 4.6, DOD's 4165.66-M, dated July 1995, covers the early transfer of Clean Air Act Emission Reduction Credits (ERC's) to local reuse authority. This transfer is essentially the transfer of ERC's which are considered akin to personal property. These credits are generated when an installation is located in a non-attainment area according to the Clean Air Act. FMC is located in an attainment area, hence there are no ERC's, and hence no personal property to be transferred. In addition each permit in the State of Alabama specifies the necessary provisions for permit reapplication upon facility/land title transfer.</p>
LR-2.24	<p>Do not concur. Based upon the Army's coordination and consultation with the Alabama SHPO, The boundaries of the FMC historic districts, as presented in the Draft EIS, are accurate.</p>
LR-2.25	<p>Comment noted. The Army believes that the information presented in Section 4 of the DEIS accurately reflects baseline conditions at FMC. The Army has, however, adjusted the traffic and air resources baseline conditions in the FEIS based upon a re-evaluation of the data available for these resources.</p>

A.3.2.5 Organizations/Interest Groups - Written Comments

Comments on the Draft EIS were received from the following organizations and interest groups:

- IG-1 Alabama Environmental Council
- IG-2 Auburn University
- IG-3 The Longleaf Alliance
- IG-4 Alabama Audubon Council & Alabama Ornithological Society
- IG-5 Wild Alabama

Copies of the comments and responses are provided in the following pages.



2717 7th Avenue South, Suite 207
Birmingham, Alabama 35233
(205) 322-3126

January 27, 1997

Mobile Corps of Engineers
Attn: CESAM-PD-E
Mr. Curtis Flakes
109 St. Joseph Street
Mobile, AL 36602

Dear Mr. Flakes,

I am writing on behalf of the Alabama Environmental Council to express our support for the protection of the ecosystem within the soon to be closed Fort McClellan. We request that the Record of Decision for the Fort McClellan Closure EIS include a requirement that the 12,000 acres of Fort McClellan's Choccolocco Ridge be protected and managed, in its entirety, for the preservation of the longleaf ecosystem. Good examples of the mountain longleaf pine ecosystem are extremely rare and endangered, and this high quality example should be protected because of its many environmental and recreational values.

The wild areas of Fort McClellan contain many rare environmental resources such as both old growth hardwood and pine forests as well as colonies of threatened plants. This large area of unfragmented forest provides critical habitat for our declining neotropical migrant birds. The longleaf pine forest provides excellent habitat for the reintroduction and recovery of the endangered red-cockaded woodpecker. The mountains contain some prehistoric rock effigy mounds which should be protected as well. These beautiful mountains contain great places for outdoor sports such as hunting, fishing, hiking, and sightseeing. Protection of this area will attract visitors who want to recreate in and/or tour a wild and historic place. This visitation will help develop and diversify the local economy.

Once again we ask the Corps to ensure the protection and management of the Fort's longleaf ecosystem and associated environmental/economic values by including such requirements in the Record of Decision on the Fort's EIS.

Thank You,

Kenneth Wills, Natural Resource Planner and Biologist

IG-1.1

Auburn University

Auburn University, Alabama 36849-5418

School of Forestry

January 27, 1998

U.S. Army Corps of Engineers
ATTN: Mr. Curtis Flakes (PD-ES)
Mobile District
109 St. Joseph Street
Mobile, AL 36628-0001

Dear Mr. Flakes,

Thank you for a copy of the Draft Environmental Impact Statement for Disposal and Reuse of Fort McClellan, Alabama. I would like to commend the efforts that went into this Statement. While I did not read every page, I was very impressed with the presentation in the two volumes.

My comments concerning the Environmental Impact Statement deal with the issue of the montane longleaf pine ecosystem existing on Fort McClellan. I feel it is imperative that a statement to the effect recognizing the importance of the montane longleaf pine ecosystem and that protection, preservation, and management of the montane longleaf pine ecosystem is essential on Main Post should be included as an integral part of the Final Environmental Impact Statement and the Record of Decision. In the 16 months since I provided written comments on the Public Scoping Meeting, I have spent time traveling through more of the montane regions of Alabama and Georgia. These travels have provided further proof that Main Post of Fort McClellan is a very unique area, containing what is probably the largest intact remnant of a montane longleaf pine ecosystem left in the world. In addition, as part of an ongoing research project looking at old-growth stands on Fort McClellan, some of the "low probability of mountain longleaf pine communities" (Figure C-2) contained in Volume II, page C-15, are better representatives of intact mountain longleaf pine ecosystems than those that are highlighted as high probability on the map.

IG-2.1

Roland Harper, the state geographer for Alabama in the first half of this century, wrote in his *Economic Botany of Alabama* (1913) "longleaf pine might have once been the most abundant tree in the United States and was certainly the most abundant tree in Alabama." He went on to add that there may be reason to believe that the mountains of Alabama may have been the original home of longleaf pine. There should be a sense of urgency to save what is left of this once vast ecosystem.

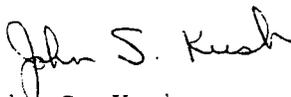
A LAND-GRANT UNIVERSITY

Once again, one of the major overriding issues of significance within this entire process is the intact mountain longleaf pine forest ecosystem on the undeveloped portion of Main Post. I would request that protection, and management of this ecosystem is included within the Record of Decision.

If you have any questions or if I can be of any help please let me know. Best wishes in your efforts.

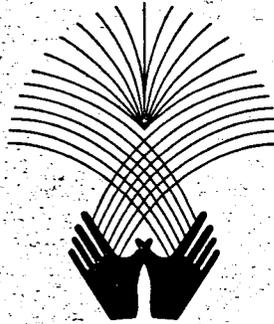
IG-2.1 (continued)

Sincerely,



John S. Kush
Senior Research Associate
School of Forestry
Auburn University
108 M. White Smith Hall
Auburn University, AL 36849-5418
Phone: (334) 844-1065
FAX: (334) 844-1084
e-mail: kush@forestry.auburn.edu

111-B M. White Smith Hall
School of Forestry
Auburn University, AL 36849-5418
Office: 334.844.1003
Fax: 334.844.1084



THE LONGLEAF ALLIANCE

Solon Dixon Forestry
Education Center
School of Forestry
Auburn University
Route 7, Box 131
Andalusia, AL 36420-9025
Office: 334.222.7779
Fax: 334.222.0581

January 30, 1998

U.S. Army Corps of Engineers
ATTN: Mr. Curtis Flakes (PD-ES)
Mobile District
109 St. Joseph Street
Mobile, AL 36628-0001

Dear Mr. Flakes:

I am responding to the Draft Environmental Impact Statement for Disposal and Reuse of Fort McClellan, Alabama. As co-director of the Longleaf Alliance, my objective is to encourage the maintenance of existing longleaf forests and to prevail on land managers to consider the restoration of longleaf systems where appropriate. The Longleaf Alliance is a partnership of private landowners, forest industries, state and federal agencies, conservation groups, universities and others interested in promoting a region wide recovery of longleaf pine forests.

The US Department of Army as the manager of public lands has the distinct opportunity to restore and maintain the unique montane longleaf ecosystem. Thus a major goal for the reuse of Fort McClellan should be to maintain and restore the montane longleaf ecosystem found on site.

One of the major overriding issues of significance within this entire process is the intact montane longleaf ecosystem on the undeveloped portion of Main Post. The Longleaf Alliance requests that protection and management of this ecosystem is included within the Record of Decision.

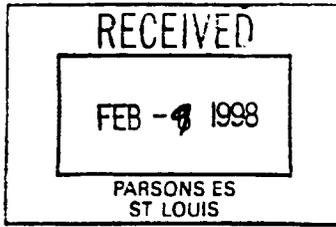
The Longleaf Alliance looks forward to working with the Department of Army in this most important effort.

Sincerely,

A handwritten signature in black ink, appearing to read "Dean H. Gjerstad". The signature is fluid and cursive, written over the printed name and title.

Dean H. Gjerstad
Co-Director

IG-3.1



2616 Mtn. Brook Pkwy.
Birmingham, Alabama 35223
January 29, 1998

Mr. Curtis M. Flakes, Chief
Environment and Resources Branch
U. S. Corps of Engineers
Post Office Box 2288
Mobile, Alabama 36628

Dear Mr. Flakes:

We understand the Corps of Engineers has prepared a Draft Environmental Impact Statement covering alternative uses for the land of Fort McClellan upon closure of the military base near Anniston. The base includes around 12,000 acres of hardwood and mountain longleaf pine habitat, and we understand the alternatives include transferring the property to the U. S. Fish & Wildlife Service for use as a wildlife refuge. We -- including the organizations set forth below, which have an aggregate of over 8,000 members -- strongly urge that the final disposition plan that is recommended include such transfer and setting aside of those forested lands. There is a great shortage of both hardwood and mountain longleaf pine habitat in Alabama and in this area, so that would be of multiple benefits for the recreational, scientific, economic and educational benefits of the people of the state. Consequently, it would appear that such use would be their highest and best use.

In addition, please note that, whether or not the State Department of Conservation through its Game & Fish Division joins in management of the acreage, which we have heard proposed, such a transfer would be to government agencies and, thus, would retain the land for the benefit of the general public. In addition, the Fish & Wildlife Service, being a division of the Department of Interior of the U. S. Government, should be entitled to preference in transfer and use. Further, that alternative could bring the expertise and experience of one or two branches of government to bear on management of the property. Consequently, it would appear that this would be the most efficient and cost-effective management option and the preferred one for the following reasons:

IG-4.1

- (1) Preservation for All the People -- It would preserve this significant wooded acreage of Fort McClellan for the benefit of all citizens since it would be held and managed by government entities. This would be as contrasted with a transfer to private interests that would, of necessity, limit its use by the general public with whose funds the property was acquired in the first place.
- (2) Presence of Hardwood Resources -- The property contains extensive acreage of rolling hardwood forests that are in short supply in Alabama. While we do have some national forests, they represent only around 3% of Alabama's land area, and there are practically no state forests. In addition, many hardwood acres have been timbered so our hardwood base is being reduced more and more; yet, oak-hickory is the climax forest of this area of Alabama, extending down the Appalachian ridges. We, therefore, need to preserve more of these hardwoods that are being lost in Alabama and elsewhere. This transfer would be a very positive step toward meeting that need.
- (3) Protection of Declining Species -- These hardwood forests are the primary habitat of neotropical migrant birds, many of whose numbers have decreased around

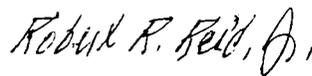
50% in only the last three decades. The Partners-in-Flight Consortium, in which the U. S. Fish & Wildlife Service, the U. S. Department of Defense, and our State Conservation Department, plus other government agencies and non-government organizations are participants, is working to preserve habitat for those declining species. Please note that the Department of Defense is a participant just as are the other agencies mentioned. Thus, this transfer would work to further the goals of that government and non-government consortium of cooperating interests. In addition, there are rare plant species on the site that need protection.

(4) Protection of Mountain Longleaf Pine Habitat -- The remainder of the forested area consists primarily of the mountain variety of our Longleaf Pine. It occupies little acreage in Alabama since most of our pine acreage away from the coastal plain is in Loblolly and Shortleaf Pines. This Mountain Longleaf Pine has some of the best habitat in the region for the very endangered Red-cockaded Woodpecker, which is so endangered because much of its habitat is on private lands that are often timbered and, thus, is lost. Therefore, preservation of this habitat, which is the one most preferred by the species, would be an important addition to preservation of habitat for this species in the Southeast and would reduce the pressure on private lands to preserve it.

(5) Recreational and Economic Benefits -- Preservation and management of the hardwoods and longleaf pines would further public recreation and education that could be availed of by all citizens and student groups in the area as well as tourists visiting it. Areas for study of ecosystems, scientific research, hunting, picnicking and hiking are just some of the recreational and educational benefits that come to mind. Please note that these will be for the benefit of all the people of the state, not just for selected interests, and will result in associated economic benefits.

It would appear that, because of these multiple benefits, transfer of the forested portion of Fort McClellan for a wildlife refuge should be approved as the highest and best use for which the land might be transferred. We, therefore, strongly urge that that be done. Please note that there still will remain over 1/3rd of the fort's acreage that could be placed to other uses, but we caution that there should be adequate buffers to protect these public use areas when the transfers are made. Because of the strong public benefits, this disposition of the forested acreage is urged by the undersigned as an interested citizen and taxpayer and in behalf of the Alabama Audubon Council and Alabama Ornithological Society, which, as noted above, have an aggregate of over 8,000 members in Alabama and each of which organizations is very concerned with protection of our forested resources and our wildlife heritage. Your consideration of all the above positive factors will be greatly appreciated.

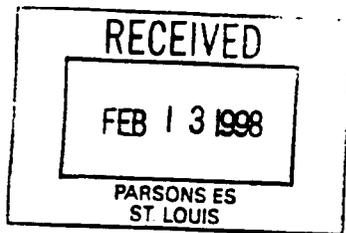
Sincerely yours,



Robert R. Reid, Jr.

RRR/bjc

cc: Mr. Robert H. Richardson, Executive Director
Ft. McClellan Local Redevelopment Authority
Submitting organizations



WILD ALABAMA
P.O. Box 117
Moulton, AL 35650
Phone: (205) 974-6166
Fax: (205) 974-7678



January 27, 1998
Mobile Corps of Engineers
Mr. Curtis Flakes
109 St. Joseph Street
Mobile, AL 36602

Dear Mr. Flakes:

This letter is written concerning the nearly 12,000 acre area formerly know as Ft. McClellan. As an active organization supporting the protection of public lands and native ecosystems, we urge you to support transferring jurisdiction of the area to the U.S. Fish and Wildlife Service, to be managed under the National Wildlife Refuge System. The Choccolocco Mountain area is unique in its mountain longleaf pine ecosystem, which has been drastically reduced in other areas due to timber harvesting and forest conversion. As a National Wildlife Refuge, local citizens as well as the general public could benefit from outdoor recreation and hunting, at the same time protecting the natural biodiversity of the area. Our organization requests that the ROD (Record of Decision) concerning the area include a requirement that this area be protected and managed, in its entirety, for the preservation of the longleaf ecosystem.

IG-5.1

Thank you for all your efforts.

Sincerely,

Robert Cox
Wild Alabama

TABLE A.5 Responses to Organizations/Interest Group Written Comments	
COMMENT	RESPONSE
Alabama Environmental Council (IG-1)	
IG-1.1	<p>Comment noted. Additional detail regarding the USFWS refuge has been included in the Final EIS. The Army supports the USFWS's plans to establish a National Wildlife Refuge for the protection and management of the MLP ecosystem.</p> <p>Language in the ROD, supporting the transfer of FMC land for the protection and management of the MLP ecosystem can occur only after the receipt of a formal request for the establishment of a wildlife refuge by USFWS (or similar agency) that is supported by the FMDC. If a formal plan is not submitted, the Army cannot require the requested language in the ROD since the MLP is not a Federal Threatened or Endangered Species and consequently not afforded formal protection under the ESA.</p>
Auburn University (IG-2)	
IG-2.1	<p>The Final EIS includes additional details concerning the establishment of a USFWS MLP National Wildlife Refuge.</p> <p>Language in the ROD, supporting the transfer of FMC land for the protection and management of the MLP ecosystem can occur only after the receipt of a formal request for the establishment of a wildlife refuge by USFWS (or similar agency) that is supported by the FMDC. If a formal plan is not submitted, the Army cannot require the requested language in the ROD since the MLP is not a Federal Threatened or Endangered Species and consequently not afforded formal protection under the ESA.</p>
The Longleaf Alliance (IG-3)	
IG-3.1	(see response to IG-2.1)
Alabama Audubon Council & Alabama Ornithological Society (IG-4)	
IG-4.1	(see response to IG-2.1)
Wild Alabama (IG-5)	
IG-5.1	(see response to IG-2.1)

A.3.2.6 Individual Citizens - Written Comments

Comments on the Draft EIS were received from the following individual citizens:

- IC-1 Scott Horn
- IC-2 Karen Allen & Laura Meeds
- IC-3 Daniel E. Spector
- IC-4 Lewis Lankford

Copies of the comments and responses are provided in the following pages.

Mobile Corps of Engineers, Attn: CESAM-PD-EC
P.O. Box 2288
Mobile, AL 36628

Saving the forts undeveloped areas is a very easy decision to make. The relatively small amount of public land in Alabama combined with the rapid rate at which private holdings are being developed warrants this decision. Our state is blessed with an abundance of natural resources, many already lost, with others hanging in the balance. Everyone on this planet is dependent on a healthy environment, we all need clean air and water to survive. However, as our society expands these become a little more tainted. The issue at hand is not only of local concern; it will affect the entire state and beyond. It is essential that we protect the fort's natural areas for ourselves and our children.

IC-1.1

There has been a shift in recent years from species management to ecosystem management. By managing the entire ecosystem you not only benefit target species but also others dependent on the distinct area. This is easily seen in the longleaf ecosystem. Proper maintenance of a longleaf forest can benefit all native plants and animals such as red-cockaded woodpeckers and fox squirrels. In coastal plain longleaf forests early mismanagement almost spelled doom for red-cockaded woodpeckers, gopher tortoises, and pitcher plants. However, recently there has been a renewed interest by landowners, large and small, in replanting and managing longleaf pine. A grand opportunity exists to preserve an almost untouched tract. Please recognize the uniqueness of this area and take measures to save it.

IC-1.2

The mountains within the fort are home to countless birds, mammals, fish, reptiles and amphibians, and plants. Many species of neotropical migrant songbirds utilize this area as summertime breeding grounds. Other birds escape harsh conditions in the north and over-winter at the fort. Many birds have taken a hit because they require large, undisturbed areas to nest, however, these areas are becoming harder and harder to find. Fragmented forests negatively affect birds because they are attractive to nest predators (edge effect). Also many fish and amphibians could be lost due to siltation of streams if logging or road building were to occur. This is especially true on the fort due to the mountainous terrain. Native plants could also be harshly affected if the habitat was disturbed or if needed disturbance was not applied (i.e. fire). If needed fire is suppressed in a longleaf forest fuel builds up and chokes out herbaceous plant species vital to wildlife, not to mention increases the probability of dangerous wildfires.

IC-1.3

The entire undeveloped areas of the fort should be left exactly as they are--undeveloped. It would be best suited as a wildlife management area under total state control. Absolutely no further road construction or logging should be allowed. The area should be open to the public with restricted access. It could serve as a "remote" area for most of the year, with limited hunting to manage wildlife populations. Hiking, camping, birdwatching, etc.. would be available for those willing to walk a considerable distance into the closed areas. The remaining wooded areas that are already somewhat developed could serve as easy access camping, picnicking, nature trails, and exhibits.

IC-1.4

I feel that reuse of the already present building space is in the best interest of the local economy. However, there is no need for any further construction at the fort. All areas contained within the present cantonment area could be utilized for the above mentioned easy access recreational opportunities.

IC-1.5

The U.S. Government has a chance to act responsively and preserve for future generations. The fort could serve as a "wilderness" close to home. A multiple-recreation forest would contain over 10,000 acres as a remote wildlife management area, and over 2,000 acres would be fully accessible to all year around. This would allow for full enjoyment of our natural resources without compromising the environment.

IC-1.6



Scott Horn
Recent B.S. in Wildlife Mgt.
Presently Master's Student

U.S. Army Chemical and Military Police
Center and Fort McClellan
Ralph H. Wooten
Major General, U.S. Army
Commanding General

To Whom It May Concern:

We have examined the Draft Environmental Impact Statement:
Disposal and Reuse of Fort McClellan, Alabama.

We understand the proposed three reuse alternatives and
realize the importance of the Medium High Intensity Reuse option.

We feel strongly that any reuse plan must consider the
wildlife and endangered species which currently use the
installation property.

IC-2.1

We have helped monitor and maintain the Eastern Bluebird
Nests on main post for the past 9 years. There has been
NO provision made for wildlife in the current impact
Statement.

IC-2.2

We have heard of an additional proposal to make part of the
installation a National Wildlife Refuge and support this plan
completely.

IC-2.3

We like the designation of passive recreation for the Reilly Lake and other areas only if that means the land cannot be usurped for other uses. That rail line extension makes us think that this area could be used for industrial purposes. We think a designation as a park or as part of the proposed National Wildlife Refuge will protect the land contained in the 16A area and other passive park areas.

IC-2.4

Karen Allen
Karen Meadows

DANJEL E. SPECTOR
1317 Seventh Avenue Northeast
Jacksonville, Alabama

January 17, 1998

Mr. Curtis M. Flakes
Mobile District Corps of Engineers
ATTN: CESAM-PD-E
109 St. Joseph Street
Mobile, Alabama 36602

Dear Mr. Flakes:

I got your name and address from the January 16 issue of the *Anniston Star* as the person to contact regarding comments to the draft environment impact statement for closing Fort McClellan.

I understand that the Army plans to restrict future use of approximately 17,000 acres of Fort McClellan because restoring this acreage to unrestricted use would cost too much. This is deplorable, and I want to express my opposition to this plan most vigorously.

17,000 acres is over 26 square miles. That is a very sizable chunk of Calhoun County, an area that exceeds the Manhattan Island purchased by our ancestors from the Indians. Considering the fact that the Army will retain Pelham Range for the National Guard and some parts of the main post for the Guard, this proposal leaves the citizens of Northeast Alabama with not much of Fort McClellan to turn into productive use once the Army leaves in 1999.

This community has a long history of supporting, with a great deal of pride, the American military. That tradition goes back to the Spanish-American War when the Army first used parts of what would later become Fort McClellan for training. I myself spent 25 years working for the Army, many of them at Fort McClellan. Because of the shoddy treatment of this community by the Army, I am afraid the Army will leave in 1999 with very few friends left in this part of Alabama. I know that I will not be among those friends the Army will have left.

I know you and your superiors in the Army (superior to you administratively, but in no way superior in the broader sense of the term) care little for how I, or anyone else here feels about the treatment we have received at the hands of the Army. But you should also know that we vote; we write to and talk with our congressional representatives; and from time to time we take issues to the courts.

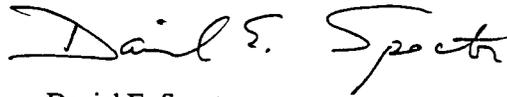
Lots of us talk to America's youth and give career advice. I know I do as a professor, telling several hundred college students each year that the Federal civil service, especially with the Army, should be viewed as a "career of last resort." I do tell them that military service for a few years is a useful activity, but as a career it is about as unattractive as the civil service.

IC-3.1

In short, in just a few years the Army, at least for this observer, has squandered the respect and good will it so painstakingly had restored after the Vietnam era. That is a real shame.

By the way, how secure is your job and retirement? Given what you know about how the Army has treated us, do you really believe that the Army cares about you future?

Sincerely,

A handwritten signature in cursive script that reads "Daniel E. Spector".

Daniel E. Spector
Jacksonville, Alabama

CF:

Anniston Star
Senator Shelby
Senator Sessions
Congressman Riley

January 19, 1998

Mrs. Curtis M. Flakes
109 Joseph Street
Mobile, Alabama 36602
Attn: CESAM-PD-E

Lewis Lankford, E-6, Ret. US Army
1105 Bonnie Drive
Weaver, Alabama 36277

Dear Madam:

I am very disappointed and discouraged by our appointed and elected officials of Calhoun County over the final decision what to do about the land and buildings at Fort McClellan after it closes in 1999. The problem is that there is too much greed and politics emerging. There is one city government that wants all or a large part of the fort.

For me, there is too much money being paid out to these people to have them bickering and badgering for property and not doing what the people of this county desires. At this point, I am in favor of the state of Alabama assuming control of Fort McClellan, at least until a sensible solution has been reached and the people of Calhoun County be permitted to vote on this very important issue.

IC-4.1

Sincerely,


Lewis Lankford

TABLE A.6 Responses to Individual Citizen Written Comments	
COMMENT	RESPONSE
Scott Horn (IC-1)	
IC-1.1	Comment noted. Reuse alternatives for the passive recreation area (Area 2) are described in subsection 3.4.4.2. Planning for the reuse of FMC excess property is the responsibility of FMDC and its predecessor the FMRRA.
IC-1.2	Comment noted. Reuse alternatives for the passive recreation area (Area 2) are described in subsection 3.4.4.2. Planning for the reuse of FMC excess property is the responsibility of FMDC and its predecessor the FMRRA.
IC-1.3	Comment noted. The impacts to biological resources, including neotropical migratory birds, forest fragmentation, use of fire within the MLP ecosystem, and related issues, are discussed in subsections 5.2.11, 5.3.11, and 5.4.11.
IC-1.4	Comment noted. The reuse alternatives described in subsection 3.4.4.2 include varying degrees of wildlife management and passive recreation.
IC-1.5	Comment noted.
IC-1.6	Subsection 3.4.4.2 and related subsections have been modified to better describe the USFWS National Wildlife Refuge proposed to be established within the passive recreation area.
Karen Allen & Laura Meeds (IC-2)	
IC-2.1	Comment noted. It should be understood that the reuse of FMC disposal area property is an action by others (FMDC) and not the Army. The reuse alternatives described in subsection 3.4.4.2 describe the various wildlife management and endangered species management provisions for each alternative within the passive recreation area.
IC-2.2	Comment noted. The reuse alternatives described in subsection 3.4.4.2 include varying degrees of wildlife management within the passive recreation area.
IC-2.3	The potential for the establishment of a USFWS National Wildlife Refuge was acknowledged in subsection 3.4.4.2. The establishment of a refuge within the passive recreation area is consistent with the MHIR and MIR alternatives. Subsection 3.4.4.2 and related subsections have been modified to better describe the USFWS National Wildlife Refuge proposed to be established within the passive recreation area.
IC-2.4	Comment noted. Reuse alternatives for the passive recreation area (Area 2) are described in subsection 3.4.4.2. Planning for the reuse of FMC excess property is the responsibility of FMDC and its producer the FMRRA.
Daniel E. Spector (IC-3)	
IC-3.1	Comment noted. The Encumbered and Unencumbered Disposal alternatives are described in subsection 3.3. The impacts associated with Encumbered and Unencumbered Disposal are described in subsection 5.3. Based upon the adverse impacts associated with the Unencumbered Disposal Alternative (including adverse impacts to biological resources, soils, UXO, hazardous waste, and other resources), the Army has selected the Encumbered Disposal Alternative as the preferred Army Action.
Lewis Lankford (IC-4)	
IC-4.1	Comment noted.

Appendix B
AGENCY COORDINATION

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Appendix B: Agency Coordination

B.1 INTRODUCTION

This appendix provides detailed information and correspondence pertaining to four elements of the proposed disposal and reuse of Fort McClellan:

- 1) B.2 - Biological Assessment (Endangered Species) Assessment and Coordination;
- 2) B.3 - Cultural Resources Programmatic Agreement;
- 3) B.4 - National Wildlife Refuge Coordination; and
- 4) B.5 - Pearson's Hawthorn Coordination

B.2 FORT MCCLELLAN BIOLOGICAL ASSESSMENT COORDINATION

B.2.1 Introduction

As noted on the US Department of Interior, Fish and Wildlife Service (USFWS) letter dated July 25, 1996 (provided earlier on page A-8), one of the major issues potentially effecting the Army's Proposed Action are the likely direct and indirect impacts of the action on species that are listed by the Fish and Wildlife Service as being either Threatened or Endangered. Consequently, as part of the environmental analysis of potential impacts associated with the proposed action, the Army prepared a Biological Assessment (BA) under informal consultation with USFWS concerning the proposed action

The BA addresses the effects of implementing the Army's Preferred Alternative: Encumbered Disposal followed by Medium-High Intensity Reuse. As a result of consultation with the USFWS and a review of available information regarding the presence of listed species on FMC, the BA focuses upon the assessment of effect to gray bats (*Myotis grisescens*).

B.2.2 Biological Assessment

The Biological Assessment (main text only) addressing the disposal and reuse of FMC and the endangered gray bat is presented in the following pages.

C7788.11

1 April 1998

**BIOLOGICAL ASSESSMENT:
DISPOSAL AND REUSE OF
FORT MCCLELLAN, ALABAMA**

Submitted to:
U.S. Army Corps of Engineers
Mobile District
109 St. Joseph Street
Mobile, Alabama 36628

Submitted by:
Harland Bartholomew and Associates, Inc.
400 Woods Mill Road South, Suite 330
Chesterfield, Missouri 63017

Prepared by:
3D/International, Inc.,
Environmental Group
781 Neeb Road
Cincinnati, Ohio 45233
(513) 922-8199

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List of Acronyms

BA	Biological Assessment
BLM	Bureau of Land Management
BRAC 95	Defense Base Closure and Realignment Act of 1995
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
DESMP	Draft Endangered Species Management Plan
DoD	Department of Defense
EBS	Environmental Baseline Survey
EE/CA	Engineering Evaluations/Cost Analysis
EIS	Environmental Impact Statement
ESA	Endangered Species Act
FMC	Fort McClellan (Main Post and Pelham Range)
FMCRP	Fort McClellan Comprehensive Reuse Plan
FMRRRA	Fort McClellan Reuse and Redevelopment Authority
FWS	U.S. Fish and Wildlife Service
NPDES	National Pollution Discharge Elimination System
PDF	Project Design Feature
RI/FS	Remedial Investigation/Feasibility Study
SWPPP	Stormwater Pollution Prevention Plan
USFS	U.S. Forest Service
UXO	Unexploded Ordnance

Section 1:

Introduction

Fort McClellan, Alabama, was recommended for closure by the Defense Base Closure and Realignment Commission in July 1995. This recommendation was accepted by the President and Congress and became legally binding under provisions of Public Law 101-510 on 28 September 1995. Approximately 17,360 acres (7025 hectares) on Main Post have been declared surplus property for disposal by the Army and available for reuse by others. In addition, approximately 1140 acres (461 hectares) of BLM property on Main Post, currently leased by the Army, may also be disposed by the Army as an interrelated action. The Army will retain all of Pelham Range (22,245 acres) and portions of the Main Post cantonment area (approximately 409 acres) for use by the Army Reserve and Alabama Army National Guard.

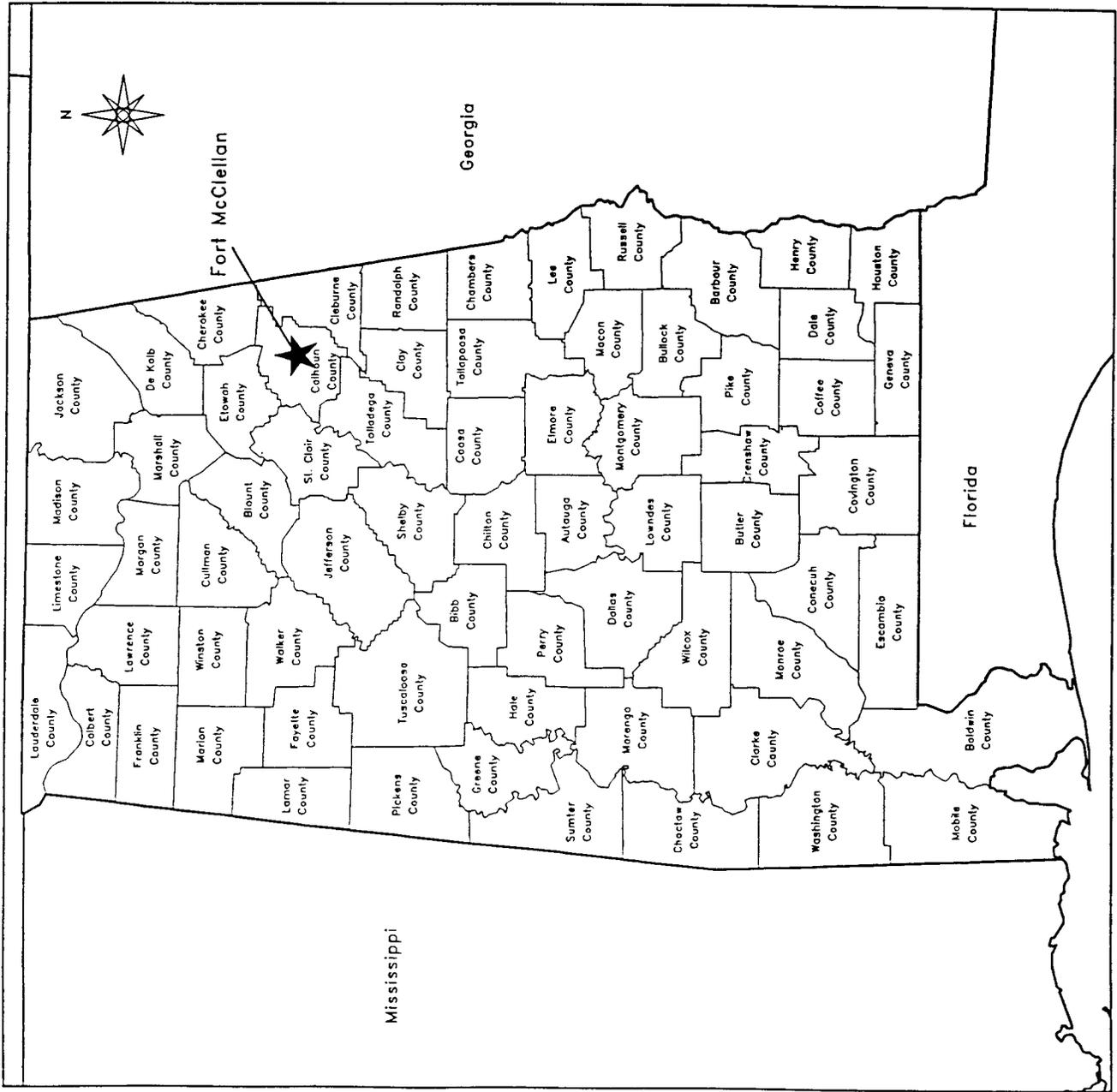
An Environmental Impact Statement (EIS) is currently in preparation to analyze environmental effects of disposal and reuse alternatives for the surplus property. The Army's proposed action is disposal, while reuse is an interrelated action of others (non-Army). Reuse planning is the responsibility of the Fort McClellan Reuse and Redevelopment Authority (FMRRRA) of Alabama, a locally chartered entity. In addition to the Army's proposed action of disposal, there is also the Army's interim period between closure of Fort McClellan and disposal of surplus property. During this period there will be caretaker, environmental investigations and remediation, unexploded ordnance investigations and removals, and other actions necessary to prepare the property for transfer. These actions have potential to affect threatened and endangered species.

This Biological Assessment (BA) determines effects on threatened and endangered species resulting from the interim period (caretaker operations) and from proposed disposal and reuse of surplus property. This BA was developed in accordance with 50 CFR Part 402 and the Endangered Species Act of 1973 (ESA), as amended. This BA incorporates information by reference [50 CFR Part 402.12 (g)] from the Draft Environmental Impact Statement for Disposal and Reuse of Fort McClellan, Alabama, hereafter referred to as the DEIS. The DEIS was provided to the FWS, Daphne, Alabama Field Office.

As a result of consultation with the FWS (Appendix A), review of information available regarding the presence of listed species on FMC, and coordination with individuals with related expertise, the BA focuses upon the assessment of effects to gray bats. Potential for effects to federally endangered red-cockaded woodpeckers (*Picoides borealis*) were also evaluated. Effects of the proposed action to these species are unlikely. Effects of disposal and reuse of Main Post to rare species other than federally protected species are addressed in the EIS.

The red-cockaded woodpecker was last detected on FMC in 1968. Subsequent surveys in 1972, 1982, 1985, 1992, and 1997 failed to find red-cockaded woodpeckers on FMC, and the species is considered extirpated on the Installation. The nearest known extant population inhabits the Talladega National Forest, approximately 5 to 7 miles (8 to 11 kilometers) east of Main Post. Based upon guidance described in "Guidelines for Preparation of Biological Assessments and Evaluations for the Red-cockaded Woodpecker" (Henry 1989), and discussions with Mr. Ralph Costa, Recovery Coordinator for the red-cockaded woodpecker, we determined the proposed action is unlikely to affect red-cockaded woodpeckers. Issues regarding suitable red-cockaded woodpecker habitat on Main Post, and potential future recovery of red-cockaded woodpeckers on the installation are addressed in the DEIS.

<p>BIOLOGICAL ASSESSMENT DISPOSAL AND REUSE OF FORT MCCLELLAN, ALABAMA</p>	<p>FIGURE 1-1. Location of Fort McClellan, Alabama.</p>	<p>Miles</p>
<p>3D/INTERNATIONAL, INC.</p>		



Section 2:

Description of the Proposed Action

2.1 INTRODUCTION

Under provisions of the Base Closure and Realignment Act of 1990 (Public Law 101-510), the 1995 Commission recommended closure of FMC, except for land and facilities required for a Reserve Component enclave and minimum essential facilities as required to provide auxiliary support to the chemical demilitarization operation at Anniston Army Depot, Alabama. Consistent with this Congressional mandate, the Army will cease performance of active missions at FMC no later than 12 July 2001.

Pursuant to the Defense Base Closure and Realignment Act of 1990 and recommendations of the Defense Base Closure and Realignment Act of 1995 pertaining to FMC, continuation of operations at the Installation is not feasible. Surplus property at FMC will be disposed or placed in caretaker operations after closure. The Army's preference is to dispose of surplus property.

Depending upon numerous factors, disposal of excess property at FMC is expected to occur as a single event transferring all excess property to one or more owners, or over time with multiple transactions involving the same or different owners. Regardless of the method of disposal, timing, or identity of new owners, reuse of excess property at FMC is reasonably foreseeable. This BA addresses effects of actions required to accomplish the Army's preferred

alternative for disposal and reuse of Fort McClellan: Encumbered Disposal and Medium-High Intensity Reuse.

2.2 LOCATION OF FORT MCCLELLAN

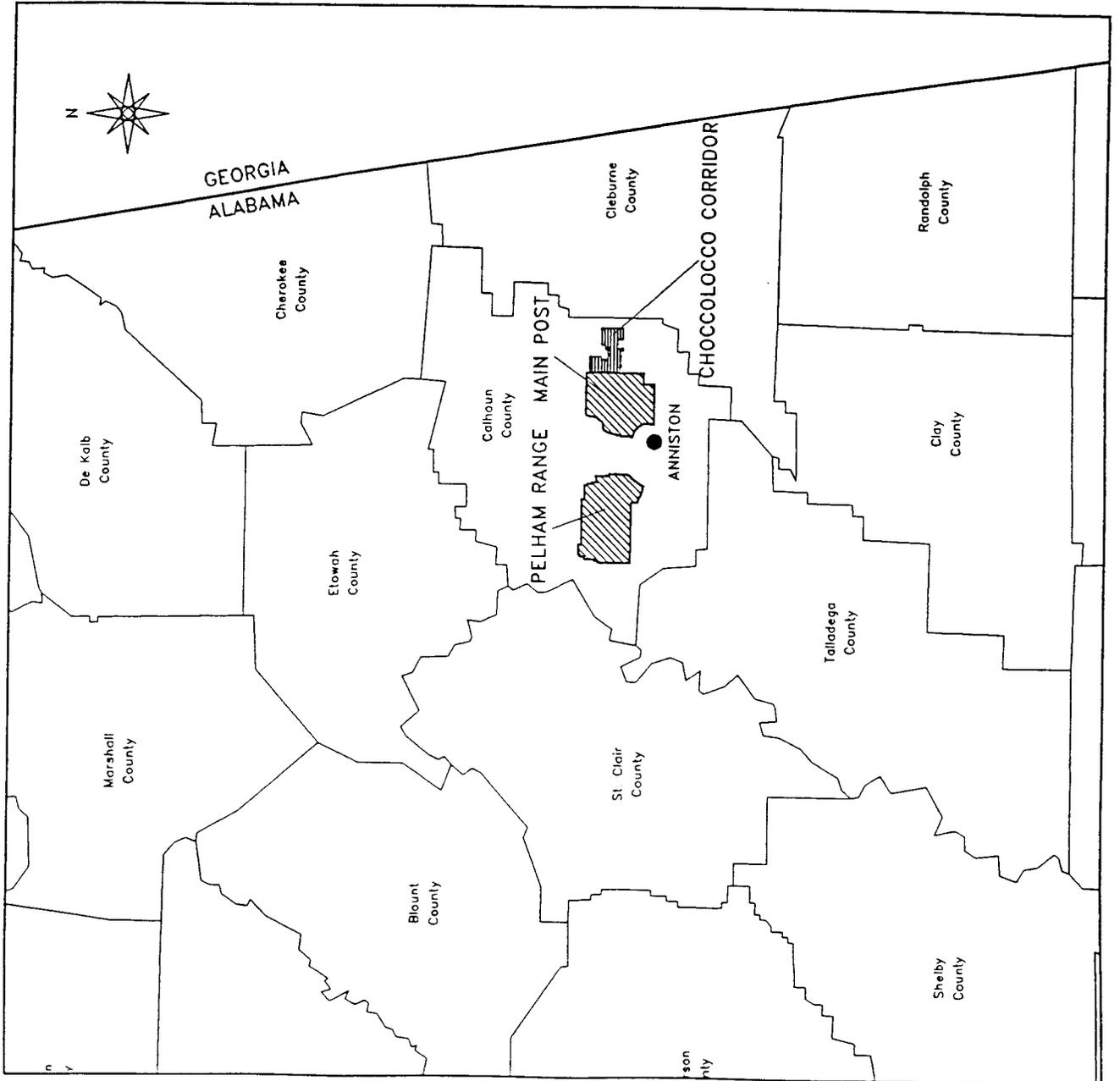
Fort McClellan is in Calhoun County, in northeast Alabama contiguous to the city of Anniston and approximately 65 miles (104 kilometers) east of Birmingham, Alabama (Figure 2-1). Fort McClellan includes three tracts of state and federal government-owned lands in the foothills of the Appalachian Mountains:

- Main Post, consisting of approximately 18,929 acres (7660 hectares), adjoins Anniston, Alabama, and stretches six miles to the northeast towards Jacksonville, Alabama, in the valley west of the Choccolocco Mountains. Approximately 12,000 acres (4856 hectares) of Main Post are characterized by undeveloped mountains, of which approximately 1140 acres (461 hectares) are public domain lands withdrawn from the Bureau of Land Management (BLM).
- Choccolocco Corridor, consisting of approximately 4388 acres (1775 hectares) leased from the State of Alabama, is east of Main Post and connects FMC with the Talladega National Forest. Within the Talladega National Forest, approximately 100,000 acres (40,470 hectares) of woodlands are accessible for training in the event of national emergency or with approval of the U.S. Forest Service (USFS). The Choccolocco Corridor lease to the Army will not be renewed, and ownership of the land will remain with the State of Alabama.
- Pelham Range, consisting of approximately 22,277 acres (9015 hectares), is located approximately eight miles west of FMC's Main Post cantonment area. Pelham Range, which adjoins Anniston Army Depot one-half mile west of US Highway 431, is used for maneuvers, firing ranges, and field training. The entire Pelham Range will remain as Army property, but will be licensed from the U.S. Army to the Alabama Army National Guard.

2.3 DISPOSAL AND REUSE AREA

The BRAC 95 actions include retention of a Reserve Component Enclave, facilities to support chemical demilitarization operations at Anniston Army Depot, and two cemeteries.

<p>BIOLOGICAL ASSESSMENT DISPOSAL AND REUSE OF FORT MCCLELLAN, ALABAMA</p>	<p>FIGURE 2-1. Location of Fort McClellan property within Calhoun County, Alabama.</p>	<p>  Fort McClellan  Land Leased By FMC From The Alabama Forestry Commission </p>	<p>  </p>	<p>3D/INTERNATIONAL, INC.</p>
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Accordingly, the Army plans to retain approximately 409 acres (165 hectares) of land within Main Post, and the entire Pelham Range area, for these purposes. The Main Post enclave area will include 16 discrete parcels (Table 2-1, Figure 2-2). In addition, BLM owns 1140 acres (461 hectares) in three parcels of land along the eastern boundary of Main Post (Figure 2-2). These BLM lands may be disposed along with the Army's excess property. Approximately 18,500 acres (7486 hectares), including BLM property, are available for disposal and reuse (18,929 acres Main Post total area less 409 acres to be maintained for Reserve training, support facilities for Anniston Army Depot, and two cemeteries).

This 18,500-acre (7486 hectares) area includes the heavily developed area in the flat northwestern portion of FMC. Cane Creek and its tributaries flow west through Main Post. The Main Post's administrative, housing and community service facilities are generally located along the northern and southern banks of Cane Creek. Firing ranges are located north, east, and south of the developed area and have firing fans generally oriented toward the Choccolocco Mountains. The remaining portion of Main Post includes the Choccolocco Mountains and contains large areas of undeveloped, forested tracts historically utilized for training and recreational activities.

The Main Post cantonment area contains various buildings including administration, transportation, maintenance, family housing, barracks, libraries, museums, a post office, banks, recreational facilities, community facilities, an auto craft shop, and health care centers. These buildings vary in condition, size, and reuse potential.

2.4 ENCUMBERED DISPOSAL

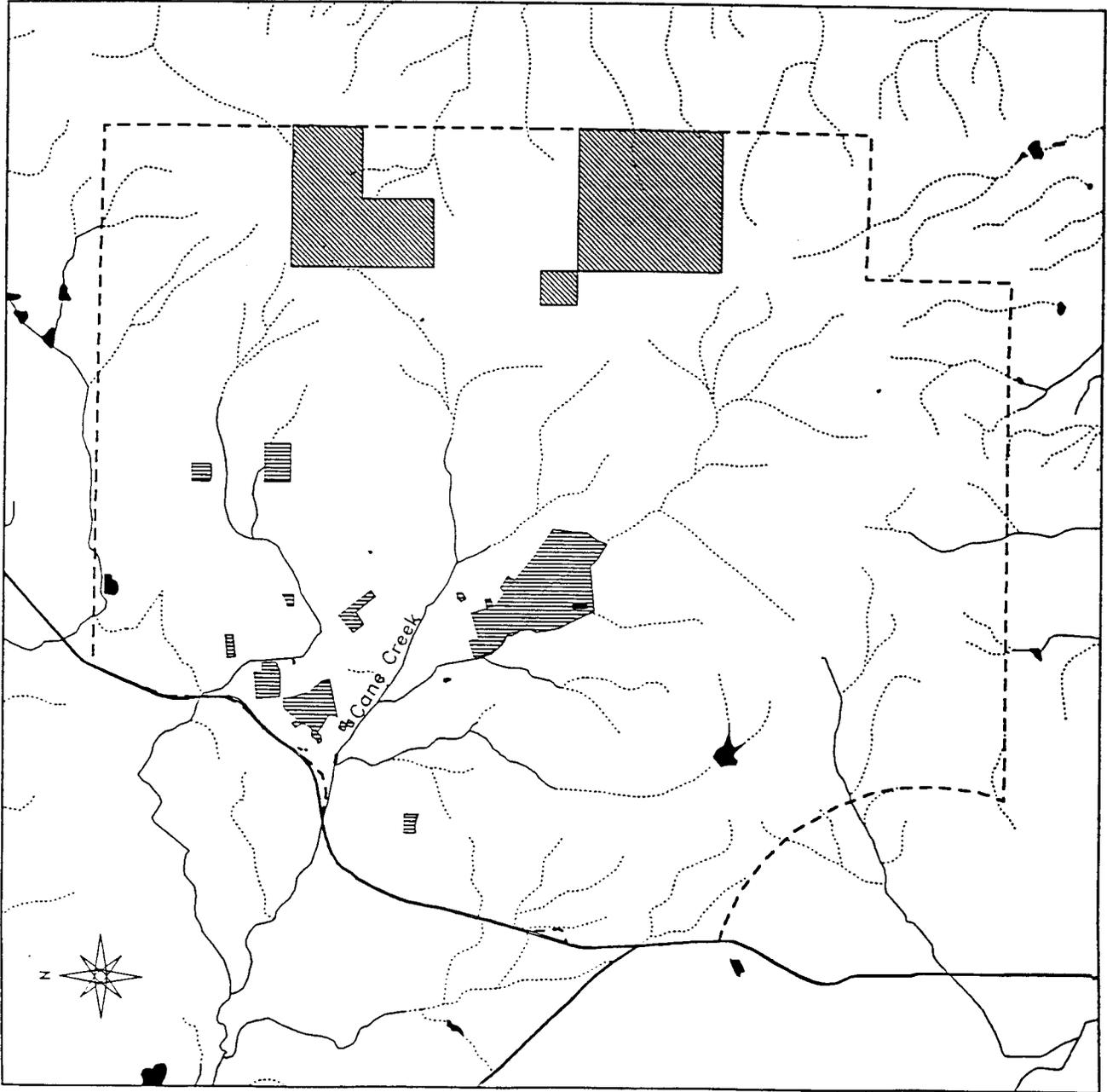
The Army's preferred disposal alternative is encumbered disposal. The Encumbered Disposal Alternative incorporates Army-imposed constraints on future owners as a condition of property disposal and reuse. Encumbrances may restrict future land use. Encumbering parcels will result in disposal actions that are timely, support Army requirements, and are compatible with future reuse plans.

Following closure of FMC, and prior to disposal, the Army is responsible for identifying significant cultural, natural, and man-made resources that must be used wisely or protected after ownership is transferred to non-Federal control. If appropriate, constraints protecting

TABLE 2-1. Fort McClellan Army National Guard/Reserve Component enclave property on Main Post.

Area Description	Estimated Size of Area	
	Acres	Hectares
1000 Area, Battalion Headquarters, Parking	24.4	9.9
Building 2290 (Dispensary)	1.4	0.6
Buildings 2281 / 2282	3.4	1.4
Joint Information Center	1.8	0.7
Battalion Headquarters	0.3	0.1
2200 Area and Triangle	53	21.4
Operations and Maintenance Shop # 10	5.4	2.2
Post Cemetery	3.4	1.4
U. S. Army Enclave	18	7.3
Military Operations in Urbanized Terrain Site	7.5	3
Chemical Defense Training Facility	26.5	10.7
Chemical stockpile Emergence Preparedness Program / Emergency Operations Center / Range Control	2	0.8
Boiler Plant	0.5	0.2
Chapel	1.5	0.6
1600 /1700 / 1800 Area	256	103.6
Prisoner of War Cemetery	4	1.6
TOTAL	409.1	165.5

<p>BIOLOGICAL ASSESSMENT DISPOSAL AND REUSE OF FORT MCCLELLAN, ALABAMA</p>	<p>FIGURE 2-2. Excess property, BLM land, and Reserve Component Enclave on Main Post.</p>	<p>  Reserve Component Enclave  BLM - Public Domain Land  Excess Property </p>	<p>  </p>	<p>3D/INTERNATIONAL, INC.</p>
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these resources may be incorporated as deed encumbrances or covenants during land transfer. The encumbrances placed on parcels of land will depend on the resources present.

After FMC is closed, all excess land will be placed in caretaker status until transfer of ownership. In addition to caretaker activities, the Army may conduct environmental restoration as appropriate before disposing of property.

2.4.1 Caretaker Status

Existing facilities and support equipment and systems at FMC are major assets encouraging and facilitating reuse after the Army completes its disposal action. Following closure, FMC facilities and equipment will be subject to caretaker operations until transfer to new owner(s) occurs. Under caretaker status, the Army will care for vacated facilities, conduct environmental restoration, and as circumstances arise, make interim leasing arrangements to the extent allowed by regulation and available funding.

In consultation with the FMRRA, the Army will determine required levels of maintenance and repair of the Installation's facilities and equipment. Initial levels of maintenance will not exceed the standard of maintenance and repair in effect on the date of closure approval, will not be less than maintenance and repair required to be consistent with government standards for excess and surplus properties, and will not require any property improvements, including construction, alteration, or demolition, except when demolition would be required for health, safety, or environmental purposes, or would be economically justified in lieu of continued maintenance expenditures (DoD 1995).

Typical activities that will continue during the caretaker phase include the maintenance of fenced areas to ensure adequate security, mowing and weed control on grounds within the cantonment area for aesthetics and fire protection, and trimming and maintenance of trees and brush to avoid interference with roadways, fences, or buildings. Diseased trees and vegetation will be identified and removed as appropriate. Irrigation and erosion control will be addressed as necessary. Natural resources management, hunting, and wildlife management would also be continued at a lower level of effort. The level of security at Fort McClellan would be the same as town and county jurisdictions within the surrounding area.

2.4.2 Environmental Restoration

The process leading to transfer of excess Army land includes certification that properties are suitable for disposal, and that environmental restoration of contaminated sites is accomplished to the degree required to protect human health and the environment and support proposed reuse. Environmental restoration activities at FMC will focus on remediating identified hazardous contamination caused by past training and waste disposal. The Environmental Baseline Survey (EBS) for Fort McClellan (Environmental Science and Engineering, Inc. 1997) identified the status of environmental restoration activities. The EBS identifies several sites that still require investigation to determine potential environmental hazards and appropriate restoration measures. Parcels requiring additional investigation and potential remedial actions will be addressed in the BRAC Cleanup Plan.

The presence of unexploded ordnance (UXO) on a BRAC parcel is considered to be a safety hazard. All UXO concerns are addressed on a case-by-case basis. It is anticipated that excess property at FMC will be disposed of in a number of smaller parcels rather than the entire Installation in one transaction. Therefore, specific UXO investigations and remedial actions will be accomplished over a period of several years. Timing of investigations will be based upon the intended reuse, disposal priorities, the complexity of proposed remedial actions, and other pertinent factors. Identifying specific locations and extent of pre-disposal cleanup activities will be accomplished during Remedial Investigations/Feasibility Studies (RI/FS) for Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) compliance for hazardous and toxic wastes and Engineering Evaluations/Cost Analysis (EE/CA) compliance for ordnance and explosives, including UXO. These processes and studies provide for public participation and are subject to regulatory review.

2.5 MEDIUM-HIGH INTENSITY REUSE

The Fort McClellan Comprehensive Reuse Plan developed by the FMRRRA is used for development of the proposed action, alternatives, and effects analysis for reuse of FMC (FMRRRA 1997). Department of Defense policy states the local community's reuse plan will be used to define the proposed reuse action, and will be the basis for analysis of reuse alternatives. In the absence of a final approved local reuse plan, analyses will use the best available information, including draft reuse plans, to describe probable reuse alternatives.

Accordingly, a draft final reuse plan was provided to the Army by the FMRRRA in June 1997. The draft final reuse plan prepared by the FMRRRA represents the Medium-High Intensity Reuse (MHIR) level described in the DEIS. Medium-High Intensity is the more probable and attainable level of development for FMC based upon FMRRRA analysis of the existing market and ability to absorb additional development. The Army has adopted the FMRRRA reuse plan as their preferred reuse alternative to be analyzed in the EIS.

The FMRRRA draft final reuse plan provides a balance of public and private reuses of the excess property, including residential, office, retail, industrial, training/education, recreation and open space uses; and, retention of certain community facilities. Approximately one-half of the existing 6,083,000 square feet (565,110 square meters) of building space on Main Post is proposed for retention, including the Post Headquarters and adjacent administration buildings; the Military Police School facility; selected instructional, recreational and housing facilities; the Independent School; and the Commissary. Less than 4000 of the 18,500 acres comprising the disposal area is proposed for development, with the remaining area reserved for passive recreation and open space.

2.6 RELATED PROJECT DESIGN FEATURES

In addition to activities necessary to accomplish disposal and reuse of excess property, the Army proposes certain activities to protect gray bats utilizing the property. Project design features (PDFs) described in this section are an integral part of the proposed action. To minimize or avoid potential adverse effects to gray bats, each PDF addresses particular activities associated with disposal and reuse of excess property at FMC (Table 2-2). The Army commits to PDFs intended to protect gray bats during pre-disposal activities (Table 2-2).

Project design features intended to protect gray bats following transfer of excess property will be incorporated into deeds (Table 2-2). "Reuse PDFs" notify new property owners of the presence of gray bats and identify measures necessary to protect gray bats. The wording of reuse PDFs is shown as it will appear in deeds to the FMC golf course and properties within 50 feet of streams identified as moderate quality foraging habitat for gray bats (Cane, Dothard, Remount, South Branch, Ingram, and Twin Mountains creeks) when these properties are transferred out of Army ownership (Figure 2-3).

TABLE 2-2. Pre-disposal and reuse activities addressed by project design features to minimize or avoid potential adverse effects to gray bats.

Activity	During Pre-Disposal Period	Following Disposal
Modification of roost habitat	PDF No. 1	PDF No. 7
Modification of foraging habitat	PDF No. 2	PDF No. 7
Exposure to toxicants	PDF Nos. 3 & 4	PDF No. 8
Modification of water quality	PDF Nos. 4, 5, & 6	PDF Nos. 7 & 8

2.6.1 Project Design Feature Number 1

Fort McClellan has conducted extensive studies to determine if gray bats roost on the Installation (3D/I 1996a, 1996b, 1997). There are no caves on FMC and no gray bat roost sites have been identified on the Installation. Gray bats are known to roost in two caves approximately 1 mile (1.5 kilometers) northwest of Main Post, and under two bridges within 160 feet (50 meters) of Main Post. There is potential for gray bats to use similar man-made structures on Main Post. The Army proposes the following measures to minimize potential impacts to roosting gray bats during the period between closure of FMC and disposal of excess property:

- Before any bridge, cistern, or abandoned building is removed or modified, the structure will be inspected for the presence of bats.
- If bats or evidence of their recent use are found within or on a structure to be removed or modified, the species of bat will be identified.
- If gray bats or other federally listed species are present the FWS will be consulted prior to disturbance of the structure.

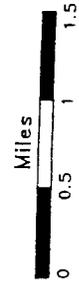
2.6.2 Project Design Feature Number 2

Fort McClellan will manage gray bat foraging habitat on Main Post. Current guidelines (Garland 1996, 3D/I 1996b) protect riparian forest by prohibiting tree removal within 50 feet (15.2 meters) of streams on the Installation designated as providing high or moderate quality foraging habitat for gray bats. If an activity required for disposal or interim reuse of excess

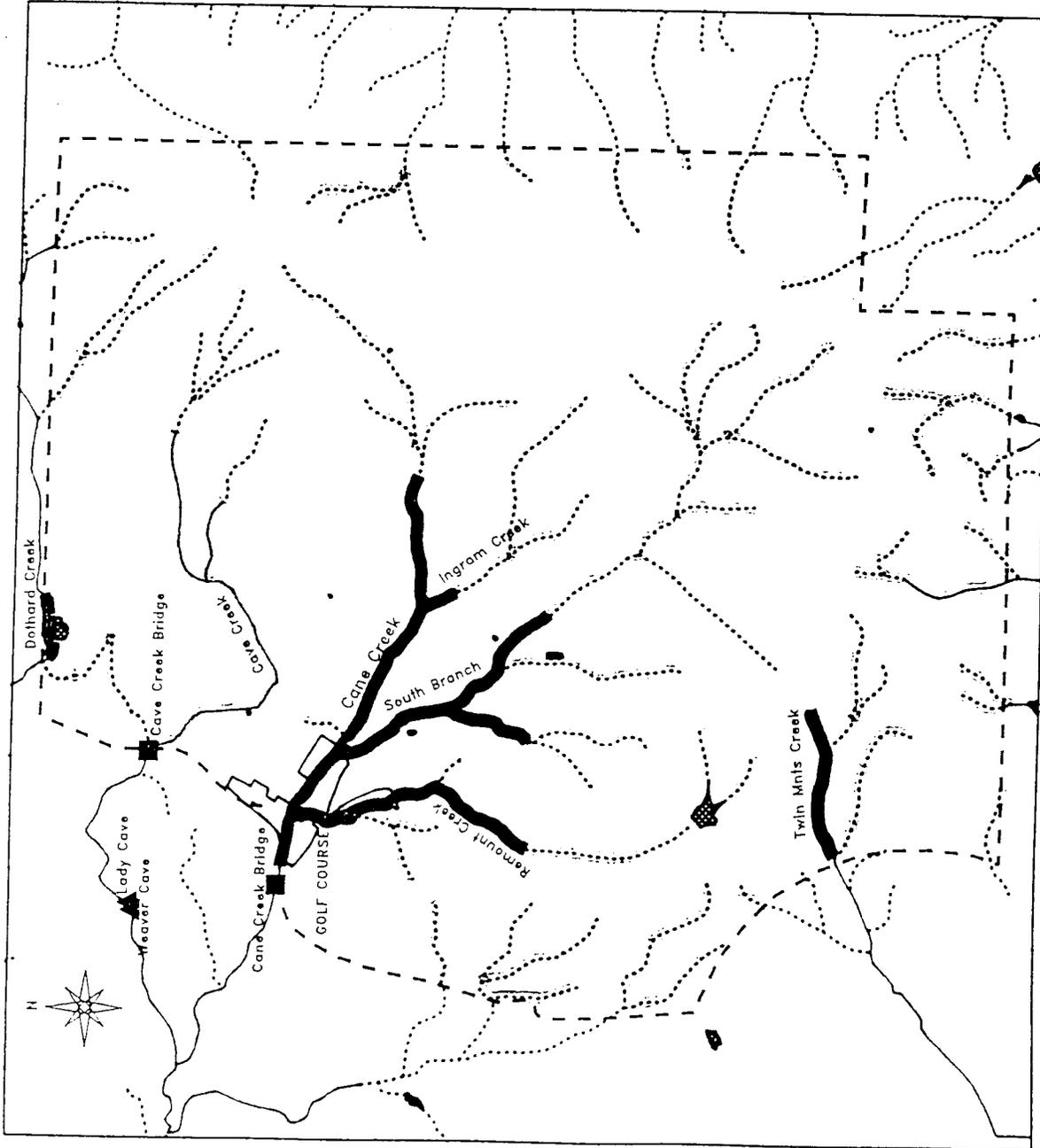
BIOLOGICAL ASSESSMENT
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FIGURE 2-3. Streams on Main Post providing moderate quality foraging habitat for gray bats.

-  Golf Course
 -  Main Post
 -  Moderate Quality Streams
 -  Low Quality Streams
 -  Gray Bat Roost under Bridge
 -  Gray Bat Roost in Cave
- Note : No high quality habitat on Main Post.



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property involves removal of trees within this 50-foot zone, the Army will consult with the FWS. The FWS has previously concurred that tree clearing outside of this zone or along streams designated as low quality foraging habitat will not affect gray bats, and no consultation is required for such projects (3D/I 1996b). The Army also will consult the FWS if any activity requires alteration of water quality, water flow, or bank stability within streams providing high or moderate quality habitat for gray bats (Figure 2-3).

2.6.3 Project Design Feature Number 3

Pesticide use on Main Post will decrease as Army presence is reduced during caretaker status. However, the FMC golf course will maintain its current level of pesticide use until disposal. Due to the frequency of pesticide use and proximity of the golf course to known roosts and suitable foraging habitat, protective guidelines have been established for pesticide use on the FMC golf course. Appendix B contains a list of pesticides that are expected to be used on the golf course. A product summary, including use guidelines, for each of these pesticides also is included in Appendix B. The product summaries in Appendix B provide background information on each pesticide. Use guidelines listed within the product summaries were primarily derived from product labels, material safety data sheets, and manufacturer's comments, and address both human health and environmental concerns.

Fort McClellan will implement the following guidelines to avoid effects to gray bats from pesticide use on the golf course.

- Do not spray pesticides directly onto or into streams, lakes, ponds, or other bodies of surface water.
- Do not allow pesticides to drift onto water, and do not apply when weather conditions favor drift or runoff from treated areas.
- Do not apply within 20 feet (6 meters) of banks or natural levees associated with streams, lakes, ponds, or other bodies of surface water. Illoxan® should not be applied within 100 feet (30 meters) of surface water.
- Apply pesticides only during daylight hours.
- Apply pesticides only for approved uses.

- Follow all use and disposal directions as specified on labels.

2.6.4 Project Design Feature Number 4

Identifying specific locations and extent of pre-disposal cleanup activities will be accomplished during Remedial Investigations/Feasibility Studies (RI/FS) for Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) compliance for hazardous and toxic wastes and Engineering Evaluations/Cost Analysis (EE/CA) compliance for ordnance and explosives, including unexploded ordnance. At sites requiring environmental restoration prior to disposal, potential direct, indirect, and cumulative effects to endangered and threatened species will be assessed. Contaminant type and potential transfer of contaminants into the environment will be identified. If screening level risk assessments indicate a likelihood of exposure exceeding safe levels, Section 7 consultation with the FWS will be initiated.

2.6.5 Project Design Feature Number 5

Surface water quality will be maintained by the Army at or exceeding its current level. Thirty-one industrial stormwater outfalls are identified in the Stormwater Pollution Prevention Plan (SWPPP) for FMC (CH2M Hill 1994). Fort McClellan currently has a National Pollution Discharge Elimination System (NPDES) permit (No. AL0055999) for 14 industrial outfalls and one process water discharge site. To maintain water quality, FMC will continue to implement Best Management Practices identified in the SWPPP and continue to comply with NPDES permit requirements until disposal.

2.6.6 Project Design Feature Number 6

Fort McClellan will implement erosion control measures during environmental restoration activities, including hazardous waste cleanup and UXO removal. These measures will minimize the movement of sediment to streams utilized by foraging gray bats. Standard erosion control measures in place for all BRAC-related environmental restoration activities are described below.

- Vegetative and structural erosion control practices will be constructed and maintained according to standards and specifications of Fort McClellan's Soil Erosion Plan (Nakata Planning Group 1994).

- Construction shall follow Alabama Clean Water Law requirements for construction activities.
- All erosion and sediment control measures are to be in place prior to, or as the first step in construction.
- All areas disturbed by construction activities shall be seeded and mulched or sodded and fertilized unless the area is to be paved or built upon.

2.6.7 Project Design Feature Number 7

Project Design Feature No. 7 advises new property owners of the presence of gray bats and identifies measures necessary to prevent take of gray bats. The following paragraphs will be placed in deeds for parcels within 50 feet of streams identified as moderate quality foraging habitat for gray bats (Figure 2-3).

Gray bats (*Myotis grisescens*) are known to forage near (insert name of stream(s) with high or moderate quality foraging habitat on this parcel, as shown on page 14 of this BA) or on this parcel of land and are known to roost in caves and under bridges in the vicinity. This parcel has been identified as suitable gray bat foraging habitat. Gray bats are listed as endangered by the U.S. Fish and Wildlife Service (FWS) and are afforded federal protection under the Endangered Species Act (ESA) of 1973, as amended. Section 9 of the ESA prohibits private landowners from "taking" (harm, harass, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct) endangered species.

The following measures will limit potential take of gray bats on this parcel. Failure to follow these measures could subject the violator to criminal sanctions of the ESA.

- Gray bats are known to use man-made structures in the vicinity of this parcel. Prior to removing or altering the structure of a bridge, abandoned building, or cistem, the structure should be checked for the presence of gray bats. The FWS will be contacted if bats are found to be present.

- Trees along (insert name of stream(s) with high or moderate quality foraging habitat on this parcel, as shown on page 14 of this BA) provide protective cover and prey for foraging gray bats. Forest within 50 feet of this stream should not be removed. If removal of dead or live trees within 50 feet of this stream is necessary, the FWS should be consulted prior to cutting.
- Gray bats primarily feed on insects with an aquatic life stage; therefore, water quality and the physical characteristics of streams affect the amount and types of insects available for these bats. State and federal regulations pertaining to water quality and erosion control should be followed. Additionally, modification of stream banks and water flow should be avoided to maintain present water quality and physical structure.

2.6.8 Project Design Feature Number 8

Project Design Feature No. 8 will be incorporated as a deed restriction for disposal of the FMC golf course.

Gray bats are known to forage over the golf course. If you change land use of this area, you must contact the U.S. Fish and Wildlife Service. If land use changes to something other than a golf course, the U.S. Fish and Wildlife Service may require preparation of a Conservation Agreement or Habitat Conservation Plan.

Pesticides currently used on the golf course include: Daconil® 2787; Dursban 50W; 2,4-D Amine 4; MSMA; Pendimethalin; Illoxan® 3EC; Koban 30; Dimension®; and Roundup®. Use of these pesticides in compliance with the following guidelines will not adversely affect gray bats.

- Do not spray pesticides directly onto or into streams, lakes, ponds, or other bodies of surface water.
- Do not allow pesticides to drift onto water, and do not apply when weather conditions favor drift or runoff from treated areas.

- Do not apply within 20 feet (6 meters) of banks or natural levees associated with streams, lakes, ponds, or other bodies of surface water. Illoxan® should not be applied within 100 feet (30 meters) of surface water.
- Apply pesticides only during daylight hours.
- Apply pesticides only for approved uses.
- Follow all use and disposal directions as specified on labels.

Section 3:

Scope of Analysis

3.1 EFFECTS ANALYSIS AREA

The effects analysis area is defined as all surplus property within Main Post boundaries, including BLM property, and four known gray bat roosts outside Main Post boundaries (Weaver Cave, Lady Cave, Highway 21 bridge over Cave Creek, and Highway 21 bridge over Cane Creek). Effects to gray bats within this area are assessed. This BA does not assess effects of activities on property retained for the National Guard/Reserves.

The BLM may elect to have the Army dispose of the 1140 acres of public domain land within Main Post. The BLM property is included in the effects analysis area. This BA analyzes disposal of BLM property by the Army as an interrelated action.

3.2 EFFECTS ANALYSIS APPROACH

This BA focuses upon aspects of the proposed action with reasonable potential to affect gray bats. We assess potential effects of the Army's preferred alternatives for disposal and reuse of excess property at Fort McClellan. Potential impacts to gray bats analyzed in this BA are characterized in Table 3-1.

TABLE 3-1. Activities and resultant impacts analyzed for the disposal and reuse of Main Post.

Activities	Type of Impact
Exposure to toxicants	Gray bat fatality or illness
Modification of forest cover near stream corridors	Deterioration of foraging habitat
Removal or modification of known/potential roost structures or caves, increased human presence near roosts	Modification or disturbance of roosts
Sedimentation, deterioration of surface water chemistry, deterioration of stream substrate or banks	Reduction of aquatic prey base

Army actions necessary to dispose of excess property and activities to occur during caretaker status are assessed to determine potential effects to roosting and foraging gray bats. The Army has incorporated protective measures into the proposed action as PDFs. The purpose of these PDFs is to reduce or eliminate potential impacts of proposed Army activities. Project Design Features are part of the proposed action and are analyzed as proposed Army activities.

Reuse of excess property is guided by the FMRRA reuse plan. Potential effects of reuse of Main Post by private entities are also addressed in this BA. Additional PDFs have been incorporated into the Army's proposed action regarding reuse of disposed property. Reuse PDFs are intended to inform new property owners of the presence of gray bats, potential impacts to this species from particular activities, and responsibility of the land owner to avoid take as regulated by the ESA. Reuse PDFs will be included in deeds to new property owners.

Section 4:

Natural History, Status, and Distribution of Gray Bats (*Myotis grisescens*)

4.1 LEGAL STATUS

Gray bats were listed as endangered by the FWS on 28 April 1976 and are protected under the ESA, as amended (Public Law 93-205). A recovery plan for gray bats was formulated by a FWS-sponsored recovery team (Brady et al. 1982). The recovery plan outlines three primary objectives: (1) prevent disturbance to important roost habitat, (2) maintain, protect, and restore foraging habitat, and (3) monitor population trends.

4.2 PHYSICAL DESCRIPTION

The pelage of gray bats is uniformly gray from the base to the tip of the hair. They have a forearm length of 1.6 to 1.8 inches (40 to 46 millimeters) and a wingspan of 10.8 to 11.8 inches (275 to 300 millimeters; Barbour and Davis 1969). A characteristic distinguishing this species from its congeners is the attachment of the wing membrane to foot at the ankle. In other species of myotine bats, wing membranes attach to the foot at the base of the toe. Additional distinguishing characteristics of gray bats include notched toenails and lack of a keeled calcar (Brady et al. 1982, Barbour and Davis 1969).

4.3 RANGE

Gray bat populations are concentrated in the cave regions of Missouri, Kentucky, Tennessee, and Alabama, with only a few known populations in southern Indiana (Brack et al. 1984, Mumford and Whitaker 1982, Barbour and Davis 1969). The cave regions of the above states comprise the summer and winter range for this species.

4.4 HABITAT REQUIREMENTS

4.4.1 Foraging Requirements

4.4.1.1 Foraging Habitat

Gray bats forage predominantly over water and in adjacent riparian vegetation. Foraging gray bats require open water (e.g., streams and lakes) that produces aquatic-based insects for food, and provides drinking water. Both large and small perennial streams are used by foraging gray bats (LaVal et al. 1977); there are no known limits to the size of streams gray bats will utilize for foraging. LaVal et al. (1977) observed gray bats flying downstream more often than upstream upon departure of a cave near a stream. This suggests a preference for wider downstream areas. Mist netting over streams has indicated some gray bats use even the smallest of permanently flowing streams, but most gray bats appear to use larger streams (LaVal et al. 1977).

Cover provided by riparian vegetation may be an important characteristic of foraging areas. Riparian vegetation provides shelter from predators, especially on nights with a bright moon (Fenton et al. 1977, LaVal and LaVal 1980). Observations of gray bat foraging on nights with a full moon versus nights with a new moon indicate lunar illumination may affect foraging activity. When released near caves, a greater percentage of gray bats flew cross-country from a release site during bright moon conditions than during new moon conditions (LaVal and LaVal 1980). During new moon nights, 62% of gray bats observed were foraging over water or in riparian strips, but on bright moon nights only 23% were seen foraging in these areas. During bright moon nights 20% of gray bats observed were foraging in ridge and hillside forest, while no gray bats were seen foraging in these forests on new moon nights (LaVal and LaVal 1980). Fenton et al. (1977) also observed bat activity in open areas was reduced on nights with a bright moon.

Gray bats utilize open flyways over streams. Gray bats generally forage close to the water surface (Clawson 1984). Foraging usually occurs below treetop height, often lower than 6.5 feet (2 meters) (LaVal et al. 1977). Gray bats foraging over a lake in Missouri were observed feeding from water level up to approximately 4.9 feet (1.5 meters), and occasionally as high as 9.8 feet (3 meters) (Clawson 1984). Large streams and rivers typically provide an abundant food source and ample flight space. Gray bats will use smaller streams if there is enough prey and if the stream corridor provides a clear flyway. Dense, overgrown vegetation along small streams commonly reduces or eliminates open space over the water.

Clawson (1984) observed gray bats foraging adjacent to bluffs near a lake, but concentrations of foraging gray bats were found over deep water in the center of the lake and over shallow, weedy areas. Gray bats foraged alone or in pairs, rarely in groups of three or more (Clawson 1984, LaVal et al. 1977).

LaVal et al. (1977) used a helicopter to observe gray bat foraging activity. The bats foraged over water with brief forays into riparian vegetation. The use of riparian forest likely accounts for the presence of terrestrial-based insects in their diet. The bats tended to be concentrated in groups of two or three adjacent to heavily wooded bluffs and hillsides. Few bats were observed foraging adjacent to pastures. LaVal and LaVal (1980) reported some or all gray bats from a maternity cave may switch from one foraging area to another during the course of a season, even when the change involves flying the opposite direction over pastures to a different body of water.

4.4.1.2 Prey

The diet of gray bats has been characterized from fecal analysis. Gray bats consume both aquatic and terrestrial-based insects. Clawson (1984) analyzed fecal samples taken from reproductively active gray bats captured at four Missouri caves. He identified 53 families comprising 13 orders of insects in the fecal pellets. Size of prey ranged from 0.08 to 1 inch (2 to 25 millimeters), but most were small, 0.08 to 0.4 inches (2 to 10 millimeters). Abundance of terrestrial and aquatic forms was variable due to variation in availability in the habitat occupied by the bats. Overall, Diptera (flies), Coleoptera (beetles), and Homoptera (plant hoppers) were the most frequently observed prey in the diet. Hymenoptera (wasps) and Plecoptera (stoneflies) were less frequent prey items. Ephemeroptera (mayflies) appeared to be a rare

item in the diet of gray bats; however, this may be due to their extreme digestibility. Temporal changes in diet apparently reflected changes in the insect fauna (Clawson 1984).

Brack et al. (1994) collected fecal samples from five gray bat maternity caves in Missouri. At three of these caves, reproductive females consumed predominately aquatic-based insects (orders Trichoptera (caddisflies), Plecoptera, Ephemeroptera, and Diptera) on most sample dates. In contrast, juveniles at these three caves often ate more terrestrial insects (orders Lepidoptera (moths), Coleoptera, Homoptera, Hemiptera (true bugs), and Hymenoptera). At the other two maternity caves, reproductive females and juveniles sometimes consumed more terrestrial-based insects than insects with an aquatic life stage. Males and non-reproductive females at two of the maternity caves typically consumed more aquatic-based than terrestrial-based insects. In all ages and sexes, individual variability in the types of insects eaten was generally high (Brack et al. 1994).

LaVal and LaVal (1980) examined 6272 fecal pellets obtained from 685 gray bats. Results showed insects of the aquatic orders Plecoptera, Ephemeroptera, and especially Trichoptera, are extremely important in the diet, accounting for as much as 98% in some samples. During late summer, small Coleoptera (Asiatic oak weevils) were commonly eaten, accounting for as much as 50% of the diet (Brack et al. 1994, LaVal and LaVal 1980). Asiatic oak weevils are a terrestrial species; therefore, indicating use of riparian forest during foraging. LaVal and LaVal (1980) found that on occasion, Lepidoptera were taken in sizable numbers (more than 50% moths at one site on two nights). At two of five sites, Diptera became important in late June and early July, comprising up to 55% of the diet on one night.

Comparisons of prey selection and prey availability indicate gray bats are opportunistic feeders. They appear to concentrate on aquatic-based insects available where they forage, but take advantage of other insects (especially Lepidoptera and Coleoptera) when they are abundant in their foraging areas (Brack et al. 1994, Clawson 1984, LaVal and LaVal 1980). Clawson (1984) found significant correlation between the types of insect captured in light traps (availability) and the types of insects eaten at foraging sites. Significant correlation of prey availability and prey selection was found for insect orders Coleoptera, Diptera, Hemiptera, and Plecoptera (Clawson 1984).

4.4.1.3 Foraging Travel Distance

Gray bats are known to fly up to 22 miles (35 kilometers) in a single night to forage over large bodies of water (Tuttle 1976). During summer mist netting over streams in eastern Missouri, gray bats were recaptured a mean distance of 6.9 miles (11.1 kilometers) from the cave in which they were banded (LaVal et al. 1977). Bats netted over streams were later recaptured at caves a mean distance of 7.8 miles (12.5 kilometers) from the stream site where they were banded (LaVal et al. 1977). LaVal and LaVal (1980) reported a maximum upstream dispersal distance of 12.4 miles (20 kilometers) from a cave. They also reported gray bats flying cross country as far as 15.4 miles (24.8 kilometers) from a cave to a lake. Gray bats released from Hambrick Cave on Guntersville Reservoir, Alabama, were detected with radiotelemetry at sites up to 18.6 miles (30 kilometers) from the release point (Thomas and Best in press).

Gray bats may fly from summer caves for some distance before foraging. After reaching a suitable foraging area, a gray bat may remain within a limited portion of stream or lake for the remainder of the evening. While observing gray bats foraging along a Missouri stream, LaVal et al. (1977) noted foraging areas of individuals seemed to be less than 0.6 miles (1 kilometer) in length.

4.4.2 Roosting Requirements

With few exceptions (3D/I 1997, Grigsby 1965, Gunier and Elder 1971), gray bats roost in caves year-round (Barbour and Davis 1969). Because of unique habitat requirements, $\leq 5\%$ of available caves are used as roosts by gray bats (Tuttle 1979). The majority of the population hibernates in five or six caves (Barbour and Davis 1969). Gray bats appear to prefer summer roost caves within 0.6 mile (1 kilometer) of a large river or lake, and rarely roost in caves > 2.5 miles (4 kilometers) from these features (Tuttle 1976). Gray bats are intolerant of disturbance and may desert a cave if disturbed (Tuttle 1979). Tolerance level of gray bats using atypical roosts such as bridges is undocumented. During winter, gray bats congregate in large, tight clusters on the cave ceiling. These clusters are sometimes several layers thick (Barbour and Davis 1969). Gray bats tend to select roost sites in hibernacula with a temperature between 7 and 10°C.

In late March or early April, gray bats begin leaving hibernacula, and males and females migrate to summer transient caves (LaVal and LaVal 1980). By the middle of May pregnant

females move from transient caves to maternity caves (LaVal and LaVal 1980). Maternity caves often have large streams running through them. During the maternity season, males and non-reproductive females roost in caves used by transient bats. Caves used by a large number of males during the maternity season are commonly called bachelor caves.

By late July most females and juveniles leave maternity caves (LaVal and LaVal 1980). After this time, maternity caves are often used as transient caves by males and females. During late July and August, gray bats of mixed ages and sexes can be found at many caves throughout the summering area, with frequent movement between caves (LaVal and LaVal 1980). In September females begin to congregate at transient caves, and by the end of the month most females return to hibernacula (LaVal and LaVal 1980). Males remain in the summering areas later than females. Most males leave summering areas by November; however, a small number of males may remain in summer transient caves through winter (LaVal and LaVal 1980).

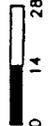
4.5 REPRODUCTION

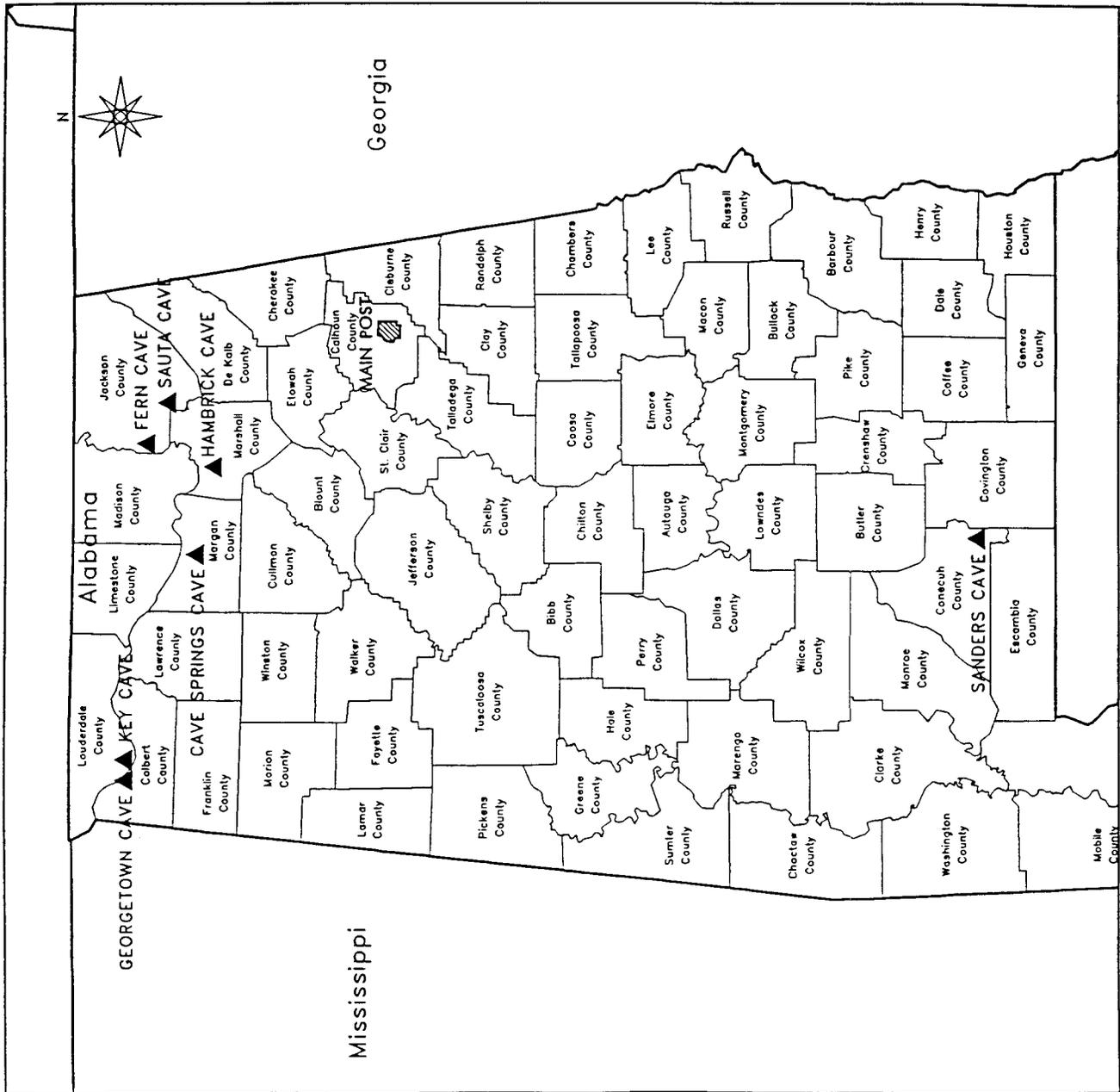
Males become reproductively active in October and November (Barbour and Davis 1969). Mating occurs at hibernacula. Females store sperm, and fertilization is delayed until spring. After leaving hibernacula, females migrate to transient caves in summering areas. In May, pregnant females form large colonies at maternity caves. Maternity colonies may contain from a few hundred to a quarter of a million individuals (Barbour and Davis 1969).

Females produce a single young in June (LaVal and LaVal 1980). Neonates are left in the cave while adults forage, but females return frequently to nurse their young (Barbour and Davis 1969). By the middle of July, young forage on their own. At this time the maternity colony disbands and disperses among other caves in the summering area (LaVal and LaVal 1980).

4.6 PRESENCE IN ALABAMA

The range of gray bats includes all of eastern Alabama (Barbour and Davis 1969). Northern Alabama supports the majority of known gray bat populations in the state. Fern Cave, in Jackson County, Alabama supports the largest number of hibernating gray bats range-wide (Figure 4-1). It is located near Paint Rock, approximately 87 miles (140 kilometers) north of

<p>BIOLOGICAL ASSESSMENT DISPOSAL AND REUSE OF FORT MCLELLAN, ALABAMA</p>	<p>FIGURE 4-1. Alabama caves historically used by gray bats during summer.</p>	<p>▲ Cave Location</p>	<p>Miles 0 14 28</p> 	<p>3D/ENVIRONMENTAL</p>
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Fort McClellan. About 750,000 gray bats hibernate in Fern Cave (Gray Bat Recovery Team census 1991). In summer, Fern Cave is used by a maternity colony of about 400 gray bats (Hudson 1995).

The largest gray bat summer colonies in Alabama roost in Sauta Cave, Jackson County, and Hambrick Cave, Marshall County (Figure 4-1). Sauta Cave (also named Blowing Wind Cave) is a bachelor cave, housing primarily males during the maternity season. Hudson (1995) reports 105,000 to 180,000 gray bats using Sauta Cave during summer. In 1993, 550 non-volant young were observed in the cave, suggesting a maternity colony was established that year (Hudson 1995). Human disturbance of bats at Sauta Cave is discouraged by gates at both entrances of the cave. Sauta Cave is located on the Wheeler National Wildlife Refuge near Scottsboro, approximately 62 miles (100 kilometers) north of Fort McClellan. The cave is less than 328 feet (100 meters) from North Sauty Creek, a tributary of the Guntersville Reservoir. Both North Sauty Creek and Guntersville Reservoir provide foraging habitat for the colony at Sauta Cave.

Hambrick Cave is primarily a maternity cave. Approximately 55,000-67,000 gray bats roost in the cave during summer months (Hudson 1995). Hambrick Cave is located at Guntersville Reservoir, near the Guntersville Dam, about 43 miles (70 kilometers) north of Fort McClellan. Gray bats fly upstream and downstream from this cave to forage (Thomas and Best in press).

Two other large gray bat maternity caves are known in Alabama. Cave Springs Cave in Morgan County contains a population of approximately 65,400 gray bats (Figure 4-1). It is located about 71 miles (115 kilometers) northwest of Fort McClellan. Key Cave in Lauderdale County is approximately 118 miles (190 kilometers) northwest of the Installation (Figure 4-1). Key Cave houses a maternity colony of 25,000 to 35,000 gray bats (Hudson 1995). Both caves are near the Tennessee River or its tributaries.

Gray bat numbers have decreased over the past two decades; populations in two Alabama caves having decreased dramatically. Georgetown Cave and Sanders Cave once housed maternity colonies consisting of nearly 50,000 gray bats each, but have contained few or no gray bats in recent years (Hudson 1995). At Georgetown Cave in Colbert County, fewer than 10 bats have been observed emerging during each of the past three years (Hudson 1995). Georgetown cave is located over 124 miles (200 kilometers) northwest of Fort McClellan

(Figure 4-1). Sanders Cave in Conecuh County currently contains a large population of the southeastern myotis (*Myotis austroriparius*), but gray bats have not been documented there in over 20 years (Hudson 1995). Sanders Cave is located more than 124 miles (200 kilometers) south of Fort McClellan (Figure 4-1).

4.7 GRAY BAT OCCURRENCE NEAR FORT MCCLELLAN

During August 1995, 3D/International, Inc. (3D/I) captured two post-lactating female gray bats along Choccolocco Creek in the Choccolocco State Forest (3D/I 1996a). The capture site is approximately 2 miles (3.3 kilometers) from the eastern boundary of Main Post (Figure 4-2).

There is an historical record of a gray bat captured in Anniston (Hall 1981). No data exist describing the gender or season of capture for this specimen.

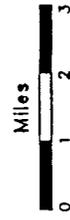
In July 1997, 3D/I found gray bats roosting in four locations near Main Post (Figure 4-3). The Highway 21 bridge over Cane Creek approximately 160 feet (50 meters) outside Main Post served as a bachelor roost for at least seven adult males during the maternity season (4 July 1997), and served as a transient roost for at least 17 gray bats (males and females) on 29 July 1997. A single gray bat of unknown sex was found under the Highway 21 bridge over Cave Creek approximately 160 feet (50 meters) outside Main Post on two occasions during summer 1997.

On 29 July 1997, 3D/I discovered adult male, adult female, and juvenile gray bats roosting in Weaver Cave and Lady Cave, both located approximately 1 mile (1.5 kilometers) from the northwestern boundary of Main Post (Figure 4-3). Two clusters (n = 4, 6) and one solitary gray bat were found in Weaver Cave. Two clusters (n = 6, 7) of gray bats were found in Lady Cave. Additional gray bats may roost in reaches of the caves not investigated. The time of year and mix of ages and sexes in these colonies indicates these bats were transitory. Weaver Cave and Lady Cave had previously been investigated for the presence of gray bats during the maternity season (early July 1997), but no individuals or sign of gray bats were found (3D/I 1997). These caves may serve as roosts for maternity colonies in the future.

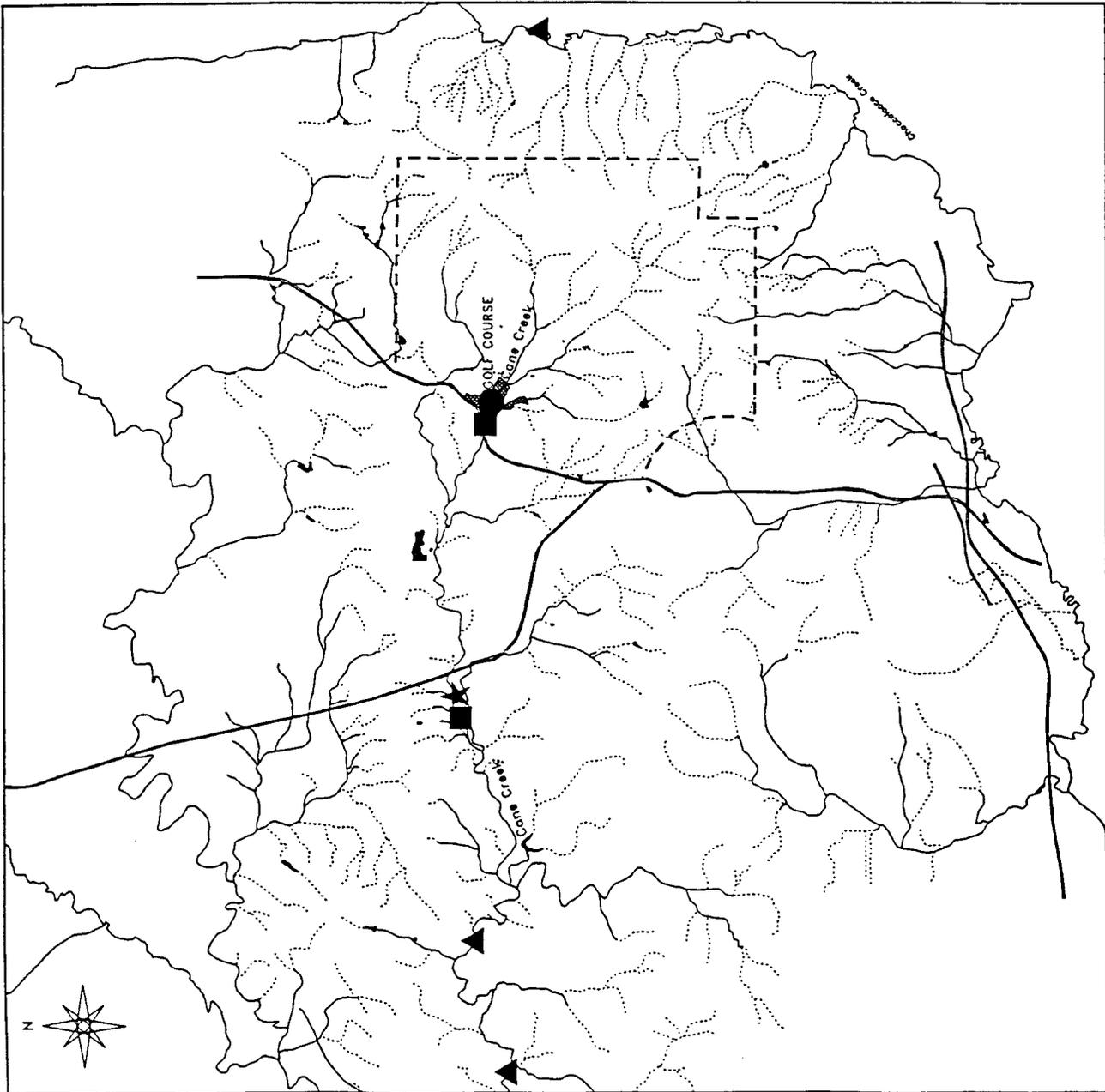
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**FIGURE 4-2. Location of gray
bats captured on or near Main Post
during mist net surveys in 1995,
1996, and 1997.**

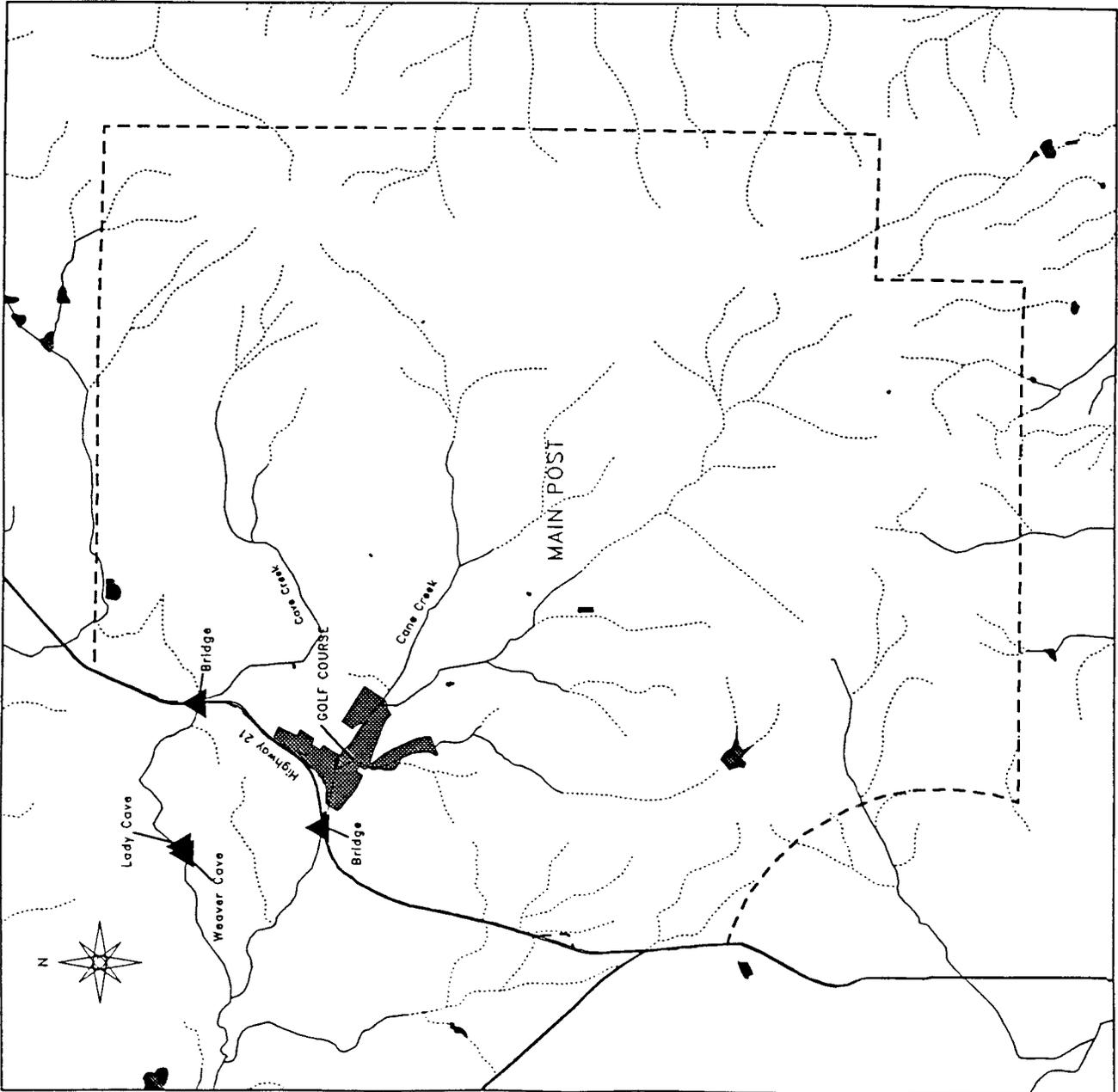
- ▲ 1995 capture site
- 1996 capture site
- ★ 1997 capture site
- 1996 and 1997 capture site



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<p>BIOLOGICAL ASSESSMENT DISPOSAL AND REUSE OF FORT McCLELLAN, ALABAMA</p>	<p>FIGURE 4-3. Known gray bat roosts on or near Fort McClellan.</p>	<p>▲ Gray bat roosts</p>	<p>Miles 0 0.5 1 1.5</p>	<p>3D/INTERNATIONAL, INC.</p>
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4.8 GRAY BAT OCCURRENCE ON FORT MCCLELLAN

3D/International documented gray bats using Fort McClellan during mid- and late-summer (3D/I 1996a, 1996b, 1997). Reproductive and transient adults have been captured over Cane Creek. Mist net surveys conducted during August 1995 resulted in capture of 13 gray bats (five post-lactating females, seven adult males, and one of undetermined sex) on Cane Creek within Pelham Range (Figure 4-2). Mist net surveys conducted in June and July 1996 resulted in the capture of two gray bats (a lactating female and an adult male) on Pelham Range and two adult male gray bats on Main Post along Cane Creek at the golf course (Figure 4-2). Mist net surveys conducted in June and July 1997 resulted in the capture of one adult male on Cane Creek near the golf course and two post lactating females on Cane Creek just within the eastern boundary of Pelham Range (Figure 4-2).

The capture of a reproductive female and three adult males during summer 1996 indicated at least one maternity colony and one bachelor colony is located within approximately 22 miles (35 kilometers) of the Installation. Gray bats may travel as far as 22 miles from a roost site to a foraging area in a single night (Tuttle 1976). Radiotelemetry studies conducted by 3D/I in 1997 revealed one bachelor roost under a bridge, a second bridge roost for a single gray bat, and two transitional cave roosts outside FMC boundaries (Figure 4-3); no roosts were found on the Installation.

The August 1995 captures of post reproductive females and adult males indicate gray bats also forage on the Installation during the transient period following the maternity season. After the maternity season, females and juveniles generally disperse to caves other than the maternity cave. Therefore, several different caves or structures may be used near or on the Installation throughout summer and fall. This information is important for determining potential effects of seasonally dependent activities on foraging and roosting gray bats.

Section 5:

Relevant Studies Completed on Fort McClellan

This BA analyzes potential for, and magnitude of, direct, indirect, and cumulative effects based upon the best available scientific and commercial data, including studies described in this document. Fort McClellan has completed studies to:

- Assess the location and quality of suitable gray bat habitat on FMC
- Document presence and distribution of gray bats on FMC
- Assess the environmental fate of certain training chemicals used on FMC
- Identify roost sites used by gray bats foraging on FMC

This assessment incorporates results of these studies to identify potential effects of disposal and reuse of the Installation on gray bats.

5.1 LITERATURE REVIEW AND HABITAT CHARACTERIZATION

To assess the current status of gray bats on and near Fort McClellan, 3D/I reviewed published and unpublished literature pertaining to cave locations and bat occurrence in Calhoun and surrounding counties (3D/I 1996a). 3D/International also solicited information regarding these

issues from state and local agencies and private organizations, including the National Speleological Society.

A search for caves was conducted on FMC between 1 and 4 March 1996 (3D/I 1996a). The search revealed no caves within FMC boundaries. 3D/International also searched historical records for caves near the Installation. Thirty-five caves were recorded within 22 miles (35 kilometers) of gray bat capture sites on Main Post (Table 5-1 and Figure 5-1).

In February and July 1996, 3D/I assessed the quality of habitat on Main Post and Pelham Range for foraging gray bats. Streams, lakes, and ponds on the Installation were ranked as providing high, moderate, or low quality habitat for gray bats. High quality habitat was found only on Pelham Range along Cane Creek. Moderate and low quality foraging habitat was identified on Main Post (Figure 5-2). 3D/International provided recommendations for management of high and moderate quality habitat to be incorporated into the FMC Endangered Species Management Plan (3D/I 1996a).

5.2 INVESTIGATIONS TO DETERMINE PRESENCE OF GRAY BATS AT FORT MCCLELLAN

During 1996, 3D/I investigated the presence of gray bats at potential roosting and foraging sites on and near FMC (3D/I 1996b). Caves near the Installation, and man-made structures on Main Post were searched for signs of gray bat colonies. The distribution of gray bats on Main Post and Pelham Range was investigated by mist netting stream corridors identified as moderate or high quality foraging habitat.

During February and March 1996, four caves just outside Main Post and Pelham Range were searched for hibernating bats or signs of summer use by gray bats. No gray bats or guano accumulation were found (3D/I 1996b).

Structures on main post such as bunkers, storm sewers, and abandoned cisterns were investigated for live bats, guano, stains on ceilings or beams, bat carcasses, and other evidence indicating bats currently or historically used these features. No gray bats were observed roosting in man-made structures on the Installation. However, fresh bat guano found in an abandoned cistern in February 1996 indicates an undetermined species of bat had been using this structure. Fort McClellan personnel reported seeing bats roosting within the cistern

TABLE 5-1. Names and locations of caves within 22 miles (35 kilometers) of gray bat capture sites on Main Post (3D/I 1996a, Varnedoe 1973).

Cave Name	County	Location Relative to Main Post Capture Sites		
		Distance		Direction
		kilometers	miles	
Unnamed Cave	Calhoun	0.9	0.6	North
Little Weaver Cave	Calhoun	1.0	0.6	North
Weaver Cave	Calhoun	1.9	1.2	Northwest
Lady Cave	Calhoun	1.9	1.2	Northwest
Meadows Cave	Calhoun	5.0	3.1	Northwest
Erby Cave	Calhoun	11.0	6.8	North
Oxford Cave	Calhoun	12.7	7.9	South
Wilson Cave	Calhoun	14.3	8.9	North
Cedar Mountain Cave	Calhoun	17.9	11.2	Northwest
Maxwellbom Cave	Calhoun	18.1	11.3	Northeast
Daugette No.2 Cave	Calhoun	18.8	11.7	Northeast
Daugette No.1 Cave	Calhoun	18.8	11.7	Northeast
Baswell Cave	Calhoun	20.0	12.4	West
Millers Cave	Calhoun	20.7	12.9	Southwest
Green Valley Cave	Calhoun	25.1	15.6	Northwest
Small Cave	Etowah	25.1	15.6	Northwest
Lin and Randys Pit	Calhoun	25.3	15.7	Northwest
Short Cave	Calhoun	25.3	15.7	Northwest
Greens Creek MT. Cave	Calhoun	25.4	15.8	Northwest
Joint Cave	Etowah	25.5	15.8	Northwest
Little Sink Cave	Etowah	25.5	15.8	Northwest
Crawl Cave	Etowah	25.5	15.9	Northwest
Abrupt End Cave	Etowah	25.6	15.9	Northwest
Quarry Side Cave	Etowah	26.3	16.3	Northwest
Mule Glove Pit	Etowah	26.3	16.3	Northwest
Zuber Quarry No.1 Cave	Etowah	26.3	16.4	Northwest
Cedar Tree Pit	Etowah	26.4	16.4	Northwest
Zuber Quarry No. 2 Cave	Etowah	26.4	16.4	Northwest
Coluin Cave	Etowah	26.4	16.4	Northwest
Coluin Pit No.2	Etowah	26.4	16.4	Northwest
Spiral Cave	Etowah	26.5	16.5	Northwest
Robertson Cave	Calhoun	26.6	16.5	Northeast
Wrights Cave	Calhoun	26.8	16.6	Northeast
Dulaney Cave	Talladega	26.8	16.6	Southwest
Merit Cave	Etowah	33.1	20.5	Northwest

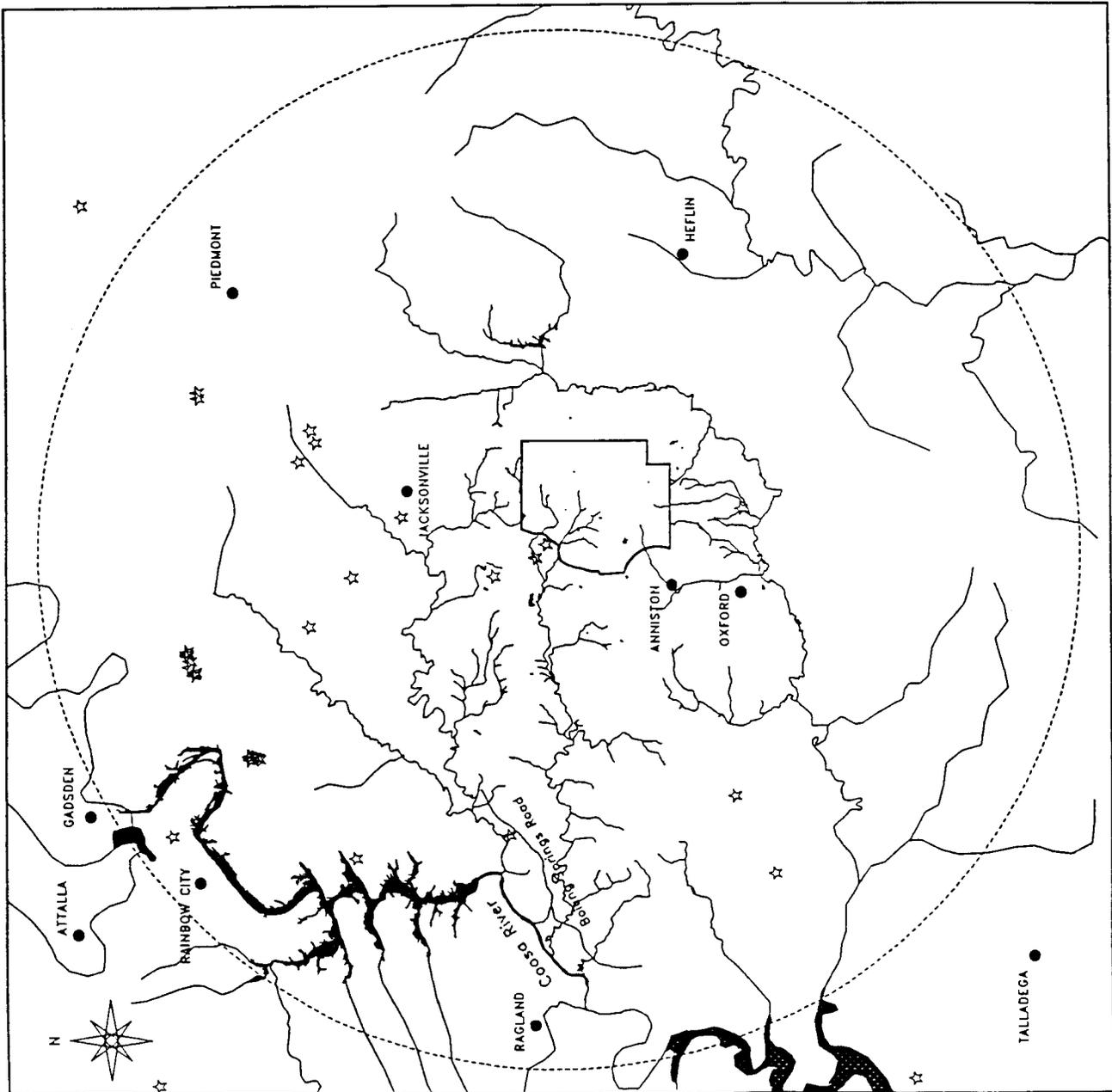
**BIOLOGICAL ASSESSMENT
DISPOSAL AND REUSE OF
FORT MCCLELLAN, ALABAMA**

**FIGURE 5-1. Caves within 22
miles (35 kilometers) of gray bat
capture sites on Main Post.**

- ☆ Cave
- Main Post
- ⊞ 22-mile radius buffer
- Stream
- Town



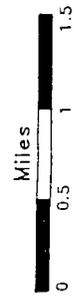
3D/INTERNATIONAL, INC.



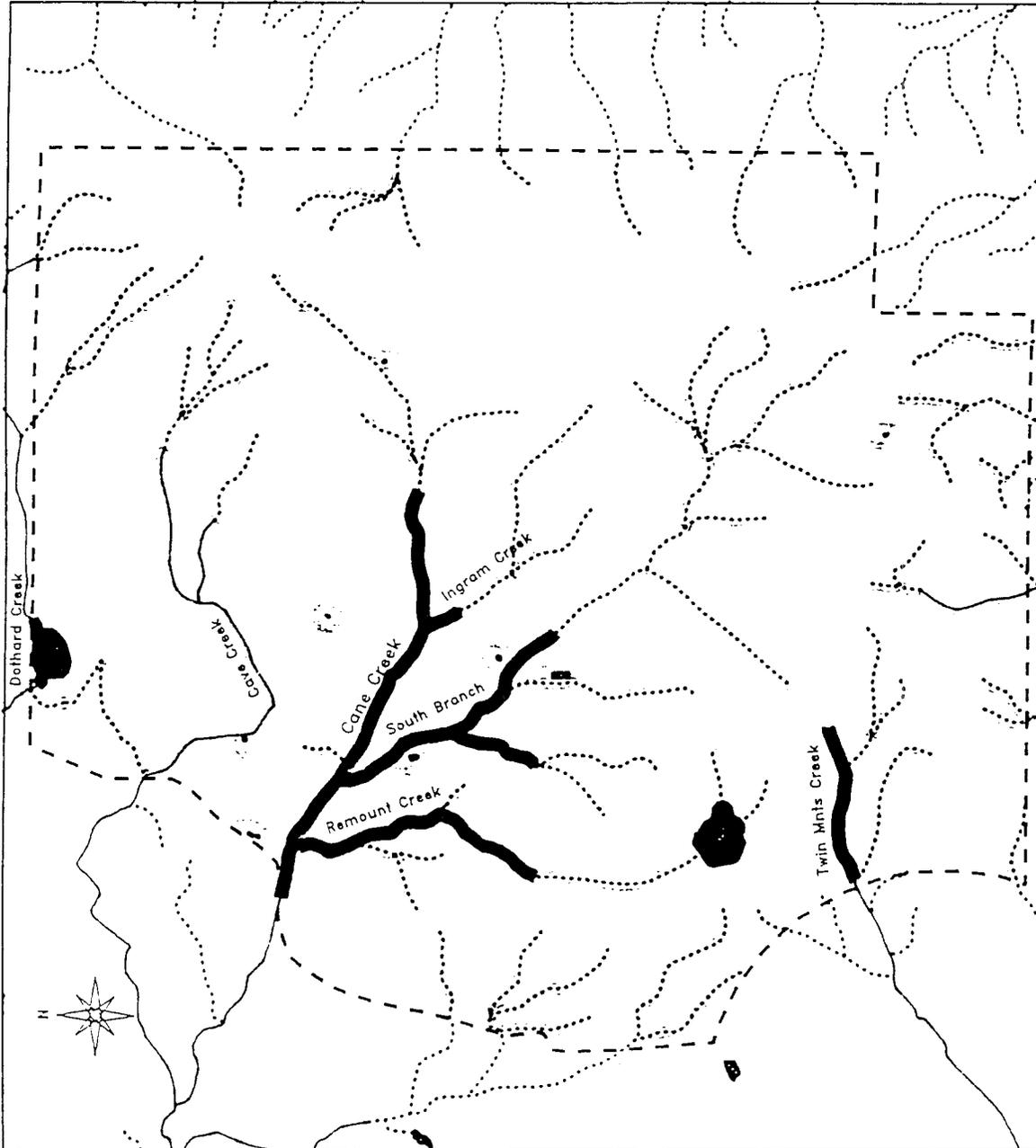
**BIOLOGICAL ASSESSMENT
DISPOSAL AND REUSE OF
FORT McCLELLAN, ALABAMA**

**FIGURE 5-2. Quality of habitat for
foraging gray bats on Main Post.**

-  Excess Property
 -  Moderate Quality Habitat
 -  Low Quality Habitat
- Note: No high quality habitat on
Main Post.**



3D/INTERNATIONAL, INC.



during summer 1995. 3D/International conducted additional investigations of this cistern during June and July 1996 and July 1997; no bats or fresh sign was found within the cistern (3D/I 1996b, 1997).

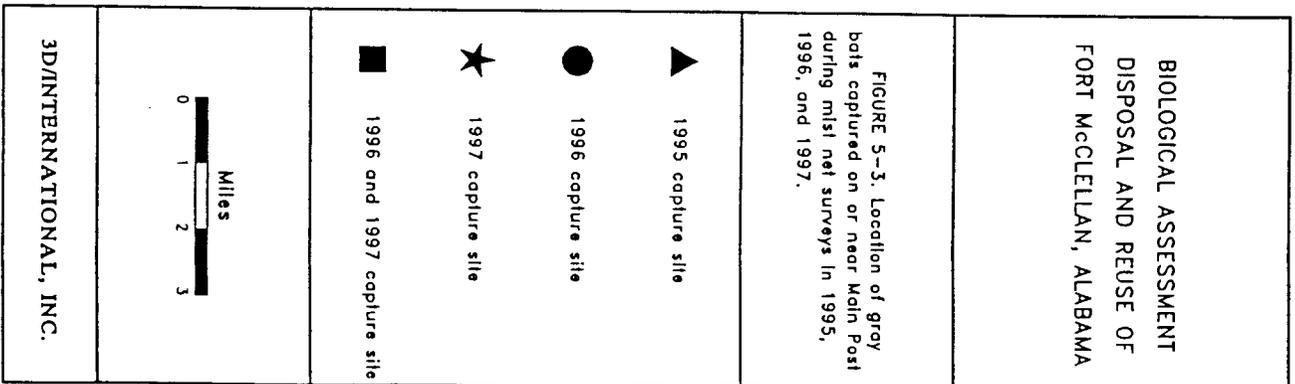
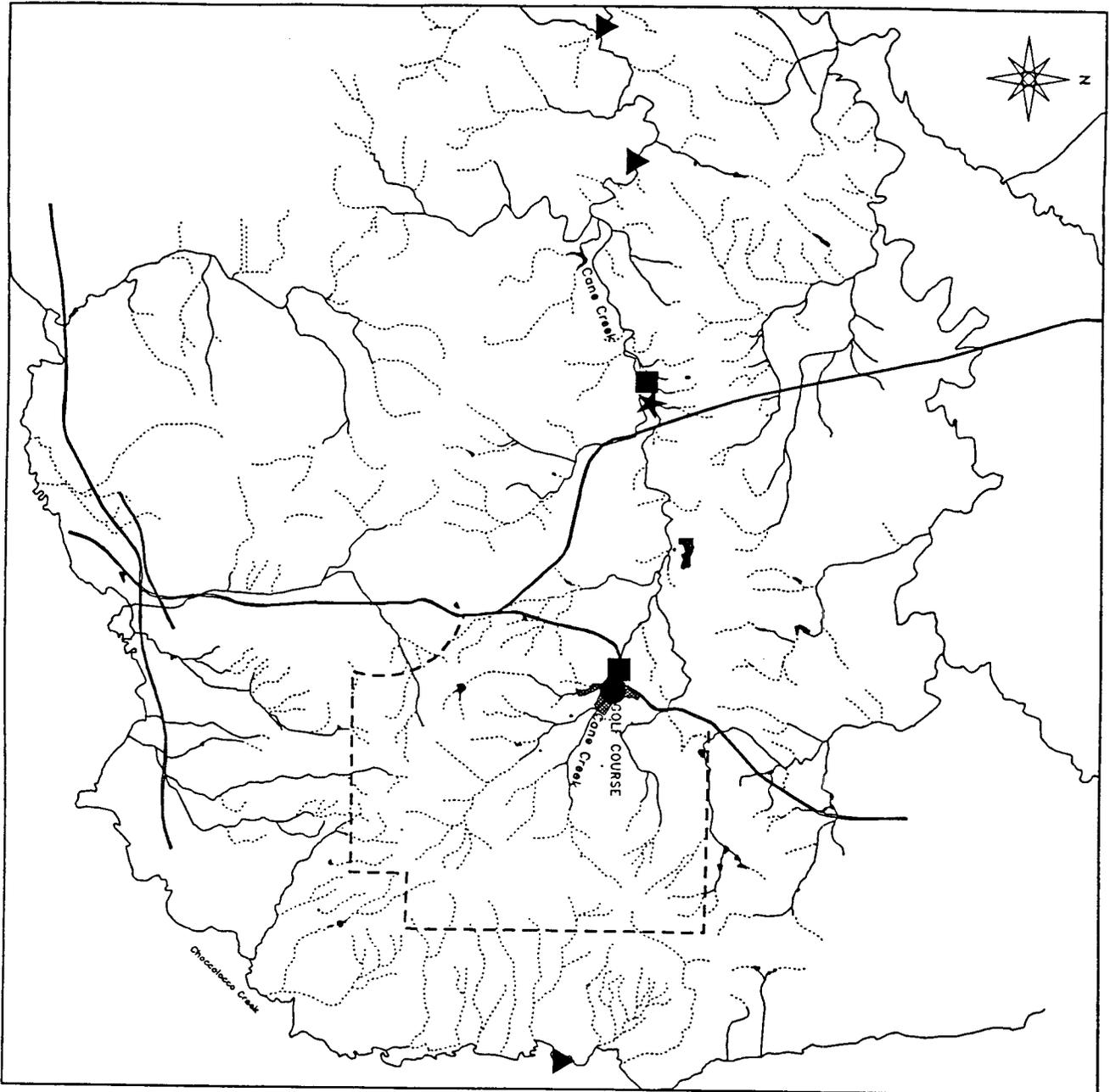
From 25 June to 17 July 1996, mist net surveys were conducted at 17 sites on Pelham Range and Main Post (3D/I 1996b). A total of 102 bats of five species were captured, including four gray bats (one lactating female and three adult males). On Pelham Range, a lactating female and an adult male gray bat were captured over Cane Creek near the eastern boundary. Two adult male gray bats were captured over Cane Creek near the golf course on Main Post (Figure 5-3).

5.3 RADIOTELEMETRY STUDIES OF GRAY BATS AT FORT MCCLELLAN

3D/International tracked gray bats captured on FMC to determine roost locations (3D/I 1997). Mist nets were used to capture gray bats foraging on Main Post and Pelham Range (Figure 5-3). Four gray bat roosts, two caves and two bridges, were successfully located during this study.

An adult male gray bat captured over Cane Creek near the FMC golf course was tracked to a roost site under a bridge (3D/I 1997). This gray bat was found roosting with approximately six other adult males during the maternity season (4 July 1997) under the Highway 21 bridge over Cane Creek approximately 160 feet (50 meters) outside the Baltzell gate to Main Post (Figure 3-4). One of the bats found in this colony had a red arm band (band number 1862). 3D/International confirmed this bat was one captured near the FMC golf course during 1996. On 29 July 1997, during the transitory season following the maternity season, approximately 17 gray bats (males and females) were found roosting under the bridge. The gray bats were roosting in holes on the underside of the concrete bridge.

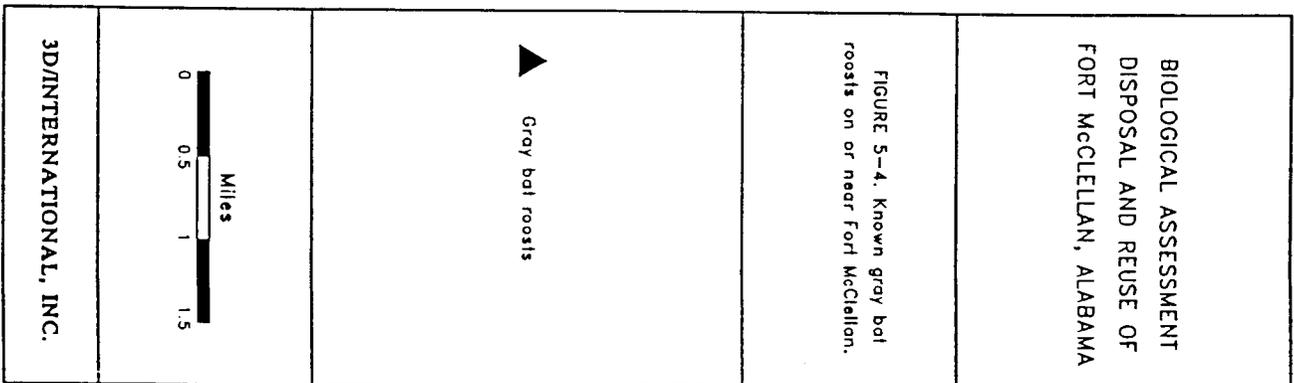
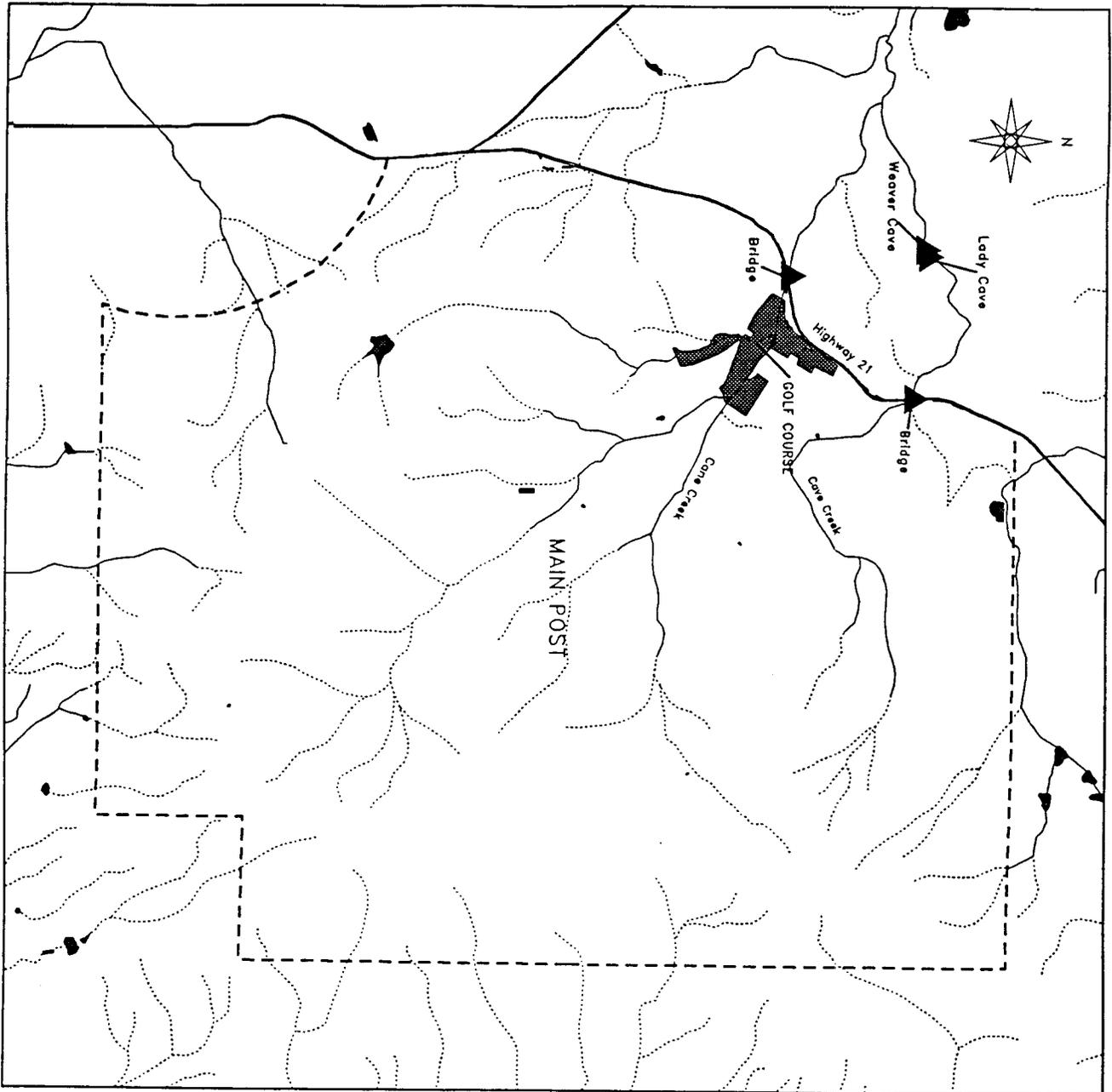
During this study an additional bridge roost was found while searching for roosting gray bats. On two occasions (3 & 29 July 1997), a gray bat was observed roosting on the Highway 21 bridge over Cave Creek (Figure 5-4). The bridge is approximately 160 feet (50 meters) outside the western boundary of Main Post. This study establishes knowledge of gray bats using man-made structures in Alabama. The study also documents use of a bridge during maternity and transitory seasons.



3D/International tracked two post-lactating females and one adult male captured over Cane Creek on Pelham Range to the region of Weaver Cave and Lady Cave (Figure 5-4). Previous investigations of these caves (4 July 1997) revealed no gray bats. On 29 July 1997, 3D/I discovered gray bats roosting in both caves. Seven gray bats, including the adult male and one of the post-lactating females with transmitters, were roosting in Weaver Cave. Thirteen gray bats were roosting in Lady Cave. The clusters of gray bats in these caves contained a mix of adult males, adult females, and juveniles.

5.4 ENVIRONMENTAL FATE OF FOG OIL AT FORT MCCLELLAN

3D/International assessed the environmental fate of certain chemicals used in training at Fort McClellan (3D/I 1996c). This study was completed to support the Biological Assessment for relocation of Fort McClellan training activities to Fort Leonard Wood. Soil, water, and vegetation samples were collected and analyzed for the presence of chemicals used during military training. Insects and bats also were collected and analyzed for presence of these chemicals in body tissues to determine potential effects to endangered bat species. Gray bats were first discovered on Fort McClellan during this study in August 1995. Gray bats were captured on Pelham Range and Choccolocco Creek (Figure 5-3).



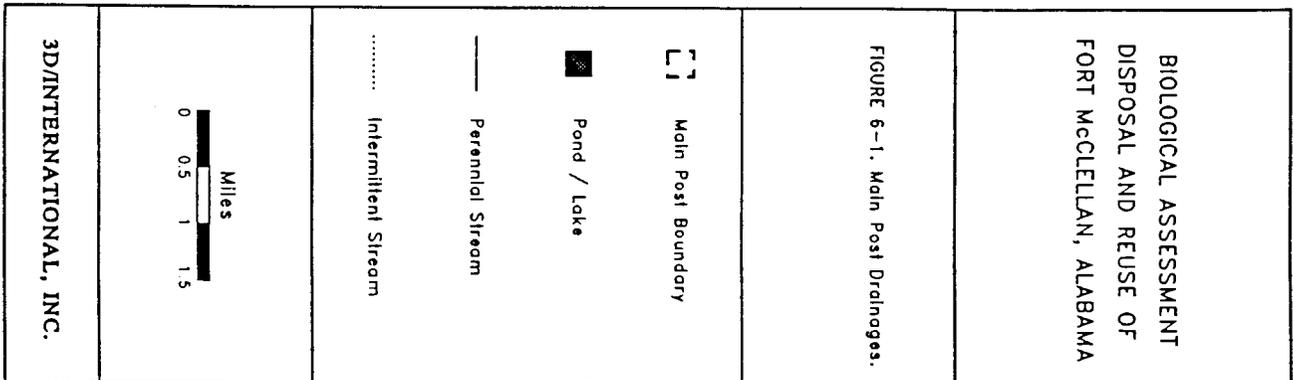
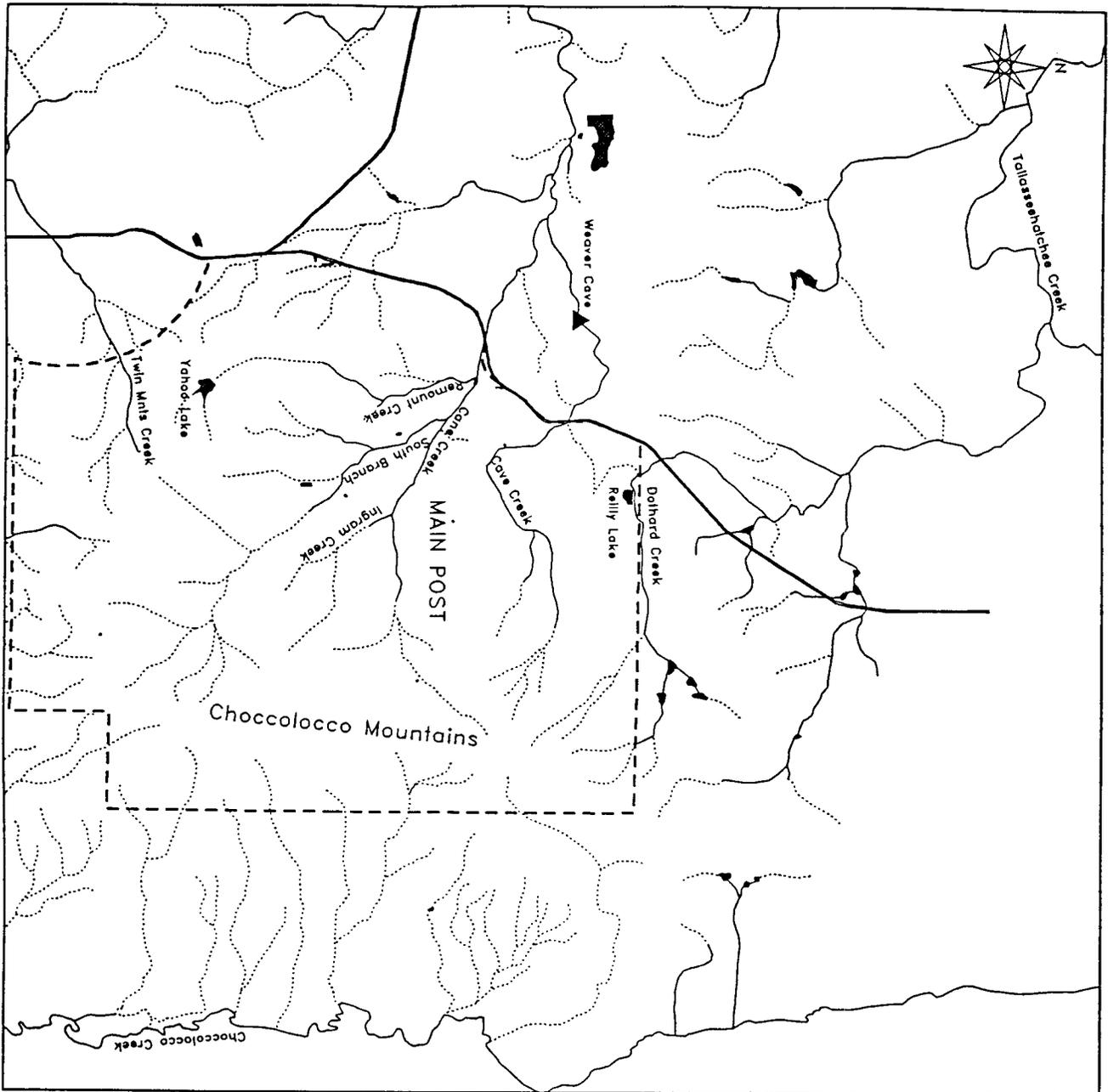
Section 6:

Affected Environment

6.1 PHYSIOGRAPHY AND SURFACE DRAINAGE

All but the eastern most portion of FMC lies within the Valley and Ridge physiographic province of the Appalachian Highlands. The portion of FMC west of Choccolocco Creek lies within the Piedmont province. The lower elevations [700 feet (210 meters) above mean sea level (MSL)] occur along Cane Creek, near Baltzell Gate Road, while the maximum elevations [2063 feet (619 meters) above MSL] occur on Choccolocco Mountain, which traverses the installation and the area in a north-south direction, with the steep easterly slopes grading abruptly into Choccolocco Valley. The western slopes are more gradual, with the southern extension maintaining elevations up to 900 feet (270 meters) above MSL near the western installation boundary. The northern extension decreases in elevation in the vicinity of Reilly Army Airfield. The central portion of FMC is characterized by flat to gently sloping land.

The Choccolocco Mountains, located in the eastern portion of FMC, form a major surface water divide. Choccolocco Creek and its tributaries drain this portion of FMC and flow southward to the Coosa River. FMC west of the drainage divide is drained by three creek systems, Cane, Choccolocco, and Tallasseehatchee creeks (Figure 6-1).



6.1.1 Surface Water

The Cane Creek watershed is among six major watersheds occurring within Calhoun County. Cane Creek, with its tributaries (Cave, Remount, South Branch, and Ingram creeks), originates on FMC (Figure 6-1). Cane Creek flows westerly across Main Post and Pelham Range and drains the majority of the installation [approximately 20 square miles (52 square kilometers)].

South Branch receives runoff from the south-central portion of Main Post, then joins Cane Creek before leaving Main Post on the western boundary. Cane Creek receives surface runoff from the central portion of Main Post. The north-central portion of Main Post is drained by Cave Creek, which leaves Main Post on the northwestern boundary. A small portion of the area along the northern installation boundary and north of the Cave Creek watershed, drains into the Tallasseehatchee Creek watershed (including its southern tributaries, Little Tallasseehatchee, Weaver's and Dothard creeks). Dothard Creek has headwaters originating both on and off the installation and drains the area around Reilly Lake (Figure 6-1). These creek systems originate on the western side of the Choccolocco Mountains and flow west through Main Post. They are fed by springs originating from underlying limestone strata.

Choccolocco Creek occurs to the east of the Choccolocco Mountains, passing along the eastern and southern portions of FMC. The Choccolocco Creek drainage includes four small tributaries originating near the southern boundary (Faison, Davis-Silver, Royal-Davis, and Twin Mountains creeks).

Surface water features other than streams and creeks within Main Post boundaries include Lake Yahou [13.5 acres (5.4 hectares)], Reilly Lake [8.5 acres (3.4 hectares)], Cappington Ridge [0.3 acres (0.12 hectares)], and Duck Pond [0.5 acre (0.2 hectares)]. Surface drainage is collected in small, independent networks that drain areas varying from 20 to 60 acres (8 to 24 hectares; Science Applications International Corporation 1993).

Freshwater springs occur throughout Calhoun County, often appearing along the trace of thrust faults (Moser and DeJamette 1992). On FMC, the springs appear as seeps and include the Marcheta Orchid Seep, Bains Gap Seep, Cave Creek Seep, and Marcheta Hill Crow Poison Seep. Unmapped springs and seeps potentially occur over much of the FMC area. Karst features, including sinkholes, have been identified in the area of FMC (U.S. Army Corps

of Engineers 1992). Weaver Cave interrupts the drainage of Cave Creek from FMC prior to its reemergence approximately 1300 feet (390 meters) downstream (Figure 6-1).

6.1.2 Surface Water Quality

Water quality on FMC has been characterized as predominantly good and provides for a suitable gray bat prey base as evident from the presence of this species. If water quality declines, aquatic-based prey could decrease, resulting in less suitable foraging habitat.

The State of Alabama has classified streams in this area as suitable for fish and wildlife use. Water quality surveys over the past 20 years have shown good water quality at most locations surveyed.

A number of studies provide baseline data on water chemistry and quality at FMC. A survey conducted by the U.S. Army Environmental Hygiene Agency (1976) found the streams of FMC to be of good chemical quality and in good biological condition. In this study, profiles at FMC sampling stations, had average water temperatures of 17.8°C, dissolved oxygen levels at 9.3 ppm, and average pH values of 7.5.

Environmental Science and Engineering studied surface water quality at four sites on the Installation in 1980. Data indicated the water had no unusual concentrations of organic or inorganic constituents. Dissolved oxygen was at or near saturation (range 7.8 to 12.1 mg/l), and specific conductance was very low for all samples (range 18 to 21 µmhos/cm). Zinc and hydrocarbon concentrations were also low (range of <0.01 to 0.02 mg/l and 0.27 to 1.0 mg/l, respectively). Two sampling sites were located on Cane Creek, which drains FMC, including the golf course, the wastewater treatment plant, and urbanized areas surrounding Anniston, Jacksonville, and Pelham Range. The creek was found to be highly mineralized and the specific conductivity was elevated (range of 215 to 270 µmhos/cm). Dissolved oxygen varied from 7.8 to 12.2 mg/l, indicating sufficient degradation of organic compounds. Dissolved zinc and hydrocarbon concentration were low (Ogden Environmental and Energy Services 1992).

Biotic surveys of Cane Creek were conducted in the fall of 1992 and again in the winter of 1993, at six sites along Cane Creek from the headwaters to the confluence with the Coosa River (Weninegar 1993). Surface water quality data was collected concomitant with the

biological surveys. Parameters examined included ammonia, carbon dioxide, chloride, dissolved oxygen, hardness, nitrites, pH, temperature, and turbidity. Ammonia concentrations ranged from 0.0 to 0.1 mg/l. Carbon dioxide levels varied from a low of 5 mg/l to a high of 20 mg/l. Chloride concentrations varied from lows of 15 mg/l at several stations to a high of 30 mg/l at an effluent dumpsite several meters below the Highway 21 bridge. Dissolved oxygen values ranged from a low of 6 mg/l to highs of 11.0 mg/l at the two stations closest to the headwaters. Nitrite values were low and ranged from 0.0 mg/l at several locations to a high of 1.2 mg/l. Values for pH were usually alkaline (7.4 to 8.2 pH units) at all stations except the one closest to the headwaters where the waters were slightly acidic (6.3 to 6.5 pH units). Temperatures ranged from 11.0° to 21.1°C. Only one station, that was closest to the mouth, had any measurable turbidity with a concentration of 1.0 NTU (Weninegar 1993).

Surface water quality data was collected as part of a multifaceted study done to characterize the geochemical signature of mineralized and highly altered rocks at FMC (Tucker et al. 1995). Results show the streams sampled to generally be of good water quality. Several of the springs sampled had slightly alkaline, mineralized water. One spring, on Range 21 had slightly elevated lead and copper values averaging about 16 and 6.1 parts per billion (ppb), respectively (Tucker et al. 1995). The study also stated that high levels of heavy metals could be a natural result of mineralization of the rocks and soils of the area. The study concluded that since springs and seeps are particularly influenced by the chemical composition of associated rocks and soils, high lead values at some sites could be the result of these nonanthropogenic processes (Tucker et al. 1995).

6.1.3 Geologic Structure

Fort McClellan lies almost entirely in the Valley and Ridge physiographic province of the Appalachian Highlands, where southeastward dipping thrust faults with associated minor folding are the predominate structural features. Consolidated rocks ranging in age from Precambrian to Pennsylvanian have sharply folded into northeastward-trending synclines and anticlines complicated by thrust faults that have a general northeastward-trending strike and southeasterly dip. These thrust faults are the predominant structural features of the Calhoun County area. The extreme eastern portion of FMC lies within the Piedmont physiographic province.

The Jacksonville Fault is a major thrust fault within the fold and thrust belt of the Appalachian

Highlands in Alabama. This fault is the most significant structural geological feature due to its role in determining the stratigraphic relationships in the area and for its contribution to regional water supplies. Cambrian and Ordovician rocks associated with the fault and adjacent structures include the Chilhowee Group; Shady Dolomite; Rome Formation; Conasauga Formation; Knox Group, undifferentiated; Newala and Little Oak Limestones, undifferentiated; and Athens Shale.

Changes in the structural style of the fault along the strike suggest a complex history of deformation. Stratigraphic separation on the fault decreases toward Bynum, Alabama, where the fault dies out on the foreland side of an apparently imbricated, southwestern plunging anticlinal fold making Coldwater Mountain and the southwestern end of Choccolocco Mountain. Hydrologic conditions in areas adjacent to the fault are controlled by both stratigraphy and structure. The permeability of rock units in the area is the result of secondary openings. The rock types with the greatest permeability are the highly fractured quartzite beds of the Weisner Formation and the fractured dolomite beds within the solution cavities of the Knox Group. All the other rock units have very low primary and secondary porosity and permeability. The greatest porosity and permeability occurs in a wide zone of fracturing where quartzite and dolomite are juxtaposed along the Jacksonville Fault. The wide fracture zone is most prominent southwest of FMC on the northwestern sides of the Choccolocco and Coldwater Mountains.

The Weisner Formation, characteristic of FMC, occurs to 2500-foot (750-meter) depths and consists of buff shale, siltstone, sandstone, quartzite, and conglomerate. Outcrops form hills or mountains of great relief. Quartzite and conglomerate are most conspicuous where they form crests or ledges along the southeastern side of Choccolocco Mountain. This mountain runs north to south, forming the eastern boundary of FMC. Locally, the Weisner Formation contains deposits of limonite, manganese, bauxite, and hematite.

6.2 LAND COVER

Main Post land cover consists of three general types associated with the level of existing disturbance and land management programs in place: improved grounds; semi-improved grounds; and unimproved grounds. Improved and semi-improved grounds have limited ecological resources value because of the high level of habitat disturbance and human activity. Unimproved grounds offer much higher ecological resource value.

Topography ranges from relatively level areas through much of the developed part of Main Post to hills and mountainous ridges. The oak-pine forest region dominates the general area containing Main Post. The area is transitional between north central deciduous forests and southern pine forests.

Most of the forested areas of Main Post have been cut in the past, leaving only very small stands of original timber in more rugged areas of the Choccolocco Mountains. The Alabama Natural Heritage Program (1994) conservatively identified eight general upland ecosystem community types occurring on FMC. Upland Ecological Plant Community Types for FMC include: Typic Mesophytic Forest; Piedmont Monadnock Forest; Interior Calcareous Oak-Hickory Forest; Basic Oak-Hickory Forest; Loblolly Pine-Shortleaf Pine-Oak Forest; Xeric Virginia Pine Ridge Forest; Dry Virginia Pine-Oak Forest; and Mountain Longleaf Pine Forest.

Forest types on Main Post vary according to local topography, soils, and ecological successional stage. An active tree planting program has been in operation for nearly 40 years. The forestry program at FMC has modified the commercial forest land cover through harvesting, thinning, strip disking, applying fertilizer and lime, prescribed burning, and planting activities.

The forest block on Main Post is ecologically important due to its large size and unfragmented condition, diversity and uniqueness of species and communities, rare species of animals and plants present, and general lack of exotics and disturbance. Decreased logging frequencies and periodic range fires that have allowed the plant communities to be maintained under natural conditions add to the ecological importance of this complex.

Virginia pine (*Pinus virginiana*) is found along ridges, and longleaf pine (*Pinus palustris*) occurs along the lower slopes of hills and ridges. Short-leaf pine (*Pinus echinata*) is most commonly encountered on more infertile soils.

Upland hardwoods are dominated by oak and hickory species. Mountainous hardwoods are dominated by chestnut oak (*Quercus prinus*), scarlet oak (*Q. coccinea*) and pignut hickory (*Carya glabra*). Hardwoods on upland slopes and hills are dominated by southern red oak (*Quercus falcata*), post oak (*Q. stellata*), chestnut oak, black oak (*Q. velutina*), blackjack oak (*Q. marilandica*), pignut hickory, and dogwood (*Comus florida*). American beech (*Fagus grandifolia*),

1
tuliptree (*Liriodendron tulipifera*), white ash (*Fraxinus americana*), maple (*Acer* spp.), white oak (*Q. alba*), American holly (*Ilex opaca*), and redbud (*Cercis canadensis*) are present in ravines. Soil type and fire history are major factors in determining the composition of forests on Main Post.

Open areas also constitute a component of land cover. Open areas include upland oldfields, shrubland, and mowed fields. In each case, ongoing activities on Main Post either continually or occasionally manage the land in early ecological successional conditions. Generally open areas are used for training programs and as weapon firing impact areas.

The primary creek system on Main Post is Cane Creek. Springs and seeps occur throughout the area. There are also about 22 acres (8.9 hectares) of impoundments on the Main Post.

Relatively little is documented regarding vegetation communities associated with the creeks, springs, and seeps on Main Post. Ongoing research is underway to accurately map and characterize vegetation communities along springs and seeps in this area.

6.3 GRAY BAT HABITAT

6.3.1 Roosting

Gray bats typically roost in caves year round, though different caves are used at different times of the year. There are no known caves on Main Post. No habitat on or near Main Post has been designated as critical habitat by the Secretary of the Interior. In general, geomorphology of Main Post is not conducive to cave formation. Searches for karst features on Main Post during 1996 revealed no caves (3D/I 1996a).

Gray bats may travel as far as 22 miles (35 kilometers) from a roost to forage each night. Therefore, roosts used by gray bats foraging on Main Post are most likely within 22 miles of capture locations. Thirty-five caves are known within 22 miles of the gray bat capture sites on Main Post (Table 5-1; Figure 5-1). Eighteen of these caves are within Calhoun County. It is likely that other caves exist within 22 miles of Main Post.

Historical records suggest some caves near Main Post such as Weaver Cave and Lady Cave were previously occupied by large numbers of bats (McCalley 1897). Four caves near Installation boundaries were investigated for presence or sign of gray bats in February 1996

(3D/I 1996b). Baswell Cave, Weaver Cave, Little Weaver Cave, and an unnamed cave approximately 164 feet (50 meters) south of Little Weaver Cave were entered and searched for gray bats or guano accumulation. No gray bats were found during the winter searches; however, gray bats were found roosting in Weaver Cave and Lady Cave on 29 July 1997 (3D/I 1997).

Gray bats occasionally roost in man-made structures (Barker 1986, Grigsby 1995, Hays and Bingman 1964). A colony of six adult male gray bats were found using the Highway 21 bridge over Cane Creek and a single gray bat was found using the Highway 21 bridge over Cave Creek (3D/I 1997). Both bridges are located just outside the western boundary of Main Post.

6.3.2 Foraging

Although no critical habitat for gray bats exists on or near Main Post, removal or degradation of suitable habitat in areas known to be used by gray bats may constitute take, which is prohibited by the ESA. 3D/International (1996a) characterized suitability of habitat on Main Post and Pelham Range to support foraging gray bats. Six streams and two lakes on Main Post were characterized as providing moderate quality habitat for gray bats (Figure 5-2). All other streams and ponds on Main Post provide low quality habitat due to their small size and lack of flight space. Of the six moderate quality streams, only Cane Creek is known to be used by gray bats (3D/I 1996b).

6.4 CURRENT MANAGEMENT GUIDELINES

The Draft Endangered Species Management Plan (DESMP) for FMC addresses the current status and management of endangered species found on the Installation (Garland 1996). The DESMP provides for protection of gray bat foraging habitat through protection of riparian forest. Forest management guidelines in the DESMP state only floodplain terraces that contain a major pine component undergo timber harvesting. The DESMP states management will focus on maintaining existing forested corridors along Cane Creek. These guidelines are to be revised and updated to include information attained from studies of gray bats completed after the DESMP was written.

After completion of the 1996 mist net surveys for gray bats, the following guidelines were proposed by the Army to aid in protecting foraging gray bats at FMC (3D/I 1996b):

- Fort McClellan will initiate ESA Section 7 consultation with the FWS for actions requiring tree clearing within 50 feet (15.2 meters) of streams designated as high or moderate quality gray bat foraging habitat, and for actions outside the stream border suspected of affecting gray bats.
- Conclusions of gray bat studies completed at Fort McClellan (3D/Environmental 1996a, 1996b) indicate activities along streams with low quality habitat will not affect gray bats. The FWS will not be consulted on tree clearing activities along streams designated as low quality foraging habitat for gray bats.

These guidelines have been reviewed and approved by the FWS (Appendix A), and will be incorporated in the Final ESMP.

Section 7:

Effects Analysis/Discussion

7.1 EFFECT OF DISPOSAL AND REUSE ACTIVITIES TO GRAY BATS

Because specific actions that will occur during the caretaker period, during disposal, and following encumbered disposal are not fully characterized, this analysis reflects avoidance of effects through application of PDFs (Section 2.6). These PDFs are an integral part of the proposed action.

Below, we assess the likelihood of direct, indirect, and cumulative effects to gray bats. We focus upon effects to summer and winter roosting habitat and summer foraging habitat, and exposure to unsafe concentrations of environmental contaminants.

7.1.1 Direct Effects

7.1.1.1 Roost Habitat

In general, activities that affect gray bats at maternity caves or hibernacula have potential to be most harmful to the species because large numbers of gray bats congregate at such roost sites. Four roost sites have been identified near FMC (3D/I 1997): Weaver Cave, Lady Cave, the Highway 21 bridge over Cane Creek, and the Highway 21 bridge over Cave Creek (Figure 5-4). These roosts support bachelor and/or transient roost sites located outside Installation boundaries. Because there are no known roosts within Installation boundaries, no caves exist

on Main Post, and no critical habitat exists within the action area, it is unlikely the proposed action will affect gray bats through modification of winter or summer roost habitat (caves and similar structures), or disturbance of roosting bats.

Caretaker and environmental restoration activities will not result in modification or disturbance to known gray bat roosts. All caretaker and restoration activities will be conducted within the boundaries of Main Post. All known gray bat roosts within the action area are outside of Main Post boundaries.

Potential exists for gray bats to use man-made structures within Main Post boundaries. During caretaker and environmental restoration activities, the Army will avoid effects to gray bats potentially roosting in man made structures by investigating presence of the bats prior to disturbance or removal of structures such as buildings, bridges, or cisterns. Project Design Feature No. 1 ensures the Army will conduct such investigations and avoid effects to gray bats roosting in man made structures within the action area.

Reuse of Main Post will not result in disturbance or modification of Weaver Cave or Lady Cave due to their distance from Main Post. However, road construction or improvements necessary for accommodating reuse of Main Post may require disturbance to bridges, including the two bridges outside the installation known to house gray bats. Resurfacing of the bridges, or other work of the type, if conducted when gray bats are present, may disturb the bats and cause at least temporary abandonment of the roost. Removal of bridges used by gray bats would destroy the roost. Project Design Feature No. 7 advises future property owners that gray bats are known to roost under bridges near Main Post and that alteration of man made structures should be completed only after investigations for gray bat presence. Direct effects to gray bat roosts from reuse are unlikely if protective measures in PDF No. 7 are employed by future landowners.

7.1.1.2 Foraging Habitat

Fort McClellan currently implements a management strategy developed in consultation with the FWS to avoid effects to high or moderate quality gray bat foraging habitat (Appendix A). Main Post contains no high quality foraging habitat, but does have moderate quality habitat. Project Design Feature No. 2 reflects the Army's commitment to continue the existing approach to protecting foraging habitat during caretaker operations and environmental restoration activities.

The Army will avoid effects to foraging habitat by protecting forest within 50 feet of streams providing moderate quality foraging habitat (Figure 5-2). Prior to disposal, the Army will consult with the FWS if construction, remediation, or other ground-disturbing activities are necessary within this 50-foot buffer zone.

Project Design Feature No. 7 advises future property owners that suitable foraging habitat for gray bats is present on their property and removal of trees within 50 feet of streams may constitute take of gray bats. Direct effects to gray bat foraging habitat from reuse are unlikely if protective measures in PDF No. 7 are employed by future landowners.

7.1.1.3 Exposure to Environmental Contaminants

In general, the potential for gray bats to be exposed to environmental contaminants used by the Army on FMC will be reduced as activities on Main Post move into caretaker status, environmental restoration is completed, and land is transferred to non-Army ownership.

The potential for Army environmental restoration activities to affect gray bats will be determined through site-specific assessments during the RI/FS phase. Environmental restoration procedures defined in Army Regulation 200-1 commit the Army to site-specific analyses and Section 7 consultation if assessments completed at the time of remediation indicate a likelihood of exposures exceeding safe levels (PDF No. 6). Screening level risk assessments will be completed to determine the likelihood of unsafe exposure. Potential exposure routes to be considered will include ingestion of contaminated prey and inhalation or dermal absorption of vapors or contaminated dust.

Pesticide use on Main Post will decrease as Army presence is reduced during caretaker status. However, the FMC golf course will maintain its current level of pesticide use until disposal. Pesticides use on the golf course was analyzed to determine potential adverse effects to gray bats. Guidelines for proper use of each pesticide used on the golf course were developed from product labels, material safety data sheets, and gray bat exposure risk factors (PDF No. 3). Pesticides are applied during daylight hours using broadcast spreaders, hand sprayers, and boom sprayers. Application method and timing eliminate potential inhalation and dermal absorption effects to foraging and roosting gray bats. Applying pesticides listed in Appendix B in accordance with protective measures in PDF No. 3 will prevent potential effects to gray bats due to ingestion of contaminated aquatic-based prey. Additionally, protective measures in

PDF No. 3 will avoid changes in prey abundance or diversity due to pesticide use on the golf course.

The future presence of environmental contaminants on Main Post lands and the potential that gray bats will be affected by exposure to unsafe concentrations, is difficult to predict. Reuse of Main Post lands will include a variety of industrial, commercial, residential, and recreational uses. Following transfer of property deeds, environmental protection and compliance with state and federal regulations will be the responsibility of the new landowners.

When portions of Main Post become the property of non-Army entities, pesticide use may be common and widespread. Use of commercially available pesticides on lands within Main Post may change following disposal. Regardless of future ownership, it is reasonable to expect relatively extensive use of pesticides on the golf course. Project Design Feature No. 8 notifies the future golf course owner of measures necessary to protect gray bats. Adverse effects to gray bats from future pesticide use on the golf course are unlikely if protective measures in PDF No. 8 are employed by the future owner.

7.1.2 Indirect Effects

Gray bats may be indirectly affected by modification of aquatic habitat supporting insects upon which gray bats feed. Habitat for gray bat prey may be adversely affected by environmental contaminants (discussed above), degradation of water quality, and adverse changes in stream channel structure.

Surface water quality will be maintained by the Army at its current status through application of PDF Nos. 4, 5, and 6. Potential effects resulting from contaminant release during environmental restoration will be evaluated during investigations prior to restoration activities (PDF No. 4). Compliance with NPDES permits and existing pollution prevention guidelines will continue until disposal (PDF No. 5). Erosion control measures described in PDF No. 6 will control and reduce transfer of soil into streams during ground disturbing activities.

The morphology of stream channels may be adversely modified through actions in and near the stream. Changes in morphology commonly include or lead to stream incision or stream channel widening, sedimentation, loss of channel stability, loss of flood plain function, and an increase in stream temperature. Adverse changes are commonly initiated by seemingly

benign activities, including misplacement of culverts in streams, poorly designed bridge crossings, unbridged road crossings, and individually minor but cumulatively damaging changes in watersheds. The Army proposes no activities requiring stream channel alterations.

Project Design Feature No. 7 advises future property owners that suitable foraging habitat for gray bats is present on their property and changes to stream morphology or water quality may result in adverse effects to gray bats. Indirect effects to gray bats from reuse are unlikely if protective measures in PDF No. 7 are employed by future landowners.

7.1.3 Cumulative Effects

Effects of the proposed action are described in this BA. Because the proposed action includes future "state and non-federal actions," the distinction between the direct and indirect effects analyzed above, and cumulative effects as defined by the ESA (see 50 CFR Ch. IV Part 402, Subpart A, Section 402.02) is less apparent than in a BA addressing site-specific actions.

Because the proposed action, including reasonably foreseeable future state and private actions will not affect gray bats, the proposed action will not contribute to cumulative effects of activities in the action area; no cumulative effects are anticipated. Federal actions not addressed in this analysis require action-specific assessment for ESA compliance.

7.2 STATEMENT OF FINDING

Disposal and reuse of Ft. McClellan is not likely to adversely affect gray bats in the action area.

Section 8:

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B.2.3 USFWS Biological Assessment Letter



United States Department of the Interior

FISH AND WILDLIFE SERVICE

P. O. Drawer 1190
Daphne, Alabama 36526

IN REPLY REFER TO:

98-1063

June 11, 1998

Mobile District, Corps of Engineers
Mr. Curtis M. Flakes, Chief
Environment and Resources Branch
Inland Environment Section
Planning and Environmental Division
P.O. Box 2288
Mobile, AL 36628-0001

Dear Mr. Flakes:

This letter acknowledges the U.S. Fish and Wildlife Service (Service) receipt of your June 4, 1998 letter requesting written concurrence on the Biological Assessment (BA) for Disposal and Reuse of Fort McClellan, Alabama. The BA evaluated and determine the effects of caretaker operations, property disposal and land reuse alternatives on species listed as threatened or endangered under the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.). To date, only the gray bat (*Myotis grisescens*) is known from Main Post on Fort McClellan and the BA includes only this species in the assessment and determination.

The BA develops and relies upon "Project Design Features" (PDF) to minimize and avoid adverse effects to gray bats. The Army is committed to implementing these procedures and measures during caretaker operations. On disposal of property and transfer from federal ownership, PDF will be incorporated into property deeds and advise future owners of the need to contact the Service concerning certain actions that may adversely affect the gray bat.

The Service concurs on PDF described in the BA as appropriate measures to minimize and avoid adverse impacts to gray bats based on the implementation of the following actions:

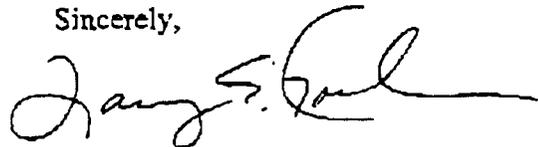
1. The BA prepared by the Army for the ongoing mission at Fort Leonard Wood, Missouri concluded that the spraying of Malathion may adversely affect gray bats. Specifically, the risk assessment accomplished as part of this evaluation revealed that foraging gray bats may be affected by inhaling unsafe concentrations of Malathion. Because mosquito fogging will likely be a long-term pest control practice at Fort McClellan, the Service believes that protective measures should be developed for both caretaker operations and land disposal. An initial effort should be taken during caretaker operations to eliminate or minimize mosquito

fogging requirements in the vicinity of all moderate quality foraging habitat on Fort McClellan. The Army should avoid fogging on the golf course where gray bats have been documented to forage and roost nearby. Atmospheric conditions and winds could be used to determine appropriate timing for fogging on lands directly adjacent to foraging areas. Also, after transfer of lands from federal ownership, an addition to PDF Number 8 or a new PDF advising future owners of possible adverse effects from Malathion should be placed in property deeds. The Service believes this additional PDF should at a minimum be applied to the Fort McClellan golf course. Reasonable and prudent measures in the Biological Opinion for the Ongoing Mission at Fort Leonard Wood provide an appropriate means of accomplishing these protection objectives. Suggested wording includes, "Malathion will only be sprayed during daylight hours no earlier than one hour after sunrise and no later than one hour prior to sunset between March 15 and October 31".

2. There are several plants documented as occurring on Main Post that are undergoing status reviews concerning the need for listing as threatened or endangered. These plants include white fringeless orchid (*Platanthera integrilabia*), hawthorn (*Crataegus triflora*) and Fraser's loosestrife (*Lysimachia fraseri*). Should these plants or newly discovered species be proposed or federally listed prior to land transfer, the Service should be contacted concerning the need to reinitiate Section 7 consultation.

If you have any questions or concerns about this consultation or the consultation process in general, please feel free to contact Mr. Bill Garland at (334) 441-5181, ext. 33.

Sincerely,



Larry E. Goldman
Field Supervisor

cc: Mr. David Taylor, Chief, BRACO, Fort Monroe, VA 23651
Mr. Ron Levy, ATZN-EM, Fort McClellan, AL 36205-5000

B.2.4 Correspondence

Copies of correspondence documenting the development of the BA, and coordination with the USFWS, have been provided on the attached pages, and include the following:

Letter	Date	Page
1 US Department of Interior, Fish and Wildlife Service	Feb 6, 1997	B-73
2 Department of the Army, US Army Chemical and Military Police Centers & Fort McClellan	May 1, 1997	B-74
3 US Department of the Interior, Fish and Wildlife Service	May 27, 1997	B-77
4 Department of the Army, Mobile District, Corps of Engineers	July 24, 1997	B-78
5 Parsons Engineering Science, Inc. Contract Memorandum number 31	July 1, 1997	B-79
6 US Department of the Interior, Fish and Wildlife Service	June 11, 1997	B-85
7 Department of the Army, Mobile District, Corps of Engineers	July 16, 1998	B-87



IN REPLY REFER TO:

United States Department of the Interior

FISH AND WILDLIFE SERVICE
2001-A Highway 98
P. O. Drawer 1190
Daphne, Alabama 36526

February 6, 1997

Mr. Bill Garland, Biologist
Office of the Directorate of the Environment
Fort McClellan
Fort McClellan, Alabama 36205-5000

Dear Mr. Garland:

This concerns the document entitled *Investigations for the Presence of Gray Bats (Myotis grisescens) at Fort McClellan, Alabama* dated November 25, 1996 conducted by 3D/Environmental (3D/E) and a meeting at this office involving yourself, representatives of 3D/E and Sharon Delchamps of my staff on January 21, 1997.

Based on the study results and meeting discussions, we have the following comments and recommendations:

1. We concur with page 25 of the report which states that Endangered Species Act Section 7 consultation between Fort McClellan and this office will be conducted for actions requiring tree clearing within 50 feet of streams designated as high or moderate quality gray bat foraging habitat and for actions outside the stream border suspected of affecting gray bats. For low quality gray bat foraging habitat, Section 7 will not be conducted.
2. As discussed in the meeting, we recommend that a radiotagging study be conducted for the gray bat on Main Post, particularly the golf course, to further aid in delineating foraging and roosting areas. We understand this study will take place during the summer of 1997. This will be the last effort to quantify this species and habitat utilization on Fort McClellan. No further gray bat studies on Pelham Range will be required.
3. The results of the study entitled *Environmental Fate of Fog Oil at Fort McClellan* conducted by 3D/E dated August 6, 1996 show that the components in the fog oil to be used on Fort McClellan are neither persistent in soils and water nor bioaccumulative in receptor organisms. Therefore, Section 7 consultation will not be required for fog oil exercises conducted at Fort McClellan. However, we recommend notifying our office immediately should the fog oil components or training exercises show adverse effects to this species or its habitat.

Should you require further information, please contact Ms. Delchamps at 334/441-5181 ext. 31.

Sincerely,

Larry E. Goldman
Field Supervisor



DEPARTMENT OF THE ARMY
U.S. ARMY CHEMICAL AND MILITARY POLICE CENTERS & FORT McCLELLAN
FORT McCLELLAN, ALABAMA 36205-5000

REPLY TO
ATTENTION OF

May 1, 1997

Directorate of Environment

Mr. Larry E. Goldman
Field Supervisor
U.S. Fish and Wildlife Service
P.O. Drawer 1190
Daphne, AL 36526

Dear Mr. Goldman:

Fort McClellan was recommended for closure by the Defense Base Closure and Realignment Commission during the summer of 1995. These recommendations became law under signature of the President on September 28, 1995. Approximately 18,500 acres on Main Post have been declared surplus property available for disposal by the Army and for reuse by others. The Army will retain all of Pelham Range (22,245 acres) and portions of the Main Post cantonment area (427 acres) for use by the Army Reserve/National Guard.

An Environmental Impact Statement (EIS) is currently in preparation to analyze the environmental effects of disposal and reuse alternatives for the surplus property. The Army's proposed action is disposal while reuse is a secondary action of others (non-Army). Reuse planning is the responsibility of the Fort McClellan Reuse and Redevelopment Authority of Alabama which is a locally chartered entity. A public scoping meeting was held on September 25, 1996, to obtain input from review agencies, interested groups and concerned individuals. U.S. Fish and Wildlife Service (USFWS) comments regarding this scoping meeting were provided in a letter to Mr. Robert Bax, dated July 25, 1996.

Fort McClellan would like to open informal discussions under Section 7 of the Endangered Species Act (ESA). While the Army intends to prepare a Biological Assessment (BA) to include listed species, early discussions will facilitate and ensure that all concerns are included in the consultation process. The attached Description of Proposed Action and Alternatives (DOPAA) provides a preliminary overview of the Army's proposed action of disposal and possible reuse alternatives. Irrespective of the reuse alternative, we believe the real key and focus of consultations should be the disposal action and the types of protection measures (deed covenants) to be placed on the specific parcels of property for protection of threatened and endangered species or their



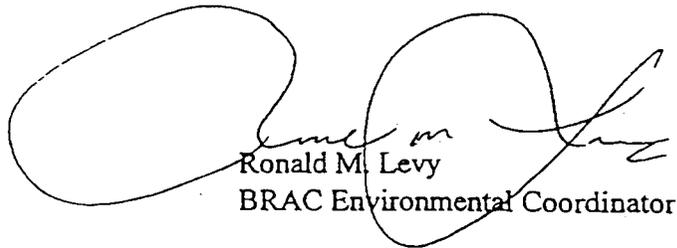
habitat. In addition to the Army's proposed action of disposal, there is also the Army's interim period between closure and disposal. During this period there will be caretaker, environmental investigations and remediation, unexploded ordnance removal, and other actions to prepare property for transfer that may impact on threatened and endangered species. The impacts of these actions should also be part of our consultations.

Fort McClellan has completed a Draft Endangered Species Management Plan (ESMP) that describes federally endangered/threatened species along with unique biological communities on the installation. The USFWS has reviewed this plan and provided concurrence within a letter dated April 18, 1996. This document will provide biological information for initiating informal consultation under Section 7 of the ESA. Some of the issues that we believe should be included in preliminary discussions deal with impacts to the following species during the interim period and protection measures to be established for disposal:

1. Gray Bat (*Myotis grisescens*) - Documented to utilize lower reaches of Cane Creek for foraging, particularly on the golf course. Mist netting and habitat suitability studies have been completed throughout the installation. A single male was captured at dusk on the golf course, which indicates a roosting cave in the local vicinity.
2. Red-cockaded Woodpecker (*Picoides borealis*) - This woodpecker has not been reported on Fort McClellan for several decades. A Piedmont Recovery Population is located adjacent to the installation within the Talladega National Forest. Active clusters are documented within 5-7 miles and potential habitat exists within Main Post. As specified within the ESMP, surveys are to be conducted on five year intervals (1997) to identify pioneering birds and possible new clusters.
3. White Fringeless Orchid (*Platanthera integrilabia*) - A species of concern that is undergoing status review by the USFWS. Indications from the USFWS are that this species could be listed in the foreseeable future. The plant has been located at two separate sites and studies are in place to locate possible new populations this summer.
4. Hawthorn (*Crataegus triflora*) - This plant occurs on limestone outcroppings at two locations on Main Post. Currently, this species is undergoing a status review by USFWS. Preliminary findings indicate this plant is more uncommon than previously believed. Depending on the outcome of the status review and recommendations by the USFWS, this species could be listed in the foreseeable future.

Fort McClellan looks forward to working with your office to assure the Army fulfills their obligations under Section 7 of the ESA. By initiating discussions early in the closure and disposal process, the Army can insure that all concerns involving endangered and threatened species are considered in assessing and selecting appropriate actions during the interim period and appropriate protection measures for disposal and reuse alternatives. If you should have any questions or require additional information, please contact the undersigned or Mr. Luke Owen at (205) 848-3539/5663.

Sincerely,



Ronald M. Levy
BRAC Environmental Coordinator

Enclosure

Copies Furnished:

U.S. Army Training and Doctrine Command, ATTN: Mr. David Taylor
U.S. Army Corps of Engineers, ATTN: Mr. Curtis Flakes



IN REPLY REFER TO:

United States Department of the Interior

FISH AND WILDLIFE SERVICE

2001-A Highway 98

P. O. Drawer 1190

Daphne, Alabama 36526

May 27, 1997

Commander

U.S. Army Chemical and Military Police Centers & Fort McClellan

ATTN: ATZN-EM (Ron Levy)

Fort McClellan, AL 36205-5000

Dear Mr. Levy:

Thank you for the letter, dated May 1, 1997, concerning the disposal and possible reuse of Fort McClellan. The Service would welcome the opportunity to open informal discussions under Section 7 of the Endangered Species Act. Fort McClellan represents an important landscape scale remnant of the mountain longleaf pine ecosystem. Main Post on Fort McClellan has been described as the finest remaining example of this very rare cover type. We commend the Army for including both federally listed species, as well as, those species undergoing status reviews in these discussions.

Please contact Mr. Bill Garland of my office, (334) 441-5181 ext. 33, to coordinate the meeting time and place. We look forward to participating in these discussions and formulating a plan that insures the protection of endangered/threatened species, and the future of lands they inhabit.

Sincerely,

Larry E. Goldman
Field Supervisor



DEPARTMENT OF THE ARMY
MOBILE DISTRICT, CORPS OF ENGINEERS
P.O. BOX 2288
MOBILE, ALABAMA 36628-0001

REPLY TO
ATTENTION OF:

July 24, 1997

Environment and Resources Branch
Planning and Environmental Division

Mr. Larry Goldman
U.S. Fish and Wildlife Service
Post Office Drawer 1190
Daphne, Alabama 36526

Dear Mr. Goldman:

Please find enclosed the minutes from our July 1, 1997, meeting in the Mobile District. The meeting involved discussions of procedures to comply with the Endangered Species Act as related to the Fort McClellan Base Realignment and Closure action and the Disposal and Reuse Environmental Impact Statement.

Thank you and Mr. Bill Garland for contributing to a positive and successful meeting. We look forward to continuing to work with you to address the fish and wildlife concerns at Fort McClellan.

Sincerely,


Curtis M. Flakes
Chief, Environment and
Resources Branch

Enclosure



Contact Memorandum

EIS for Disposal and Reuse of Fort McClellan, Alabama

Memo Number: 31
Person Contacted: See List Below
Organization: US Fish & Wildlife Service
Location: Mobile, Alabama
Date: July 1, 1997
Subject: T&E Species Coordination

A meeting was held at the US Army Corps of Engineers, Mobile District Offices on July 1, 1997 to discuss procedures to be used to comply with the Endangered Species Act as part of the EIS for the Disposal and Reuse of Fort McClellan (FMC), Alabama. Meeting participants included:

Name	Organization	Phone	Fax
B. David Taylor	HQ US Army Training & Doctrine Command, BRAC Office Fort Monroe, VA	757-727-4350	757-727-4374
Larry E. Goldman	US Fish & Wildlife Service Daphne, AL	334-441-5181 Ext. 30	334-441-6222
Curtis M. Flakes	US Army COE, Mobile	334-690-2693	334-690-2727
Brian Peek	US Army COE, Mobile	334-690-2750	334-694-3815
Bill Garland	US Fish & Wildlife Service Daphne, AL	334-441-5181	334-441-6222
John Esson	TRADOC Env. Office, Ft. Monroe	757-727-3335	757-727-2362
Karen Tyrell	3D/International	423-922-4305	423-922-8495
Ron Levy	BRAC Env. Coordinator Fort McClellan, AL	205-848-3539	205-848-5517
Russ Romme	3D/International	513-922-8199	513-922-9150
Greg Knauer	Parsons Engineering Science, Inc.	314-576-7330	314-576-2702
Bob Bax	Parsons Harland Bartholomew & Associates, Inc.	314-434-2900	314-576-2702

Introductions & Meeting Objective. All parties introduced themselves. Mr. Flakes (COE Project Manager for the Fort McClellan Disposal and Reuse EIS) provided introductory comments. He stressed the desire of the Mobile Corps to enter into a "partnering" relationship with the USFWS for the successful completion of an EIS for the Disposal and Reuse of Fort McClellan and related Endangered Species Act compliance. He confirmed that the primary

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EIS for Disposal and Reuse of Fort McClellan, Alabama

goal of this coordination meeting was to discuss and agree on an approach to compliance that was acceptable to both parties.

Army's Position on BRAC Threatened & Endangered (T&E) Species. Mr. Taylor stressed the need to comply with the President's "5-Point Plan" which is designed to emphasize prompt disposal and reuse of DOD property to the extent practicable within the confines of existing statutes and restoration procedures. He noted that the Army's direct action is to dispose of surplus property at FMC. Generally, Army policy is to support the Local Reuse Authorities reuse plan where it does not conflict with other federal statute or regulations. The desire is to transfer property with as few encumbrances as possible and, if encumbrances are required, that they have a foundation in federal regulatory requirements. After closure, but prior to disposal, the property will be maintained in "caretaker status", with a significantly reduced level of maintenance. Remediation and unexploded ordnance (UXO) removal of various parcels of surplus property will be completed consistent with the local communities proposed reuse, and within the limits and provisions established by law. After transfer of the property to a new owner(s), the Army's goal is to minimize their involvement. Therefore, the Army intends to transfer land management and development responsibilities to future owners to the maximum extent possible. Mr. Taylor pointed out that the NEPA process is an important tool for informing the FMRRA and the public of potential impacts of their reuse plans.

Mr. Taylor also noted that the Army Reserve will maintain control and management responsibility of a substantial portion of the current FMC lands including the entire Pelham Range area. He noted that the Federal property screening process had been completed, and that no Federal agency expressed a formal interest in any of the surplus property at FMC. The Fort McClellan Reuse and Redevelopment Authority (FMRRA) is continuing to consider various requests from State and local entities as part of their ongoing reuse planning process. The Army anticipates that the FMRRA will request an "Economic Development Conveyance" of most or all of the surplus property for which there is no approved public benefit conveyance. Mr. Taylor closed by stressing that the Army will not have any direct control over the surplus property once it is disposed of. Therefore, it is critically important to identify constraints, or "encumbrances" that should be placed on the property as a condition of disposal as required to comply with applicable laws and regulations. Mr. Taylor also noted that the Army will not be in a position to enforce deed covenants and restrictions; rather, the regulatory agencies responsible for the enforcement of the statute or regulations which drive the restriction would be responsible.

Status of EIS. Mr. Bax provided an overview of the status of the EIS using the slides included as Attachment A to this memo. These comments addressed the EIS completion timeline, the structure of the alternatives analysis to be included in the EIS, the status of the FMRRA's reuse planning process, federally-listed T&E species of concern at FMC, and other species and resources of concern that could be impacted by the proposed Army disposal action, and reuse of the property by other (non-Army) parties.

It was noted that the environmental restoration process (including cleanup of unexploded ordnance, etc.) has the potential to have an adverse impact on numerous natural resource values at FMC. The environmental restoration process will continue well beyond the time

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allowed for the completion of the EIS and the T&E Biological Assessment; and that the restoration process has its own provisions for full disclosure of proposed actions, alternatives and environmental impacts to the public and regulatory agencies. This process will be fully documented in the EIS.

The alternative structure was described in detail, including provisions for a No Action Alternative which involves maintaining surplus lands in "caretaker" status after closure but prior to disposal.

It was noted that caretaker status could have an impact on T&E species at FMC. For example, if cessation of military operations reduced the occurrence of fires on training lands, and if no controlled burns were conducted under caretaker status (over long periods of time) fire-maintained habitat that potentially supports T&E species could be degraded or lost.

The approach to property disposal was described including consideration of "encumbered" and "unencumbered" disposal alternatives. Several examples were provided to help explain this process. It was explained that reuse alternatives to be considered in the EIS were all based on the most current reuse plan developed by the FMRRRA. Furthermore, reuse alternatives are based on general "intensity-based" levels of redevelopment rather than site-specific, detailed reuse plans. It was noted that this intensity approach is used by the Army due to the uncertainty of future reuse actions.

A copy of the Preliminary Draft Environmental Impact Statement (PDEIS) (June 1997) was provided to Mr. Goldman at the conclusion of this coordination meeting. It was explained that this is an internal working document that is currently being reviewed by various Army entities, and that information within the document should not be released to any other parties at this time. No formal review by the FWS is required or requested. However, it was noted that any comments or concerns that may be identified by the FWS on the PDEIS should be directed by Mr. Flakes at the Mobile COE, and that any such comments would be fully considered as the Army proceeds with the preparation of the Draft EIS to be released to the public at a later date. In order to be considered by the Army review team, comments from the FWS should be provided no later than July 18, 1997. Comments received after that date will not be discussed by the total Army review team, but will still be considered and incorporated to the extent possible.

Mr. Bax noted that the PDEIS reuse alternatives were based on the latest plan provided by the FMRRRA. Therefore, the plan focused on approximately 7,200 acres of land primarily within the existing cantonment area at FMC. Minimal definition of proposed reuse of approximately 10,000 acres of more remote training areas has been provided to date. It was agreed by all that the Army must inform the FMRRRA that the EIS team needs additional details regarding the proposed reuse of the "natural" land areas at FMC. If this definition is not forthcoming in time to be incorporated in the DEIS, the EIS team will take the initiative to define the type and extent of land use activities to occur for these lands under the low, medium and high intensity reuse alternatives.

In order to allow for the concept currently being considered by the FWS (as summarized below), the Low Intensity Reuse Alternative would logically be defined as establishing a major part of these lands as a preserve area through a Public Benefit Conveyance (under direction of

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the state, a trust for public land, the Nature Conservancy, or some other entity). This alternative would result in very minimal human access and use, and would include provisions to continue land management procedures (such as prescribed burning) as required to protect and enhance unique and sensitive resources. Under a Medium Intensity Alternative, the EIS would define a higher level of public access that could occur if the area is transferred to the FMRRRA under an Economic Development Conveyance. This alternative would include provisions for access roads, trails and associated staging areas and support facilities consistent with an overall land use designation of "passive recreational use". Finally, under the High Intensity Reuse Alternative, the EIS may assume a higher level of passive recreation use, or may even consider use of area ridgetops for the development of low-density residential development (which has been considered by the FMRRRA). This option would obviously increase the degree of associated passive recreation use of the remaining natural areas.

Status of T&E Studies at FMC. Mr. Levy provided an overview of the status of a number of biological studies that are ongoing at FMC to support the EIS process and associated T&E evaluations. A copy of the handout provided by Mr. Levy has been included as Attachment B to this memo. Studies described by Mr. Levy included: 1) Radio Telemetry Survey of Gray Bats; 2) Red-cockaded Woodpecker Survey on Main Post; 3) Reptile and Amphibian Survey of Fort McClellan; 4) Wetland Seep Survey; 5) Mollusk Survey of Aquatic Systems on Main Post and Pelham Range; 6) Willett Springs Ecological Surveys (Pelham Range); 7) Integrated Natural Resource Management Plan; 8) Longleaf Pine Studies.

USFWS Concerns with T&E Species at FMC. Mr. Goldman discussed the FWS's position regarding T&E species issues that must be considered as part of the EIS for the Disposal and Reuse of FMC. Stated that the FWS concurs with the Army's intent to prepare a Biological Assessment (BA) that will focus on the gray bat, and that consideration of this species will meet the Army's legal obligation under the provisions of the Endangered Species Act (ESA). Mr. Goldman stated that the FWS would like to see the Army include provisions as encumbrances, or at least as recommendations to future owners, to keep "options open" with regard to the status of the Red Cockaded Woodpecker (RCW) in the region. Mr. Bax commented that the EIS team welcomed comments from the FWS regarding future management recommendations that could be included in the EIS as a "recommended" course of action for future property owners, but that it was not likely that the Army could include these provisions as formal encumbrances to future property reuse.

Other USFWS Concerns. Mr. Goldman went on to explain that the FWS has scheduled a meeting for July 97 to discuss the White Fringeless Orchid, and steps that could be taken to avoid listing of this species. The population of these orchids at FMC is one of the top 2-3 known to occur, and past surveys have indicated that FMC property includes a considerable amount of habitat that could support this species. He also stressed that the EIS should make special note of the significance of the FMC ecosystem as a whole, and the adverse impacts associated with fragmentation of the resource on the total resource. Also, the EIS should identify what management procedures must be implemented in the future (after Army disposal) to maintain this resource (primarily prescribed burning program).

Mr. Goldman stated that the FWS has had numerous discussions with the local office of the

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EIS for Disposal and Reuse of Fort McClellan, Alabama

Alabama Game & Fish Commission (AG&FC) regarding the concept of establishing a nature preserve to protect major portions of the FMC surplus property areas, and that the AG&FC has been very enthusiastic about this concept. (Note: the Alabama Forestry Commission had expressed interest in surplus property at FMC, but has recently declined further pursuit of these lands)

The FWS has a written preliminary document (presented as an ecosystem preservation project) that describes this option. Mr. Goldman indicated that this was not the traditional type FWS refuge project but that the Service has adopted ecosystems in principle. Under this option, the Army could grant a Public Benefit Conveyance to the US Department of Interior, who could then lease the property to the Alabama Game & Fish Commission. This preliminary document is currently under review by the FWS Atlanta office and that the Regional director had not made a decision. He noted that the State of Alabama has lost a considerable part of their lands that are available to the public for hunting, and that a preserve at FMC could help offset these losses. The timing of a final decision by FWS on this issue is unknown at this time. Therefore, the EIS will need to proceed on the basis of best available information. Mr. Taylor indicated that he was confident that the Army would support such a proposal and he would begin to lay the foundation for Headquarters, Department of the Army support of such a project. He noted that support of such a concept from the FMRRRA and inclusion in their reuse plan would also facilitate acceptance by the Army. Mr. Taylor noted that FMRRRA has hired Jacksonville State University to conduct a study on a wildlife refuge concept.

Discussion of T&E Issues. A variety of issues were discussed at this point to ensure that all parties had a common understanding. It was agreed that the existing information on the environment at FMC, in association with additional information to be provided by ongoing studies referenced above should be adequate to support the EIS and specifically, compliance with the Endangered Species Act. It was agreed that the BA would only address the gray bat, and that other species of interest or concern would be addressed in the EIS. It was understood by all that the BA will focus primarily on property disposal, which is the action to be taken by the Army. Protection of listed species from various reuse activities that could occur will be discussed primarily as recommendations to be included in the EIS for consideration by future owners, and the requirement for any such future owners to comply with the provisions of the Endangered Species Act as they apply to private (non-federal) property owners. It was agreed that the goal of the EIS/BA study team is to complete the BA prior to completion of the Draft EIS, and to reflect the findings of the BA in the Draft EIS. Finally, it was agreed that the BA for the proposed action may conclude with informal consultations with the FWS. Formal consultation and formulation of a Biological Opinion are not anticipated at this time. However, this could change based on the results of ongoing studies and surveys.

There was also discussion of the potential impact of environmental remediation and ordnance removal on T&E, other species of concern, and potential ecological damage in general. Mr. Taylor suggested that FWS should be actively involved in the public and regulatory review process for these actions.

Summary of Approach to Ensure Compliance with Endangered Species Act (ESA).

Based on discussions that occurred during this meeting, Mr. Romme led the group through the

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key elements of the approach to be used to ensure that the Army's planned property disposal action complies with the provisions of the ESA. This approach is described below:

Goal. Conclude ESA compliance through the completion of a Biological Assessment within the established EIS schedule. Tentative completion date for the BA of September 1, 1997 (one month prior to scheduled completion of Draft EIS). The BA may be published as a separate technical study, or included as a background data appendix to the Draft EIS.

Species to be Addressed in the BA. The only listed species known to occur on Main Post is the gray bat (federally endangered). RCW last occurred on Main Post in 1968. Potentially suitable habitat for the RCW is present on Main Post. Nearest occurrence is approximately 6 miles to the east, and therefore, the proposed BRAC action will not affect the RCW. Hence, the potential for effects to RCW will not be analyzed in the BA. Issues involving potentially suitable habitat at FMC for RCW, and other sensitive species, will be addressed through the NEPA process and documented in the EIS.

Action to be Assessed in the BA. The action to be evaluated at FMC includes three distinct components:

- 1. No Action (Caretaker Status).** Potential caretaker actions (including property remediation and ordnance and explosive removal) will be described in as much detail as possible. However, the detail of this description will be limited by the fact that actual cleanup and removal actions are dependent on final reuse plans, and these actions will not be fully defined prior to the required completion of the BA and EIS process. Project design features (PDFs) in the BA and NEPA documents will be developed to avoid negative effects to the gray bat.
- 2. Property Disposal.** Property Disposal is the primary Army action to be addressed in the EIS and BA. Project design features in the BA and NEPA document will be developed to avoid negative effects to the gray bat, and these features may include specific encumbrances in the form of deed restrictions, covenants, notifications, etc.
- 3. Property Reuse.** The EIS will define the general type and intensity of reuse that is likely to occur on lands to be disposed of. However, the precise nature of reuse plans will not be known to the EIS/BA team, and therefore, the potential effects of these future actions on gray bats can't be fully characterized. The BA and EIS will note this fact, and explain that additional ESA compliance efforts may be required by reuse proponents as specific actions are identified for implementation. These future ESA compliance efforts, if any, will be the responsibilities of future (non-Army) owners.

The meeting was concluded by Mr. Taylor thanking Mr. Goldman for his participation and the open and positive discussions. The Army looks forward to a continuing dialogue and a positive working relationship for the completion of Endangered Species Act and the EIS, and USFWS involvement in seeking ways to preserve the unique natural resources at Fort McClellan while balancing economic recovery of the community. A win-win-win solution for the FMRRRA, USFWS, and the environment.

Parsons Engineering Science, Inc.,
Harland Bartholomew & Associates, Inc.

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United States Department of the Interior

FISH AND WILDLIFE SERVICE

[REDACTED]
P. O. Drawer 1190
Daphne, Alabama 36526

Handwritten: RAN
RD-E

IN REPLY REFER TO:

98-1063

June 11, 1998

Mobile District, Corps of Engineers
Mr. Curtis M. Flakes, Chief
Environment and Resources Branch
Inland Environment Section
Planning and Environmental Division
P.O. Box 2288
Mobile, AL 36628-0001

Dear Mr. Flakes:

This letter acknowledges the U.S. Fish and Wildlife Service (Service) receipt of your June 4, 1998 letter requesting written concurrence on the Biological Assessment (BA) for Disposal and Reuse of Fort McClellan, Alabama. The BA evaluated and determine the effects of caretaker operations, property disposal and land reuse alternatives on species listed as threatened or endangered under the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.). To date, only the gray bat (*Myotis grisescens*) is known from Main Post on Fort McClellan and the BA includes only this species in the assessment and determination.

The BA develops and relies upon "Project Design Features" (PDF) to minimize and avoid adverse effects to gray bats. The Army is committed to implementing these procedures and measures during caretaker operations. On disposal of property and transfer from federal ownership, PDF will be incorporated into property deeds and advise future owners of the need to contact the Service concerning certain actions that may adversely affect the gray bat.

The Service concurs on PDF described in the BA as appropriate measures to minimize and avoid adverse impacts to gray bats based on the implementation of the following actions:

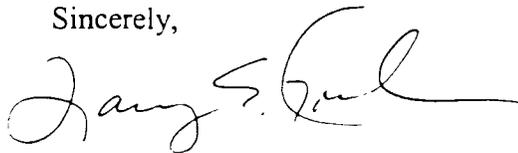
1. The BA prepared by the Army for the ongoing mission at Fort Leonard Wood, Missouri concluded that the spraying of Malathion may adversely affect gray bats. Specifically, the risk assessment accomplished as part of this evaluation revealed that foraging gray bats may be affected by inhaling unsafe concentrations of Malathion. Because mosquito fogging will likely be a long-term pest control practice at Fort McClellan, the Service believes that protective measures should be developed for both caretaker operations and land disposal. An initial effort should be taken during caretaker operations to eliminate or minimize mosquito

fogging requirements in the vicinity of all moderate quality foraging habitat on Fort McClellan. The Army should avoid fogging on the golf course where gray bats have been documented to forage and roost nearby. Atmospheric conditions and winds could be used to determine appropriate timing for fogging on lands directly adjacent to foraging areas. Also, after transfer of lands from federal ownership, an addition to PDF Number 8 or a new PDF advising future owners of possible adverse effects from Malathion should be placed in property deeds. The Service believes this additional PDF should at a minimum be applied to the Fort McClellan golf course. Reasonable and prudent measures in the Biological Opinion for the Ongoing Mission at Fort Leonard Wood provide an appropriate means of accomplishing these protection objectives. Suggested wording includes, "Malathion will only be sprayed during daylight hours no earlier than one hour after sunrise and no later than one hour prior to sunset between March 15 and October 31".

2. There are several plants documented as occurring on Main Post that are undergoing status reviews concerning the need for listing as threatened or endangered. These plants include white fringeless orchid (*Platanthera integrilabia*), hawthorn (*Crataegus triflora*) and Fraser's loosestrife (*Lysimachia fraseri*). Should these plants or newly discovered species be proposed or federally listed prior to land transfer, the Service should be contacted concerning the need to reinitiate Section 7 consultation.

If you have any questions or concerns about this consultation or the consultation process in general, please feel free to contact Mr. Bill Garland at (334) 441-5181, ext. 33.

Sincerely,



Larry E. Goldman
Field Supervisor

cc: Mr. David Taylor, Chief, BRACO, Fort Monroe, VA 23651
Mr. Ron Levy, ATZN-EM, Fort McClellan, AL 36205-5000



DEPARTMENT OF THE ARMY
MOBILE DISTRICT, CORPS OF ENGINEERS
P.O. BOX 2288
MOBILE, ALABAMA 36628-0001
July 16, 1998

REPLY TO
ATTENTION OF:

Planning and Environmental Division

Mr. Larry Goldman
Fish and Wildlife Service
Post Office Drawer 1190
Daphne, Alabama 36526

Dear Mr. Goldman:

Thank you for your letter of June 11, 1998, in which you provided comments on the Biological Assessment (BA) for the Disposal and Reuse of Ft. McClellan, Alabama. In your letter you concurred with the BA, conditioned upon the Army taking certain protective measures for the gray bat during Malathion application while the installation is in caretaker status and the imposition of restrictions on its use after transfer. You further requested that your agency be consulted if plants now undergoing review are proposed for inclusion on the Federal list of Threatened or Endangered Species prior to transfer of ownership of the property.

In response to your request, officials at Ft. McClellan have agreed to restrict the use of Malathion during caretaker operations as specified in your letter. In addition, the following language, which is based upon a provision in the Fish and Wildlife Service proposal in the Biological Opinion for the ongoing mission at Fort Leonard Wood, Missouri, will be incorporated into property deeds transfer documents to notify future owners of the Ft. McClellan golf course of the potential for adverse impacts and the requirement to provide appropriate protection to the gray bat:

"Malathion should be sprayed during daylight hours no earlier than one hour after sunrise and no later than one hour prior to sunset between March 15 and October 31." Aerial application (fogging) of Malathion during other times of the day between March 15 and October 31 may affect the gray bat.

This commitment will be documented in the Final Environmental Impact Statement (FEIS) and Record of Decision for Disposal and Reuse of Ft. McClellan, Alabama, and this letter will be included in the Appendix to the FEIS.

We will comply fully with requirements of the Endangered Species Act if the plants now under review are listed or proposed for listing. Mr. Curtis M. Flakes is available at (334) 690-2693 for further discussion if you desire.

Sincerely,

A handwritten signature in black ink, appearing to read "J. David Norwood". The signature is fluid and cursive, with the first name "J. David" and last name "Norwood" clearly distinguishable.

J. David Norwood
Colonel, Corps of Engineers
District Engineer

SUBSECTION B.3

CULTURAL RESOURCES COORDINATION

B.3 CULTURAL RESOURCES COORDINATION

B.3.1 INTRODUCTION

The National Historical Preservation Act of 1966 (NHPA) protects buildings, sites, districts, structures, and objects that have significant scientific, historic, cultural value. The act establishes affirmative responsibilities of federal agencies to preserve historic and prehistoric resources. Effects on properties that are on, or eligible for, the National Register of Historic Places (NRHP) must be taken into account in the disposal and reuse of installations closed under Base Realignment and Closure (BRAC).

Fulfillment of the purposes of the NHPA is accomplished through consultation with the Advisory Council on Historic Preservation (ACHP) and with each State Historic Preservation Officer (SHPO). Prior to the final disposal action, the Army must ensure that NHPA Section 106 consultations are completed and that the appropriate considerations have been afforded FMC properties that are on or eligible for the NRHP.

The U.S. Army Training and Doctrine Command has entered into Section 106 consultations with the Alabama SHPO and the ACHP in accordance with Section 106, NHPA. These consultations were initiated using Prototype Programmatic Agreement for the Closure and Disposal of BRAC Installations resulting from consultations between the Army and the ACHP. The Final Programmatic Agreement, which was developed based upon consultations with the Alabama SHPO, the ACHP and other interested parties, has been signed by the Alabama SHPO and the U.S. Army Training and Doctrine Command. Signatures of the FMDC and ACHP are expected to be obtained during the thirty day review period for the FEIS and before the Army completes the Record of Decision. A copy of the Programmatic Agreement is provided in subsection B.3.2.

B.3.2 FINAL PROGRAMMATIC AGREEMENT

PROGRAMMATIC AGREEMENT

among

**UNITED STATES ARMY,
ALABAMA STATE HISTORIC PRESERVATION OFFICER,
and ADVISORY COUNCIL ON HISTORIC PRESERVATION**

for the

Closure and Disposal of FORT MCCLELLAN, ALABAMA

1998

Whereas the United States Army (Army) is responsible for implementation of applicable provisions of the Defense Base Closure and Realignment Act of 1990 (P.L. 101-510) as amended, and is proceeding with the closure of Fort McClellan, Alabama, and consequent disposal of excess and surplus property in a manner consistent with the requirements of the applicable Defense Base Closure and Realignment Commission recommendation; and

Whereas the Army has determined that leasing, licensing and/or disposal of all or portions of Fort McClellan, in Alabama, may have an effect upon historic properties that have been designated as in, or eligible for listing in, the National Register of Historic Places (Register), and has consulted with the Alabama State Historic Preservation Officer (SHPO) and the Advisory Council on Historic Preservation (Council) pursuant to 36 C.F.R. Part 800, regulations implementing Section 106 of the National Historic Preservation Act (16 U.S.C. Section 470(f), Section 110(f) of the same Act (16 U.S.C. Section 470h-2[f]), and Section 111 of the same Act (16 U.S.C. Section 470h-3); and

Whereas historic properties at Fort McClellan are at this time known to include properties listed in Attachment A; and

Whereas the Army has completed historical and archival investigations, surveys of historic structures, and archeological surveys which support disposal of the BRAC property, and these are listed in Appendix B; and

Whereas interested members of the public, including the Fort McClellan Development Commission, Anniston Historical Preservation Commission, Muscogee (Creek) Nation of Oklahoma, Thlopthlocco Tribal Town, the Southeastern Inter-Tribal Ketchematah Nation, and Native Americans, have been provided opportunities to comment on the effects this base closure may have on historic properties at Fort McClellan through public hearings, consultation meetings, and other means; and

Whereas in carrying out the disposal of excess and surplus property the Army will comply with all applicable laws and regulations, including 36 C.F.R. Part 79, Curation of Federally-Owned and Administered Archeological Collections;

NOW, THEREFORE, the Army, the SHPO, and the Council agree that the undertaking described above

shall be implemented in accordance with the following stipulations to take into account the effect of the undertaking on historic properties.

STIPULATIONS - The Army will ensure that the following measures are carried out:

I. Identification and Evaluation

A. Archaeological Inventory

1. Considerable archaeological inventory has been completed at Fort McClellan, but not all of the property to be disposed has been subject to complete inventory. The property to be disposed is located in the Main Post section of Fort McClellan. The Army will complete archaeological inventory for the property to be disposed, that has not been surveyed previously, at two levels of intensity: 1. Low intensity archaeological survey will be carried out in portions of the disposal property subject to previous disturbance by development activity, including the cantonment area; 2. High intensity archaeological survey will be completed in other portions of the disposal property that have not been developed, or that have been affected only by training activities.
2. All archaeological inventories will be conducted by, or under the supervision of a qualified archaeologist as defined by 36 CFR Part 61.
3. The Alabama Historical Commission's Policy for Archaeological Survey and Testing will be followed.
4. The Army will consult with the Alabama SHPO to determine those archaeological sites that will be considered eligible to the Register.

B. Inventory of Historic Structures

Inventory of historic structures built prior to World War II is complete. Additional inventory of permanent structures built during World War II (1941 to 1945) and structures built during the "Cold War Era" (1946 to 1989) is underway and any structures built during these periods that are found to be eligible to the National Register of Historic Places, in consultation with the Alabama SHPO will be treated consistent with the terms of this agreement.

II. Caretaker Maintenance of Historic Properties

The Army will ensure the provision of caretaker building maintenance, security, and fire protection pending the transfer, lease, or sale of historic properties at Fort McClellan. These caretaker activities shall be conducted in accordance with Public Works Bulletin 420-10-08 (17 March 1993), Facilities Operation, Maintenance, and Repair Guidance for Base Realignment and Closing Installations (and subsequent revisions). The Army will ensure the protection of archeological sites on, or eligible for inclusion on the National Register, in accordance with the "Interim Maintenance Plan for Repairs and Maintenance to Historic Structures and their surrounding Environment," dated October 14, 1994, and "An Historic Preservation Plan for Fort McClellan, Alabama," dated September 13, 1994.

III. Licenses and Leases

Licenses or leases, to other than federal agencies, of historic properties will include language provided in Attachment C of this agreement as appropriate. Any modifications to licensed or leased structures eligible to the National Register will be reported in the Annual Status Report, to be provided as required in Stipulation VII of this Programmatic Agreement (PA).

IV. Disposal of Fort McClellan Properties

A. Transfer of Real Property That Does Not Contain Historic Properties

In leasing or disposing of real property and improvements -- for which identification and evaluation have been completed in consultation with the SHPO--that do not contain historic properties, any portion of a historic property, archeological site, or any portion of an archeological site, no further action is necessary under this agreement. The Army will, however, notify the SHPO that such a transfer has been completed.

B. Assignments to Other Federal Agencies

In assigning historic or archeological-site properties directly to another Federal agency by a transfer authority such as The Federal Property and Administrative Services Act of 1949, as amended (40 U.S.C. Section 471 et seq.), the receiving Federal agency will be deemed responsible for compliance with 36 C.F.R. Part 800 and any other applicable state or Federal laws and regulations with respect to the maintenance and disposal of these properties. The Army will notify the SHPO and Council in writing of each Federal agency that has requested and been assigned such property.

C. Public Benefit Conveyances to Non-Federal Recipients

In disposing of historic or archeological-site property(ies) directly to a non-Federal recipient--at the request of a sponsoring Federal agency, and pursuant to the Public Benefit Conveyance authorities contained in the Federal Property and Administrative Services Act of 1949, as amended (40 U.S.C. Section 471 et seq.), and other applicable authorities--appropriate preservation covenants (found at Attachments D and E) will be incorporated in the transfer instrument(s). The Army will notify the SHPO and Council in writing of each such transfer of historic and/or archeological-site property.

D. Economic Development Conveyances to LRA

In disposing of historic or archeological-site property(ies) to a Local Redevelopment Authority (LRA) pursuant to the Economic Development Conveyance authority contained in the Defense Base Closure and Realignment Act of 1990 (Public Law 101-510, as amended), appropriate preservation covenants (found at Attachments D and E) will be incorporated in the transfer instrument(s). The Army will notify the SHPO and Council in writing of each such transfer of historic and/or archeological-site property.

E. Competitive Sales

In disposing of historic properties via a competitive sale transfer authority, the Army's bid solicitation will contain the following information:

1. Information on the property's historic, archeological, and/or architectural significance, identifying elements, or other characteristics of the property that should be given special consideration in planning;
2. Information on financial incentives for rehabilitation of historic structures;
3. Information indicating that appropriate preservation covenants will be incorporated in the instrument transferring title to the property, and that these covenants will be substantively identical to those contained in Attachments D and/or E of this agreement (as appropriate), unless modifications are authorized pursuant to the process described in paragraph IV. G, below, and as required to accord the covenants with state law.

In developing the above information for inclusion in its initial bid solicitation document, the Army will solicit the advice and assistance of the SHPO. The Army need not solicit such advice and assistance in preparing subsequent solicitation documents, unless such documents contain historic properties information that differs materially from that included in the initial solicitation document. The Army will notify the SHPO and Council in writing of each such transfer of historic and/or archeological-site property.

F. Negotiated Sales

In disposing of historic properties via a negotiated sale transfer authority, the Army will provide a written document ("negotiation document") to the negotiating party that sets forth the same information described in subparagraphs IV. E (1), (2), and (3) above. In developing this information for inclusion in the negotiation document to be provided to the initial negotiating party, the Army will solicit the advice and assistance of the SHPO. The Army need not solicit such advice and assistance in preparing negotiation documents for subsequent negotiating parties, unless such documents contain historic properties information that differs materially from that included in the document provided to the initial negotiating party. The Army will notify the SHPO and Council in writing of each such transfer of historic and/or archeological-site property.

G. Covenant Modification to Facilitate Transfer

If the Army cannot transfer the property or properties that contain historic structures pursuant to the provisions set forth in paragraphs IV. C, D, E, and F above, then the Army will consult with the concerned SHPO, the ACHP, and (with respect to transfers pursuant to paragraphs IV. C, D, and F) the prospective transferee(s) to determine appropriate modifications to the preservation covenants contained in Attachments D and/or E that are necessary in order to complete transfer of the property(ies) within established disposal timelines. Such modifications shall be limited to those that are reasonably necessary in order to effect transfer of, or effectively market, the concerned property within established timelines.

V. Environmental Remediation

- A. The Fort McClellan Environmental Baseline Survey describes the environmental and ordnance and explosive contamination that may require some type of remediation or removal action. The remediation and removal actions will be conducted in accordance with the requirements of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Proposed remediation testing and plans will be coordinated between the Fort McClellan Garrison/Transition Activity and the Fort McClellan BRAC Environmental Coordinator (BEC) to identify any effects to historic properties, known or yet to be discovered. If the Army determines that historic properties will be affected by a proposed remediation plan, the Army will consult with the SHPO to determine what steps should be taken, if any, with respect to those effects.
- B. Proposed remediation testing and plans that the Army determines may affect historic properties will be submitted to the SHPO for review and comment in accordance with the following procedures:
1. Proposed remediation testing and plans or supplemental documentation furnished by the Army will provide descriptions of any potential conflicts between remediation and preservation of historic properties;
 2. In situations where the Army determines that there is an immediate threat to human health, safety, or the environment, and that remediation must proceed without first taking steps to preserve historic properties, notice will be given to the SHPO as soon as possible and the Army's reasons for determining that there is an immediate threat will be fully described;
 3. In situations where the Army determines that there is not an immediate threat to human health, safety, or the environment, and that implementation of its proposed remediation plan will result in the demolition or substantial alteration of any historic property, then the Army shall either modify its remediation plan to avoid the adverse effect or implement data recovery and/or recordation in consultation with the SHPO, taking into account health and safety constraints inherent in properties containing hazardous materials, resource availability, and any other relevant constraints.

VI. Anti-Deficiency Act

The stipulations of this agreement are subject to the provisions of the Anti-Deficiency Act. If compliance with the Anti-Deficiency Act alters or impairs the Army's ability to implement the stipulations of this agreement, the Army will consult in accordance with the amendment and termination procedures found at Sections IX. and X. of this agreement.

VII. Status Reports

Until such time as all Fort McClellan historic and/or archeological-site properties have been transferred from Army control in accordance with the terms of this agreement, the Army will provide an annual status report to the Council and SHPO to review implementation of the terms of this agreement and to determine whether amendments are needed. If amendments are needed, the signatories to this agreement will consult, in accordance with Stipulation VIII. of this agreement, to make such revisions.

VIII. Dispute Resolution

- A. Should the SHPO and/or the Council object within thirty (30) days to any plans or other documents provided by the Army or others for review pursuant to this agreement, or to any actions proposed or initiated by the Army pursuant to this agreement, the Army shall consult with the objecting party to resolve the objection. If the Army determines that the objection cannot be resolved, the Army shall forward all documentation relevant to the dispute to the Council. Within thirty (30) days after receipt of all pertinent documentation, the Council will either:
 - 1. Provide the Army with recommendations, which the Army will take into account in reaching a final decision regarding the dispute; or
 - 2. Notify the Army that it will comment pursuant to 36 C.F.R. 800.6(b), and proceed to comment. Any Council comment will be taken into account by the Army in accordance with 36 C.F.R. 800.6(c)(2) with reference to the subject of the dispute.
- B. Any recommendations or comment provided by the Council pursuant to Stipulation VII. A above will pertain only to the subject of the dispute; the Army's responsibility to carry out all other actions under this agreement that are not the subjects of the dispute will remain unchanged.
- C. At any time during implementation of the measures stipulated in this agreement by the Army, if an objection to any such measure or its manner of implementation is raised by interested persons, then the Army shall consider the objection and take the objection into account and consult, as appropriate, with the objecting party, the SHPO, and the Council to attempt to resolve the objection.

IX. Amendments

- A. The Army, the SHPO, and/or Council may request that this PA be revised, whereby the parties will consult to consider whether such revision is necessary.
- B. If it is determined that revisions to this PA are necessary, then the Army, the Council, and the SHPO shall consult pursuant to 36 C.F.R. Part 800.13, as appropriate, to make such revisions. The Army will prepare the language for any proposed revisions and submit it to the Council and the SHPO for their review. Reviewing parties must comment on, or signify their acceptance of, the proposed changes to the PA in writing within thirty (30) days of their receipt.

X. Termination of Agreement

- A. The Army, the SHPO, and/or Council may terminate this PA by providing thirty (30) days written notice to the other signatory parties. During the period after notification and prior to termination, the Army, the Council, and the SHPO will consult to seek agreement on amendments or other actions that would avoid termination. In the event of termination, the Army will comply with 36 C.F.R. 800.4 through 800.6 with regard to individual undertakings associated with the BRAC disposal action.
- B. Execution and implementation of this PA evidences that the Army has afforded the Council a reasonable opportunity to comment on the closure and disposal of excess and surplus property at

Fort McClellan, and that the Army has taken into account the effects of the undertaking on historic properties. Execution and compliance with this programmatic agreement fulfills the Army's Section 106 responsibilities regarding the closure and disposal of Fort McClellan.

DEPARTMENT OF THE ARMY

By:

Charles W. Thomas

CHARLES W. THOMAS
Major General, U.S. Army
Chief of Staff
U.S. Army Training and Doctrine Command

Date: *7 Aug 98*

ALABAMA STATE HISTORIC PRESERVATION OFFICER

By:

Elizabeth Ann Brown

ELIZABETH ANN BROWN
Deputy Alabama State Historic Preservation Officer

Date:

July 8, 1998

ADVISORY COUNCIL ON HISTORIC PRESERVATION

By:

Date:

DON L. KLIMA
Executive Director, Eastern Office of Project Review
Advisory Council on Historic Preservation

Concur:

Date:

ROBERT H. RICHARDSON
Executive Director
Fort McClellan Development Commission

ATTACHMENT A

**Fort McClellan, Alabama
Historic Properties on or Eligible for
the National Register of Historic Places,
with accompanying maps**

Post Headquarters District, Fort McClellan, Alabama					
Struct.	Constr.	Contrib/	Structure Name	District	QM plan
Number	Date	Non Con		Subdivision	
1	1930	Con	Post Commanding Officers Quarters	Commissioned Officers' Housing	625-362
2	1930	Con	Commissioned Officers' Quarters	Commissioned Officers' Housing	625-140
3	1930	Con	Commissioned Officers' Quarters	Commissioned Officers' Housing	625-140
4	1930	Con	Commissioned Officers' Quarters	Commissioned Officers' Housing	625-140
5	1930	Con	Commissioned Officers' Quarters	Commissioned Officers' Housing	625-140
6	1930	Con	Commissioned Officers' Quarters	Commissioned Officers' Housing	625-140
7	1930	Con	Commissioned Officers' Quarters	Commissioned Officers' Housing	625-140
8	1930	Con	Commissioned Officers' Quarters	Commissioned Officers' Housing	625-140
9	1930	Con	Commissioned Officers' Quarters	Commissioned Officers' Housing	625-140
10	1930	Con	Commissioned Officers' Quarters	Commissioned Officers' Housing	625-140
11	1930	Con	Commissioned Officers' Quarters	Commissioned Officers' Housing	625-140
12	1930	Con	Commissioned Officers' Quarters	Commissioned Officers' Housing	625-140
13	1930	Con	Commissioned Officers' Quarters	Commissioned Officers' Housing	625-140
14	1930	Con	Commissioned Officers' Quarters	Commissioned Officers' Housing	625-140
15	1930	Con	Commissioned Officers' Quarters	Commissioned Officers' Housing	625-140
16	1930	Con	Commissioned Officers' Quarters	Commissioned Officers' Housing	625-140
17	1936	Con	Commissioned Officers' Quarters	Commissioned Officers' Housing	625-4360
18	1936	Con	Commissioned Officers' Quarters	Commissioned Officers' Housing	625-4360
19	1936	Con	Commissioned Officers' Quarters	Commissioned Officers' Housing	625-4360
20	1936	Con	Commissioned Officers' Quarters	Commissioned Officers' Housing	625-436
181	1936	Con	Garage	Commissioned Officers' Housing	634-140
182	1936	Con	Garage	Commissioned Officers' Housing	634-140
183	1936	Con	Garage	Commissioned Officers' Housing	634-140
185	1936	Con	Garage	Commissioned Officers' Housing	634-140
186	1936	Con	Garage	Commissioned Officers' Housing	634-140
187	1936	Con	Garage	Commissioned Officers' Housing	634-140
188	1936	Con	Garage	Commissioned Officers' Housing	634-140
189	1936	Con	Garage	Commissioned Officers' Housing	634-140
190	1936	Con	Garage	Commissioned Officers' Housing	634-140
51	1936	Con	Bachelor Officers' Quarters	Commissioned Officers' Housing	6119-600 to 620
81	1930	Con	NCO quarters	Non-Commissioned Officers' (NCO) Housing	625-581
82	1930	Con	NCO quarters	Non-Commissioned Officers' (NCO) Housing	625-581
83	1930	Con	NCO quarters	Non-Commissioned Officers' (NCO) Housing	625-581

Post Headquarters District, Fort McClellan, Alabama					
Struct.	Constr.	Contrib/	Structure Name	District	QM plan
Number	Date	Non Con		Subdivision	
84	1930	Con	NCO quarters	Non-Commissioned Officers' (NCO) Housing	625-581
85	1930	Con	NCO quarters	Non-Commissioned Officers' (NCO) Housing	625-581
86	1930	Con	NCO quarters	Non-Commissioned Officers' (NCO) Housing	625-581
87	1930	Con	NCO quarters	Non-Commissioned Officers' (NCO) Housing	625-581
88	1936	Con	NCO quarters	Non-Commissioned Officers' (NCO) Housing	625-3585-3595
89	1936	Con	NCO quarters	Non-Commissioned Officers' (NCO) Housing	625-3585-3595
90	1936	Con	NCO quarters	Non-Commissioned Officers' (NCO) Housing	625-3585-3595
102	1936	Con	NCO quarters	Non-Commissioned Officers' (NCO) Housing	625-3585-3595
103	1936	Con	NCO quarters	Non-Commissioned Officers' (NCO) Housing	625-3585-3595
104	1936	Con	NCO quarters	Non-Commissioned Officers' (NCO) Housing	625-3585-3595
105	1936	Con	NCO quarters	Non-Commissioned Officers' (NCO) Housing	625-3585-3595
106	1936	Con	NCO quarters	Non-Commissioned Officers' (NCO) Housing	625-3585-3595
107	1936	Con	NCO quarters	Non-Commissioned Officers' (NCO) Housing	625-3585-3595
196	1936	Con	Garage	Non-Commissioned Officers' (NCO) Housing	634-140
197	1936	Con	Garage	Non-Commissioned Officers' (NCO) Housing	634-140
198	1936	Con	Garage	Non-Commissioned Officers' (NCO) Housing	634-140
61	1934	Con	Post Headquarters	Administration	6119-109 and 6119-530 to 538
67	1936	Con	Silver Chapel	Administration	6119-689 to 697
63	1931	Con	Provost Marshal Administration Building	Administration	6119-429 to 447
65	1936	Con	Administration General Purpose Building	Administration	6119-800-809
141 A, B, C	1937	Con	Enlisted Men's Barracks (Stanley Barracks)	The Quadrangle Grouping	6119-700-746
142	1930	Con	Enlisted Men's Barracks (Frederic Barracks)	The Quadrangle Grouping	621-297-725
144	1930	Con	Automatic Data Processing	The Quadrangle Grouping	621-297-725
143	1930	Con	Enlisted Men's Barracks (Wikoff Barrack)	The Quadrangle Grouping	621-297-725
161	1936	Con	Theater (Hutchinson Hall)	na	6119-630-654
162	1936	Con	Administration Building (Koehler Hall)	na	6119-630-654

Post Headquarters District, Fort McClellan, Alabama					
Struct.	Constr.	Contrib/	Structure Name	District	QM plan
Number	Date	Non Con		Subdivision	
163	1936	Con	Administration General Purpose (Schou Hall)	na	6119-630-654
69	1936	Con	Fire Station Building	na	634-330-343
170	1937	Con	Band Stand	na	NA
184	1932	Non	Vehicle Registration Building	misc.	NA
66	1941	Non	Child Support Service Center	misc.	NA
21-30	1957	Non	Housing	na	NA
54	1958	Non	Bath House	na	NA
56	1958	Non	Outdoor Swimming Pool Building	na	NA

Industrial District, Fort McClellan, Alabama					
Struct.	Constr.	Contrib/	Structure Name	District	QM plan
Number	Date	Non Con		Subdivision	
241	1937	Con	Administration/Warehouse Building	Admin. Bldgs.	6119-760 to 782 and 6119-140 to 146
241A	1937	Con	Administration/Warehouse Building	Admin. Bldgs.	6119-760 to 782 and 6119-140 to 146
241B	1937	Con	Administration/Warehouse Building	Admin. Bldgs.	6119-760 to 782 and 6119-140 to 146
234	1936	Con	Vehicle Maintenance Building	Motor Pool Bldgs.	634-350 to 355
237	1936	Con	Vehicle Storage Building	Motor Pool Bldgs.	677-120 to 125
238	1936	Con	Vehicle Storage Building	Motor Pool Bldgs.	676-135 and 677-121 to 124
240	1936	Con	Administration Building	Motor Pool Bldgs.	676-130
242	1936	Con	General Storehouse	Motor Pool Bldgs.	676-112A
243	1932	Con	Storage Building	Motor Pool Bldgs.	6119-507
244	1934	Con	Storage Bldg/Technical Shop	Motor Pool Bldgs.	6119-510
216	1936	Non	Railroad Coal Trestle	na	6119-580
228	1936	Con	Electrical Maintenance Shop	Warehouse District	420-155-160
229	1937	Con	Clothing (Military Sales) Building	Warehouse District	6119-140 to 146
230	1937	Con	Clothing (Military) Sales Building	Warehouse District	6119-155 to 158
236	1932	Con	Technical Maintenance Shop	Warehouse District	6119-500
246	1941	Con	Cold Storage Building	Warehouse District	?
247	1934	Con	Warehouse/Laundry Building	Warehouse District	422-111
252	1936	Con	Communications Center Building	Warehouse District	633-143

Magazines (Ammunition Storage) District, Fort McClellan, Alabama					
Struct.	Constr.	Contrib/	Structure Name	District	QM plan
Number	Date	Non Con		Subdiv.	
4401	1936	Con	Ammunition Magazine	na	652-277
4402	1917	Con	Ammunition Magazine	na	none
4405	1917	Con	Ammunition Magazine	na	none
4406	1909	Con	Unknown Munitions Structure	na	na
4412	1941	Con	Igloo Magazine	na	652-354 Igloo
4413	1941	Con	Igloo Magazine	na	652-354 Igloo
4415	1941	Con	Igloo Magazine	na	652-354 Igloo
4416	1941	Con	Igloo Magazine	na	652-354 Igloo

Fort McClellan Historic Districts



Fort McClellan Historic Districts
UTM References, General Location

Post Headquarters District

- UTM References:
 1 - 16/611100/3731780
 2 - 16/611600/3731680
 3 - 16/612060/3731000
 4 - 16/611420/3730700

Industrial District

- UTM References:
 1 - 16/611630/3731580
 2 - 16/611740/3731640
 3 - 16/612560/3731180
 4 - 16/612080/3731020

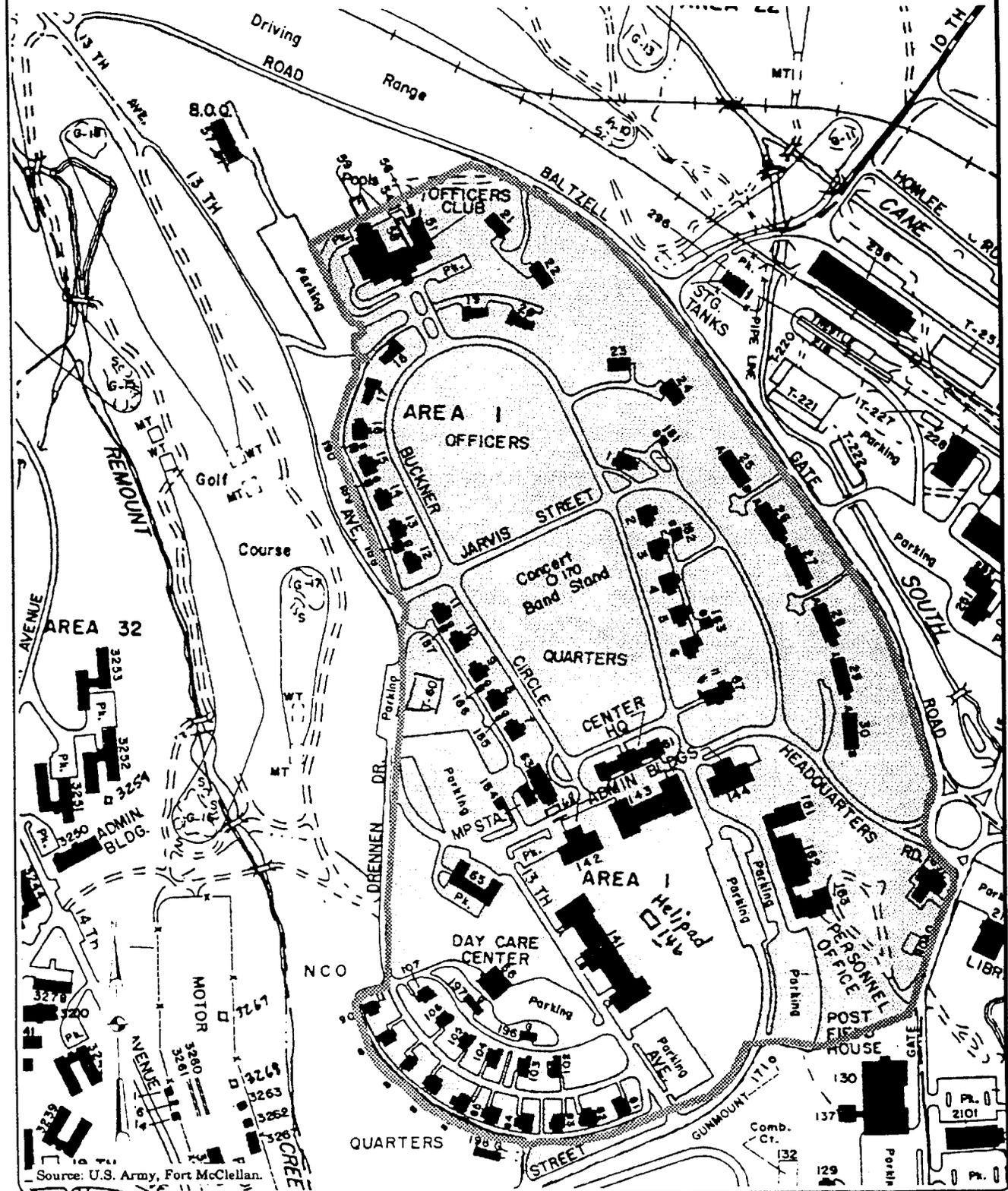
Ammunition Storage District

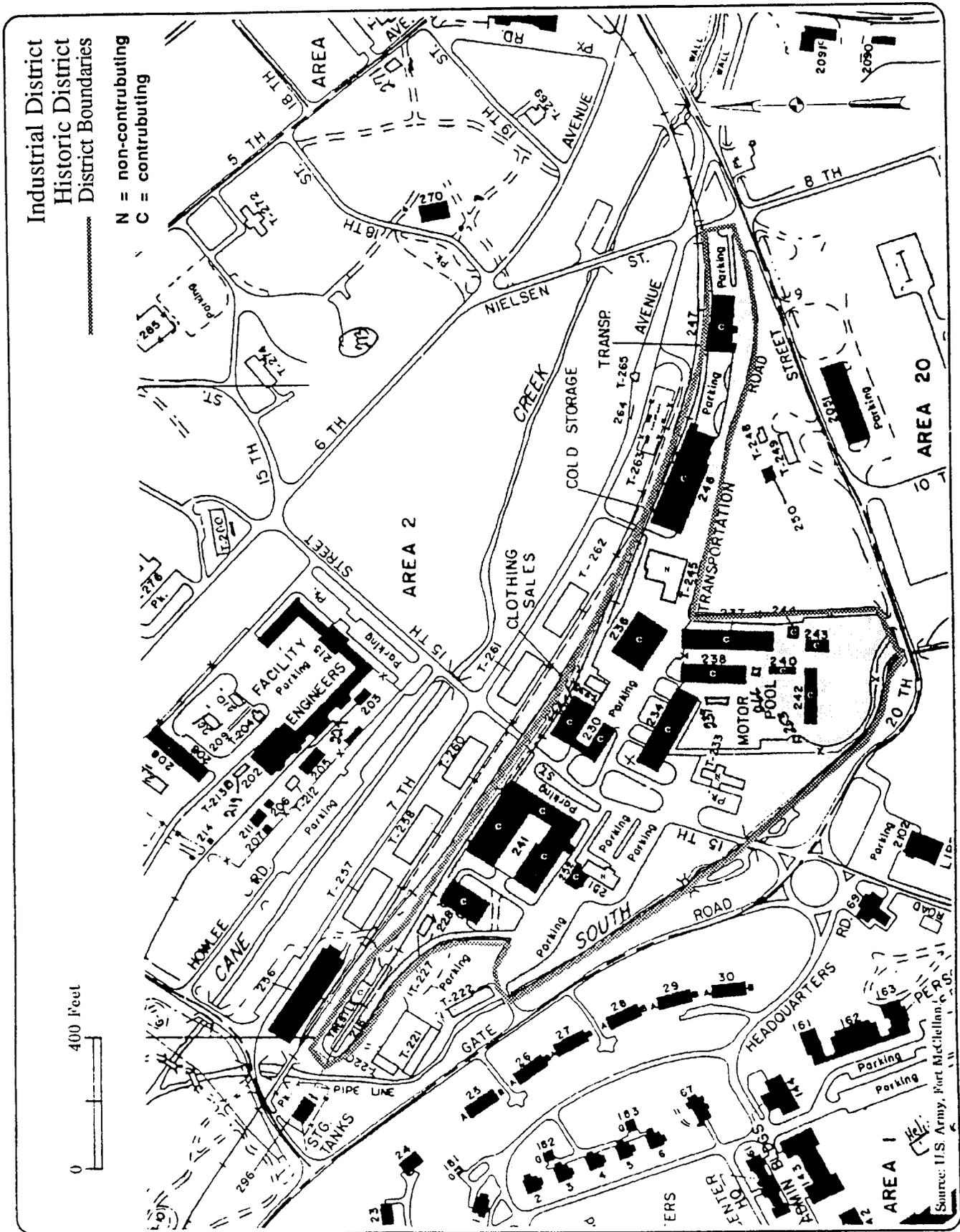
- UTM References
 1 - 16/613080/3732580
 2 - 16/613560/3732470
 3 - 16/613760/3732470
 4 - 16/613190/3732220

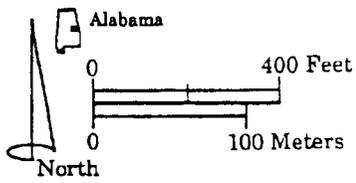
Source: USGS Quadrangle: Anniston, ALA., 1956 (Photorevised 1972)

Headquarters District
 Historic District
 District Boundaries

0 400 Feet

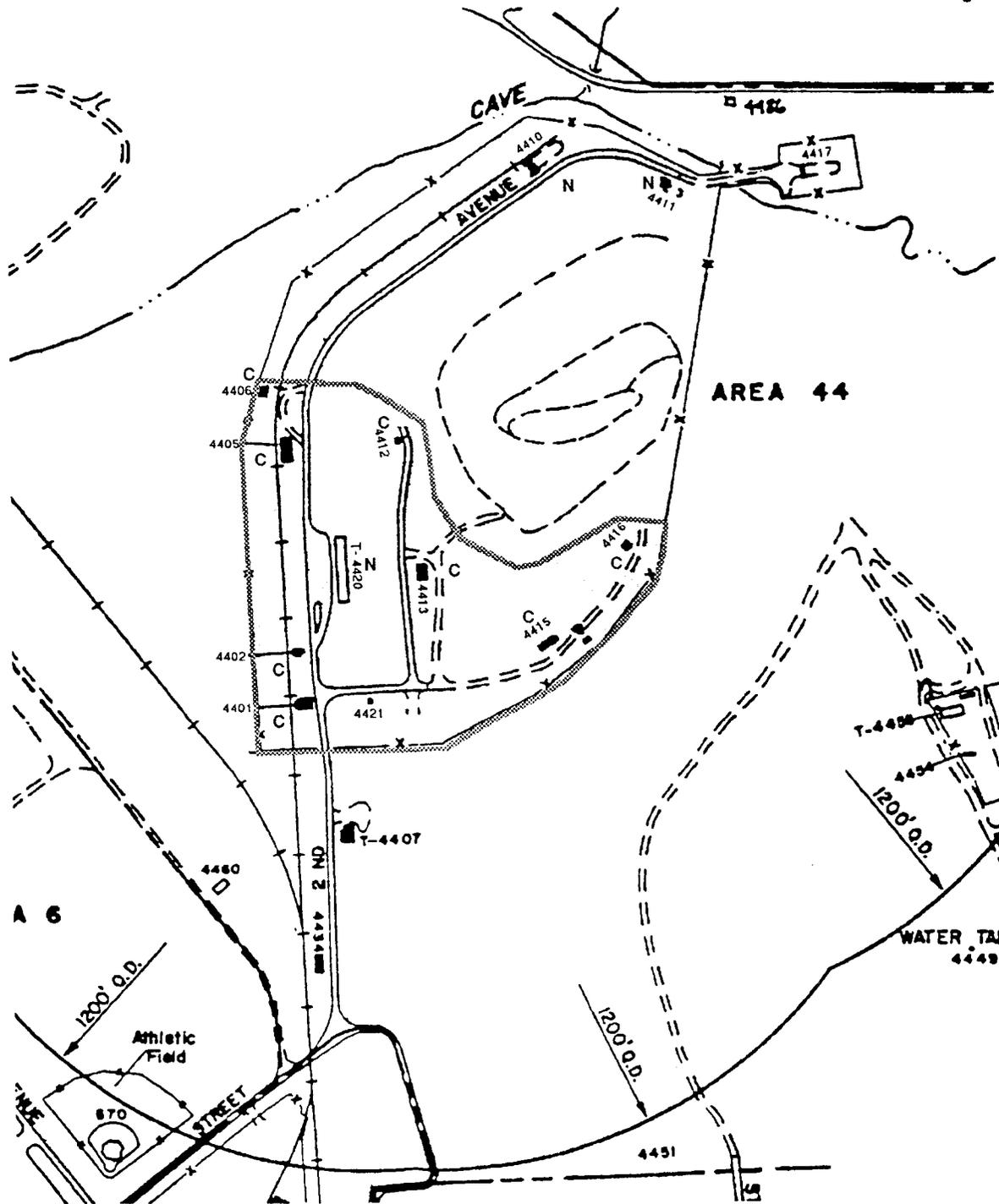






**Ammunition Storage
Historic District
District Boundaries**

N = non-contributing
C = contributing



Source: U.S. Army, Fort McClellan.

ATTACHMENT B

List of Architectural, Archaeological, and Archival Studies completed at Fort McClellan:

- Holstein, H. O., and K. Little
1982 "The Validity Test of the 1980 McEachern Archaeological Predictive Model of Fort McClellan, Alabama." Archaeological Resource Laboratory, Jacksonville State University, Jacksonville Alabama.
- Holstein, H. O., and K. Little
1985a "An Archaeological Pedestrian Survey of Portions of Northeast Alabama." Archaeological Resource Laboratory, Jacksonville State University, Jacksonville Alabama.
- Holstein, H.O.
1988 "An Archaeological Pedestrian Survey of the Proposed Fort McClellan Museum Consolidation Project, Calhoun County, Alabama." Jacksonville Statue University.
- Holstein, H.O. and K. Little
1982 "The Validity Test of the 1980 McEachern Archaeological Predictive Model of Fort McClellan, Alabama." Jacksonville State University
- Holstein, H.O., and C.E. Hill
1993 "Resources on Pelham Range, Fort McClellan, Alabama." Jacksonville State University.
- Holstein, Harry O., Curtis E. Hill, and Keith J. Little
1995 "Archaeological Investigations of Stone Mounds on the Fort McClellan Military Reservation, Calhoun County, Alabama (Jan 1995, Legacy)." Archaeological Resource Laboratory, Jacksonville State University.
- Joseph, J. W. and Mary Beth Reed
1994 "Inventory and Evaluation of Seventeen Buildings, Fort McClellan, Alabama". New South Associates.
- Joseph, J. W., Mary Beth Reed, Charles E. Cantley, G. Ishmael Williams
1992 "Fort McClellan: A Cultural Resources Overview." New South Associates.
- Kelley, B.
1967 "Fort McClellan Traditions Live in Buildings and Landmarks." (report on file) Information Office, Headquarters Division, Fort McClellan, Alabama.

- Kirkland, A.
1984 "Survey Report of Site Number Ca32, Morgan Mountain (located in Calhoun Co., Alabama." (ms. on file) Environmental Management Division, Directorate of Engineering and Housing, Fort McClellan, Alabama.
- McEachern, M. and N. Boice
1976 "Archaeological Reconnaissance of Fort McClellan, Alabama," University of Alabama.
- McEachern, M., N. Boice, D. C. Hurst and C.R. Nance
1980 "Statistical Evaluation and Predictive Study of the Cultural Resources at Fort McClellan, Alabama." University of Alabama, Birmingham.
- McEahern, M and N. Boice
1976 "Archaeological Reconnaissance of Fort McClellan, Alabama." University of Alabama, Birmingham.
- Moorehead, C.W.
1991 "Cultural Resource Survey of Fifteen Acres at Fort McClellan, Alabama." Mobile District, U.S. Army Corps of Engineers.
- Pyburn, Jack and Denise Messick
1994 "Interim Maintenance Plan for Repairs and Maintenance to Historic Structures and Their Surrounding Environment, Fort McClellan, Anniston, Alabama." New South Associates.
- Reed, M.B.
1994 "Inventory and Evaluation of Seventeen Buildings, Fort McClellan, Alabama." New South Associates.
- Reed, M.B., C.E. Cantley, G.I. Williams, and J.W. Joseph
1992 "Fort McClellan: A Cultural Resources Overview." New South Associates.
- Reed, M.B., W.R. Henry, and J. W. Joseph
1993 "The Military Showplace of the South, Fort McClellan, Alabama, A Historic Building Inventory." New South Associates.
- Robison, N. and J. Nielson
1984 "An Examination of Sites 1Ca62, 1Ca88, and 1CA111 for National Register Significance, Fort McClellan, Calhoun County, Alabama." Mobile District, U.S. Army Corps of Engineers.
- Westervelt, J., M. O'shea, J. Krzyzak, T. Oduwolle, M. Shapiro and W. Goran
1984 "Characterization of Landscape Related Features for Archaeological and Historical Sites Occurring at Fort McClellan, Alabama." Construction Engineering Research Laboratories, U.S. Army Corps of Engineers.

ATTACHMENT C:

[Language to be included in lease and license agreements when historic buildings, archeological sites, districts, or other historic properties are present. Two versions are presented--one for buildings/structures and a second for archeological sites.]

Building/Structure Lease (or License) Language

Building number(s) XXX is/are (eligible for inclusion in/ listed in) the National Register of Historic Places. This/these building(s) will be maintained by the Lessee (Licensee) in accordance with the recommended approaches in the Secretary of the Interior's Standards for Rehabilitation and Illustrated Guidelines for Rehabilitating Historic Buildings (U.S. Department of the Interior, National Park Service 1992) (Standards). The Lessee (Licensee) will notify the Army of any proposed rehabilitation or structural alteration to this/these building(s) or to the landscape/landscape features and will provide a detailed description of the undertaking prior to undertaking said rehabilitation/alterations. Within 30 days of receipt of such notification and adequate supporting documentation, the Army will notify the Lessee (Licensee) in writing that the undertaking conforms to the Standards and that the Lessee (Licensee) may proceed or that the undertaking does not conform to the Standards and that the Lessee (Licensee) may not proceed. If the Army determines that the undertaking does not meet the Standards, the Army will, with the assistance of the Lessee (Licensee), fulfill the requirements of Section 106 of the National Historic Preservation Act and its implementing regulations, "Protection of Historic Properties" (36 CFR Part 800). The Lessee (Licensee) will not undertake the proposed action until the Army notifies the Lessee that the requirements of Section 106 have been fulfilled and the Lessee may proceed. If the Army objects to the Lessee's (Licensee's) proposed undertaking, the Army will notify the Lessee (Licensee) that the proposed action may not proceed.

Archeological Property(ies) Lease (License) Language

Archeological property(ies)XXX is/are (eligible for inclusion in/ listed in) the national Register of Historic Places. The Lessee (Licensee) shall ensure that the property(ies) remain(s) undisturbed. The Lessee (Licensee) will notify the Army of any proposed ground disturbance to the archeological property prior to undertaking said ground disturbance. Notification will include a detailed description of the proposed undertaking. If the Army does not object to the proposal within 30 days of receipt of such notification and adequate supporting documentation, the Army will, with the assistance of the Lessee (Licensee), initiate consultation with the SHPO in accordance with Section 106 of the National Historic Preservation Act and its implementing regulations, "Protection of Historic Properties" (36 C.F.R. Part 800). The Lessee (Licensee) will not undertake the proposed action until the Army notifies the Lessee (Licensee) that the requirements of Section 106 have been fulfilled and the Lessee (Licensee) may proceed. If the Army objects to the Lessee's (Licensee's) proposed ground disturbance, the Lessee shall not undertake the proposed action.

ATTACHMENT D:

**STANDARD PRESERVATION COVENANT FOR CONVEYANCE OF PROPERTY
THAT CONTAINS HISTORIC BUILDINGS AND STRUCTURES**

1. In consideration of the conveyance of certain real property hereinafter referred to as (name of property), located in the Calhoun County, Alabama, which is more fully described as: (Insert legal description), (Name of property recipient) hereby covenants on behalf of (himself/herself/itself), (his/her/its) heirs, successors, and assigns at all times to the Alabama State Historic Preservation Officer to preserve and maintain (name of historic property/district) in accordance with the recommended approaches in the Secretary of the Interior's Standards for Rehabilitation and Illustrated Guidelines for Rehabilitating Historic Buildings (U.S. Department of the Interior, National Park Service 1992), in order to preserve and enhance those qualities that make (name of historic property) eligible for inclusion in/or resulted in the inclusion of the property in the National Register of Historic Places. In addition, any design review guidelines established by a Preservation Commission with appropriate authority will be followed. If (Name of property recipient) desires to deviate from these maintenance standards, (Name of property recipient) will notify and consult with the Alabama State Historic Preservation Officer in accordance with paragraphs 2, 3, and 4 of this covenant.
2. (Name of property recipient) will notify the Alabama State Historic Preservation Officer in writing prior to undertaking any construction, alteration, remodeling, demolition, or other modification to structures or setting that would affect the integrity or appearance of (name of historic property). Such notice shall describe in reasonable detail the proposed undertaking and its expected effect on the integrity or appearance of (name of historic property). "Demolition or interior retrofit of noncontributing buildings and structures can be undertaken after thirty (30) days of written notice to the Alabama State Historical Preservation Officer without further consultation."
3. Within thirty (30) calendar days of the Alabama State Historic Preservation Officer's receipt of notification provided by (name of property recipient) pursuant to paragraph 2 of this covenant, the Alabama State Historic Preservation Officer will respond to (name of property recipient) in writing as follows:
 - (a) That (name of property recipient) may proceed with the proposed undertaking without further consultation; or
 - (b) That (name of property recipient) must initiate and complete consultation with the Alabama State Historic Preservation Office before (he/she/it) can proceed with the proposed undertaking.

If the Alabama State Historic Preservation Officer fails to respond to the (name of property recipient)'s written notice, as described in paragraph 2, within thirty (30) calendar days of the Alabama State Historic Preservation Officer's receipt of the same, then (name of property recipient) may proceed with the proposed undertaking without further consultation with the Alabama State Historic Preservation Officer.

4. If the response provided to (name of property recipient) by the Alabama State Historic Preservation Officer pursuant to paragraph 3 of this covenant requires consultation with the Alabama State Historic Preservation Officer, then both parties will so consult in good faith to arrive at mutually agreeable and

appropriate measures that (name of property recipient) will implement to mitigate any adverse effects associated with the proposed undertaking. If the parties are unable to arrive at such mutually-agreeable mitigation measures, then (name of property recipient) shall, at a minimum, undertake recordation for the concerned property--in accordance with the Secretary of Interior's standards for recordation and any applicable state standards for recordation, or in accordance with such other standards to which the parties may mutually agree--prior to proceeding with the proposed undertaking. Pursuant to this covenant, any mitigation measures to which (name of property recipient) and the Alabama State Historic Preservation Officer mutually agree, or any recordation that may be required, shall be carried out solely at the expense of (name of property recipient).

5. Alabama State Historic Preservation Officer shall be permitted upon reasonable notice at a reasonable time to inspect (name of historic property) in order to ascertain its condition and to fulfill its responsibilities hereunder.
6. In the event of a violation of this covenant, and in addition to any remedy now or hereafter provided by law, the Alabama State Historic Preservation Officer may, following reasonable notice to (name of recipient), institute suit to enjoin said violation or to require the restoration of (name of historic property). The successful party shall be entitled to recover all costs or expenses incurred in connection with such a suit, including all court costs and attorneys fees.
7. In the event that the (name of historic property) (i) is substantially destroyed by fire or other casualty, or (ii) is not totally destroyed by fire or other casualty, but damage thereto is so serious that restoration would be financially impractical in the reasonable judgment of the Owner, this covenant shall terminate on the date of such destruction or casualty. Upon such termination, the Owner shall deliver a duly executed and acknowledged notice of such termination to the, Alabama State Historic Preservation Officer and record a duplicate original of said notice in the Calhoun County Deed Records. Such notice shall be conclusive evidence in favor of every person dealing with the (name of historic property) as to the facts set forth therein.
8. (Name of recipient) agrees that the Alabama State Historic Preservation Officer may at his/her discretion, without prior notice to (name of recipient), convey and assign all or part of its rights and responsibilities contained herein to a third party.
9. This covenant is binding on (name of recipient), (his/her/its) heirs, successors, and assigns in perpetuity, unless explicitly waived by the Alabama State Historic Preservation Officer. Restrictions, stipulations, and covenants contained herein shall be inserted by (name of recipient) verbatim or by express reference in any deed or other legal instrument by which (he/she/it) divests (himself/herself/itself) of either the fee simple title or any other lesser estate in (name of property) or any part thereof.
10. The failure of the Alabama State Historic Preservation Officer to exercise any right or remedy granted under this instrument shall not have the effect of waiving or limiting the exercise of any other right or remedy or the use of such right or remedy at any other time.
11. The covenant shall be a binding servitude upon (name of historic property) and shall be deemed to run with the land. Execution of this covenant shall constitute conclusive evidence that (name of recipient) agrees to be bound by the foregoing conditions and restrictions and to perform the obligations herein set forth.

ATTACHMENT E:

**STANDARD PRESERVATION COVENANT FOR CONVEYANCE
OF PROPERTY THAT INCLUDES ARCHEOLOGICAL SITES**

1. In consideration of the conveyance of the real property that includes the [official number(s) designation of archeological site(s)] located in the County of Calhoun, Alabama, which is more fully described as [insert legal description of the boundaries of the archaeological site], [Name of property recipient] hereby covenants on behalf of [himself/herself/itself], [his/her/its] heirs, successors, and assigns at all times to the Alabama State Historic Preservation Officer, to maintain and preserve [official number(s) designation of archeological site(s)], in accordance with the provisions of paragraphs 2 through 11 of this covenant.
2. (Name of property recipient) will notify the Alabama State Historic Preservation Officer in writing prior to undertaking any disturbance of the ground surface or any other action on [official number(s) designation of archeological site(s)] that would affect the physical integrity of this/these site(s). Such notice shall describe in reasonable detail the proposed undertaking and its expected effect on the physical integrity of [official number(s) designation of archeological site(s)].
3. Within thirty (30) calendar days of the appropriate Alabama State Historic Preservation Officer's receipt of notification provided by (name of property recipient) pursuant to paragraph 2 of this covenant, the SHPO will respond to (name of property recipient) in writing as follows:
 - (a) That (name of property recipient) may proceed with the proposed undertaking without further consultation; or
 - (b) That (name of property recipient) must initiate and complete consultation with the Alabama State Historic Preservation Office before (he/she/it) can proceed with the proposed undertaking.

If the Alabama State Historic Preservation Officer fails to respond to the (name of property recipient)'s written notice, as described in paragraph 2, within thirty (30) calendar days of the Alabama State Historic Preservation Officer's receipt of the same, then (name of property recipient) may proceed with the proposed undertaking without further consultation with the Alabama State Historic Preservation Officer.

4. If the response provided to (name of property recipient) by the Alabama State Historic Preservation Officer pursuant to paragraph 3 of this covenant requires consultation with the Alabama State Historic Preservation Officer, then both parties will so consult in good faith to arrive at mutually-agreeable and appropriate measures that (name of property recipient) will employ to mitigate any adverse effects associated with the proposed undertaking. If the parties are unable to arrive at such mutually-agreeable mitigation measures, then (name of property recipient) shall, at a minimum, undertake recordation for the concerned property--in accordance with the Secretary of Interior's standards for recordation and any applicable state standards for recordation, or in accordance with such other standards to which the parties may mutually agree--prior to proceeding with the proposed undertaking. Pursuant to this covenant, any mitigation measures to which (name of property recipient) and the Alabama State Historic Preservation Officer mutually agree, or any recordation that may be required, shall be carried out solely at the expense of (name of property recipient).

5. [Name of recipient] shall make every reasonable effort to prohibit any person from vandalizing or otherwise disturbing any archeological site determined by the Alabama State Historic Preservation Officer to be eligible for inclusion in the National Register of Historic Places. Any such vandalism or disturbance shall be reported to the Alabama State Historic Preservation Officer promptly.
6. The Alabama State Historic Preservation Officer shall be permitted upon reasonable notice at a reasonable time to inspect [parcel designation] in order to ascertain its condition and to fulfill its responsibilities hereunder.
7. In the event of a violation of this covenant, and in addition to any remedy now or hereafter provided by law, the Alabama State Historic Preservation Officer may, following reasonable notice to [name of recipient], institute suit to enjoin said violation or to require the restoration of any archeological site affected by such violation. The successful party shall be entitled to recover all costs or expenses incurred in connection with any such suit, including all court costs and attorney's fees.
8. [Name of recipient] agrees that the Alabama State Historic Preservation Officer may, at its discretion and without prior notice to [name of recipient], convey and assign all or part of its rights and responsibilities contained in this covenant to a third party.
9. This covenant is binding on [name of recipient], [his/her/its] heirs, successors, and assigns in perpetuity, unless explicitly waived by the Alabama State Historic Preservation Officer. Restrictions, stipulations, and covenants contained herein shall be inserted by [name of recipient] verbatim or by express reference in any deed or other legal instrument by which [he/she/it] divests [himself/herself/itself] of either the fee simple title or any other lesser estate in [parcel designation] or any part thereof.
10. The failure of the Alabama State Historic Preservation Officer to exercise any right or remedy granted under this instrument shall not have the effect of waiving or limiting the exercise of any other right or remedy or the use of such right or remedy at any other time.
11. The covenant shall be a binding servitude upon the real property that includes [official number(s) designation of archeological site(s)] and shall be deemed to run with the land. Execution of this covenant shall constitute conclusive evidence that [name of recipient] agrees to be bound by the foregoing conditions and restrictions and to perform the obligations herein set forth.

SUBSECTION B.4

**NATIONAL WILDLIFE REFUGE
COORDINATION**

B.4 NATIONAL WILDLIFE REFUGE COORDINATION

B.4.1 INTRODUCTION

As noted in the EIS and in the FMDC Final Reuse Plan, it is anticipated that the USFWS may establish a National Wildlife Refuge on a large parcel of FMC property to management and protect the Mountain Longleaf Pine ecosystem present at FMC. Since the protection of this ecosystem has been identified as an important scoping issue by agencies and the public (see appendix A), this subsection contains important correspondence on the issue of the creation of a USFWS wildlife refuge at FMC.

B.4.2 CORRESPONDENCE

Copies of correspondence documenting correspondence associated with the development of the proposed USFWS Mountain Longleaf Wildlife Refuge at FMC have been provided on the following pages, and include the following:

Letter	Date	Page
1 USFWS letter to DA	Dec 2, 1997	B-114
2 DA response letter to USFWS	Jan 16, 1998	B-116
3 USFWS memorandum	Jun 12, 1998	B-117



IN REPLY REFER TO:

United States Department of the Interior

FISH AND WILDLIFE SERVICE

1875 Century Boulevard
Atlanta, Georgia 30345
December 2, 1997

RECEIVED

DEC 22 1997

PARSONS ES
ST LOUIS

Mr. Paul Johnson
Deputy Assistant Secretary of the Army (I,L&E)
Attention: DASA (I&H)
110 Army Pentagon
Washington, D.C. 20310-0110

Dear Mr. Johnson:

This letter is in regard to the planned closure of Fort McClellan near Anniston, Alabama. In accordance with the recommendation of the Base Realignment Closure Commission, the Main Post at Fort McClellan is scheduled to be closed in 1999. This 18,954-acre base includes approximately 12,000 acres of unique mountain longleaf pine habitat. The steep slopes and isolated ridges at Fort McClellan contain relic trees up to 250 years old and isolated old growth stands of longleaf pine that average 180 years in age. Research has documented the rapid loss of this type habitat, and it is believed that Ft. McClellan now represents the best example of a large, natural mountain longleaf pine ecosystem.

During the process of determining the best reuse of the property at Fort McClellan, the Fish and Wildlife Service (Service) and the Alabama Department of Natural Resources, Game and Fish Division, have worked closely with the Local Reuse and Redevelopment Authority to formulate plans to preserve the unique mountain longleaf pine habitat. The following options were formulated and evaluated:

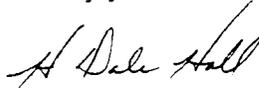
- (1) Ownership of 12,000-acre natural area be retained by the Army (due to liability issue with UXO). A Memorandum of Understanding (MOU) be developed between the Service and Army whereby the Service would manage the 12,000 acres as a national wildlife refuge. An MOU would then be developed between the Service and the Alabama Game and Fish Commission (AGFC) whereby the AGFC would manage the public hunting and fishing programs.
- (2) Ownership of the 12,000 acres be transferred from Army to the Service for a national wildlife refuge with Army retaining liability for UXOs. The Service and the AGFC would then enter into an MOU whereby the AGFC would manage the public hunting and fishing programs.
- (3) Ownership of the 12,000 acres be transferred from Army to the AGFC for a wildlife management area.

It is our understanding that the Final Reuse Plan for Fort McClellan will contain a recommendation for Option 2.

The Service is committed to the preservation of the unique mountain longleaf pine habitat at Fort McClellan, and we have initiated planning for the establishment of the Mountain Longleaf National Wildlife Refuge. Any land transfers or formal management agreements are contingent upon the completion of planning, including the Director's approval and compliance with the National Environmental Policy Act of 1969, as amended. We expect these planning efforts to be completed in approximately 18 to 24 months. Also, prior to refuge establishment, written confirmation of Army's continuing UXO liability will be required.

We look forward to working closely with the Army in the protection of the unique mountain longleaf pine habitat at Fort McClellan.

Sincerely yours,



for Sam D. Hamilton
Regional Director



DEPARTMENT OF THE ARMY
OFFICE OF THE ASSISTANT SECRETARY
INSTALLATIONS LOGISTICS AND ENVIRONMENT
110 ARMY PENTAGON
WASHINGTON DC 20310-0110

January 16, 1998

Mr. Sam D. Hamilton
Regional Director
Fish and Wildlife Service
United States Department of the Interior
1875 Century Boulevard
Atlanta, Georgia 30345

Dear Mr. Hamilton:

Thank you for your letter of December 2, 1997, in which you bring to my attention the Fish and Wildlife Service's (Service) desire to own approximately 12,000 acres of natural area, currently part of Fort McClellan, Alabama, to establish a national wildlife refuge for the preservation of mountain longleaf pine habitat. The Army strongly supports this initiative, knowing details of the proposal remain to be worked. We pledge to work with the Service and the Fort McClellan Development Commission (FMDC) to establish the refuge.

Ongoing responsibility for unexploded ordnance (UXO) remaining on the property after transfer to the Service will be set forth in a Memorandum of Agreement (MOA) to be entered into by our respective agencies. The MOA will address the use restrictions determined to be appropriate based upon the property's suitability. Work on the MOA can certainly begin before your planning is complete, as can your boundary negotiations with the FMDC.

The Army is in the process of establishing a BRAC Transfer Team (BTT) that will effect the disposal of property at Fort McClellan. The BTT will work the MOA with the Service, relying heavily on the expertise of the Mobile District Corps of Engineers' real estate staff and the environmental staff of the US Army Training and Doctrine Command (TRADOC). The respective points of contact for these organizations are Mr. James A. Wagoner (Mobile District) at (334) 694-3681, and Mr. Bob Anderson (TRADOC Natural Resources) at (757) 727-2077. The Army staff point of contact for the closure, disposal and reuse of Fort McClellan is LTC Carla Coulson at (703) 697-0225.

We anticipate a favorable outcome to this endeavor and look forward to working with you to achieve that goal.

Sincerely,

Paul W. Johnson
Deputy Assistant Secretary of the Army
(Installations and Housing)
OASA(LL&E)

Printed on Recycled Paper



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Washington, D.C. 20240

IN REPLY REFER TO:

JUN 12 1998

FWS/RE98-00014

Memorandum

To: Regional Director, Region 4
From: Director
Subject: Preliminary Project Proposal to Establish the Mountain
Longleaf National Wildlife Refuge, Calhoun County,
Alabama

Your proposal to establish the Mountain Longleaf National Wildlife Refuge is approved for detailed planning. The proposed refuge will be established from lands made available by the closing of Fort McClellan. These lands will benefit the longleaf pine community and wildlife including neotropical migrating birds, wading birds, raptors.

The detailed plan must include compliance with the requirements of the National Environmental Policy Act. We recommend the decision document provide a thorough discussion of the contaminant cleanup issues, unexploded ordinance and the proposed MOA for management of the area during the interim before transfer.

Please forward three copies of draft and final planning documents to the Assistant Director - Refuges and Wildlife (ARW/RE).

SUBSECTION B.5

PEARSON'S HAWTHORN COORDINATION

B.5 PEARSON'S HAWTHORN COORDINATION

B.5.1 INTRODUCTION

As noted in subsection 4.11.5.2 during a 1995 floral survey of FMC, collections of field unidentifiable hawthorns were made at FMC. Specimens were provided to regional and national experts on hawthorn identification. A confirmed identification and follow-up surveys of three-flowered hawthorn have been made at FMC. Pearson's hawthorn (*Crataegus pearsonii*) has been preliminarily identified as occurring in training area 15D near the quarry site. This hawthorn was thought to be extinct and has no current federal listing or state designation. If this species is validated to be present at FMC, it may initiate future listing efforts by the USFWS. Botanists considered to be experts in hawthorn identification and representatives from the USFWS and FMC conducted a survey of the quarry area on April 8, 1998. Additional analysis is required before a positive identification of the specimens can be made. The Army and National Guard will protect this site from training and development activities as further studies continue.

Since the protection of a species previously thought to be extinct is important, this subsection contains formal correspondence on this issue.

B.5.2 CORRESPONDENCE

Copies of correspondence associated with the investigations concerning the potential existence of Pearson's hawthorn within the disposal area at FMC have been provided on the following pages, and include the following:

Letter	Date	Page
1 USFWS letter to FMC	April 22, 1998	B-120



IN REPLY REFER TO:

United States Department of the Interior

FISH AND WILDLIFE SERVICE

████████████████████
P. O. Drawer 1190
Daphne, Alabama 36526

April 22, 1998

Commander
Ralph G. Wooten
U.S. Army Chemical and Military
Police Centers & Fort McClellan
ATZM-CG
Fort McClellan, AL 36205-5000

Dear Major General Wooten:

As you are fully aware, the U.S. Fish and Wildlife Service (Service) has the responsibility of coordinating Section 7 of the Endangered Species Act (ESA) with federal land stewards for those actions that may affect federally threatened and endangered species. The Service has been consulting on these issues with your Directorate of Environment since the mid 1980s. We appreciate the aggressive efforts the army has taken on Fort McClellan to survey, identify and manage for those species in accordance with the provisions of the ESA.

During past surveys supported by the Army, a former Candidate 2 hawthorn species, *Crataegus triflora*, was recorded at two locations on Main Post. The Service recently conducted a status review of this species to determine the need for listing and protection under the ESA. Fort McClellan supported our surveys in the effort to develop a regional understanding of the hawthorn's rarity. As part of these visits, an additional unknown hawthorn was collected at the former limestone quarry in Training Area 15D on August 13, 1995. This specimen has since been tentatively identified by regional and national authorities as *Crataegus pearsonii*. This hawthorn species has not been collected since 1900 and was thought to be extinct. While identification is recognized as only tentative, the possibility of rediscovering a previously thought to be extinct species is a significant event in the biological sciences.

A field visit was recently scheduled with the installation to confirm the existence of this species on Fort McClellan. Installation and Service personnel along with national experts took part in a field visit on April 8, 1998. Recent training activity at this site, however, had altered the landscape to the extent that the hawthorn could not be relocated. In hopes of finding the hawthorn in other parts of the quarry, additional surveys have been rescheduled for later in the year.

The Service encourages the Army to provide protection to this site from military training and development activities. While this species along with other rare hawthorns at the quarry are not

protected under the ESA, they do represent a significant and biologically important asset to the installation's biodiversity. In the case of *Crataegus pearsonii*, this may prove to be the single remaining population of this species on the planet. To that extent and until confirmed, we strongly encourage the army to recognize the importance of maintaining and protecting this plant community.

Additionally, environmental analysis under the National Environmental Policy Act (NEPA) on the disposal and reuse of installation lands under Base Closure and Realignment (BRAC) should be revised to consider impacts on this unique community and species.

Should you have any questions or require additional information, please contact Mr. Bill Garland of my office, (334) 441-5181 ext. 33.

Sincerely,



E. R. Roach
Acting Field Supervisor

cc: Cal Garnett, USFWS, Atlanta, GA
Bob Anderson, TRADOC, Fort Monroe, VA
David Taylor, TRADOC, Fort Monroe, VA

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Mountain Longleaf Pine Forest Ecosystem

C.1 MOUNTAIN LONGLEAF PINE FOREST ECOSYSTEM

C.1.1 Introduction/Ecological Concepts

The Mountain Longleaf Pine (MLP) communities and the 12,000-acre (4,850-hectare) forest ecosystem at Fort McClellan (FMC) are considered valuable natural resources. This appendix is designed to provide an overview of these resources and explain their importance.

The forest block at FMC is ecologically important due to its large size and unfragmented condition, diversity and uniqueness of species and communities present, rare species of animals and plants present, and general lack of exotics and disturbance. Decreased logging frequencies and periodic range fires that have allowed the plant communities to be maintained under "natural" conditions add to the ecological importance of this ecosystem. Ecological values of large forest blocks, which includes the MLP ecosystem, include erosion control, creation of microhabitats, soil formation, groundwater recharge, floodflow alteration, nutrient cycling, food chain support, pollutant detoxification, and conservation of genetic diversity (USEPA, 1990; and USEPA, 1993).

The flora and fauna at FMC is diverse. Diversity at FMC is a result of topography that ranges from 700 to 1360 feet (214 to 415 meters) National Geodetic Vertical Datum (NGVD), moisture conditions that range from xeric to mesic to hydric, different fire regimes, and variances in slope and slope face. The variations in the physical environment create conditions favorable for the variety of plant communities that in turn support the diverse faunal populations. Habitats at FMC include various types of upland forest, bottomland forest, savannas, seeps, lakes, old fields, and thickets. Flora includes more than 200 known species of plants in at least 60 families. Major groups of plants include asters, legumes, ferns, sedges, grasses, oaks, hickories, roses, pines, rushes, and violets. Fauna includes many species of mammals, birds, reptiles, amphibians, fish, and invertebrates. There are approximately 40 species of mammals that include various species of bats, shrews, squirrels, rabbits, and mice. Common game species include white-tailed deer and wild turkey. Over 200 species of birds have been observed at FMC that include many species of waterfowl, shorebirds, hawks, owls, woodpeckers, warblers, sparrows, tanagers, vireos, wrens, and grosbeaks. Reptiles and amphibians include various species of snakes, salamanders, frogs, and turtles. Fish include various species of sunfish, shiners, darters, catfish, and bass. More than 10 taxa of invertebrates have been noted at FMC.

The Alabama Natural Heritage Program identified eight general terrestrial community types that occur on the Main Post. Those types are typic mesophytic forest, Piedmont monadnock forest, interior calcareous oak-hickory forest, basic oak-hickory forest, loblolly pine-shortleaf pine-oak forest, xeric Virginia pine ridge forest, dry Virginia pine-oak forest, and MLP forest (see Table C.1). Reproduction, pole, sawtimber, and over-mature (old growth) successional stages are present within the majority of the forest types present at FMC. The various forest types and successional stages creates a mosaic of habitat and community types.

Table C.1 Typical Plant Species in Fort McClellan Upland Forest Communities

	Typic Meso-phytic	Piedmont Monadnock	Interior Calcareous Oak-Hickory	Basic Oak-Hickory	Loblolly & Shortleaf Pine - Oak	Xeric Virginia Pine Ridge	Dry Virginia Pine-Oak	Mountain Longleaf Pine
CANOPY SPECIES								
shagbark hickory <i>Carya alba</i>								.
mokernut hickory <i>C. tomentosa</i>		.						
yellow poplar <i>Liriodendron tulipifera</i>	.							
sweetgum <i>Liquidambar styraciflua</i>	.							
black gum <i>Nyssa sylvatica</i>	.							.
shortleaf pine <i>Pinus echinata</i>	.				.			.
longleaf pine <i>P. palustris</i>					.			.
loblolly pine <i>P. taeda</i>	.				.			.
Virginia pine <i>P. virginiana</i>				.			.	
white oak <i>Quercus alba</i>	.	.		.				
scarlet oak <i>Q. coccinea</i>		.						
southern red oak <i>Q. falcata</i>							.	.
blackjack oak <i>Q. marilandica</i>							.	
chinkapin oak <i>Q. muehlenbergii</i>				.				
water oak								

Table C.1 Typical Plant Species in Fort McClellan Upland Forest Communities

	Typic Meso- phytic	Piedmont Monadnock	Interior Calcareous Oak- Hickory	Basic Oak- Hickory	Loblolly & Shortleaf Pine - Oak	Xeric Virginia Pine Ridge	Dry Virginia Pine- Oak	Mountain Longleaf Pine
<i>Q. nigra</i>				.				
willow oak <i>Q. phellos</i>			.					
chestnut oak <i>Q. prinus</i>	
northern red oak <i>Q. rubra</i>	.							
post oak <i>Q. stellata</i>				.			.	.
black oak <i>Q. velutina</i>				.				
oak <i>Q. spp.</i>	.				.			
UNDERSTORY SPECIES								
chalk maple <i>Acer leucoderme</i>				.				
box elder <i>A. negundo</i>			.					
red maple <i>A. rubrum</i>	.	.						
sugar maple <i>A. saccharum</i>			.					
ironwood <i>Carpinus caroliniana</i>			.					
redbud <i>Cercis canadensis</i>			.	.				
flowering dogwood <i>Cornus florida</i>	.	.						
American beech <i>Fagus grandifolia</i>			.					
witch hazel <i>Hamamelis virginia</i>	.							
common juniper <i>Juniperus communis</i>								
eastern red cedar <i>J. virginiana</i>			.					
sweetgum								

Table C.1 Typical Plant Species in Fort McClellan Upland Forest Communities

	Typic Meso- phytic	Piedmont Monadnock	Interior Calcareous Oak- Hickory	Basic Oak- Hickory	Loblolly & Shortleaf Pine - Oak	Xeric Virginia Pine Ridge	Dry Virginia Pine- Oak	Mountain Longleaf Pine
<i>Liquidambar styraciflua</i>	▪							
blackgum <i>Nyssa sylvatica</i>		▪						
hophornbeam <i>Ostrya virginiana</i>			▪					
sourwood <i>Oxydendrum arboreum</i>	▪	▪						▪
turkey oak <i>Quercus laevis</i>								▪
blackjack oak <i>Q. marilandica</i>								▪
Carolina buckthorn <i>Rhamnus caroliniana</i>			▪					
SHRUB SPECIES								
chokeberry <i>Aronia arbutifolia</i>						▪		
mountain laurel <i>Kalmia latifolia</i>	▪							
Piedmont azalea <i>Rhododendron canescens</i>								▪
coralberry <i>Symphoricarpos orbicuatus</i>				▪				
tree sparkleberry <i>Vaccinium arboreum</i>						▪	▪	
southern low blueberry <i>V. pallidum</i>	▪	▪						▪
deerberry <i>V. stamineum</i>								▪
southern wild-raisin <i>Viburnum nudum</i>	▪							
<i>V. spp.</i>				▪				
yellowroot <i>Xanthorhiza</i>	▪							

Table C.1 Typical Plant Species in Fort McClellan Upland Forest Communities

	Typic Meso- phytic	Piedmont Monadnock	Interior Calcareous Oak- Hickory	Basic Oak- Hickory	Loblolly & Shortleaf Pine - Oak	Xeric Virginia Pine Ridge	Dry Virginia Pine- Oak	Mountain Longleaf Pine
<i>simplicissima</i>								
VINE SPECIES								
false jessamine <i>Gelsemium sempervirens</i>							.	
muscadine grape <i>Vitis rotundifolia</i>	.							
HERBACEOUS SPECIES								
foxglove <i>Aureolaria pectinata</i>								.
bracken fern <i>Pteridium aquilinum</i>								.
little bluestem <i>Schizachyrium scoparium</i>							.	
narrow-leaved sensitive brier <i>Schrankia microphylla</i>								.
black oat grass <i>Stipa avenacea</i>							.	
pencil flower <i>Stylosanthes biflora</i>								.
goat's rue <i>Tephrosia virginiana</i>								.
poison oak <i>Toxicodendron toxicarium</i>								.

SOURCE: FWEC, 1996

The relative large size, undisturbed, and unfragmented condition, of the forest ecosystem; taxonomic, community, and successional diversity present; and periodic wildfire create the ecological matrix in which the MLP communities and rare species exist. A "naturally" or ecologically maintained MLP ecosystem of this quality is only known to occur at FMC.

C.1.2 Historic Development and Decline of Longleaf Pine Forests

Longleaf pine forests redeveloped after the retreat of the last continental ice sheet (approximately 10,000 years before present) and these "core" forests remained in place for approximately 5,000 years. Fire has always been an important component of the longleaf pine forests, with lightning strikes likely accounting for the majority of the fires in the region from 5,000 to 2,500 years before present. Palynological investigations indicate that about 2,500 years ago pine and corn pollen began to simultaneously increase in central Alabama. This provides evidence that Indian (aborigines) agriculture and related fires may have had a significant impact on forest composition. Native Americans practiced slash and burn agriculture. Fire used to clear fields of weeds and other vegetation probably escaped into the surrounding forests. Indians may also have used fire to drive game, enhance game habitat, and reduce forest undergrowth to make traveling easier. It is likely that these aboriginal fires favored the expansion of longleaf pine forests, particularly on ridgetops and south/west facing slopes (Landers, 1995; and Shankman, 1995).

Historically, the longleaf pine was once the dominant upland plant cover of the southeastern U.S., formerly extending from what is now southeastern Virginia to central Florida and eastern Texas. These longleaf pine forests, when encountered by the early Europeans, totaled 60 to 90 million acres (24 to 36 million hectares). Currently the longleaf pine ecosystem is considered critically endangered. At least 1,200 plant species are endemic to this ecosystem (Landers, 1995; and NBS, 1995).

Within the last 400 years the extensive longleaf pine forest acreage decreased to approximately three million acres (1.2 million hectares). The decrease in the longleaf pine ecosystem was due to extensive logging; conversion to cropland, pasture, and urban areas; suppression of fire; and preferred use of other pine species on forest plantations. Due to these various factors FMC represents the last known remaining landscape example of naturally regenerated and fire maintained Mountain Longleaf Pine (MLP) communities. The Shoal Creek District (Talladega Mountain) and the Talladega District (Cheaha Mountain) of the Talladega National Forest have significant stands of longleaf pine that occur in mountain areas. The Talladega National Forest stands have had some combination of artificial regeneration, historic fire suppression, and/or use of herbicides to control hardwood competition that have altered their floral composition and uniqueness (Landers, 1995; Hilton, 1996; and Maceina, 1996).

C.1.3 Longleaf Pine Species Characteristics

The longleaf pine has long needles (8-18 inches/20-46 centimeters) and cones (6-10 inches/15-25 centimeters), stout twigs (0.5+ inch/1.3+ centimeters), and white buds. Mature trees generally reach a height of 60-70 feet (18-21 meters) and a trunk diameter of 1-2 feet (0.3-0.6 meters). Longleaf pine grows in warm, wet temperate climates characterized by hot summers and mild winters. The seeds from this species require contact with mineral soil for satisfactory germination and establishment. Longleaf seedlings go through a "grass" stage for the first few years, during which an extensive root system develops. This species grows moderately fast and straight, has high quality wood, and self prunes. The longleaf pine is intolerant of competition from other plants for light, moisture, and/or nutrients. Brown-spot needle blight (*Scirrhia acicola*) is the most common disease affecting this pine. The longleaf pine is generally more resistant to fire, pathogens, insects, and damage from ice and wind storms than other southern pines; and has the potential to reach an age of 500 years. Stands greater than 200 years of age are rare (Boyer, 1991; Petrides, 1988; and Landers, 1995).

Longleaf pine that occurs in mountain regions of Alabama and Georgia is a distinct ecotype, exhibiting phenological and morphological differences. This gene pool is a valuable resource for silvicultural improvement efforts. MLP is less resistant to brown spot, grows into shorter and larger diameter trees, and has better seed production than the coastal ecotypes. Outplanting studies indicated that MLP taken from rich mountain coves demonstrated superior growth rates to longleaf pine taken from southern Mississippi (Maceina, 1996).

C.1.4 Mountain Longleaf Pine Community Characteristics

Most of the longleaf pine forests occur within the Coastal Plains of the southeastern U.S. at elevations below 660 feet. Soils in the Coastal Plains are typically deep and sandy. Longleaf pine forests also occur within a peninsula that extends through the Piedmont Ridge and Valley and into the Mountain Provinces of Alabama and northwest Georgia at elevations from 660 feet to 1,970 feet. The soils within the mountains of northeast Alabama are often shallow and rocky (Boyer, 1990; and FMC, 1996e).

The structure and composition of MLP forests significantly differ from those found on the Coastal Plain. Slope, aspect, and elevation appear to be significant factors influencing fire intensity and the distribution of longleaf pine in these mountain regions. The forests are composed of a variety of species, with longleaf pine dominating on flat, xeric ridges and moderately steep to steep (30-70 percent) upper, generally south to southwest facing, slopes. This MLP community occurs on a variety of rock types including quartzites, phyllites, and mica schists (NatCons, 1995).

These MLP forests contain a highly diverse assemblage of species and biological communities. This high species diversity can be attributed to both geographical and physiographic factors. The Ridge and Valley Physiographic Province and a southern disjunct of the Blue Ridge Physiographic Province introduce a decidedly Appalachian influence into the region. A large number of species reach the southern terminus of their range on these lands. At the same time, the region is also influenced by proximity to the Piedmont and Coastal Plain. The widespread existence of longleaf pine and, in particular, a northern disjunct population of turkey oak are particularly significant (Hilton, 1996; and FMC, 1996e).

While the longleaf pine (*Pinus palustris*) is the dominant overstory plant, there are other significant species associated with this community. Tree species present at FMC that are typical of the MLP ecosystem are included in Table C.2. Many of these tree species occur at the limit of their ranges. Longleaf pine, loblolly pine, and turkey oak are at their northern limit. Virginia pine, chestnut oak, and scarlet oak are at their southern limit. Shrubs at FMC that are typically found in the MLP ecosystem are included in Table C.3. Herbaceous species at FMC that are typically found in the MLP ecosystem are included in Table C.4.

Common Name	Scientific Name
longleaf pine	<i>Pinus palustris</i>
shortleaf pine	<i>Pinus echinata</i>
Virginia pine	<i>Pinus virginiana</i>
post oak	<i>Quercus stellata</i>
chestnut oak	<i>Quercus prinus</i>
blackjack oak	<i>Quercus marilandica</i>
scarlet oak	<i>Quercus coccinea</i>
southern red oak	<i>Quercus falcata</i>
turkey oak	<i>Quercus laevis</i>
black oak	<i>Quercus velutina</i>
mockernut hickory	<i>Carya tomentosa</i>
pignut hickory	<i>Carya alba</i>
blackgum	<i>Nyssa sylvatica</i>
black cherry	<i>Prunus serotina</i>
persimmon	<i>Diospyros virginiana</i>

sourwood	<i>Oxydendrum arboreum</i>
Source: Mohr, 1901; Harper, 1949; Boyer, 1990; Maceina, 1996; NatCons, 1995; Peet, 1994; and ANHP, 1994	

Table C.3 Shrub Species Associated with the MLP Ecosystem

Common Name	Scientific name
southern blueberry	<i>Vaccinium tenellum</i>
mountain blueberry	<i>Vaccinium pallidum</i>
tree sparkleberry	<i>Vaccinium stamineum</i>
farkleberry	<i>Vaccinium arboreum</i>
huckleberry	<i>Gaylussacia dumosa</i>
prickly dewberry	<i>Rubus flagellaris</i>
winged sumac	<i>Rhus copallina</i>
false jessamine	<i>Gelsemium sempervirens</i>
poison oak	<i>Toxicodendron toxicarium</i>
Piedmont azalea	<i>Rhododendron canescens</i>

Source: Mohr, 1901; Harper, 1949; Boyer, 1990; Maceina, 1996; NatCons, 1995; Peet, 1994; and ANHP, 1994

Table C.4 Herbaceous Species Associated with MLP Ecosystem

Common Name	Scientific Name
broomsedge	<i>Andropogon virginicus</i>
little bluestem	<i>Schizachyrium scoparium</i>
northern oat grass	<i>Danthonia spicata</i>
Indian grass	<i>Sorghastrum nutans</i>
silky wild oatgrass	<i>Danthonia sericea</i>
bushy aster	<i>Aster dumosus</i>
calico aster	<i>Aster lateriflorus</i>
late purple aster	<i>Aster patens</i>
golden aster	<i>Pityopsis graminifolia</i>
stiff leaved aster	<i>Ionactis linariifolius</i>
Maryland golden aster	<i>Chrysopsis mariana</i>
rosinweed	<i>Silphium compositum</i>
sundrops	<i>Oenothera fruticosa</i>
St. Johnswort	<i>Hypericum hypericoides</i>
wild quinine	<i>Parthenium integrifolium</i>
bracken fern	<i>Pteridium aquilinum</i>

greater tickseed	<i>Coreopsis major</i>
goat's-rue	<i>Tephrosia virginiana</i>
birdfoot violet	<i>Viola pedata</i>
Georgia calamint	<i>Calamintha georgina</i>
pencil flower	<i>Styosanthes biflora</i>
foxglove	<i>Aureolaria pectinata</i>
flowering spurge	<i>Euphorbia corollata</i>
narrow-leaved sensitive brier	<i>Schrankia microphylla</i>
sweet goldenrod	<i>Solidago odora</i>
creeping bush clover	<i>Lespedza repens</i>

Source: Mohr, 1901; Harper, 1949; Boyer, 1990; Maceina, 1996; NatCons, 1995; Peet, 1994; and ANHP, 1994

Based on floral composition and topographic features, the MLP forest is considered part of a distinct natural community within the longleaf pine ecosystem. This natural ecosystem once covered ridge and southern slope regions of the Blue Ridge in northeastern Alabama and northwestern Georgia, but has been reduced to several degraded sites in northeastern Alabama. The main post of FMC represents the best remaining example of the MLP ecosystem on a landscape scale (Hilton, 1996).

C.1.5 Characteristics of the Mountain Longleaf Pine Ecosystem at FMC

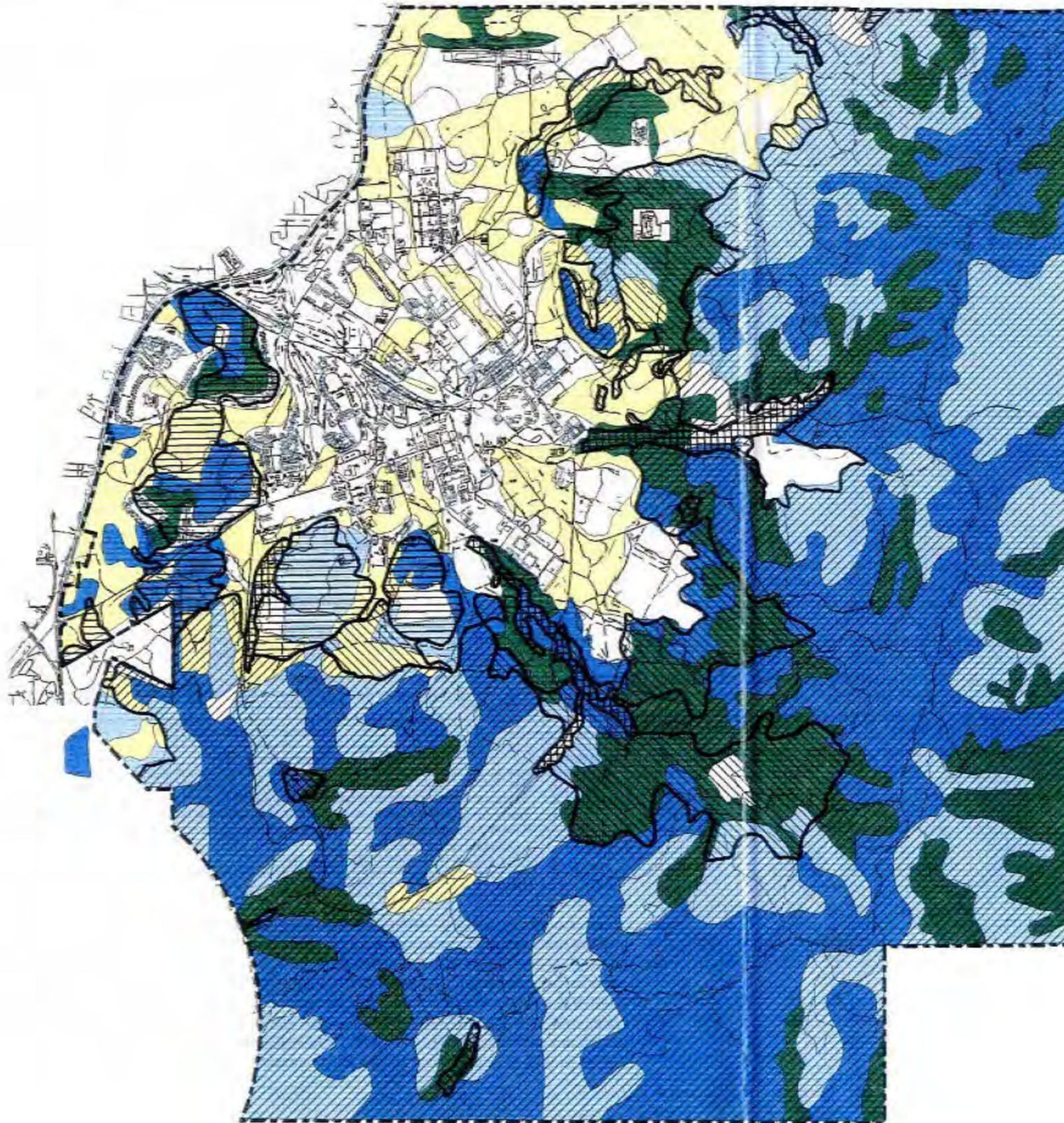
The 12,000-acre MLP ecosystem at FMC is a mosaic of forest types (See Figure C.1). The MLP ecosystem is primarily present in the pine/hardwood and hardwood/pine areas. Figure C-2, Sensitive Habitats, provides additional graphic information on MLP. On ridgetops where wildfires have been infrequent, stunted oak may be the dominant forest cover. Longleaf pine communities dominate on xeric ridgetops and south/west facing slopes where wildfires have frequently occurred. As fire frequency decreases, shortleaf pine and hardwoods express more dominance. Mesic ravines and lower north/east facing slopes are dominated primarily by hardwoods with some loblolly pine present. Between the longleaf pine dominated slopes and the mesic ravines are complex ecotones/transition zones that contain components of both the xeric and mesic species. The typical mesic hardwoods that are associated with the Mountain Longleaf forest and seep borders that are present at FMC are listed in Table C.5. This mixture of pine, pine/hardwood, hardwood/pine, and hardwood components adds diversity to the forest ecosystem. This diversity and abundance of "internal edge" provides for numerous microhabitats and helps to account for the many species of birds, reptiles, and mammals present at FMC.

Common Name	Scientific Name
loblolly pine	<i>Pinus taeda</i>
tulip popular	<i>Liriodendron tulipifera</i>
red maple	<i>Acer rubrum</i>
sweetgum	<i>Liquidambar styraciflua</i>
white oak	<i>Quercus alba</i>
northern red oak	<i>Quercus rubra</i>
water oak	<i>Quercus nigra</i>

beech	<i>Fagus grandifolia</i>
flowering dogwood	<i>Cornus florida</i>
mountain laurel	<i>Kalmia latifolia</i>
muscadine grape	<i>Vitis rotundifolia</i>
sassafras	<i>Sassafras albidum</i>

Source: Mohr, 1901; Harper, 1949; Boyer, 1990; Maceina, 1996; NatCons, 1995; Peet, 1994; and ANHP, 1994

The FMC MLP ecosystem is mostly unfragmented, includes federal and state ranked species, Special Interest Natural Areas (SINA), is valuable habitat for neotropical migratory birds (NTMB), contains some high quality old growth MLP communities, and is relatively free of exotic species. Approximately 12,000 (4,850 hectares) of the 19,000 acres (7,689 hectares) within FMC are considered to be part of this ecosystem. Plants designated as state "Species of Conservation Concern" (SCC) within the MLP ecosystem at FMC are listed in Table C.6 and Animal SCC are listed in Table C.7. Additional information on SCC that also have a federal designation can be found in subsections 4.11.4 and 4.11.5.2. These rare flora occur in a diverse habitat matrix embedded within the overall forest cover on the Main Post. Long term viability of these species is dependent upon the integrity of the forest (FMC, 1996d; FMC, 1996e; and Hilton, 1996).

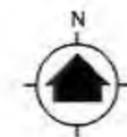


LEGEND

- RESERVATION BOUNDARY
- PINE
- PINE/HARDWOOD
- HARDWOOD/PINE
- HARDWOOD
- NON-FORESTED AREAS
- ▨ STONY ROUGH LAND (S8 AND S1)
- ▨ ANNISTON AND ALLEN STONY LOAMS (AdC and AdE)
- ▨ ANNISTON AND ALLEN GRAVELLY LOAM (AcE2)
- ▨ JEFFERSON STONY FINE SANDY LOAM (JfB)

SOURCES:

USDA, 1961,
RMS, 1984



SCALE IN FEET

PARSONS ES.
PARSONS H&A
ST. LOUIS, MISSOURI

MOBILE DISTRICT
US ARMY CORPS OF ENGINEERS
MOBILE, ALABAMA

ENVIRONMENTAL IMPACT STATEMENT

DISPOSAL AND REUSE OF
FORT McCLELLAN, ALABAMA

FOREST COVER TYPES
AND SOIL MAP UNITS

DATE: AUG., 1998

FIGURE NO. C-1

Table C.6 Plant Species of Conservation Concern

Common Name	Scientific Name	State Rank
sky blue aster	<i>Aster azureus</i>	S1
three-flowered hawthorn*	<i>Crataegus triflora</i>	S2
pink lady's slipper	<i>Cypripedium acaule</i>	S3
pale coneflower	<i>Echinacea pallida</i>	S2
eastern purple coneflower	<i>Echinacea purpurea</i>	S2
soapwort gentian	<i>Gentiana saponaria</i>	S3
ground juniper	<i>Juniperus communis</i>	S1
yellow honeysuckle	<i>Lonicera flava</i>	S3
Fraser's loosestrife*	<i>Lysimachia fraseri</i>	S1
single flowered cancer root	<i>Orbanche uniflora</i>	S2
white fringeless orchid*	<i>Platanthera integrilabia</i>	S1
rose pink	<i>Sabatia capitata</i>	S2
crow-poison	<i>Zigadenus leimanthoides</i>	S1

Note: * Denotes Federally designated species of concern, see Table 4.24

Source: Hilton, 1996; and FMC, 1996d

Table C.7 Animal Species of Conservation Concern¹

Common Name	Scientific Name	State Rank
Appalachian cottontail	<i>Sylvilagus obscurus</i>	S1
gray bat ¹	<i>Myotis grisescens</i>	S2
Carlson's Polycentropus caddisfly ²	<i>Polycentropus carlsoni</i>	S1
coldwater elimia	<i>Elimia gerhardti</i>	S ⁴
red-cockaded woodpecker ³	<i>Picoides borealis</i>	S2
northern pine snake	<i>Pituophis melanoleucus</i>	S3
Diana butterfly	<i>Speyeria diana</i>	S ⁴

Notes: 1 See Tables 4.23 and 4.24 for the federal status of these species.

2 There are 16 other species of caddisflies considered rare or uncommon, i.e., have a state rank from S1 to S3.

3 There are no active clusters of red-cockaded woodpecker located within the MLP ecosystem at FMC, but the habitat may be suitable for this species which has active colonies approximately 5 to 7 miles to the east in the Talladega National Forest.

4 State ranking is currently under evaluation.

Source: FMC, 1996d; Hilton, 1996; and 3D/E, 1996

There is a good correlation with soil map units classified as "Stony Rough Land" (map units "Ss" and "St") and the occurrence of unfragmented forest areas at FMC that contain MLP communities. This land is not suitable for agriculture or commercial forestry. Due to low economic value and inaccessibility this land experienced less historic logging and development than surrounding lands. Stony Rough Land has shallow soil with many rock fragments, rock outcrops, and escarpments composed of sandstone and

slate; has poor tilth, low natural fertility, high runoff, slow infiltration, low water holding capacity, and slopes are generally greater than 25%; has a silt loam to silty clay loam texture, low amounts of organic matter, is very strongly acid, and has a high erosion hazard (FMC, 1996d; and USDA, 1961).

Soil map units Anniston and Allen Stony Loams (AdC and AdE), and Jefferson Stony Fine Sandy Loam (JfB) are currently covered largely by unfragmented forest. Due to the better soil properties and accessibility, these soils have historically experienced more frequent logging and other types of disturbance than areas with Stony Rough Land experienced. Anniston and Allen Stony Loams have deep soil, with many rock fragments up to eight inches; have fair to poor tilth; are well drained, have moderate permeability, high water holding capacity, and slopes that range from 5-25%; have a loam to fine sandy loam texture; are strongly acid, and have a moderate susceptibility to erosion (FMC, 1996d; and USDA, 1961).

Anniston and Allen Gravelly Loam, 10-25% slopes, eroded (AcE2) is correlated with disturbed and fragmented forests blocks (generally greater than 100 acres/40 hectares) near the cantonment area. Soil map units Anniston and Allen Gravelly Loams (AbD3, AbC3, AcB2, AcC2, AcD3, and AcD2) occur in smaller blocks (generally less than 100 acres/40 hectares), are generally highly disturbed and fragmented, 6-15% slopes, eroded, that are from 20-70% forested, contain developed and cleared areas, and historically have been frequently and extensively logged. Exotic species are more common in these disturbed forests that are near the cantonment area (FMC, 1996d; and USDA, 1961).

C.1.6 Why the MLP Communities are Present at FMC

The longleaf forests are present at FMC due to Army ownership, range activities, and rough topography. Army ownership and inaccessible terrain helped to limit the extent and frequency of timber harvest. Army range activities ignited wildfires that approximated natural fire regimes. The thin and rocky soil was not suitable for commercial timber production or farming.

In 1949 Roland Harper wrote, "In recent years much of the Blue Ridge in Alabama has been included in the FMC military reservation, the Cheaha State Park, and the Talladega National Forest, which should offer some protection from destructive exploitation. The cities of Jacksonville and Anniston get their water supplies from springs on the slopes and at the bases of these mountains, which is an additional reason for protecting the forests above them (Harper, 1949)."

While fire suppression and public education decreased wildfire in the surrounding region, military training assured that this fire regime was maintained on FMC. These montane forests have been exposed to frequent and recurring wildfire the past hundred years. Military training with pyrotechnic and explosive devices has occurred within these forests since the turn of the century. This has allowed the formation of a more natural fire-maintained forest system than what is encountered on surrounding lands (FMC, 1996e).

This area of rugged topography includes steep ridges that occasionally exceed 2,000 feet (610 meters) in elevation. The majority of the longleaf pine stands at FMC occur on steep, rocky, inaccessible south and west facing slopes. Most accessible areas within these mountains were timbered in the late 1800s to produce charcoal for the local iron industry. After purchase by the Army in the early 1900s, timber harvesting continued in some areas, but in general was less extensive than surrounding areas. Steep slopes and isolated ridges contain relict trees and isolated old growth stands of longleaf pine. There are isolated stands that are 180 years in age, and individual relict trees that are 250 years old (FMC, 1996e).

C.1.7 Maintaining the Mountain Longleaf Pine Ecosystem at FMC

The U.S. Department of Agriculture, Forest Service (USDA-FS) is developing a new stewardship philosophy for the management of southern forests. While the USDA-FS does not manage the FMC forests, a similar management approach would be needed to maintain the MLP ecosystem. This management philosophy takes into account concepts such as: (1) maintenance of biological diversity, (2)

preventing further fragmentation of the southern landscape, (3) maintenance of environmental quality, and (4) balancing economic commodities and ecological values.

Maintenance of diversity in the southern forest requires management strategies that consider regional biogeography and landscape patterns. Compositional, structural, and functional diversity are three important types of diversity. Compositional diversity refers to species numbers, population sizes, and genetic diversity. Structural diversity refers to the variety and arrangement of habitats. Functional diversity refers to variation in ecological processes or interactions, such as nutrient recycling. This new management style is needed due to destruction, fragmentation, simplification, and degradation of habitat by logging, grazing by livestock, mining, construction of reservoirs, military activities, and conversion of natural habitats to roads, urban and industrial areas, and agricultural fields. These activities have resulted in many species becoming threatened or endangered, decrease in numbers of NTMB that use interior forests, increased erosion, increase in exotic species populations, and disappearance of old growth forests (EcoApp, 1992; USDA-FS, 1993; USEPA, 1990; and USEPA, 1993).

The commercial forestry program is currently being excluded from identified SINA at FMC. While decreased logging is a valuable management tool, the 12,000-acre (4,850-hectare) ecosystem needs more than just simple preservation to be maintained. The primary mitigation measure to preserve the MLP ecosystem would be a prescribed burn program. Longleaf pine, white fringeless orchid (WFO), and other fire adapted plants would be out-competed in the long term, if periodic fire does not occur within the forest ecosystem. Natural ecological processes such as fire need to be maintained for the long term viability of the MLP system and the rare species it harbors. Longleaf pine requires fire to maintain its competitive advantage edge in establishing reproduction, and will gradually be replaced by hardwoods and shortleaf pine in the absence of fire. For hardwood control, fires need to occur during the growing season.

The transition from ridgetop longleaf pine to cove and bottomland hardwood forest is defined where hydric conditions control the downward extent of fire penetration, creating a natural ecotone between pines and hardwoods. Fire is necessary to maintain the integrity of this system by controlling hardwood and other pine species invasion, maintaining species diversity, reducing fuel loads, and encouraging new longleaf pine recruitment (Boyer, 1991; and Hilton, 1996).

In general, exotic species are adapted to human disturbances and are not fire adapted. Exotic species present at FMC that are currently present in small to moderate numbers include Chinese privet (*Ligustrum sinense*), Kudzu (*Percina* spp.), and Japanese honeysuckle (*Lonicera japonica*). These species are present in small numbers due to the unfragmented condition of the forest and presence of wildfire. The largest concentrations of exotic species occurs in and adjacent to the cantonment area. Smaller populations of exotics occur along roadways, firebreaks, and active ranges. At present, exotic species populations do not appear to be spreading, and are not large enough to be considered a serious threat to native flora.

Longleaf pine is adapted to frequent growing season fires. Longleaf pine is resistant to fire due to thick bark on its lower stem and unique growth habit. Low intensity fire damages hardwood trees, injuring the thinner bark and facilitating rot and weakening of the tree. More severe fires will kill the aboveground portions of hardwoods. Growing season fires result in greater mortality for hardwoods and other pine species (with diameters less than eight inches). Most hardwood species will resprout after a single burn. Repeated burns will eventually control hardwoods (Maceina, 1996; and Croker, 1975).

Shelterwood cuts and prescribed fire is an effective way to establish and regenerate longleaf pine. Clearcutting is of limited use in natural regeneration of longleaf pine. Longleaf pine seeds, unlike other pines, begin to germinate as soon as they contact soil, and a "seedbank" does not build-up in the soil. Growing season burns every one to three years will result in the highest diversity of grasses, legumes, composites, and other forbs. Growing season burn benefits also include rapid herbaceous regeneration, synchronized blooming, and higher densities of herbaceous vegetation (Maceina, 1996; and Croker, 1975).

C.1.8 Current Management Programs/Ongoing Research

Auburn University, working through the USDA-FS, is characterizing and mapping existing MLP communities and will develop management and restoration recommendations as part of their work (FWEC, 1996). This research by Auburn University will help the Army manage the MLP ecosystem until disposal occurs. These management and restoration recommendations will also provide valuable information for potential future managers of the MLP ecosystem. Future managers should also consider the current and historical level of "management" that the Army conducted to maintain the MLP ecosystem. The current staff at FMC that is devoted to natural resource management is equivalent to about five full time personnel. The current staff secures and appropriates funding, oversee various biological surveys, review environmental reports, prepare environmental constraint maps and pamphlets, maintain records and files, conduct environmental debriefings and educational programs, post T & E locations, perform prescribed burns, cultivate wildlife food plots, manage white-tailed deer hunts and run check stations, develop forestry and wildlife management plans (such as Integrated Longleaf Restoration Plan, Natural Resource Management Plan & Endangered Species Management Plan), monitor endangered species locations for disturbance, select areas and secure bids for areas to be included in the commercial forestry program, oversee lakes open for fishing, implement erosion control projects, coordinate with regulatory agencies (such as USFWS & ANHP), and ensure compliance with environmental permits and regulations.

The MLP ecosystem at FMC has also received indirect benefits from being included within the boundaries of a military installation that conducts range activities. Most of the locations that contain SCC are included within controlled range areas. Military police and other military personnel not directly involved with or funded by natural resource management, prevent access to and potential impact to SCC. Future prescribed burn regimes would have to consider the manpower and cost to maintain existing firebreaks and crews that are not now supported by the natural resource division at FMC.

C.2 SPECIES AND HABITATS OF CONCERN

General lists of plants (Table C.6) and animals (Table C.7) that are considered of conservation concern are included in subsection C.1.5. Subsections C.2.1 through C.2.4 includes additional discussion on selected species.

C.2.1 Special Interest Natural Areas

As part of the Endangered Species Management Plan, eleven SINAs have been designated on the Main Post of FMC (see Table C.8 and Figure C.2). SINAs are communities that are rare, sensitive, unique, or ecologically important. SINAs were developed to support the management of SCC. These SINAs are included in the approximately 12,000 acres (4,850 hectares) of forest that is largely unfragmented. MLP communities are a significant component of this forest ecosystem. The continuity of this forest is critical to the long-term maintenance of the smaller SINA and the health of the longleaf pine component. The majority of the SINAs and SCC are fire adapted or benefit indirectly from the overall conditions created by fire (FMC, 1996d; and Hilton, 1996).

Figure C.2 indicates the locations most likely to contain current, restorable, and/or historical MLP communities. The purpose of the figure is designed to illustrate the estimated abundance and likely juxtaposition of the MLP communities at FMC. The areas most likely to contain these communities were predicted using the best available information. MLP locations are not based on comprehensive or specific surveys for MLP communities. Auburn University is currently conducting a survey of the MLP communities at FMC that is expected to be completed in 1999.

The location of MLP communities on Figure C.2 was based on the expected occurrence of xeric (dry) conditions and wildfire; and current forest types (pine, pine/hardwood, hardwood/pine, and hardwood - see Figure C.1), which were determined by using aerial photographs. Location of current tracer and flare ranges, and historical artillery ranges were considered when inferring historical occurrence of fire.

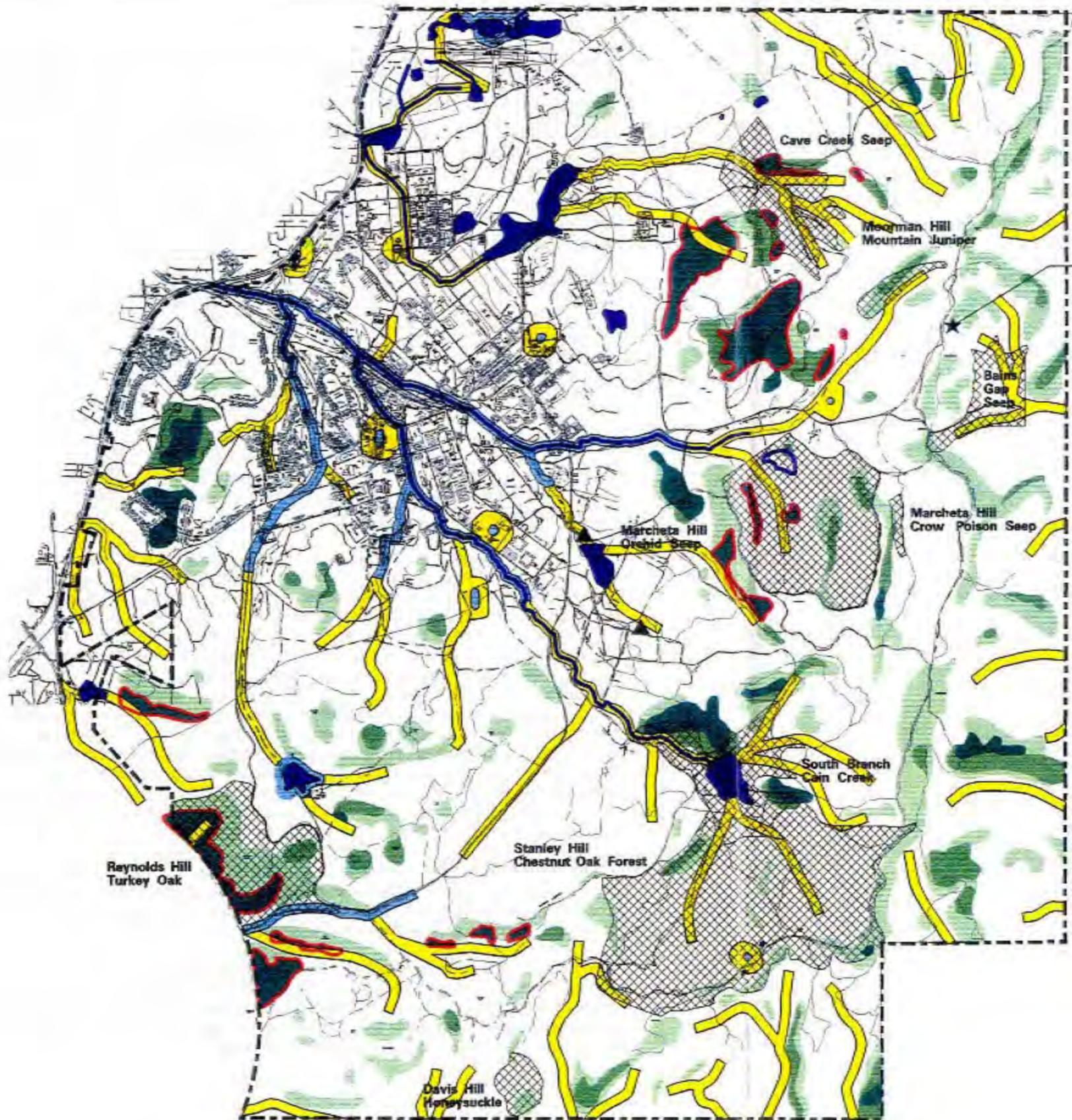
Steepness of slope, topographic position, slope face, and soil type were considered when predicting likely xeric conditions. Areas shown as MLP communities on this figure may not actually contain stands of longleaf pine due to insufficient wildfire or prescribed burns, planting of loblolly pine, historic logging, or other factors. Conversely, it should also be noted that some of the areas not shown as probable locations may actually contain MLP communities. (RMS, 1984; FMC, 1996d; USGS, 7.5; FMC, 1997c; USDA, 1961).

SINA Name	Comments/Description
Mountain Longleaf Pine Ecosystem	Approximately 12,000 acres (4,850 hectares) largely unfragmented forest matrix in which other SINA, NTMB, plant and animal SCC exist. Only known natural and fire maintained examples of this MLP communities on a landscape scale.
Marcheta Hill Orchid Seep	The largest forested seep on the installation. Contains white fringeless orchid, rose pink, soapwort gentian, and Diana butterfly. Maintained and enhanced by tracer range wildfire. Probable jurisdictional wetland.
Bains Gap Seep	Small stream seepages that contain Fraser's loosestrife and a SCC caddisfly. Susceptible to erosion.
South Branch Cane Creek	Headwaters of this stream contain 17 species of SCC, rare, and endemic caddisflies. Cane Creek contains the coldwater elimia (<i>Elimia gerhardti</i>). Adjacent to a 1.5 acre (0.6 hectare) chemical munitions disposal site currently under investigation.
Cave Creek Seep	Headwaters of this stream have been noted to contain pink lady's slipper, soapwort gentian, and white fringeless orchid. Enhanced by occasional wildfire.
Moorman Hill Mountain Juniper	Contains common juniper. FMC is a southern range extension for this species. Enhanced by low intensity fires.
Stanely Hill Chestnut Oak Forest	Largest tract of mesic woodland on the installation. Considered an important area for breeding NTMB. Susceptible to wildfire from April to June.
Reynolds Hill Turkey Oak	Area dominated by mature longleaf pine. Contains a small disjunct population of turkey oak. Fire is critical to maintaining this SINA.
Davis Hill Honeysuckle	The upper slopes of Davis Hill contain yellow honeysuckle.
Marcheta Hill Crow Poison Seep	Small headwater seep that contains the plant known as crow poison. Closely associated with Marcheta Hill Orchid Seep.
Frederick Hill Aster Site	Contains the only documented population of sky-blue aster in Alabama. Fire is needed to maintain openings in the canopy.

Source: FMC, 1996d

C.2.2 Neotropical Migratory Birds and the Main Post Forests

Fort McClellan contains diverse populations of NTMB. This diversity is due to the large size of the installation, unfragmented condition of the forests, diversity of forest types present, and being connected to other large blocks of forest. Forest cover, and NTMB habitat as related to forest cover, is shown in Figure C.3. Species present at FMC that are potential breeders and have high scores in the Partners in Flight Prioritization Scheme for the Southeastern U.S. are listed in Table C.9. Species listed in Table C.9 are rapidly declining in the Southern Ridge and Valley physiographic province. The reasons for the decline of these species may include the need for large unfragmented blocks of forest, the use of habitat types that have experienced large scale reductions or modifications, habit of nesting on or close to the ground (see Table 4.21), and use of tree cavities (Webb, 1996a; and USDA-FS, 1992).



Fredrick Hill Aster Site
(Boundaries not delineated
at this time)

LEGEND

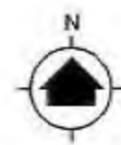
- RESERVATION BOUNDARY
- WETLANDS AND LAKES
- ▨ SPECIAL INTEREST NATURAL AREA (SINA)
- LOW QUALITY GRAY BAT HABITAT
- MODERATE QUALITY GRAY BAT HABITAT
- POTENTIAL RED COCKADED WOODPECKER HABITAT
- ▲ THREE-FLOWERED HAWTHORN LOCATION
- HIGH PROBABILITY OF MOUNTAIN LONGLEAF PINE COMMUNITIES *
- MODERATE PROBABILITY OF MOUNTAIN LONGLEAF PINE COMMUNITIES *
- LOW PROBABILITY OF MOUNTAIN LONGLEAF PINE COMMUNITIES *

NOTE:

* Indicates the locations most likely to contain current, restorable, and/or historical MLP communities. The figure is designed to illustrate the estimated abundance and likely juxtaposition of the MLP communities at FMC. The areas most likely to contain these communities were predicted using the best available information. MLP locations are not based on comprehensive or specific surveys for MLP communities. Auburn University is currently conducting a survey of the MLP communities at FMC that is expected to be completed in 1999. See Appendix C for additional information.

SOURCES:

- RMS, 1984;
- FMC, 1996d;
- USGS, 7.5;
- John Kush, per. comm.;
- FMC, 1997c;
- USDA 1961;
- Summerour, 1992;
- 30/E, 1986;
- USFWS, 1994;
- NREC, 1986.



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MOBILE DISTRICT
US ARMY CORPS OF ENGINEERS
MOBILE, ALABAMA

ENVIRONMENTAL IMPACT STATEMENT

DISPOSAL AND REUSE OF
FORT McCLELLAN, ALABAMA

SENSITIVE HABITATS

DATE: AUG, 1998

FIGURE NO. C-2

Common Name	Scientific Name
cerulean warbler ^{FI}	<i>Dendroica cerulea</i>
Swainson's warbler ^{FI}	<i>Limnothlypis swainsonii</i>
prothonotary warbler ^{FI,CV}	<i>Protonotaria citrea</i>
wood thrush ^{FI,MO}	<i>Hylocichla mustelina</i>
northern prairie warbler	<i>Dendroica discolor</i>
blue-winged warbler	<i>Vermivora pinus</i>
worm-eating warbler ^{FI,MO}	<i>Helmitheros vermivorous</i>
Louisiana waterthrush ^{MO}	<i>Seiurus motacilla</i>
Acadian flycatcher ^{FI}	<i>Empidonax virescens</i>
yellow-throated vireo ^{FI,MO}	<i>Vireo flavifrons</i>
black-billed cuckoo	<i>Coccyzus erythrophthalmus</i>
yellow-billed cuckoo	<i>Coccyzus americanus</i>
eastern wood-pewee ^{MO}	<i>Contopus virens</i>
great crested flycatcher ^{CV}	<i>Myiarchus crinitus</i>
white-eyed vireo	<i>Vireo griseus</i>
Kentucky warbler ^{FI}	<i>Oporornis formosus</i>
orchard oriole	<i>Icterus spurius</i>

Notes: FI-Forest Interior; CV-Cavity Nesting; MO-more abundant in mature/old growth forests

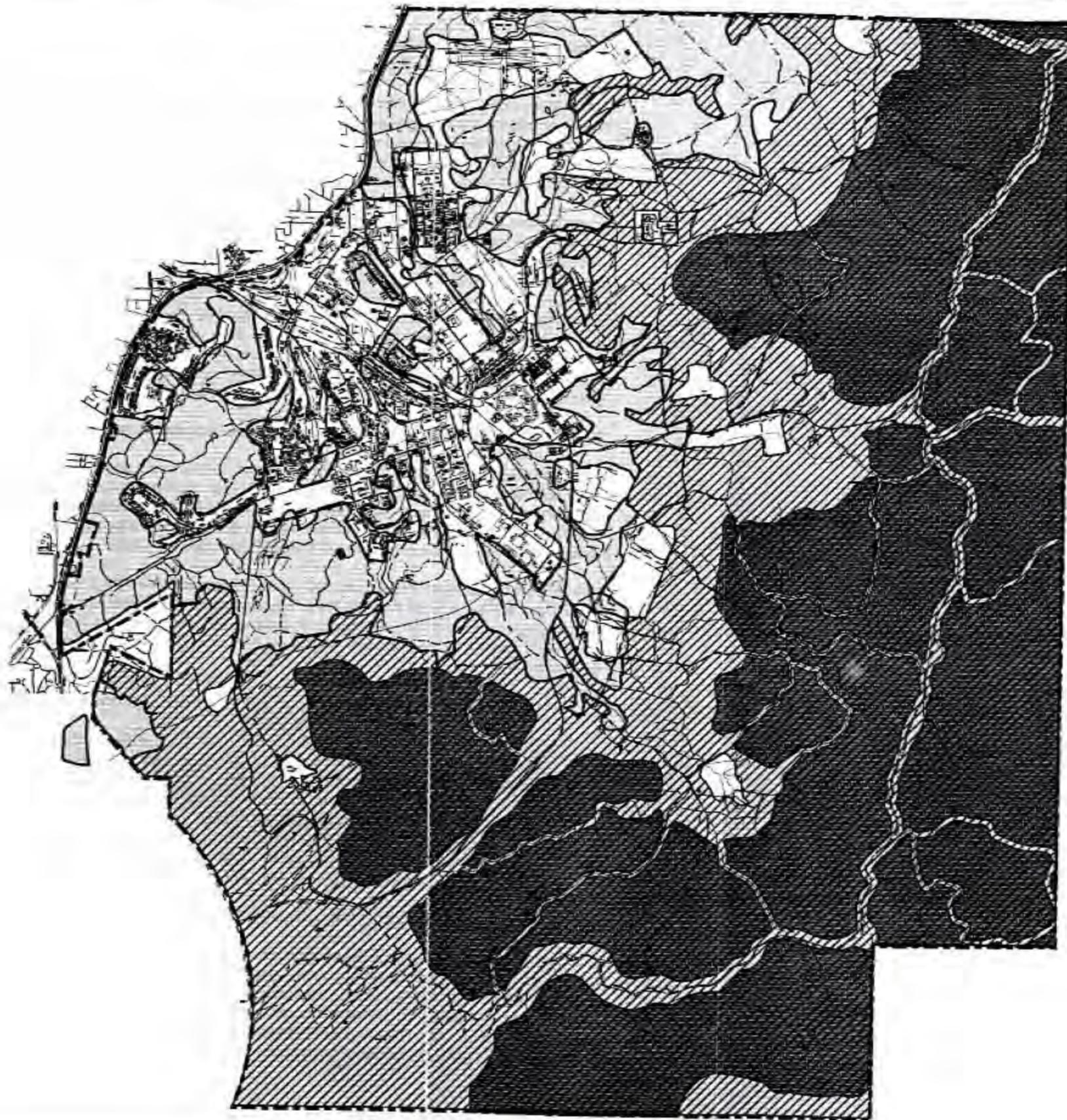
Source: USDA-FS, 1992; and Finch, 1991

Figure C.3 indicates areas considered to be fragmented, unfragmented, and interior forest. These relative classifications refer to the size and juxtaposition of forest blocks. Fragmented forest has limited value for most species of NTMB, unfragmented forest provides moderate habitat values to most species, and interior forest provides the highest quality habitat. Some species can reproduce successfully only in what is considered to be interior forest and are referred to "forest interior" species. These determinations are based on surveys that indicate that large blocks of forest (564 to 1,335 hectares/1,394 to 3299 acres) generally support more dense populations of neotropical migrants than small forest fragments (4 to 92 hectares/10 to 227 acres). For Figure C.3 fragmented forest was defined as small blocks of forest that were significantly dissected by roads or other types of development; unfragmented forest as medium to large forest blocks that are contiguous and relatively free of roads and other types of development; and interior forest was defined as unfragmented forest tracts on FMC that are greater than 564 hectares (1,394 acres) in size that do not have roads, powerlines or other openings greater than 13.5 meters (44 feet) in width, and are at least 300-600 meters (984 to 1,969 feet) from fragmented forest or significant development. The interior forests on Main Post provide habitat for many species that are unable to adapt and survive in early successional or disturbed cover types (Webb, 1996a; Hill, 1996, and Finch, 1991).

Growing-season fire-maintained longleaf pine habitats support many shrub-scrub neotropical migrant species. These open pine habitats when managed on a large scale (1000's of hectares) should provide a more natural habitat for many species currently dependent upon oldfields and clearcuts and undergoing widespread decline, e.g. prairie warbler (*Dendroica discolor*), (USDA-FS, 1992).

Fragmented forests generally have higher populations of nest predators such as blue jays, raccoon, opossum, and fox. Low nesting species in general are more susceptible to nest predators. Fragmented

forests often also have higher populations of the brown-headed cowbird. The brown-headed cowbird is a nest parasite that lays its eggs in the nests of other species. Many "forest edge" bird species have the ability to recognize the foreign egg and will expel the egg from the nest, build over the foreign egg, or build

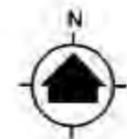


LEGEND

- RESERVATION BOUNDARY
- FRAGMENTED FOREST
(SMALL BLOCKS OF FOREST THAT ARE SIGNIFICANTLY DISSECTED BY ROADS OR OTHER TYPES OF DEVELOPMENT)
- ▨ UNFRAGMENTED FOREST
(MEDIUM TO LARGE FOREST BLOCKS THAT ARE CONTIGUOUS AND RELATIVELY FREE OF ROADS AND OTHER TYPES OF DEVELOPMENT)
- INTERIOR FOREST
(UNFRAGMENTED FOREST TRACTS GREATER THAN 1,394 ACRES IN SIZE THAT DO NOT HAVE ROADS, POWERLINES OR OTHER OPENINGS GREATER THAN 44 FT. IN WIDTH, AND ARE AT LEAST 984 FT. FROM FRAGMENTED FOREST OR SIGNIFICANT DEVELOPMENT)
- NON-FORESTED AREAS

SOURCES:

USDA, 1961
USGS, 7.5,
WEBB, 1996;
HILL, 1996



SCALE IN FEET

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ST LOUIS, MISSOURI

US Army MOBILE DISTRICT
US ARMY CORPS OF ENGINEERS
MOBILE, ALABAMA

ENVIRONMENTAL IMPACT STATEMENT

DISPOSAL AND REUSE OF
FORT McCLELLAN, ALABAMA

FOREST COVER AND NTMB HABITAT

DATE: AUG., 1998

FIGURE NO. C-3

a new nest. Forest interior species of birds often will not recognize the foreign egg, and will hatch and raise the cowbird to the detriment to its own brood (Hill, 1996).

Many cavity-using NTMB do not have the ability, as do woodpeckers for example, to excavate their own holes. Consequently these species rely on abandoned cavities of other species or natural defects in trees. Woodpeckers that occur at FMC include red-bellied (*Melanerpes carolinus*), downy (*Picoides pubescens*), hairy (*Picoides villosus*), and pileated (*Dryocopus pileatus*). Old growth forests usually contain more trees with knotholes, heartrot, lightning strike, and cavities abandoned by woodpeckers.

Agencies and organizations concerned with NTMB conservation emphasize the need to consider management issues on a landscape scale. The minimum size for landscape consideration for NTMB habitat is approximately 75,000 acres (30,350 hectares). The unfragmented FMC forests total approximately 12,000 acres (4,850 hectares), i.e., are not large enough to be considered on a landscape scale when considering jurisdictional boundaries only. The leased Choccolocco corridor connects FMC to forests to the north, east, and south. This connection with the Talladega National Forest is significant in that it provides a contiguous forest cover of much larger proportions. If jurisdictional boundaries are overlooked, then the FMC forest ecosystem, via the Choccolocco corridor (to be retained by the Alabama State Forestry Commission), is part of a forest block large enough to be considered on a landscape scale (Hilton, 1996; Workshop, 1996; USDA-FS, 1992; and USDA-FS, 1993).

C.2.3 Red Cockaded Woodpecker (RCW) and the Mountain Longleaf Pine Communities

The RCW (*Picoides borealis*) is endemic to the pine forests of the southeastern U.S. This bird prefers open park like stands of pine, particularly longleaf pine. Most authorities believe that RCW will not tolerate dense hardwood stocking in the midstory. The RCW uses cavities in trees for nesting and uses trees that average more than 80 years old. The decrease in old-growth pine throughout the southeastern U.S. has contributed to the decline in numbers of this species (USFWS, 1985).

The RCW is not currently present at FMC. Refer to subsection 4.11.4.2 for a discussion concerning historical occurrence of the RCW at FMC. Maintaining habitat suitable for potential recolonization may help this species to recover. Ecological land management activities, compatible with management of other SCC and the MLP ecosystem, that would help to maintain suitable habitat for the RCW at FMC include the following:

- Conducting periodic forest surveys to accurately determine the quantity and quality of potential foraging and nesting habitat for the RCW;
- Longleaf pine would not be regenerated to other pine species. Where other species have either replaced longleaf pine (due to fire suppression) or been artificially established on sites historically forested with longleaf, direct forest management towards regeneration back to longleaf;
- Midstory Control. The preferred method would be prescribed burning at least every three years in longleaf areas considered to be suitable habitat;
- Maintaining sufficient old growth pine stands by lengthening timber harvesting rotations to 120 years for longleaf pine. Rotation ages would not apply to stands of loblolly pine, or other locations that historically contained longleaf (USACE, 1997a; USACE, 1997b; and USDA-FS, 1993).

C.2.4 White Fringeless Orchid (WFO) and the Mountain Longleaf Pine Ecosystem

As recently as 1992, the WFO was considered to be extirpated from the Ridge and Valley physiographic province. The species is known and/or has been known to occur in Alabama, Tennessee, Kentucky, Georgia, Mississippi, North Carolina, South Carolina, and Virginia. WFO is usually found in deep poorly drained soils that are acidic. Populations are usually found in boggy streamheads. The WFO is often associated with forests with an open canopy that contain red maple and blackgum. The Marcheta Hill Orchid Seep contains one of the largest known populations of this orchid. The Marcheta Hill Orchid Seep is a probable jurisdictional wetland (see Table C.10). See Table C.11 for a list of plants that are commonly found in forested seeps at FMC. There has not been extensive or systematic surveys of all the

seeps that occur at FMC and is it possible that additional populations of the WFO may be found at FMC (Shea, 1992; and FMC, 1996d).

Management activities, compatible with management of other SCC and the MLP ecosystem, that would help to maintain WFO populations at FMC include the following:

- Identifying additional populations and habitat requirements through periodic surveys;
- Understanding the biological system under consideration and using an ecological approach to land management;
- Establishing permanent buffers around known populations;
- Protecting a large enough area to allow prescribed burning; and
- Protecting the watershed or recharge area for the seeps.

C.3 SUMMARY

The MLP ecosystem at FMC appears to be functioning as an ecological unit, i.e., is greater than the sum of its parts. This unique ecosystem has 12,000 acres (4,850 hectares) of largely unfragmented forest, longleaf pine communities, SINA, SCC, NTMB, wetlands, stands of old growth forest, a mosaic of pine and hardwood forest types, and a relative lack of exotic species. See Figure C.4. This ecosystem also has potential RCW habitat. One of the largest known populations of the white fringeless orchid occurs here. In addition this forest ecosystem protects water quality by preventing soil erosion and is good habitat for common wildlife species such as white-tailed deer and wild turkey. Reduced logging frequency and intensity along with periodic wildfire were crucial components in the ecology and maintenance of this ecosystem.

Longleaf pine forests are considered one of the most species rich floral communities in temperate areas (Peet, 1993). The Alabama Natural Heritage Program, School of Forestry at Auburn University, USFWS Central Gulf Coast Ecosystem Team, Nature Conservancy, U.S. Forest Service, and others (see Section 10 in Volume I) have indicated that FMC contains the best remaining known example of the MLP component of the longleaf pine ecosystem. There was consensus among these organizations and individuals that the MLP ecosystem at FMC was important in maintaining the MLP communities, the SINA's, SCC and NTMB habitats. The management of Main Post in a contiguous tract represents an important contribution to conserving regional biodiversity (USDA-FS, 1994).

Table C.10 (pg.1)
Marcheta Hill Seep Data Form

Table C.10 (pg.2)

Table C.10

DATA FORM
ROUTINE WETLAND DETERMINATION
(adapted from 1987 COE Manual)

Project/Site: <u>Ft. McClellan BRAC EIS (729950)</u>	Date: <u>17 Dec. 1996</u>
Applicant/Owner: <u>USACE Memphis</u>	County: <u>Calhoun</u>
Investigators: <u>Tom Plattner & Bill Garland</u>	State: <u>AL</u>
Do Normal Circumstances exist on the site ? Yes	Community ID: _____ Transect ID: _____ Plot ID: <u>Marcheta Seep</u>
Is the site significantly disturbed (Atypical Situation) ? No	
Is the area a potential Problem Area ? No	

VEGETATION

Dominant Plant Species (trees/shrub)	% cover	Indicator	Dominant Plant Species (herb)	% cover	Indicator
<u>Acer rubrum</u>	_____	<u>FAC/OBL</u>	<u>Osmunda sp.</u>	_____	_____
<u>Liquidambar styraciflua</u>	_____	<u>FAC+</u>	<u>Carex sp.</u>	_____	_____
<u>Pinus taeda</u>	_____	<u>FAC+</u>	<u>Scirpus sp.</u>	_____	_____
<u>Smilax laurifolia</u>	_____	<u>FACW+</u>	<u>Eleocharis sp.</u>	_____	_____
<u>Viburnum nudum</u>	_____	<u>FACW+</u>	<u>Platanthera spp.</u>	_____	_____
<u>Alnus serrulata</u>	_____	<u>FACW+</u>	<u>Sphagnum sp.</u>	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): _____

Remarks: Buttressed tree trunks and tussocky clumps of grasses/sedges/rushes. See Table C.11 for list of species that occur in forested seeps at Ft. McClellan.

HYDROLOGY

<p><input type="checkbox"/> Recorded Data (Describe in Remarks):</p> <p style="padding-left: 20px;"><input type="checkbox"/> Stream, Lake, or Tide Gauge</p> <p style="padding-left: 20px;"><input type="checkbox"/> Aerial Photographs</p> <p style="padding-left: 20px;"><input type="checkbox"/> Other</p> <p><input type="checkbox"/> No Recorded Data Available</p> <hr/> <p>Field Observations:</p> <p>Depth of Surface Water: _____ (in.)</p> <p>Depth of Free Water in Pit: <u>0-2</u> (in.)</p> <p>Depth to Saturated Soil: <u>0</u> (in.)</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p style="padding-left: 20px;"><input checked="" type="checkbox"/> Inundated (5%)</p> <p style="padding-left: 20px;"><input checked="" type="checkbox"/> Saturated in Upper 12 Inches</p> <p style="padding-left: 20px;"><input checked="" type="checkbox"/> Water Marks</p> <p style="padding-left: 20px;"><input type="checkbox"/> Drift Lines</p> <p style="padding-left: 20px;"><input type="checkbox"/> Sediment Deposits</p> <p style="padding-left: 20px;"><input checked="" type="checkbox"/> Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p style="padding-left: 20px;"><input checked="" type="checkbox"/> Oxidized Root Channels in Upper 12"</p> <p style="padding-left: 20px;"><input checked="" type="checkbox"/> Water-Stained Leaves</p> <p style="padding-left: 20px;"><input type="checkbox"/> Local Soil Survey Data</p> <p style="padding-left: 20px;"><input type="checkbox"/> FAC-Neutral Test</p> <p style="padding-left: 20px;"><input type="checkbox"/> Other (Explain in Remarks)</p>
<p>Remarks: Permanent to semi-permanent acidic seep.</p>	

Table C.10

SOILS

Map Unit Name (Series and Phase): _____		Drainage Class: _____			
Taxonomy (Subgroup): _____		Field Observations Confirm Mapped Type ? Yes No			
<u>Profile Description:</u>					
<u>Depth</u> (inches)	<u>Matrix Color</u> (Munsel)	<u>Mottle Color</u> (Munsel)	<u>Mottle</u> <u>Size/Abundance</u>	<u>Texture/Structure/etc.</u>	<u>Moisture</u>
0-2				sphagnum/humus	
2-12	5Y2.5/2 (black)			clayey silt	saturated
<u>Hydric Soil Indicators:</u>					
<input type="checkbox"/> Histosol		<input checked="" type="checkbox"/> Concretions (few soft nodules present)			
<input checked="" type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic content in Surface Layer in Sandy Soils			
<input checked="" type="checkbox"/> Sulfidic Odor (slight)		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input checked="" type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks: 1.) This soil is expected to be saturated to the surface, by groundwater flow, for more than 30 days during the growing season. 2.) This soil has a high organic content in the top six to eight inches (which is borderline for the histic epipedon criteria). The process of organic matter accumulation and histic epipedon formation is occurring at this site. The relative uncommon combination of severe drought and intense wildfire at this seep - periodically reduces the organic matter build-up.					

PRELIMINARY WETLAND DETERMINATION

Hydrophytic Vegetation Present ?	Yes	Probable Jurisdictional Wetland ? Yes
Wetland Hydrology Present ?	Yes	
Hydric Soils Present ?	Yes	
Remarks: This site contains white-fringeless orchid (WFO). WFO is considered to be a Species of Concern by the USFWS. This wetland, which is approximately seven acres in size, is part of the Marcheta Hill Orchid Seep Special Interest Natural Area (SINA).		

Table C.11 Plants Associated with Forested Seeps at FMC

Common Name	Scientific Name	Wetland Indicator Category*
tag alder	<i>Alnus serrulata</i>	FACW+
swamp dogwood	<i>Cornus foemina</i>	FACW-
green ash	<i>Fraxinus pennsylvanica</i>	FACW
winterberry	<i>Ilex verticillata</i>	FACW
male-berry	<i>Lyonia ligustrina</i>	FACW
sweet bay	<i>Magnolia virginiana</i>	FACW+
swamp azalea	<i>Rhodoendron viscosum</i>	FACW+
high-bush blueberry	<i>Vaccinium corymbosum</i>	FACW
possum-haw	<i>Viburnum nudum</i>	FACW+
sedge	<i>Carex alata</i>	OBL
sedge	<i>Carex folliculata</i>	OBL
white turtle-head	<i>Chelone glabra</i>	OBL
spikerush	<i>Eleocharis obtusa</i>	OBL
spikerush	<i>Eleocharis nigrescens</i>	FACW
Joe-pye weed	<i>Eupatorium fistulosum</i>	FAC+
soapwort gentian	<i>Gentiana saponaria</i>	FACW-
cinnamon fern	<i>Osmunda cinnamomea</i>	FACW+
royal fern	<i>Osmunda regalis var. spectabilis</i>	OBL
cowbane	<i>Oxypolis rigidior</i>	OBL
warty panic grass	<i>Panicum verrucosum</i>	FACW
switchgrass	<i>Panicum virgatum</i>	FAC+
arrow arum	<i>Peltandra virginica</i>	OBL
yellow-fringed orchid	<i>Platanthera ciliaris</i>	FACW
green wood orchid	<i>Platanthera clavellata</i>	OBL
white-fringeless orchid	<i>Platanthera integrilabia</i>	OBL
primrose-leafed violet	<i>Viola primulifolia</i>	FACW
netted chain fern	<i>Woodwardia areolata</i>	OBL

Notes: * Wetland Indicator Category:

OBL = obligate wetland plant (estimated probability of wetland occurrence >99%);

FACW = facultative wetland plant (estimated probability of wetland occurrence 67-99%);

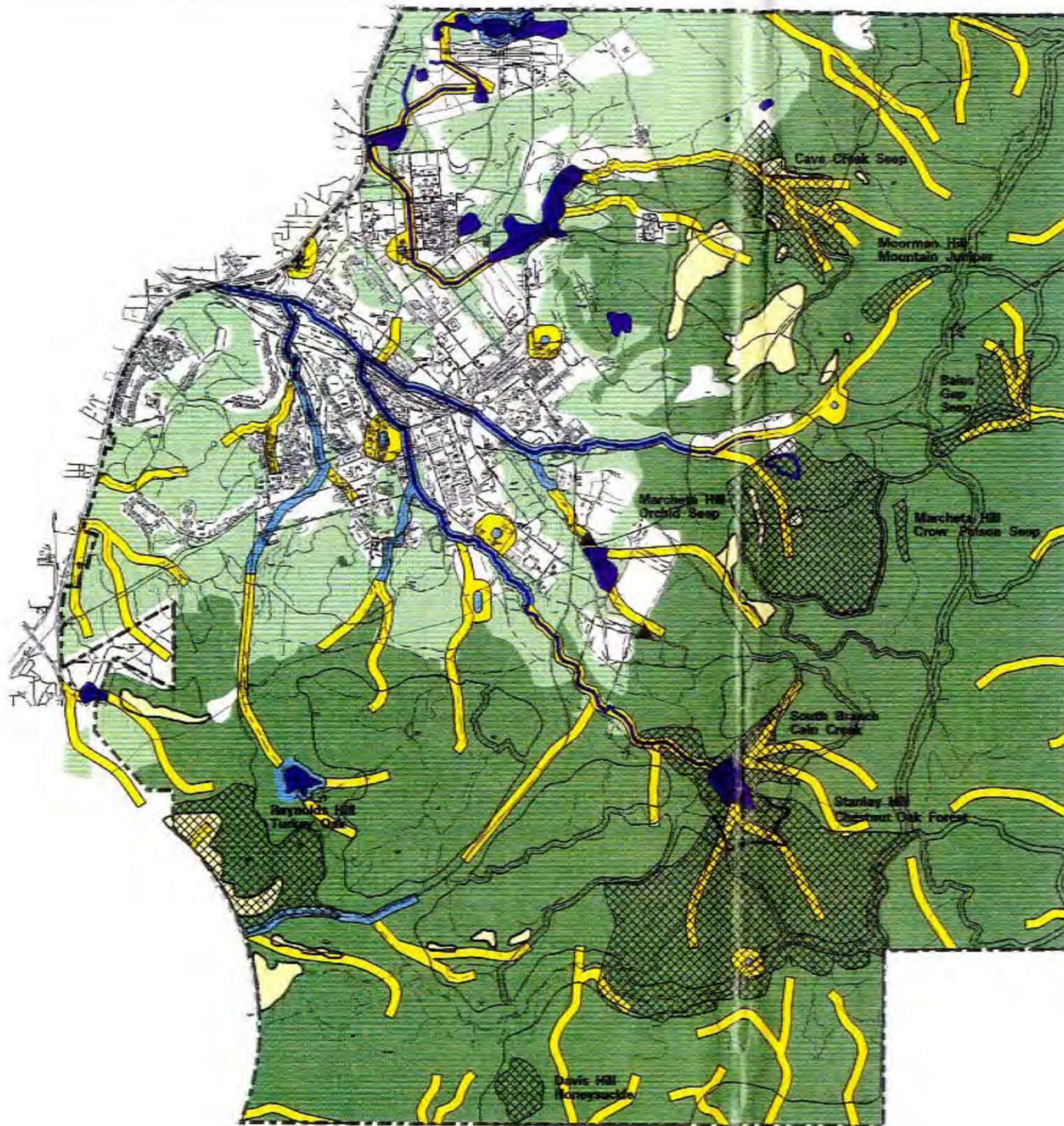
FAC = facultative wetland plant (estimated probability of wetland occurrence 33-66%);

positive sign (+) indicates a frequency towards the higher end of the category; and

negative sign (-) indicates a frequency towards the lower end of the category.

Sources: Whetstone, 1996; and USFWS, 1988

Figure C-4 Natural Resource Composite
(11 X 17 Color)



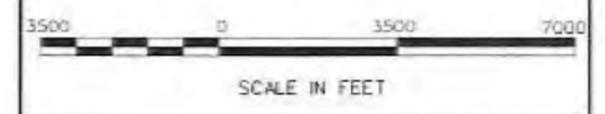
Fredrick Hill Aster Site
(Boundaries not delineated
at this time)

LEGEND

- RESERVATION BOUNDARY
- FRAGMENTED FOREST
- UNFRAGMENTED FOREST
- INTERIOR FOREST
- NON-FORESTED AREAS
- WETLAND/LAKE
- SPECIAL INTEREST NATURAL AREA (SINA)
- LOW QUALITY GRAY BAT HABITAT
- MODERATE QUALITY GRAY BAT HABITAT
- RED COCKADED WOODPECKER HABITAT
- THREE-FLOWERED HAWTHORN LOCATION

SOURCES:

- 3D/E, 1996.
- FMC, 1996d.
- USFWS, 1994.
- NREC, 1986.
- Summerour, 1992.
- Webb, 1996.



PARSONS ES PARSONS HEA ST LOUIS, MISSOURI	MOBILE DISTRICT US ARMY CORPS OF ENGINEERS MOBILE, ALABAMA
ENVIRONMENTAL IMPACT STATEMENT	
DISPOSAL AND REUSE OF FORT McCLELLAN, ALABAMA	
NATURAL RESOURCE COMPOSITE	
DATE: AUG., 1998	FIGURE NO. C-4

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Economic Impact Forecast System (EIFS) Methodology

D.1 INTRODUCTION

The U.S. Army Construction Engineering Research Laboratories (USACERL) have developed a computer-based model to provide a systematic method for evaluating the regional socioeconomic effects of government actions, such as military base operations and military realignments. This model is the Economic Impact Forecast System (EIFS) Model which was specifically designed for evaluating the effects of military actions such as construction programs, mission changes, or operations and maintenance programs. The following subsections respectively describe the EIFS Model methodology, and the inputs and outputs for the various FMC related actions pertaining to existing operations and reuse.

D.2 ECONOMIC IMPACT FORECAST SYSTEM METHODOLOGY

EIFS is a regional system best suited for analysis at the county or higher level. Thus, the results of the analysis for Fort McClellan are applied to a regional area and not disaggregated to the local municipal or township level. In this regard, the surrounding eight-county area (Calhoun, Cherokee, Clay, Cleburne, Etowah, Randolph, St. Clair and Talladega) has been defined by the EIFS Model as the region of influence for this EIFS assessment. This defined area represents the outer limit of a 60-minute or 50-mile commute, and the primary trade area for personnel associated with the installation. In addition, 100 percent of the combined civilian and military personnel associated with FMC in addition to retired military personnel reside within this eight-county area.

Using employment and income "multipliers" developed with the comprehensive database combined with economic export base techniques, EIFS estimates the regional economic impacts of actions resulting in changes in personnel or expenditures. These multipliers are applied to the direct economic effects of an action to calculate the total impacts upon the region. For example, ten new manufacturing jobs may spin off additional new jobs in several different sectors of the regional economy. EIFS evaluates socioeconomic impacts in terms of change in sales (business) volume, employment and personal income.

EIFS also estimates other demographic indicators such as change in population, school children, demand for housing and government revenues. However, these demographic indicators are calculated only for those civilian and military personnel directly involved with a military action.

Two submodels of EIFS are executed to actually model the economic impacts of existing operations (1995). These are the "Standard" (Operations and Maintenance) forecast model, and the "Training" forecast model. Both the "standard" and "training" models are used to estimate the impacts of ongoing missions/operations. The "standard" model was used to assess the economic impacts of the permanent party military stationed and civilian personnel employed at FMC, and the economic impacts under each of the alternative reuse plans. The "training" model was used for a separate assessment of the economic

impacts of the military trainees since their off-post consumption (propensity to consume), housing and school enrollment impacts are considerably different than that of permanent party military. In addition, the “Construction” model was utilized for assessing the impacts of facility construction under each of the three reuse alternatives..

D.3 EIFS MODEL INPUTS

D.3.1 Existing or Change in Value of the Following Inputs:

- Expenditures for procurement of services and supplies for operations;
- Civilian employment;
- Average annual civilian income;
- Military employment (permanent party military and trainees);
- Average annual income of military personnel;
- Percent of employees expected to relocate from outside of the ROI;
- Percent of military personnel residing on base; and,
- Construction expenditures for reuse.

The EIFS model uses price indices, or “deflators”, as a means of converting dollars to equivalent dollar values in order to reflect price-adjustments as a result of inflation. The Consumer Price Index (CPI) and Producer Price Index (PPI) are the indices used in both the “standard” and “training” models, while the “construction model” uses the CPI and Engineering News-Record (ENR) construction cost index. The latest EIFS default values for these indices are for the year 1993. In order to more accurately reflect the value of current and future projected dollars these price indices were adjusted upward to reflect FY95, or the baseline year of operations. The adjustment factors used reflect recent (previous three years) annual average increases in these indices.

D.3.2 Calculation of Individual Inputs

- **Expenditures for Services and Supplies.** Expenditures for services and supplies correspond to the operating budget of the installation, excluding military and civilian salaries, under baseline conditions. Included are contractual services, military clothing, equipment, utilities and miscellaneous expenses. The annual expenditures used in the EIFS model reflect FY95 expenditures based upon information provided by the FMC-Directorate of Resource Management (DRM).
- **Civilian Employment.** Civilian employment is based on information provided by the FMC DRM. Current (1995) total DA and non-DA civilian employment is 2,239.
- **Average Income of Civilian Employees.** Current annual Income is estimated based upon information provided by the FMC DRM. The average salaries of DA civilian, NAF, DFAS and contractual employees were calculated and weighted to arrive at an overall current (FY95) average civilian salary of \$28,143.
- **Military Employment.** Current military employment associated with FMC is based upon information provided by the FMC DRM. For the EIFS modeling purposes the number of current (FY95) permanent party military personnel is 2,166, and 3,160 trainees/students adjusted to a full-time annual basis.
- **Average Income of Military Personnel.** Current annual income is based upon information provided by the FMC DRM. Housing allowance and other benefits are included in this figure for permanent party personnel, but not for the trainees.
- **Percent of New Employees Expected to Relocate (Live Outside of ROI).** It is assumed that a certain percentage of the new civilian employees associated with the reuse will relocate to the ROI

from outside the region. It is further assumed that less than one percent of the new employees would reside outside of the eight-county ROI. This is based upon the current geographic residency distribution of military personnel and civilian employees. The percent of new employees expected to relocate was adjusted to a "net relocation factor" in the EIFS Model to account for the simultaneous out-migration of military and civilian personnel associated with the installation under baseline conditions.

- **Percent of Military Living on Base.** The percent of permanent party military currently living on base is approximately 34 percent as defined by information provided from FMC DRM. It is assumed that 100 percent of the trainees reside on base.
- **Construction Costs.** The EIFS "Construction Model" was executed to estimate the economic impacts of one-time construction of the reuse facilities under each of the three alternative reuse plans. Projected costs are based on current construction costs/square foot for residential, commercial, industrial and institutional facilities in the Anniston area. The EIFS "default value" (30 percent) was used for estimating the percent of construction workers expected to relocate into the ROI from elsewhere.

D.4 EIFS MODEL FORECASTS

The following section provides the EIFS model forecasts of the economic impacts of Fort McClellan on the eight-county ROI resulting from existing operations (D.4.1); alternative reuse plans (D.4.2); and reuse facility construction (D.4.3) under the three reuse intensity scenarios.

D.4.1 EIFS, EXISTING OPERATIONS

STANDARD EIFS FORECAST MODEL - EXISTING OPERATIONS (Permanent Party Military and Civilian)

Project Name: Fort McClellan EIS

Enter d to enter your own price deflators

RETURN to use the default price deflators (latest year): d

Price deflator for baseline year (ex b.v.)	(CPI - 1987):	(100.0)	
Price deflator for output (ex b.v.)	(CPI - 1995):	133.3	
Price deflator for baseline year (business volume)	(PPI-1987):	(100.0)	
Price deflator for output (business volume)	(PPI - 1995):	121.6	
If entering total expenditures, enter		1	
local expenditures, enter		2 : 1	
Change in expenditures for services and supplies:		\$ 45,417,000	
Change in expenditures for local services and supplies:		24,404,670	(calculated)
price deflator (PPI - 1995):		121.6	
Change in civilian employment:		2,239	
Average income of affected civilian personnel:		\$ 28,143	
price deflator (CPI - 1995):		133.3	
Change in military employment:		2,166	
Average income of affected military personnel:		\$ 24,350	
price deflator (CPI - 1995):		133.3	
Percent of military living on-post:		0.337	

***** STANDARD EIFS MODEL FORECAST FOR FORT MCCLELLAN EIS *****

Export income multiplier:		2.1614
Change in local		
Sales volume	Direct:	\$ 90,693,000

	Induced:	\$ 105,335,000	
	Total:	\$196,029,000	(3.180%)
Employment	Direct:	812	
	Total:	6,160	(3.678%)
Income	Direct:	\$ 12,253,000	
	Total (place of work):	\$ 142,238,000	
	Total (place of residence):	\$142,238,000	(2.375%)
Local population:		10,805	(2.663%)
	Local off-base population:	8,987	
	Number of school children:	1,878	
Demand for housing	Rental:	1,478	
	Owner occupied:	2,197	
Government expenditures:		\$ 12,696,000	
Government revenues:		\$ 14,151,000	
Net Government revenues:		\$ 1,456,000	

**STANDARD EIFS FORECAST MODEL - EXISTING OPERATIONS
(Trainees Only)**

Project Name: Fort McClellan EIS

Enter d to enter your own price deflators

RETURN to use the default price deflators (latest year): d

Price deflator for baseline year (ex b.v.)	(CPI - 1987):	(100.0)	
Price deflator for output (ex b.v.)	(CPI - 1995):	133.3	
Price deflator for baseline year (business volume)	(PPI-1987):	(100.0)	
Price deflator for output (business volume)	(PPI - 1995):	121.6	
If entering total expenditures, enter		1	
local expenditures, enter	2 : 1		
Change in expenditures for services and supplies:		\$ 0	
Change in expenditures for local services and supplies:		0	(calculated)
price deflator (PPI - 1995):		121.6	
Number of (non-basic) trainees:		3,160	
Average number of trainees:	\$ 10,500		
price deflator (CPI - 1995):		133.3	
Percent of trainees living on-post:		100	

******* TRAINING IMPACT FORECAST FOR FORT MCCLELLAN EIS *******

Export income multiplier:		2.1614	
Change in local			
Sales volume	Direct:	\$ 8,899,000	
	Induced:	\$ 10,335,000	
	Total:	\$19,234,000	(0.312%)
Employment	Direct:	80	
	Total:	3,332	(1.990%)
Income	Direct:	\$ 1,202,000	
	Total (place of work):	\$ 35,779,000	
	Total (place of residence):	\$ 35,779,000	(0.597%)
Local population:		3,160	(0.779%)
	Local off-base population:	0	
	Number of school children:	0	
Demand for housing	Rental:	0	

	Owner occupied:	0
Government expenditures:		\$ 168,000
Government revenues:		\$ 2,274,000
Net Government revenues:		\$ 2,105,000
Civilian employees expected to relocate:		0
Military employees expected to relocate:		3,160

**COMPOSITE EIFS FORECAST - EXISTING OPERATIONS
PP MILITARY, CIVILIANS AND TRAINEES
(Represents Sum of Previous Two Model Outputs)**

Export income multiplier:		2.1614
Change in local		
Sales volume	Direct:	\$ 99,592,000
	Induced:	\$ 115,670,000
	Total:	\$ 215,262,000 (3.492%)
Employment	Direct:	892
	Total:	9,492 (5.668%)
Income	Direct:	\$ 13,455,000
	Total (place of work):	\$ 178,017,000
	Total (place of residence):	\$178,017,000 (2.972%)
Local population:		13,965 (3.442%)
Local off-base population:		8,987
Number of school children:		1,878
Demand for housing	Rental:	1,478
	Owner occupied:	2,197
Government expenditures:		\$ 12,864,000
Government revenues:		\$ 16,425,000
Net Government revenues:		\$ 3,561,000

D.4.2 EIFS, REUSE

The EIFS Standard Model was executed to estimate the economic impacts under each of the three alternative reuse intensity scenarios. Input values required for execution of the EIFS Model for the reuse activity include the following which are also utilized in the EIFS Model for estimating the impacts of existing operations.

- **Expenditures for Services and Supplies.** An expenditure to employee ratio of \$26,000 was used for manufacturing employment, and \$21,000 for other employment directly associated with reuse activities under each of the three reuse scenarios. Table E.1 indicates the calculation of the total estimated expenditures under each of the three reuse intensity levels.
- **Civilian Employment.** Civilian employment directly involved in the proposed reuse activities was projected by dividing the estimated total floor area by the employee density (sf per employee) for each respective proposed reuse.

Table D.1 EIFS Model Input Parameters, Reuse			
	Expenditure per Employee ¹	Employment	Expenditures
MEDIUM HIGH INTENSITY			

Manufacturing	\$26,000	7,500	\$195,000,000
Other Uses	21,000	<u>6,489</u>	<u>136,269,000</u>
Total	na	13,989	\$331,269,000
Less 1995 Baseline	na	<u>4,405</u> ²	<u>45,417,000</u> ⁴
CHANGE FROM 1995	na	9,584	\$285,852,000
Average Income/Employee (\$18,250) ³			
MEDIUM INTENSITY			
Manufacturing	\$26,000	5,150	\$133,900,000
Other Uses	21,000	<u>3,842</u>	<u>80,682,000</u>
Total	na	8,992	\$214,582,000
Less 1995 Baseline	na	<u>4,405</u>	<u>45,417,000</u>
CHANGE FROM 1995	na	4,587	\$169,165,000
Average Income/Employee (\$18,250)			
MEDIUM LOW INTENSITY			
Manufacturing	\$26,000	3,577	\$93,002,000
Other Uses	21,000	<u>2,475</u>	<u>51,975,000</u>
Total	na	6,052	\$144,977,000
Less 1995 Baseline	na	<u>4,405</u>	<u>45,417,000</u>
CHANGE FROM 1995	na	1,647	\$99,560,000
Average Income/Employee (\$18,250)			
Notes: 1 Manufacturing expenditure/employee derived from 1987 U.S. Census of Manufacturing (cost of materials divided by number of employees X .50), adjusted to 1995 baseline year. Other expenditures/employee derived from 1995 average employee earnings in retail, office, services (\$14,000) multiplied by a factor of 1.5			
2 Includes both civilian and military employees (2,239 + 2,166).			
3 Bureau of Economic Analysis. Earnings by Industry, 1994.(adjusted to 1995 baseline).			
4 1995 Baseline: FMC Operating Budget for Services and Supplies (does not include salaries).			
Source: Parsons, Harland Bartholomew & Associates, Inc.			

· **Average Annual Civilian Income.** The average annual income of the potential employees associated with the reuse activities was estimated based on the Bureau of Economic Analysis, Earnings by Industry (1994) data, and adjusted to the 1995 baseline year. The average annual income of \$18,250 represents the baseline year average earnings of industrial, retail and service workers in Calhoun County.

· **Percent Expected to Relocate.** The percent of the new civilian employment expected to relocate from the outside the FMC ROI to supplement the local labor force is based on estimates provided by EDAW which were developed during the preparation of the FMC Reuse Plan. These estimates are based on the size and skills of the current labor force pool of the FMC ROI, and were adjusted in the EIFS Model to account for the loss of population associated with the closure of the installation.

Following are the EIFS Model inputs and forecast outputs for each of the three alternative reuse plans. To determine the net change in economic impacts, the composite impacts of existing baseline operations (e.g. sales volume, employment, income, population) were subtracted from the impacts under each reuse alternative.

STANDARD EIFS FORECAST MODEL - REUSE

Project Name: Fort McClellan EIS - MHIR Alternative

Enter d to enter your own price deflators

RETURN to use the default price deflators (latest year): d

Price deflator for baseline year (ex b.v.)	(CPI - 1987):	(100.0)	
Price deflator for output (ex b.v.)	(CPI - 1995):	133.3	
Price deflator for baseline year (business volume)	(PPI-1987):	(100.0)	
Price deflator for output (business volume)	(PPI - 1995):	121.6	
If entering total expenditures, enter		1	
local expenditures, enter		2 : 1	
Change in expenditures for services and supplies:		\$ 331,269,000	
Change in expenditures for local services and supplies:		178,006,256	(calculated)
price deflator (PPI - 1995):		121.6	
Change in civilian employment:		13,989	
Average income of affected civilian personnel:		\$ 18,250	
price deflator (CPI - 1995):		133.3	
Percent expected to relocate:		0.52	
Change in military employment:		NA	

******* STANDARD EIFS MODEL FORECAST FOR FORT MCCLELLAN EIS *******

Export income multiplier:		2.1614	
Change in local			
Sales volume	Direct:	\$ 365,251,000	
	Induced:	\$ 424,219,000	
	Total:	\$789,169,000	(12.805%)
Employment	Direct:	3,270	
	Total:	21,056	(12.573%)
Income	Direct:	\$ 49,345,000	
	Total (place of work):	\$ 461,957,000	
	Total (place of residence):	\$ 361,957,000	(6.044%)
Local population:		17,582	(4.333%)
	Local off-base population:	17,582	
	Number of school children:	3,021	
Demand for housing	Rental:	1,815	
	Owner occupied:	5,460	
Government expenditures:		\$ 37,788,000	
Government revenues:		\$ 33,003,000	
Net Government revenues:		-\$ 4,785,000	
Civilian employees expected to relocate:		7,274	

STANDARD EIFS FORECAST MODEL - REUSE

Project Name: Fort McClellan EIS - MIR Alternative

Enter d to enter your own price deflators

 RETURN to use the default price deflators (latest year): d

Price deflator for baseline year (ex b.v.)	(CPI - 1987) :	(100.0)	
Price deflator for output (ex b.v.)	(CPI - 1995) :	133.3	
Price deflator for baseline year (business volume)	(PPI-1987):	(100.0)	
Price deflator for output (business volume)	(PPI - 1995):	121.6	
If entering total expenditures, enter		1	
local expenditures, enter		2 : 1	
Expenditures for services and supplies:		\$ 214,582,000	
Expenditures for local services and supplies:		115,304,904	(calculated)
price deflator (PPI - 1995):		121.6	
Civilian employment:		8,992	

Average income of affected civilian personnel:	\$ 18,250
price deflator (CPI - 1995):	133.3
Percent expected to relocate (enter <cr> to accept default):	0.40
Change in military employment:	NA

******* STANDARD EIFS MODEL FORECAST FOR FORT MCCLELLAN EIS *******

Export income multiplier:		2.1614	
Change in local			
Sales volume	Direct:	\$ 235,664,000	
	Induced:	\$ 273,711,000	
	Total:	\$ 509,375,000	(8.262%)
Employment	Direct:	2,110	
	Total:	13,552	(8.092%)
Income	Direct:	\$ 31,838,000	
	Total (place of work):	\$ 232,921,000	
	Total (place of residence):	\$ 232,921,000	(3.889%)
Local population:		8,693	(2.142%)
	Local off-base population:	8,693	
	Number of school children:	1,493	
Demand for housing	Rental:	897	
	Owner occupied:	2,700	
Government expenditures:		\$ 21,756,000	
Government revenues:		\$ 19,746,000	
Net Government revenues:		-\$ 2,010,000	
Civilian employees expected to relocate:		3,597	

STANDARD EIFS FORECAST MODEL - REUSE

Project Name: Fort McClellan EIS - MLIR Alternative

Enter d to enter your own price deflators

RETURN to use the default price deflators (latest year): d		
Price deflator for baseline year (ex b.v.)	(CPI - 1987):	(100.0)
Price deflator for output (ex b.v.)	(CPI - 1995):	133.3
Price deflator for baseline year (business volume)	(PPI-1987):	(100.0)
Price deflator for output (business volume)	(PPI-1995):	121.6
If entering total expenditures, enter		1
local expenditures, enter		2 : 1
Expenditures for services and supplies:		\$ 44,977,000
Expenditures for local services and supplies:		77,902,896(calculated)
price deflator (PPI - 1995):		121.6
Civilian employment:		6,052
Average income of affected civilian personnel:		\$ 18,250
price deflator (CPI - 1995):		133.3
Percent expected to relocate (enter <cr> to accept default):		0.30

***** STANDARD EIFS MODEL FORECAST FOR FORT MCCLELLAN EIS *****

Export income multiplier:		2.1614
Change in local		
Sales volume	Direct:	\$ 158,910,000
	Induced:	\$ 184,565,000
	Total:	\$ 343,474,000 (5.571%)
Employment	Direct:	1,423
	Total:	9,127 (5.450%)
Income	Direct:	\$ 21,469,000
	Total (place of work):	\$ 156,853,000
	Total (place of residence):	\$ 156,853,000 (2.619%)
Local population:		4,388 (1.081%)
	Local off-base population:	4,388
	Number of school children:	754
Demand for housing	Rental:	453
	Owner occupied:	1,363
Government expenditures:		\$ 13,218,000
Government revenues:		\$ 12,464,000
Net Government revenues:		-\$ 754,000
Civilian employees expected to relocate:		1,816

D.4.3 EIFS, CONSTRUCTION MODEL

The EIFS Construction Model was executed to estimate the economic impacts of facility construction. Per square foot construction costs were estimated based on *Means Construction Cost Data (1995)* and local sources of information. Included in the construction cost input values are demolition and infrastructure costs, while rehabilitation/renovation costs of existing facilities to be retained are not included. Following are the input and output values in respect to economic impacts of facility construction under each of the three alternative reuse plans.

EIFS CONSTRUCTION FORECAST MODEL

Project Name: Fort McClellan EIS - Construction, MHIR Alternative

Enter d to enter your own price deflators

RETURN to use the default price deflators (latest year): d

Price deflator for baseline year (ex b.v.)	(CPI - 1987):	(100.0)	
Price deflator for output (ex b.v.)	(CPI - 1995):	133.3	
Price deflator for baseline year (construction)	(ENR-const-1987):	(100)	
Price deflator for output (construction)	(ENR-const-1995):	126.0	
If entering total expenditures, enter		1	
local expenditures, enter		2 : 1	
Dollar volume of construction project:		\$ 320,000,000	
Local expenditures of project:		\$ 171,950,903	(calculated)
price deflator (ENR-const - 1995):		126.0	
Percent for labor (enter new value or <cr> to accept default):		(34.2)	
Percent for materials (enter new value or <cr> to accept default):		(57.8)	
Percent allowed for other:		8.00	(calculated)
Percent of construction workers expected to migrate into the area (enter <cr> to accept default):		(30.0)	

******* CONSTRUCTION IMPACT FORECAST FOR FORT MCCLELLAN EIS *******

Export income multiplier:		2.1614	
Change in local			
Sales volume	Direct:	\$ 146,669,000	
	Induced:	\$ 170,348,000	
	Total:	\$ 317,016,000	(4.963%)
Employment	Direct:	1,267	
	Total:	5,605	(3.347%)
Income	Direct:	\$ 19,123,000	
	Total (place of work):	\$ 103,548,000	
	Total (place of residence):	\$ 103,548,000	(1.729%)
Local population:		1,948	(0.480%)
	Local off-base population:	1,948	
Demand for housing	Number of school children:	363	
	Rental:	860	
	Owner occupied:	0	
Government expenditures:		\$ 7,387,000	
Government revenues:		\$ 7,688,000	
Net Government revenues:		\$ 301,000	
Civilian employees expected to relocate:		860	
Military employees expected to relocate:		0	

Project Name: Fort McClellan EIS - Construction, MIR Alternative

Enter d to enter your own price deflators

RETURN to use the default price deflators (latest year): d

Price deflator for baseline year (ex b.v.)	(CPI - 1987):	(100.0)
Price deflator for output (ex b.v.)	(CPI - 1995):	133.3
Price deflator for baseline year (construction)	(ENR-const-1987):	(100.0)
Price deflator for output (construction)	(ENR-const-1993):	126.0
If entering total expenditures, enter		1
local expenditures, enter		2 : 1
Dollar volume of construction project:		\$ 225,000,000
Local expenditures of project:		\$ 120,902,979.10 (calculated)
price deflator (ENR-const - 1995):		126.0
Percent for labor (enter new value or <cr> to accept default):		(34.2)
Percent for materials (enter new value or <cr> to accept default):		(57.8)
Percent allowed for other:		8.00 (calculated)
Percent of construction workers expected to migrate into the area (enter <cr> to accept default):		(30.0)

******* CONSTRUCTION IMPACT FORECAST FOR FORT MCCLELLAN EIS *******

Export income multiplier:		2.1614
Change in local		
Sales volume	Direct:	\$ 103,126,000
	Induced:	\$ 119,776,000
	Total:	\$ 222,902,000 (3.489%)
Employment	Direct:	891
	Total:	3,941 (2.353%)
Income	Direct:	\$ 13,446,000
	Total (place of work):	\$ 72,807,000
	Total (place of residence):	\$ 72,807,000 (1.216%)
Local population:		1,370 (0.338%)
	Local off-base population:	1,370
	Number of school children:	255
Demand for housing	Rental:	605
	Owner occupied:	0
Government expenditures:		\$ 5,194,000
Government revenues:		\$ 5,406,000
Net Government revenues:		\$ 212,000
Civilian employees expected to relocate:		605
Military employees expected to relocate:		0

Project Name: Fort McClellan EIS - Construction, MLIR Alternative

Enter d to enter your own price deflators

RETURN to use the default price deflators (latest year): d

Price deflator for baseline year (ex b.v.)	(CPI - 1987):	(100.0)
Price deflator for output (ex b.v.)	(CPI - 1995):	133.3
Price deflator for baseline year (construction)	(ENR-const-1987):	(100.0)
Price deflator for output (construction)	(ENR-const - 1995):	126.0
If entering total expenditures, enter		1
local expenditures, enter		2 : 1
Dollar volume of construction project:		\$ 164,000,000
Local expenditures of project:		\$ 88,124,838.10(calculated)
price deflator (ENR-const - 1993):		126.0
Percent for labor (enter new value or <cr> to accept default):		(34.2)
Percent for materials (enter new value or <cr> to accept default):		(57.8)
Percent allowed for other:		8.00 (calculated)
Percent of construction workers expected to migrate into the area (enter <cr> to accept default):		(30.0)

******* CONSTRUCTION IMPACT FORECAST FOR FORT MCCLELLAN EIS *******

Export income multiplier:		2.1614
Change in local		
Sales volume	Direct:	\$ 75,168,000
	Induced:	\$ 87,303,000
	Total:	\$ 162,471,000 (2.543%)
Employment	Direct:	649
	Total:	2,873 (1.715%)
Income	Direct:	\$ 9,801,000
	Total (place of work):	\$ 53,068,000
	Total (place of residence):	\$ 53,068,000 (0.886%)
Local population:		999 (0.246%)
	Local off-base population:	999
	Number of school children:	186
Demand for housing	Rental:	441
	Owner occupied:	0
Government expenditures:		\$ 3,786,000
Government revenues:		\$ 3,940,000
Net Government revenues:		\$ 154,000
Civilian employees expected to relocate:		441
Military employees expected to relocate:		0

D.5 RATIONAL THRESHOLD VALUES

Using a technique termed the Rational Threshold Value (RTV), the EIFS estimates are compared to the historic trends for each economic indicator (business volume, personal income, employment and population) to determine whether the impacts are significant. To accomplish this, the EIFS model calculates the impacts of each of the above economic indicators as a percentage of the total of that indicator for the region. For example, the increase in employment as a result of the activity might account for a five percent increase in total regional employment. This percentage increase is compared to the normal annual variations in the growth rate for each indicator. EIFS calculates both positive and negative RTVs. If an EIFS impact exceeds the normal positive or negative RTV variation, then the impact is considered to be significant. The historic positive and negative RTVs for the FMC ROI are as follows:

- business (sales) volume = 6.81 (- 5.03) percent
- personal income = 5.63 (- 4.02) percent
- employment = 2.80 (- 3.38) percent
- population = 2.12 (- 0.95) percent.

The EIFS Model was executed separately for the permanent party military/civilian component of existing operations, and the trainees component. The RTV's for each economic indicator are noted in parentheses in each of the respective EIFS forecast models. Following are the cumulative RTV's of these two model executions.

- business (sales) volume = 3.49 percent
- personal income = 2.97 percent
- employment = 5.67 percent
- population = 3.44 percent

An analysis of the RTVs of the above economic indicators indicates that the regional historic RTVs for employment and population are exceeded by existing FMC operations. Thus, FMC operations have a significant impact on the local and regional economy.

RATIONAL THRESHOLD VALUES

AREA: Fort McClellan Region of Influence (ROI)

All dollar amounts are in thousands of dollars.
Dollar adjustment based on CPI (1987=100).

**Table D.2
Business Volume (using Non-Farm Income)**

Year	Non-Farm income	Adjusted Income	Change	Deviation	%Deviation
1969	701,632	2,075,834			
1970	705,788	1,971,475	-104,359	-139,426	-6.717%
1971	759,447	2,036,051	64,576	29,510	1.500%
1972	851,726	2,206,544	170,493	135,427	6.650%
1973	936,221	2,283,466	76,922	41,856	1.900%
1974	1,016,992	2,235,147	-48,319	-83,385	-3.650%
1975	1,086,353	2,185,821	-49,326	-84,392	-3.780%
1976	1,244,122	2,369,756	183,935	148,869	6.810%
1977	1,412,924	2,527,592	157,836	122,770	5.180%
1978	1,590,569	2,642,141	114,549	79,483	3.150%
1979	1,742,178	2,600,266	-41,875	-76,942	-2.910%
1980	1,894,609	2,489,631	-110,635	-145,701	-5.600%
1981	2,054,050	2,448,212	-41,419	-76,485	-3.070%
1982	2,075,084	2,334,178	-114,034	-149,101	-6.090%
1983	2,228,560	2,432,926	98,748	63,682	2.730%
1984	2,423,291	2,556,214	123,288	88,222	3.630%
1985	2,537,071	2,586,209	29,995	-5,071	-0.200%
1986	2,671,452	2,768,344	182,135	147,069	5.690%
1987	2,849,831	2,849,831	81,487	46,421	1.680%
1988	3,003,274	2,887,763	37,932	2,866	0.101%
1989	3,106,474	2,849,976	-37,787	-72,853	-2.520%
1990	3,207,023	2,796,010	-53,966	-89,033	-3.120%
1991	3,327,373	2,786,745	-9,265	-44,331	-1.586%
1992	3,539,532	2,882,355	95,610	60,544	2.173%

Source: Bureau of Economic Analysis

average yearly change:	35,066
maximum historic positive deviation:	148,869
maximum historic negative deviation:	- 149,101
maximum historic % positive deviation:	6.811 %
maximum historic % negative deviation:	- 6.717 %
positive rtv:	6.811 %
negative rtv:	- 5.037 %

**Table D.3
Personal Income**

Year	Personal Income	Adjusted Income	Change	Deviation	% Deviation
1969	897,966	2,656,704			
1970	928,124	2,592,525	-64,179	-159,569	-6.006%
1971	1,017,985	2,729,182	136,657	41,267	1.592%
1972	1,142,780	2,960,570	231,388	135,997	4.983%
1973	1,288,329	3,142,266	181,696	86,306	2.915%
1974	1,418,910	3,118,484	-23,782	-119,173	-3.793%
1975	1,596,327	3,211,926	93,442	-1,948	-0.062%
1976	1,804,633	3,437,396	225,471	130,080	4.050%
1977	2,029,341	3,630,306	192,910	97,519	2.837%
1978	2,288,332	3,801,216	170,910	75,520	2.080%
1979	2,565,477	3,829,070	27,854	-67,536	-1.777%
1980	2,863,627	3,762,979	-66,091	-161,481	-4.217%
1981	3,160,405	3,766,871	3,892	-91,498	-2.432%
1982	3,308,205	3,721,265	-45,606	-140,996	-3.743%
1983	3,531,746	3,855,618	134,353	38,962	1.047%
1984	3,807,514	4,016,365	160,747	65,357	1.695%
1985	4,014,179	4,091,926	75,561	-19,829	-0.494%
1986	4,263,057	4,417,676	325,750	230,360	5.630%
1987	4,492,687	4,492,687	75,011	-20,379	-0.461%
1988	4,782,228	4,598,296	105,609	10,219	0.227%
1989	5,041,007	4,624,777	26,481	-68,909	-1.499%
1990	5,339,334	4,655,043	30,266	-65,125	-1.408%
1991	5,613,185	4,655,043	46,117	-49,273	-1.058%
1992	5,956,636	4,850,681	149,521	54,130	1.151%

Source: Bureau of Economic Analysis

average yearly change:	95,390
maximum historic positive deviation:	230,360
maximum historic negative deviation:	- 161,481
maximum historic % positive deviation:	5.630 %
maximum historic % negative deviation:	- 6.006 %
positive rtv:	5.630 %
negative rtv:	- 4.024 %

**Table D.4
Employment**

Year	Employment	Change	Deviation	% Deviation
1969	136,323			
1970	131,215	-5,108	-6,879	-5.046%
1971	131,612	397	-1,374	-1.047%
1972	135,086	3,474	1,703	1.294%
1973	139,222	4,136	2,365	1.751%
1974	140,312	1,090	-681	-0.489%
1975	139,719	-593	-2,364	-1.685%
1976	144,880	5,161	3,390	2.426%
1977	150,719	5,839	4,068	2.808%
1978	155,419	4,700	2,929	1.943%
1979	157,794	2,375	604	0.389%
1980	158,826	1,032	-739	-0.468%
1981	157,962	-864	-2,635	-1.659%
1982	154,227	-3,735	-5,506	-3.486%
1983	156,291	2,064	293	0.190%
1984	160,959	4,668	2,897	1.854%
1985	161,954	995	-776	-0.482%
1986	163,895	1,941	170	0.105%
1987	167,476	3,581	1,810	1.104%
1988	171,049	3,573	1,802	1.076%
1989	172,442	1,393	-378	-0.221%
1990	173,592	1,150	-621	-0.360%
1991	173,934	342	-1,429	-0.823%
1992	177,055	3,121	1,350	0.776%

Source: Bureau of Economic Analysis

average yearly change:	1,771
maximum historic positive deviation:	4,068
maximum historic negative deviation:	- 6,879
maximum historic % positive deviation:	2.808 %
maximum historic % negative deviation:	- 5.046 %
positive rtv:	2.808 %
negative rtv:	- 3.381 %

**Table D.5
Population**

Year	Population	Change	Deviation	% Deviation
1969	348,600			
1970	348,200	-400	-3,113	-0.893 %
1971	352,000	3,800	1,087	0.312 %
1972	355,700	3,700	987	0.280 %
1973	360,800	5,100	2,387	0.671 %
1974	366,200	5,400	2,687	0.745 %
1975	371,300	5,100	2,387	0.652 %
1976	381,900	10,600	7,887	2.124 %
1977	386,200	4,300	1,587	0.416 %
1978	394,400	8,200	5,487	1.421 %
1979	398,600	4,200	1,487	0.377 %
1980	404,600	6,000	3,287	0.825 %
1981	409,400	4,800	2,087	0.516 %
1982	404,300	-5,100	-7,813	-1.908 %
1983	410,600	6,300	3,587	0.887 %
1984	409,200	-1,400	-4,113	-1.002 %
1985	406,100	-3,100	-5,813	-1.421 %
1986	405,000	-1,100	-3,813	-0.939 %
1987	405,800	800	-1,913	-0.472 %
1988	406,800	1,000	-1,713	-0.422 %
1989	405,700	-1,100	-3,813	-0.937 %
1990	405,900	200	-2,513	-0.619 %
1991	407,500	1,600	-1,113	-0.274 %
1992	411,000	3,500	787	0.193 %

Source: Bureau of Economic Analysis

average yearly change:	2,713
maximum historic positive deviation:	7,887
maximum historic negative deviation:	- 7,813
maximum historic % positive deviation:	2.124 %
maximum historic % negative deviation:	- 1.908 %
positive rtv:	2.124 %
negative rtv:	- 0.954 %

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Environmental Justice

E.1 INTRODUCTION

The term *Environmental Justice*, is often used interchangeably with the term *Environmental Equity*, and refers to the distribution of impacts associated with environmental problems, and the policies and procedures to reduce the differences between population groups in society that bear environmental risks. In this context *Environmental Justice* is intended to ensure the fair treatment of all segments of society. Fair treatment means that no population group should bear a disproportionate share of negative environmental risks or consequences resulting from the operation of industrial, municipal or commercial enterprises, or from the execution of Federal, state and local policies and programs. Population groups in this context refers to groups of people with a common racial or ethnic background, income level, gender, education level, age, or other discriminating feature. Consequently, this concept is based on the principle of fair treatment of people of all races, cultures, and income with respect to the development, implementation, and enforcement of environmental laws, regulations, programs or policies.

The concept of disproportionate environmental impacts on minority and low-income communities in the United States was clearly identified and documented in the 1987 report *Toxic Wastes and Race in the United States*. Since that report several additional studies have been completed which further document a correlation between the location of environmental risks and communities where minorities live. Largely in response to these reports, and other community demands for action to address the causes of disproportionate environmental impacts on minority populations, President Clinton issued Executive Order 12898 which requires each Federal agency to develop an agency-wide environmental justice strategy that identifies and addresses disproportionately high and adverse human health or environmental effects of its programs, policies and activities on minority populations and low-income populations. Further definition of the concept of *Environmental Justice* with respect to children was provided in Executive Order 13045, Protection of Children From Environmental Health Risks and Safety Risks.

E.2 EXECUTIVE ORDER 12898 - ENVIRONMENTAL JUSTICE

Executive Order 12898, issued in February 1994, directs federal agencies to identify and analyze the potential socioeconomic impacts of proposed actions in accordance with health and environmental laws. In this regard, the Executive Order requires each federal agency to make the achievement of environmental justice a part of its mission by identifying and addressing disproportionately high and adverse human health and environmental effects of its programs, policies and activities on minority populations and low-income populations.

Text from Executive Order 12898 has been reproduced below.

February 11, 1994

EXECUTIVE ORDER

FEDERAL ACTIONS TO ADDRESS ENVIRONMENTAL JUSTICE IN MINORITY POPULATIONS AND LOW-INCOME POPULATIONS

By the authority vested in me as President by the Constitution and the laws of the United States of America, it is hereby ordered as follows:

Section 1-1. IMPLEMENTATION.

1-101. Agency Responsibilities. To the greatest extent practicable and permitted by law, and consistent with the principles set forth in the report on the National Performance Review, each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States and its territories and possessions, the District of Columbia, the Commonwealth of Puerto Rico, and the Commonwealth of the Marian Islands.

1-102. Creation of an Interagency Working Group on Environmental Justice

(a) Within 3 months of the date of this order, the Administrator of the Environmental Protection Agency ("Administrator") or the Administrator's designee shall convene an Interagency Federal Working Group on Environmental Justice ("Working- Group"). The Working Group shall comprise the heads of the following executive agencies and offices, or their designees: (a) Department of Defense; (b) Department of Health and Human Services; (c) Department of Housing and Urban Development; (d) Department of Labor; (e) Department of Agriculture; (f) Department of Transportation; (g) Department of Justice; (h) Department of the Interior; (i) Department of Commerce; (j) Department of Energy; (k) Environmental Protection Agency; (l) Office of Management and Budget; (m) Office of Science and Technology Policy; (n) Office of the Deputy Assistant to the President for Environmental Policy; (o) Office of the Assistant to the President for Domestic Policy; (p) National Economic Council; (q) Council of Economic Advisers; and (r) such other Government officials as the President may designate. The Working Group shall report to the President through the Deputy Assistant to the President for Environmental Policy and the Assistant to the President for Domestic Policy.

(b) The Working Group shall:

- (1) provide guidance to Federal agencies on criteria for identifying disproportionately high and adverse human health or environmental effects on minority populations and low-income populations;
- (2) coordinate with, provide guidance to, and serve as a clearinghouse for, each Federal agency as it develops an environmental justice strategy as required by section 1-103 of this order, in order to ensure that the administration, interpretation and enforcement of programs, activities and policies are undertaken in a consistent manner;
- (3) assist in coordinating research by, and stimulating cooperation among, the Environmental Protection Agency, the Department of Health and Human Services, the Department of Housing and Urban Development, and other agencies conducting research or other activities in accordance with section 3-3 of this order;
- (4) assist in coordinating data collection, required by this order;
- (5) examine existing data and studies on environmental justice;
- (6) hold public meetings as required in section 5-502(d) of this order; and
- (7) develop interagency model projects on environmental justice that

evidence cooperation among Federal agencies.

1-103. Development of Agency Strategies.

- (a) Except as provided in section 6-605 of this order, each Federal agency shall develop an agency-wide environmental justice strategy, as set forth in subsections (b) - (e) of this section that identifies and addresses disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations. The environmental justice strategy shall list programs, policies, planning and public participation processes, enforcement, and/or rulemakings related to human health or the environment that should be revised to, at a minimum:
 - (1) promote enforcement of all health and environmental statutes in areas with minority populations and low-income populations;
 - (2) ensure greater public participation;
 - (3) improve research and data collection relating to the health of and environment of minority populations and low-income populations; and
 - (4) identify differential patterns of consumption of natural resources among minority populations and low-income populations. In addition, the environmental justice strategy shall include, where appropriate, a timetable for undertaking identified revisions and consideration of economic and social implications of the revisions.
- (b) Within 4 months of the date of this order, each Federal agency shall identify an internal administrative process for developing its environmental justice strategy, and shall inform the Working Group of the process.
- (c) Within 6 months of the date of this order, each Federal agency shall provide the Working Group with an outline of its proposed environmental justice strategy.
- (d) Within 10 months of the date of this order, each Federal agency shall provide the Working Group with its proposed environmental justice strategy.
- (e) Within 12 months of the date of this order, each Federal agency shall finalize its environmental justice strategy and provide a copy and written description of its strategy to the Working Group. During the 12 month period from the date of this order, each Federal agency, as part of its environmental justice strategy, shall identify several specific projects that can be promptly undertaken to address particular concerns identified during the development of the proposed environmental justice strategy, and a schedule for implementing those projects.
- (f) Within 24 months of the date of this order, each Federal agency shall report to the Working Group on its progress in implementing its agency-wide environmental justice strategy.
- (g) Federal agencies shall provide additional periodic reports to the Working Group as requested by the Working Group.

1-104. Reports to The President. Within 14 months of the date of this order, the Working Group shall submit to the President, through the Office of the Deputy Assistant to the President for Environmental Policy and the Office of the Assistant to the President for Domestic Policy, a report that describes the implementation of this order, and includes the final environmental justice strategies described in section 1-103(e) of this order.

Section 2-2. Federal Agency Responsibilities For Federal Programs.

Each Federal agency shall conduct its programs, policies, and activities that substantially affect human health or the environment, in a manner that ensures that such programs, policies, and activities do not have the effect of excluding persons (including populations) from participation in, denying persons (including populations) the benefits of, or subjecting persons (including populations) to discrimination under, such, programs, policies, and activities, because of their race, Color, or national origin.

Section 3-3. Research, Data Collection, and Analysis

- 3-301. Human Health and Environmental Research and Analysis.
- (a) Environmental human health research, whenever practicable and appropriate, shall include diverse segments of the population in epidemiological and clinical studies, including segments at high risk from environmental hazards, such as minority populations, low-income populations and workers who may be exposed to, substantial environmental hazards.
 - (b) Environmental human health analyses, whenever practicable and appropriate, shall identify multiple and cumulative exposures.
 - (c) Federal agencies shall provide minority populations and low-income populations the opportunity to comment on the development and design of research strategies undertaken pursuant to this order.
- 3-302. Human Health and Environmental Data Collection and Analysis To the extent permitted by existing law, including the Privacy Act, as amended (5 U.S.C. section 552a):
- (a) each federal agency, whenever practicable and appropriate, shall collect, maintain, and analyze information assessing and comparing environmental and human health risks borne by populations identified by race, national origin, or income. To the extent practical and appropriate, Federal agencies shall use this information to determine whether their programs, policies, and activities have disproportionately high and adverse human health or environmental effects on minority populations and low-income populations;
 - (b) In connection with the development and implementation of agency strategies in section 1-103 of this order, each Federal agency, whenever practicable and appropriate, shall collect, maintain and analyze information on the race, national origin, income level, and other readily accessible and appropriate information for areas surrounding facilities or sites expected to have substantial environmental, human health, or economic effect on the surrounding populations, when such facilities or sites become the subject of a substantial Federal environmental administrative or judicial action. Such information shall be made available to the public unless prohibited by law; and
 - (c) Each Federal agency, whenever practicable and appropriate, shall collect, maintain, and analyze information on the race, national origin, income level, and other readily accessible and appropriate information for areas surrounding Federal facilities that are: (1) subject to the reporting requirements under the Emergency Planning and Community Right-to-Know Act, 42 U.S.C. section 11001-11050 as mandated in Executive Order No. 12856; and (2) expected to have a substantial environmental, human health, or economic effect on surrounding populations. Such information shall be made available to the public unless prohibited by law.
 - (d) In carrying out the responsibilities in this section, each Federal agency, whenever practicable and appropriate, shall share information and eliminate unnecessary duplication of efforts through the use of existing data systems and cooperative agreements among Federal agencies and with State, local, and tribal governments.

Section 4-4. Subsistence Consumption Of Fish And Wildlife.

- 4-401. Consumption Patterns. In order to assist in identifying the need for ensuring protection of populations with differential patterns of subsistence consumption of fish and wildlife, Federal agencies, whenever practicable and appropriate, shall collect, maintain, and analyze information on the consumption patterns of populations who principally rely on fish and/or wildlife for subsistence. Federal agencies shall communicate to the public the risks of those consumption patterns.
- 4-402. Guidance. Federal agencies, whenever practicable and appropriate, shall work in a coordinated manner to publish guidance reflecting the latest scientific information available concerning methods for evaluating the human health risks associated with the consumption of pollutant-bearing fish or wildlife. Agencies shall consider such guidance in developing their policies and rules.

Section 5-5. Public Participation and Access to Information

- (a) The public may submit recommendations to Federal agencies relating to the incorporation of environmental justice principles into Federal agency programs or policies. Each Federal agency shall convey such recommendations to the Working Group.
- (b) Each Federal agency may, whenever practicable and appropriate, translate crucial public documents, notices, and hearings relating to human health or the environment for limited English speaking populations.
- (c) Each Federal agency shall work to ensure that public documents, notices, and hearings relating to human health or the environment are concise, understandable, and readily accessible to the public.
- (d) The Working Group shall hold public meetings, as appropriate, for the purpose of fact-finding, receiving public comments, and conducting inquiries concerning environmental justice. The Working Group shall prepare for public review a summary of the comments and recommendations discussed at the public meetings.

Section 6-6. General Provisions.

- 6-601. Responsibility for Agency Implementation. The head of each Federal agency shall be responsible for ensuring compliance with this order. Each Federal agency shall conduct internal reviews and take such other steps as may be necessary to monitor compliance with this order.
- 6-602. Executive Order No. 12250. This Executive order is intended to supplement but not supersede Executive Order No. 12250, which requires consistent and effective implementation of various laws prohibiting discriminatory practices in programs receiving Federal financial assistance. Nothing herein shall limit the effect or mandate of Executive Order No. 12250.
- 6-603. Executive Order No. 12875. This Executive order is not intended to limit the effect or mandate of Executive Order No. 12875.
- 6-604. Scope. For purposes of this order, Federal agency means any agency on the Working Group, and such other agencies as may be designated by the President, that conducts any Federal program or activity that substantially affects human health or the environment. Independent agencies are requested to comply with the provisions of this order.
- 6-605. Petitions for Exemptions. The head of a Federal agency may petition the President for an exemption from the requirements of this order on the grounds that all or some of the petitioning agency's programs or activities should not be subject to the requirements of this order.
- 6-606. Native American Programs. Each Federal agency responsibility set forth under this order shall apply equally to Native American programs. In addition the Department of the Interior, in coordination with the Working Group, and, after consultation with tribal leaders, shall coordinate steps to be taken pursuant to this order that address Federally-recognized Indian

Tribes.

- 6-607. Costs. Unless otherwise provided by law, Federal agencies shall assume the financial costs of complying with this order.
- 6-608. General. Federal agencies shall implement this order consistent with, and to the extent permitted by, existing law.

- 6-609. Judicial Review. This order is intended only to improve the internal management of the executive branch and is not intended to, nor does it create any right, benefit, or trust responsibility, substantive or procedural, enforceable at law or equity by a party against the United States, its agencies, its officers, or any person. This order shall not be construed to create any right to judicial review involving the compliance or noncompliance of the United States, its agencies, its officers, or any other person with this order.

William J. Clinton
THE WHITE HOUSE,
February 11, 1994

E.3 EXECUTIVE ORDER 13045 - PROTECTION OF CHILDREN FROM ENVIRONMENTAL HEALTH RISKS AND SAFETY RISKS

On 21 April 1997, President Clinton issued Executive Order 13045, Protection of Children From Environmental Health Risks and Safety Risks. This Executive Order recognizes that a growing body of scientific knowledge demonstrates that children may suffer disproportionately from environmental health and safety risks, due in part to a child's size and still maturing bodily systems. To remedy this problem, this Executive Order requires Federal agencies, to the extent permitted by law and mission, to identify and assess environmental health and safety risks which may disproportionately affect children. The Order further requires Federal agencies to ensure that its policies, programs, activities, and standards address these disproportionate risks. The Order defines environmental health and safety risks as "risks to health or the safety that are attributable to products or substances that the child is likely to come in contact with or ingest (such as the air we breath, the food we eat, the water we drink or use for recreation, the soil we live on, and the products we use or are exposed to).

Text from Executive Order 13045 has been reproduced below.

EXECUTIVE ORDER 13045

PROTECTION OF CHILDREN FROM ENVIRONMENTAL HEALTH RISKS AND SAFETY RISKS

By the authority vested in me as President by the Constitution and the laws of the United States of America, it is hereby ordered as follows:

Section I. Policy.

- 1-101. A growing body of scientific knowledge demonstrates that children may suffer disproportionately from environmental health risks and safety risks. These risks arise because: children's neurological, immunological, digestive, and other bodily systems are still developing; children eat more food, drink more fluids, and breathe more air in proportion to their body weight than adults; children's size and weight may diminish their protection from standard safety features; and children's behavior patterns may make them more susceptible to accidents because they are less able to protect themselves. Therefore, to the extent permitted by law and appropriate, and consistent with the agency's mission, each Federal agency:
- (a) shall make it a high priority to identify and assess environmental health risks and safety risks that may disproportionately affect children; and
 - (b) shall ensure that its policies, programs, activities, and standards address disproportionate risks to children that result from environmental health risks or safety risks.
- 1-102. Each independent regulatory agency is encouraged to participate in the implementation of this order and comply with its provisions.

Section 2. Definitions.

The following definitions shall apply to this order.

- 2-201. "Federal agency" means any authority of the United States that is an agency under 44 U.S.C. 3502(1) other than those considered to be independent regulatory agencies under 44 U.S.C. 3502(5). For purposes of this order, "military departments," as defined in 5 U.S.C 102, are covered under the auspices of the Department of Defense.
- 2-202. "Covered regulatory action" means any substantive action in a rulemaking, initiated after the date of this order or for which a Notice of Proposed Rulemaking is published 1 year after the date of this order, that is likely to result in a rule that may:
- (a) be "economically significant" under Executive Order 12866 (a rulemaking that has an annual effect on the economy of \$100 million or more or would adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities); and
 - (b) concern an environmental health risk or safety risk that an agency has reason to believe may disproportionately affect children.
- 2-203. "Environmental health risks and safety risks" mean risks to health or to safety that are attributable to products or substances that the child is likely to come in contact with or ingest (such as the air we breath, the food we eat, the water we drink or use for recreation, the soil we live on, and the products we use or are exposed to).

Section 3. Task Force on Environmental Health Risks and Safety Risks to Children.

- 3-301. There is hereby established the Task Force on Environmental Health Risks and Safety Risks to Children ("Task Force").
- 3-302. The Task Force will report to the President in consultation with the Domestic Policy Council, the National Science and Technology Council, the Council on Environmental Quality, and the Office of Management and Budget (OMB).
- 3-303. Membership. The Task Force shall be composed of the:
- (a) Secretary of Health and Human Services, who shall serve as a Co-Chair of the Council;
 - (b) Administrator of the Environmental Protection Agency, who shall serve as a Co-Chair of the Council;
 - (c) Secretary of Education;
 - (d) Secretary of Labor;
 - (e) Attorney General;
 - (f) Secretary of Energy;
 - (g) Secretary of Housing and Urban Development;
 - (h) Secretary of Agriculture;
 - (i) Secretary of Transportation;
 - (j) Director of the Office of Management and Budget,
 - (k) Chair of the Council on Environmental Quality;
 - (l) Chair of the Consumer Product Safety Commission;
 - (m) Assistant to the President for Economic Policy;
 - (n) Assistant to the President for Domestic Policy;
 - (o) Assistant to the President and Director of the office of Science and Technology Policy;
 - (p) Chair of the Council of Economic Advisers; and
 - (q) Such other officials of executive departments and agencies as the President may, from time to time, designate.
- Members of the Task Force may delegate their responsibilities under this order to subordinates.
- 3-304. Functions. The Task Force shall recommend to the President Federal strategies for children's environmental health and safety, within the limits of the Administration's

budget' to include the following elements:

- (a) statements of principles, general policy, and targeted annual priorities to guide the Federal approach to achieving the goals of this order;
- (b) a coordinated research agenda for the Federal Government, including steps to implement the review of research databases described in section 4 of this order;
- (c) recommendations for appropriate partnerships among Federal, State, local, and tribal governments and the private, academic, and nonprofit sectors;
- (d) proposals to enhance public outreach and communication to assist families in evaluating risks to children and in making informed consumer choices;
- (e) an identification of high-priority initiatives that the Federal Government has undertaken or will undertake in advancing protection of children's environmental health and safety; and
- (i) a statement regarding the desirability of new legislation to fulfill or promote the purposes of this order.

- 3-305. The Task Force shall prepare a biennial report on research, data, or other information that would enhance our ability to understand, analyze, and respond to environmental health risks and safety risks to children. For purposes of this report, cabinet agencies and other agencies identified by the Task Force shall identify and specifically describe for the Task Force key data needs related to environmental health risks and safety risks to children that have arisen in the course of the agency's programs and activities.

The Task Force shall incorporate agency submissions into its report and ensure that this report is publicly available and widely disseminated. The Office of Science and Technology Policy and the National Science and Technology Council shall ensure that this report is fully considered in establishing research priorities.

- 3-306. The Task Force shall exist for a period of 4 years from the first meeting. At least 6 months prior to the expiration of that period, the member agencies shall assess the need for continuation of the Task Force or its functions, and make appropriate recommendations to the President.

Section 4. Research Coordination and Integration.

- 4-401. Within 6 months of the date of this order, the Task Force shall develop or direct to be developed a review of existing and planned data resources and a proposed plan for ensuring that researchers and Federal research agencies have access to information on all research conducted or funded by the Federal Government that is related to adverse health risks in children resulting from exposure to environmental health risks or safety risks. The National Science and Technology Council shall review the plan.
- 4-402. The plan shall promote the sharing of information on academic and private research. It shall include recommendations to encourage that such data, to the extent permitted by law, is available to the public, the scientific and academic communities, and all Federal agencies.

Section 5. Agency Environmental Health Risk or Safety Risk Regulations.

- 5-501. For each covered regulatory action submitted to OMB's Office of Information and Regulatory Affairs (OIRA) for review pursuant to Executive Order 12866, the issuing agency shall provide to OIRA the following information developed as part of the agency's decision making process' unless prohibited by law:
- (a) an evaluation of the environmental health or safety effects of the planned regulation on children; and
 - (b) an explanation of why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by the agency.

- 5-502. In emergency situations, or when an agency is obligated by law to act more quickly than normal review procedures allow, the agency shall comply with the provisions of this section to the extent practicable. For those covered regulatory actions that are governed by a court-imposed or statutory deadline, the agency shall, to the extent practicable, schedule any rulemaking proceedings so as to permit sufficient time for completing the analysis required by this section.
- 5-503. The analysis required by this section may be included as part of any other required analysis, and shall be made part of the administrative record for the covered regulatory action or otherwise made available to the public, to the extent permitted by law.

Section 6. Interagency Forum on Child and Family Statistics.

- 6-601. The Director of the OMB ("Director") shall convene an Interagency Forum on Child and Family Statistics ("Forum"), which will include representatives from the appropriate Federal statistics and research agencies. The Forum shall produce an annual compendium ("Report") of the most important indicators of the well-being of the Nation's children.
- 6-602. The Forum shall determine the indicators to be included in each Report and identify the sources of data to be used for each indicator. The Forum shall provide an ongoing review of Federal collection and dissemination of data on children and families, and shall make recommendations to improve the coverage and coordination of data collection and to reduce duplication and overlap.
- 6-603. The Report shall be published by the Forum in collaboration with the National Institute of Child Health and Human Development. The Forum shall present the first annual Report to the President, through the Director, by July 31, 1997. The Report shall be submitted annually thereafter, using the most recently available data.

Section 7 General Provisions.

- 7-701. This order is intended only for internal management of the executive branch. This order is not intended, and should not be construed to create, any right, benefit, or trust responsibility, substantive or procedural, enforceable at law or equity by a party against the United States, its agencies, its officers, or its employees. This order shall not be construed to create any right to judicial review involving the compliance or noncompliance with this order by the United States, its agencies, its officers, or any other person.
- 7-702. Executive Order 12606 of September 2, 1987 is revoked.

WILLIAM J. CLINTON
THE WHITE HOUSE
April 21, 1997

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**APPENDIX F: FORT McCLELLAN DEVELOPMENT COMMISSION
REUSE PLAN - SUMMARY**

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Appendix F: FMDC Reuse Plan - Summary

F.1 INTRODUCTION

The Fort McClellan Redevelopment Commission (FMDC) and its predecessor, the Fort McClellan Reuse and Redevelopment Authority (FMRRA) completed the Fort McClellan Reuse Plan - Phase 2 Report, Preferred Land Use Plan in June 1997 and the Fort McClellan Comprehensive Reuse Plan - Implementation Strategy in November 1997. The Phase 2 report compared alternative development plans and compared these plans against development goals that were developed by the FMRRA during the Phase 1 analysis. The Implementation Strategy report provided details regarding the staging of the FMC redevelopment. Goals developed by the FMDC (FMRRA), during their analysis, for the evaluation of alternative reuse plans included the following:

- Provide a unified, logical master plan
- Replace military and civilian jobs
- Enhance economic opportunities for Calhoun County and the surrounding region
- Recommend uses consistent with market demand
- Provide a logical strategy for phasing and marketing
- Balance public and private uses
- Emphasize sustainable development and recruit environment-friendly employers
- Maintain the natural beauty of Fort McClellan
- Retain the historic core
- Provide opportunities for public recreation
- Ensure interim leasing is consistent with long term plan

The FMDC (FMRRA) Preferred Land Use Plan and the Implementation Strategy were used as a basis for the reuse alternatives evaluated in the EIS.

F.2 FMDC REUSE PLAN SUMMARY

Copies of the complete FMDC Implementation Plan (FMRRA 1997d) and the FMDC Existing Conditions and Alternative Plans report (FMRRA, 1997e) are available for review at the Anniston - Calhoun County Public Library, 108 E. 10th Street, Anniston, Alabama 36202. Pages ES-7 through ES-12, page 4, and Appendix 1 of the Implementation Plan (FMRRA, 1997d) which include a discussion of the FMDC's Preferred Land Use Alternative have been photocopied and are presented in the following pages.

3.0 THE PREFERRED LAND USE PLAN

The goals and conclusions of Phase 1 were used to develop three different future visions of Fort McClellan. These alternative “snapshots” showed what the Fort might look like in 2020, and each responded in a different way to the current market realities:

Option A: Assumed that the current market trends continue; that all of the public sector requests which had been tabled, at the time, are accommodated; that public investment in infrastructure is minimized

Option B: Assumed that Fort McClellan’s history as a training facility becomes the main marketing asset; that the majority of new activity at the Fort centers on public and private sector training initiatives.

Option C: Assumed that the Fort becomes a regional employment center; that investment in infrastructure is high, but that so also is the return on that investment.

These three alternative scenarios were presented at three workshops in January 1997. The first involved members and staff of the Reuse Authority. The second workshop involved the public. The third workshop involved an invited panel of developers from other parts of the Southeast.

The reaction of the three disparate groups to the three options was remarkably similar. Most participants preferred Option C, expressing the desire for a bold vision for Fort McClellan as a catalyst for regional economic development. On the other hand, enthusiasm was tempered by the desire to see refined market data and costs.

The consultant team took away the results of the workshops and embarked on a detailed analysis of the three alternatives, including market assessment, job creation potential, infrastructure costs, and potential tax yields and revenues. Analysis also included prioritization of environmental cleanup areas, estimation of demolition costs, a description and cost of new road construction, and land use requirements.

The Preferred Land Use Plan fulfills the objectives of the community, while addressing constraints that include market size, environmental disposition, and capital and revenue costs. It forms the base upon which the phased implementation plan has been developed.

The key physical features of the Preferred Land Use Alternative are:

- A mix of uses, with a majority of the living areas south of Cane Creek and the majority of the working areas north of Cane Creek

- The creation of a series of living, working, learning and shopping neighborhoods that create a mixed-use community
- An open space network that links the various neighborhoods and provides a valuable public amenity
- A corridor cleared of UXO and along which the Eastern Bypass is built
- A four-lane parkway (largely following the existing road network) that joins the Eastern Bypass
- An upgrading of the rail line and its extension to the north, to provide rail access to five of the industrial sites
- The creation of a separate truck route, using an existing road to link the proposed spine road at the Rail Industrial Park with the Eastern Bypass south of Yahoo Lake
- Access points to the property at five locations along Highway 21. Two of these entrances provide access directly to the spine road, the other three provide access to specific neighborhoods.
- A nature reserve in the Choccolocco Mountains

3.1 RESIDENTIAL

Economic analyses identified the potential for a small but active market for homes at Fort McClellan and the opportunity to create a retirement community for the purposes of job creation. As development at the Fort accelerates, it is likely to generate a further, internal, demand for homes of various types. Several residential areas have been identified in the Preferred Land Use Alternative, including:

Baker Estates and Homes Adjacent to Summerall Gate

This area includes a combination of existing housing units and potential new development that includes both single-family attached and detached units.

Buckner Circle

This historic housing area includes renovated and reused single family housing in a high quality historic neighborhood.

A Planned Retirement Community

Economic analyses have highlighted the striking demographic trends that will affect senior age groups over the next 25 years. There is an opportunity for Fort McClellan to exploit these trends by establishing, with private sector

developers, a planned retirement community. The community would be aimed at the Southeastern United States and would support the State of Alabama's objective to attract increasing numbers of retirees to the region.

The retirement community comprises:

The Buckner Retirement Development, which includes the reuse of approximately 60 existing single story housing units in Avery Drive, with the potential to construct an additional 440 units. This component is intended to serve the 70- to 85-year-old retirees, most of whom will be attracted from within 100 miles of Fort McClellan. In addition, a new executive golf course adjacent to these homes provides the potential to create a high quality, single-family residential community aimed primarily at 50- to 70-year-old retirees from the wider Southeast region.

Assisted Care Retirement (clustered around the hospital). This community is provided with a relatively high degree of assisted care and includes retirees 80 years old and above who move to the community from within a 50-mile radius. The hospital is a focal point of this complex and could provide medical care to the residents of this community as well as the other retirement communities.

3.2 RETAIL

Two types of retail development have been identified; small-scale service retailing to support the immediate needs of local residents and workers and the longer-term opportunity to support larger, regional shopping needs. The Preferred Land Use Alternative, therefore, provides:

- A series of retail sites throughout the property to serve the proposed neighborhoods as well as serve surrounding communities.
- Two sites along Highway 21, one at the southern end of the property adjacent to the Baker Estates community and one at the northern end near the office and industrial employment areas.
- A small town center, close to the current heart of the Fort. The town center would include community uses such as a post office, meeting hall, commercial recreation (i.e. bowling alley/roller skating rink) and retail uses such as restaurants and a convenience store.
- A large reserve site, at the intersection of the Eastern Bypass and the McClellan Parkway, which would provide the opportunity to develop a commercial complex to serve the wider region.

3.3 INDUSTRIAL, OFFICE AND RESEARCH

Economic analyses have identified the opportunity to position Fort McClellan as a regional employment center. There are few serviced sites in single ownership, of 1,000 acres or more, in Alabama. In addition, the Eastern Bypass will provide rapid access to Interstate 20, which connects Birmingham and Atlanta. Provision of one or more large reserve sites, close to enhanced road and rail facilities, will help place Fort McClellan high on the list of preferred industrial locations in the Southeast. In order to establish the Fort's identity as an employment location, the Preferred Land Use Alternative provides:

- Several large parcels, intended for employment uses, north of Cane Creek
- The McClellan Office and Research Park, directly north of Cane Creek, including Sibert Hall and Truman Gymnasium
- Research uses
- Several large industrial parcels north of the McClellan Office and Research Park
- The McClellan Rail Industrial Park, east of the Parkway

These parcels will benefit from access to the upgraded and extended rail line. East of the Parkway, several other industrial parcels provide good access to the Parkway and Highway 21.

3.4 AGRICULTURE AND AGRIBUSINESS

Agriculture and agribusiness are important facets of the regional economy and provide opportunities for the interim use of parts of Fort McClellan. The northern section of the Fort, indicated on the Preferred Plan as industrial land, could be allocated for agriculture use in the short term, prior to industrial development. Management of forest lands at the Fort should also be continued to ensure sound land stewardship.

3.5 TRAINING/EDUCATION

Fort McClellan is a training establishment with many campus-style features. It is well served by its environment, facilities, and size to be a potential location for several private and public sector national and regional training centers. To this end the Preferred Land Use Alternative provides:

- Two training/education areas, one south and one north of Cane Creek. The area south of Cane Creek is focused around the existing MP School and Polygraph institute area. This campus is intended to serve the

Education Consortium. The area to the north of Cane Creek is located within the existing Reception Center and is intended to provide a special training and conference facility.

- The Reuse Authority, in agreement with the Department of Justice, has established the National Center for Domestic Preparedness at Fort McClellan (CDP). Individual sites and buildings have been earmarked for this activity. The Reuse Plan provides sufficient flexibility for this initiative to be accommodated.

3.6 RECREATION/OPEN SPACE

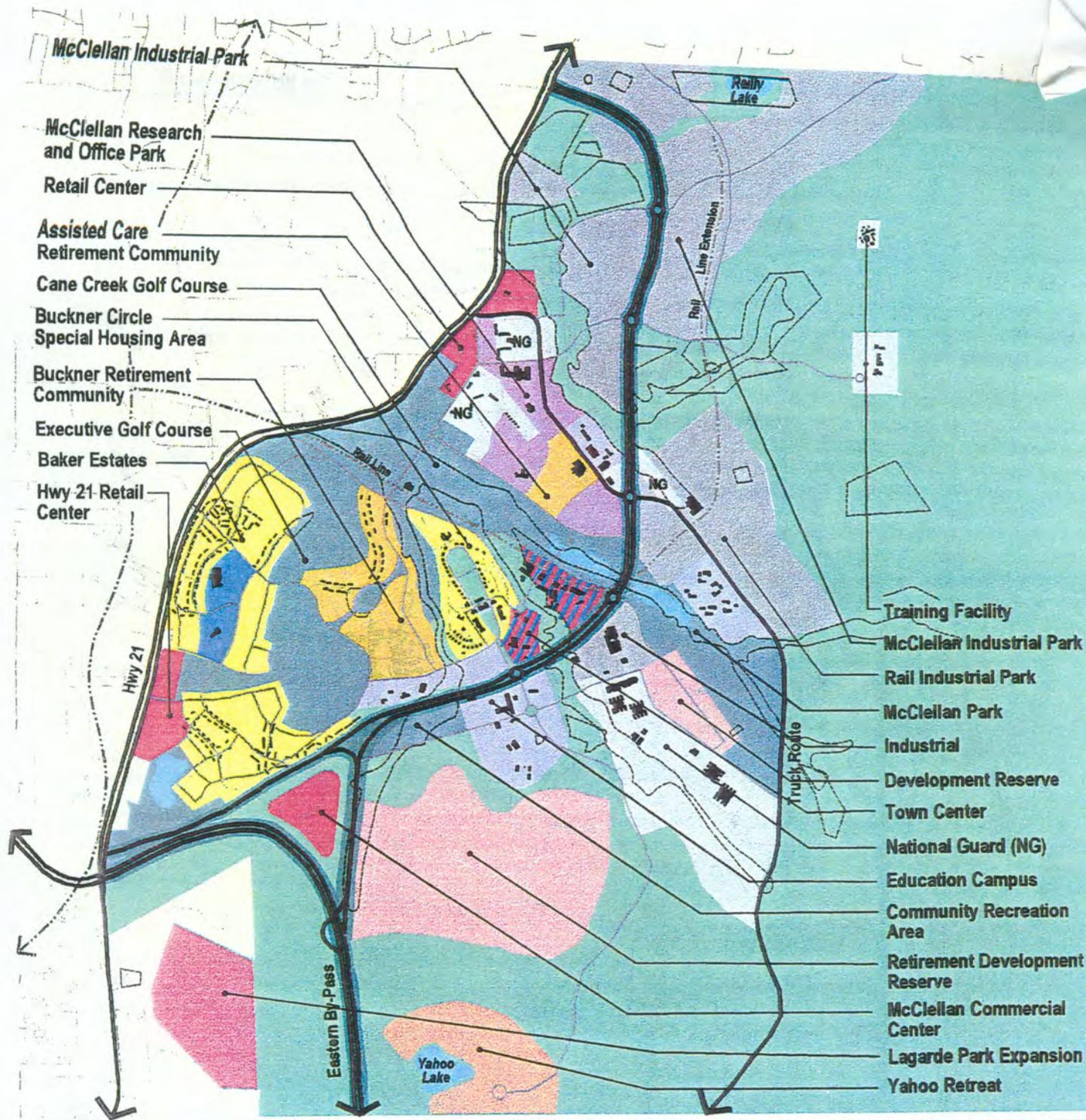
The amount of land available at Fort McClellan enables the adoption of relatively low development densities, thus improving the amenity available to each of the preferred land uses and helping to build the long-term value of the area. The community also benefits from provision in the Preferred Land Use Alternative of:

- Open space that is a network of passive and active recreation areas. In this way, each of the neighborhoods is linked to the larger open space system surrounding the site.
- Active recreation areas, including Cane Creek Golf Course, the proposed new executive golf course adjacent to the retirement community, and Guillion Recreation Fields, which serve as a major active recreation area for both the proposed neighborhoods as well as the surrounding communities.
- Town Center Park, which primarily provides a natural amenity for the Town Center.
- Buckner Park, which is located in Buckner Circle and provides an amenity for this historic housing area.
- A Trail system which connects these different open spaces with their surrounding neighborhoods.

3.7 SPECIAL USE AREAS/SPECIAL USE BUILDINGS

In addition to the main economic drivers described above, and identified by economic analyses, several special uses are accommodated in the Preferred Plan. It is imperative that the personal property contained in special use buildings be retained to support job creation. Without the personal property in special use buildings these facilities will not be reused and lost jobs will not be replaced. These include:

- The existing school and youth services facility that will provide a community amenity for the Baker Estates Community as well as surrounding neighborhoods
- Lagarde Park Expansion. The property adjacent to Lagarde Park will be utilized for additional cultural and recreation facilities.
- Yahoo Lake and Retreat Center, which will serve as a recreation and retreat complex for local, regional, and national groups
- The WAC museum, which ideally will continue in its current facility
- The National Guard, which will utilize facilities in several locations for administration and training
- A local Veteran's Cemetery
- Additional land for Camp Lee
- Additional land for Coosa Valley Youth Services
- Noble Army Hospital
- The Dental Facility
- The Heavy Vehicle Maintenance Facility (350)
- Central Shipping and Receiving
- The Elementary School



LAND USE PLAN • 2020

FORT MCCLELLAN REUSE PLAN

LEGEND

<ul style="list-style-type: none"> Retail Office Residential Retirement 	<ul style="list-style-type: none"> Industrial Education/Training Public Use Active Recreation 	<ul style="list-style-type: none"> Passive Recreation Cultural National Guard Retreat 	<ul style="list-style-type: none"> Development Reserve Lake
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Prepared by:
 ED&W, Inc.
 Atlanta, GA and Alexandria, VA
 Hammer Silver George
 Silver Spring, MD
 ECG
 Anniston, AL and Haines, VA

Kutak Rock
 Washington, DC
 KPS Group, Inc.
 Birmingham, AL
 WB Bishop & Associates
 Oklawaha, FL



FORT MCCLELLAN REUSE AND REDEVELOPMENT AUTHORITY

APPENDIX 1

**Fort McClellan Reuse Plan
Implementation Strategy**

A National Wildlife Refuge at Fort McClellan

The U.S. Fish and Wildlife Service (Service), Southeast Region, in full partnership with the Alabama Department of Conservation, Game and Fish Division, proposes to establish the Mountain Longleaf National Wildlife Refuge on approximately 10,000 acres of unique habitat at Fort McClellan, Alabama.

Several organizations, including the Longleaf Alliance, Alabama Natural Heritage Program, Auburn University, The Nature Conservancy (Alabama Chapter), Alabama Audubon Council, Alabama Environmental Council, Alabama Wildlife Federation, and Alabama Ornithological Society have urged the LRA to preserve the longleaf pine and hardwood habitat on Fort McClellan. The Service wrote the LRA in December, 1996, and indicated a desire to work with the LRA in formulating plans to preserve this valuable habitat. This letter proposed a partnership concept between the Service and the Alabama Department of Conservation and Natural Resources, Game and Fish Division, to ensure that this occurs. The Alabama Game and Fish Division strongly supports the refuge proposal and will share in the management responsibilities. Fort McClellan has offered a public hunting program for many years and both the Alabama Game and Fish Division and the Fish and Wildlife Service want to ensure that these opportunities are continued after the base closes.

The objectives of the refuge proposal are:

- 1) to preserve and enhance the natural mountain longleaf pine ecosystem,
- 2) to help perpetuate the neotropical migratory bird resource,
- 3) to preserve a natural diversity and abundance of fauna and flora with special emphasis on endangered and threatened species,
- 4) to provide compatible, wildlife-dependent recreational opportunities such as hunting, fishing, wildlife observation, photography, etc., and
- 5) to promote an understanding and appreciation of fish and wildlife ecology .

These objectives will be accomplished through a partnership between the Service and the Alabama Game and Fish Division. Both agencies will be actively involved in the on ground management at the refuge. Several coordination meetings have been held and the plans currently being formulated propose that the Game and Fish Division would have responsibility for hunting and fishing programs and also any hunter education facilities such as a shooting range. The Service would have responsibility for endangered species, migratory birds, preservation of the mountain longleaf pine habitat, and environmental education/interpretation. Obviously some of the responsibilities, such as habitat management, will require joint efforts. Other potential partners include the city of Anniston, the Anniston Museum of Natural History and Jacksonville State University.

The proposed refuge area would come to the Service through an interagency transfer, so no Service acquisition funds will be required. This transfer process may take several years to complete due to contaminant cleanup issues. In the interim, the Service and Alabama Game and Fish Division will attempt to develop a Memorandum of Agreement with Army for management of Fort McClellan.

Air Quality Supporting Documentation

G.1 INTRODUCTION

This appendix has been prepared to provide pertinent information and supporting documentation that is used for the air quality analysis. This document is not a report, it merely provides reference documentation for the EIS. This appendix contains the following sections:

- Proposed Changes to National Ambient Air Quality Standards
- Calculations for Mobile Source Emissions
- Calculations for Fugitive PM-10 Emissions from Construction Activities
- Calculations for Construction Equipment Emissions
- Calculations for Prescribed Burning Emissions Reduction

G.2 PROPOSED CHANGES TO NATIONAL AMBIENT AIR QUALITY STANDARDS

On July 16, 1997, President Clinton approved the issuance of new air quality standards designed to improve the lives of Americans. A copy of the President's memorandum and the Implementation Plan for Revised Air Quality Standards has been reproduced below.

THE WHITE HOUSE
WASHINGTON
July 16, 1997

MEMORANDUM FOR THE ADMINISTRATOR OF THE ENVIRONMENTAL PROTECTION AGENCY

SUBJECT: Implementation of Revised Air Quality Standards for Ozone and Particulate Matter

I have approved the issuance of new air quality standards to provide important new health protection for all Americans by further controlling pollution from ozone and particulate matter. These new standards promise to improve the lives of millions of Americans in coming years.

Consistent with my Administration's approach to regulatory decision making, I also want to ensure that these new standards are implemented in a common sense, cost-effective manner. It is critically important that these standards be implemented in the most flexible, reasonable, and least burdensome manner, and that the Federal Government work with State and local governments and other interested parties to this end.

I have determined that there are certain essential elements of an approach to implementation that will accomplish these goals. I direct you to use the following elements when implementing the new air quality standards:

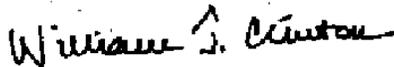
1. Implementation of the air quality standards is to be carried out to maximize common sense, flexibility, and cost effectiveness;
2. Implementation shall ensure that the Nation continues its progress toward cleaner air by respecting the agreements already made by States, communities, and businesses to clean up the air, and by avoiding additional burdens with respect to the beneficial measures already underway in many areas. Implementation also shall be structured to reward State and local governments that take early action to provide clean air to their residents; and to respond to the fact that pollution travels hundreds of miles and crosses many State lines;
3. Implementation shall ensure that the Environmental Protection Agency ("Agency") completes its next periodic review of particulate matter, including review by the Clean Air Scientific Advisory Committee, within 5 years of issuance of the new standards, as contemplated by the Clean Air Act. Thus, by July 2002, the Agency will have determined, based on data available from its review, whether to revise or maintain the standards. This determination will have been made before any areas have been designated as "nonattainment" under the PM_{2.5} standards and before imposition of any new controls related to the PM_{2.5} standards; and
4. Implementation is to be accomplished with the minimum amount of paperwork and shall seek to reduce current paperwork requirements wherever possible.

Excellent preliminary work on the strategy for carrying out these implementation principles has been accomplished by an interagency Administration group and I commend that group for these important efforts. The group's work is set out in the attached plan, which is hereby incorporated by reference.

In order for the implementation of these standards to proceed in accordance with the goals I have established, I hereby direct you, in consultation with all affected agencies and parties, to undertake the steps appropriate under law to carry out the attached plan and to complete all necessary guidance and rulemaking no later than December 31, 1998.

This memorandum is for the purposes of internal Administration management only, and is not judicially reviewable.

You are authorized and directed to publish this determination and plan in the Federal Register.



Implementation Plan for Revised Air Quality Standards

An interagency Administration group has discussed and evaluated approaches for the common sense, flexible, and cost effective implementation of the revised National Ambient Air Quality Standards (NAAQS) for ozone and particulate matter (PM). This document reflects the preliminary work by that group on a strategy for implementing these health-based standards consistent with the principles discussed by President Clinton in his announcement of the standards. The Environmental Protection Agency (EPA) will continue to work with other Federal agencies, State and local governments, small businesses, industry, and environmental and public health groups to fully develop and implement this strategy.

This implementation plan provides a road map for areas to attain the standards and protect public health without sacrificing economic growth. The goals of the plan are to: 1) maintain the progress currently being made toward cleaner air and respect the agreements and technological progress already made by communities and businesses to pursue clean air; 2) reward State and

local governments and businesses that take early action to reduce air pollution levels through cost-effective approaches; 3) respond to the fact that pollution can travel hundreds of miles and cross many State lines; 4) work with the States to develop control programs which employ regulatory flexibility to minimize economic impacts on businesses large and small to the greatest possible degree consistent with public health protection; 5) minimize planning and regulatory burdens for State and local governments and businesses where air quality problems are regional, not local, in nature; 6) ensure that air quality planning and related Federal, State, and local planning are coordinated; and 7) recognize the substantial lead time necessary for State and local governments and businesses to plan for and meet standards for a new indicator of PM.

The Clean Air Act (CAA) requires the EPA to set air quality standards to protect the public health and the environment without consideration of costs. The 1997 revisions to the NAAQS for ground level ozone and PM fulfill this requirement. However, the Act recognizes that the EPA and the States must work together to develop cost-effective, flexible, and fair implementation plans if the standards are to be met as expeditiously as practicable.

There are a number of important linkages between these pollutants. There is also a linkage between these pollutants and their precursors and regional haze problems. Promulgation of the two standards simultaneously provides a more complete description of the health and environmental effects associated with two of the major components of air pollution. It can help States and local areas better manage their air quality by focusing on the common precursors of both pollutants and provides the opportunity to work jointly with industry to address common sources of multiple air pollutants in a comprehensive manner. This will lead to more effective and efficient protection of public health and the environment.

In addition to the interagency process, the EPA has been soliciting other input. While the review of the ozone and PM NAAQS was underway, the EPA convened a group of air quality experts representing industry, environmental, and public health groups; State and local governments; other Federal agencies; and academia under the Federal Advisory Committee Act (FACA). This group was charged by the Administrator of the EPA to develop innovative, flexible, and cost-effective implementation strategies that utilize a mix of control measures to address ozone, PM, and regional haze. This group will continue working with the EPA to further develop this strategy.

In addition, all Federal agencies will continue to do their part in carrying out the Federal responsibilities in the State/Federal partnership that has been so successful in improving air quality in the United States. In addition, the EPA, in partnership with the other Federal agencies, has developed an interagency research program that is described in Appendix 1 for the coordination of future research on both ground level ozone and PM.

Implementation of Ozone Standard

Phase-out of 1-hour standard

The revised ozone standard is intended to replace the current 1-hour standard with an 8-hour standard. However, the 1-hour standard will continue to apply to areas not attaining it for an interim period to ensure an effective transition to the new 8-hour standard.

Subpart 2 of part D of Title I of the CAA addresses the requirements for different classifications of nonattainment areas that do not meet the current 1-hour standard (i.e., marginal, moderate, serious, and severe). These requirements include such items as mandatory control measures, annual rate of progress requirements for emission reductions, and offset ratios for the emissions from new or modified stationary sources. These requirements have contributed significantly to the improvements in air quality since 1990. Although the EPA initially offered an interpretation of the CAA in the proposed Interim Implementation Policy (IIP) (61 FR 65764, December 13, 1996) under which the provisions of Subpart 2 would not apply to existing ozone nonattainment areas once a new ozone NAAQS is promulgated, the EPA has reconsidered that interpretation after receiving comments on the proposed IIP. Based on EPA's legal review, the Agency has concluded that Subpart 2 should continue to apply as a matter of law for the purpose of achieving attainment of the current 1-hour standard. Once an area attains the 1-hour standard, those provisions will no longer apply and the area's implementation of the new 8-hour standard

would be governed only by the provisions of Subpart 1 of Part D of Title I.

To streamline the process and minimize the burden on existing nonattainment areas, the 1-hour standard will cease to apply to an area upon a determination by the EPA that an area has attained air quality that meets the 1-hour standard. In light of the implementation of the new 8-hour standard, which is more stringent than the existing 1-hour standard, States will not have to prepare maintenance plans for those areas that attain the 1-hour standard. Within 90 days, the EPA will publish an action identifying existing nonattainment areas and maintenance areas to which the 1-hour standard will cease to apply because they have attained the 1-hour standard.

For areas where the air quality does not currently attain the 1-hour standard, the 1-hour standard will continue in effect. The provisions of Subpart 2 would also apply to designated nonattainment areas until such time as each area has air quality meeting the 1-hour standard. At that time, the EPA will take action so that the 1-hour standard no longer applies to such areas. In any event, the "bump-up" provisions of Subpart 2, which require areas not attaining the standard by the applicable attainment date to be reclassified to the next higher classification, will not be triggered by the failure of any area to meet the new 8-hour standard. The purpose of retaining the current standard is to ensure a smooth legal and practical transition to the new standard.

Implementation of New 8-hour Ozone standard

This section discusses the general timeline for implementing the 8-hour standard, the importance of regional approaches to address ozone and options for classifying and designating areas relative to the 8-hour ozone NAAQS.

General Timeline

Following promulgation of a revised NAAQS, the Clean Air Act provides up to 3 years for State governors to recommend and the EPA to designate areas according to their most recent air quality. In addition, States will have up to 3 years from designation to develop and submit State Implementation Plans (SIPs) to provide for attainment of the new standard. Under this approach, areas would be designated as nonattainment for the 8-hour standard by 2000 and would submit their nonattainment SIPs by 2003. The Act allows up to 10 years plus two 1-year extensions from the date of designation for areas to attain the revised NAAQS.

Regional Strategy

Ozone is a pollutant that travels great distances and it is increasingly clear that it must be addressed as a regional problem. For the past 2 years the EPA has been working with the 37 most eastern States through the Ozone Transport Assessment Group (OTAG) in the belief that reducing interstate pollution will help all areas in the OTAG region attain the NAAQS. A regional approach can reduce compliance costs and allow many areas to avoid most traditional nonattainment planning requirements. The OTAG was sponsored by the Environmental Council of States, with the objective of evaluating ozone transport and recommending strategies for mitigating interstate pollution. The OTAG completed its work in June 1997 and forwarded recommendations to the EPA. Based on these recommendations, in September 1997, the EPA will propose a rule requiring States in the OTAG region that are significantly contributing to nonattainment or interfering with maintenance of attainment in downwind States to submit SIPs to reduce their interstate pollution. The EPA will issue the final rule by September 1998.

If the States choose to establish a regional emission cap-and-trade system, modeled on the current acid rain program, reductions can be obtained at a lower cost. The EPA will encourage and assist the States to develop and implement such a program. Most important, based on the EPA's review of the latest modeling, a regional approach, coupled with the implementation of other already existing State and Federal Clean Air Act requirements, will allow the vast majority of areas that currently meet the 1-hour standard but would not otherwise meet the new 8-hour standard to achieve healthful air quality without additional local controls.

Areas in the OTAG region that would exceed the new standard after the adoption of the regional strategy, including areas that do not meet the current 1-hour standard, will benefit as well because the regional NO_x program will reduce the extent of additional local measures needed to

achieve the 8-hour standard. In many cases these regional reductions may be adequate to meet CAA progress requirements for a number of years, allowing areas to defer additional local controls.

Transitional Classification

For areas that attain the 1-hour standard but not the new 8-hour standard, the EPA will follow a flexible implementation approach that encourages cleaner air sooner, responds to the fact that ozone is a regional as well as local problem, and eliminates unnecessary planning and regulatory burdens for State and local governments. A primary element of the plan will be the establishment under Section 172(a)(1) of the CAA of a special "transitional" classification for areas that participate in a regional strategy and/or that opt to submit early plans addressing the new 8-hour standard. Because many areas will need little or no additional new local emission reductions to reach attainment, beyond those reductions that will be achieved through the regional control strategy, and will come into attainment earlier than otherwise required, the EPA will exercise its discretion under the law to eliminate unnecessary local planning requirements for such areas. The EPA will revise its rules for new source review (NSR) and conformity so that States will be able to comply with only minor revisions to their existing programs in areas classified as transitional. During this rulemaking, the EPA will also reexamine the NSR requirements applicable to existing nonattainment areas, in order to deal with issues of fairness among existing and new nonattainment areas. The transitional classification will be available for any area attaining the 1-hour standard but not attaining the 8-hour standard as of the time the EPA promulgates designations for the 8-hour standard. Areas will follow the approaches described below based on their status.

- (1) Areas attaining the 1-hour standard, but not attaining the 8-hour standard, that would attain the 8-hour standard through the implementation of the regional NO_x transport strategy for the East.

Based on the OTAG analyses, areas in the OTAG region that can reach attainment through implementation of the regional transport strategy would not be required to adopt and implement additional local measures. When the EPA designates these areas under section 107(d), it will place them in the new transitional classification if they would attain the standard through implementation of the regional transport strategy and are in a State that by 2000 submits an implementation plan that includes control measures to achieve the emission reductions required by the EPA's rule for States in the OTAG region. This is 3 years earlier than an attainment SIP would otherwise be required. The EPA anticipates that it will be able to determine whether such areas will attain based on the OTAG and other regional modeling and that no additional local modeling would be required.

- (2) Areas attaining the 1-hour standard but not attaining the 8-hour standard for which a regional transport strategy is not sufficient for attainment of the 8-hour standard.

To encourage early planning and attainment for the 8-hour standard, the EPA will make the transitional classification available to areas not attaining the 8-hour standard that will need additional local measures beyond the regional transport strategy, as well as to areas that are not affected by the regional transport strategy, provided they meet certain criteria. To receive the transitional classification, these areas must submit an attainment SIP prior to the designation and classification process in 2000. The SIP must demonstrate attainment of the 8-hour standard and provide for the implementation of the necessary emissions reductions on the same time schedule as the regional transport reductions. The EPA will work with affected areas to develop a streamlined attainment demonstration. By submitting these attainment plans earlier than would have otherwise been required, these areas would be eligible for the transitional classification and its benefits and would achieve cleaner air much sooner than otherwise required.

- (3) Areas not attaining the 1-hour standard and not attaining the 8-hour standard

The majority of areas not attaining the 1-hour standard have made substantial progress in evaluating their air quality problems and developing plans to reduce emissions of ozone-causing pollutants. These areas will be eligible for the transitional classification provided that they attain the 1-hour standard by the year 2000 and comply with the appropriate provisions of section (1) or (2) above depending upon which conditions they meet.

Areas not Eligible for the Transitional Classification

For these areas, their work on planning and control programs to meet the 1-hour standard by their current attainment date (e.g., 2005 for Philadelphia and 2007 for Chicago) will take them a long way toward meeting the 8-hour standard. While the additional local reductions that they will need to achieve the 8-hour standard must occur prior to their 8-hour attainment date (e.g., 2010), for virtually all areas the additional reductions needed to achieve the 8-hour standard can occur after the 1-hour attainment date. This approach allows them to make continued progress toward attaining the 8-hour standard throughout the entire period without requiring new additional local controls for attaining the 8-hour standard until the 1-hour standard is attained. These areas, however, will need to submit an implementation plan within 3 years of designation as nonattainment for the new standard for achieving the 8-hour standard. Such a plan can rely in large part on measures needed to attain the 1-hour standard. For virtually all of these areas, no additional local control measures beyond those needed to meet the requirements of Subpart 2 and needed in response to the regional transport strategy would be required to be implemented prior to their applicable attainment date for the 1-hour standard. Nonattainment areas that do not attain the 1-hour standard by their attainment date would continue to make progress in accordance with the requirements of Subpart 2; the control measures needed to meet the progress requirements under Subpart 2 would generally be sufficient for meeting the control measure and progress requirements of Subpart 1 as well.

Implementation of Particulate Matter Standards

As required under the Act, within the next 5 years the EPA will complete the next periodic review of the PM criteria and standards, including review by the CASAC. As with all NAAQS reviews, the purpose is to update the pertinent scientific and technical information and to determine whether it is appropriate to revise the standards in order to protect the public health with an adequate margin of safety or to protect the public welfare. Although the EPA has concluded that the current scientific knowledge provides a strong basis for the revised PM₁₀ and new PM_{2.5} standards, there remain scientific uncertainties associated with the health and environmental effects of PM and the means of reducing them.

The following steps discussed below and in Appendix 1, Interagency Research Program, will address these concerns. First, recognizing the importance of developing a better understanding of the effects of fine particles on human health, including their causes and mechanisms, as well as the species and sources of PM_{2.5}, the EPA will continue to sponsor research, particularly in these areas. Second, the Administrator of the EPA will promptly initiate a new review of the scientific criteria on the effects of airborne particles on human health and the environment. Within 90 days, the EPA will develop and provide to CASAC a plan and proposed schedule for this review to assure that the review is completed within 5 years. The plan and schedule will be published in the **Federal Register**. Thus, by July 2002, the Agency will have determined, based on data available from its review, whether to revise or maintain the standards. This determination will have been made before any areas have been designated nonattainment under the PM_{2.5} standards, and before imposition of any new controls related to the PM_{2.5} standards.

Implementation of New PM_{2.5} NAAQS

As set forth in the EPA's final action regarding PM, the EPA is establishing a new indicator for fine particles (i.e., PM_{2.5}) and promulgating new PM_{2.5} standards. Monitoring and planning will be required before control measures to address these standards would be required. Therefore, the first priority for implementing them is establishment of a comprehensive monitoring network to determine ambient fine particle concentrations across the country. The monitoring network will help the EPA and the States determine which areas do not meet the new air quality standards, what are the major source of PM_{2.5} in various regions, and what action is needed to clean up the air. The EPA and the States will consult with affected stakeholders on the design of the network and will then establish the network, which will consist of approximately 1,500 monitors. All monitors will provide for limited speciation, or analysis of the chemical composition, of the particles measured. At least 50 of the monitors will provide for a more comprehensive speciation of the particles. The EPA will work with States to deploy the PM_{2.5} monitoring network. Based on the ambient monitoring data we have seen to date, these would generally not include agricultural areas. The EPA will fund the cost of purchasing the monitors, as well as the cost of analyzing particles collected at the monitors to determine their chemical composition.

Because the EPA is establishing standards for a new indicator for PM (i.e., PM_{2.5}), it is critical to develop the best information possible before attainment and nonattainment designation decisions are made. Three calendar years of Federal reference method monitoring data will be used to determine whether areas meet or do not meet the PM_{2.5} standards. Three years of data will be available from the earliest monitors in the spring of 2001, and 3 years of data will be available from all monitors in 2004. Following this monitoring schedule and allowing time for data analysis, Governors and the EPA will not be able to make the first determinations as to which areas should be designated nonattainment until at least 2002, 5 years from now. The Clean Air Act, however, requires that the EPA make designation determinations (i.e., attainment, nonattainment, or unclassifiable) within 2 to 3 years of revising a NAAQS. To fulfill this requirement, in 1999 the EPA will issue "unclassifiable" designations for PM_{2.5}. These designations will not trigger the planning or control requirements of part D of Title I of the Act.

When the EPA designates PM_{2.5} nonattainment areas pursuant to the Governors' recommendations beginning in 2002, areas will be allowed 3 years to develop and submit to the EPA pollution control plans showing how they will meet the new standards. Areas will then have up to 10 years from their redesignation to nonattainment to attain the PM_{2.5} standards with the possibility of two 1-year extensions.

In developing strategies for attaining the PM_{2.5} standards, it is important to focus on measures that decrease emissions that contribute to regional pollution. Available information indicates that nearly one-third of the areas projected not to meet the new PM_{2.5} standards, primarily in the Eastern United States, could come into compliance as a result of the regional SO₂ emission reductions already mandated under the Clean Air Act's acid rain program, which will be fully implemented between 2000 and 2010. Similarly, the Grand Canyon Visibility Transport Commission, consisting of Western States and tribes, committed to reducing regional emissions of PM_{2.5} precursors (sulfates, nitrates, and organics) to improve visibility across the Colorado Plateau.

As detailed PM_{2.5} air quality data and data on the chemical composition of PM_{2.5} in different areas become available, the EPA will work with the States to analyze regional strategies that could reduce PM_{2.5} levels. If further cost-effective regional reductions will help areas meet the new standard, the EPA will encourage States to work together to use a cap-and-trade approach similar to that used to curb acid rain. This acid rain program delivered environmental benefits at a greatly reduced cost.

Given the regional dimensions of the PM_{2.5} problem, local governments and local businesses should not be required to undertake unnecessary planning and local regulatory measures when the problem requires action on a regional basis. Therefore, as long as the States are doing their part to carry out regional reduction programs, the areas that would attain the PM_{2.5} standards based on full implementation of the acid rain program would not face new local requirements. Early identification of other regional strategies could also assist local areas in completing their programs to attain the PM_{2.5} standards after those areas have been designated nonattainment.

The EPA will also encourage States to coordinate their PM_{2.5} control strategy development and efforts to protect regional visibility. Visibility monitoring and data analysis will support both PM_{2.5} implementation and the visibility program.

Implementation of Revised PM₁₀ NAAQS

In its rule, the EPA is revising the current set of PM₁₀ standards. Given that health effects from coarse particles are still of concern, the overall goal during this transition period is to ensure that PM₁₀ control measures remain in place to maintain the progress that has been achieved toward attainment of the current PM₁₀ NAAQS (and which provides benefits for PM_{2.5}) and protection of public health.

To ensure that this goal is met, the existing PM₁₀ NAAQS will continue to apply until certain critical actions by the EPA, and by States and local agencies, have been taken to sustain the progress already made. For areas not attaining the existing PM₁₀ NAAQS when the revised standards go into effect, those standards remain in effect until the EPA has completed a section 172(e) rulemaking to prevent backsliding. The EPA will propose this rulemaking in the Fall of 1997. For areas attaining the existing PM₁₀ NAAQS, the EPA will retain the existing PM₁₀ NAAQS until the State submits and the EPA approves the section 110 SIP which States are required to submit within 3 years of a NAAQS revision. Once those areas have an approved SIP, the EPA will take action so the standard no longer applies. In addition, the EPA will take action within 3 years to designate areas for the revised PM₁₀ standards.

Cost-Effective Implementation Strategies

There is a strong desire to drive the development of new technologies with the potential of greater emission reduction at less cost. It was agreed that \$10,000 per ton of emission reduction is the high end of the range of reasonable cost to impose on sources. Consistent with the State's ultimate responsibility to attain the standards, the EPA will encourage the States to design strategies for attaining the PM and ozone standards that focus on getting low cost reductions and limiting the cost of control to under \$10,000 per ton for all sources. Market-based strategies can be used to reduce compliance costs. The EPA will encourage the use of concepts such as a Clean Air Investment Fund, which would allow sources facing control costs higher than \$10,000 a ton for any of these pollutants to pay a set annual amount per ton to fund cost-effective emissions reductions from non-traditional and small sources. Compliance strategies like this will likely lower the costs of attaining the standards through more efficient allocation, minimize the regulatory burden for small and large pollution sources, and serve to stimulate technology innovation as well.

Additional Future Activities and Coordination with Other Federal Departments and Agencies

The approaches outlined above for implementation of the current and new ozone standards will be developed in the future in much greater detail. In order to ensure that the final details are practical, incorporate common sense, and provide the appropriate steps toward cleaning the air, input is needed from many stakeholders such as representatives of State and local governments, industry, environmental groups, and Federal agencies. The EPA will continue seeking such advice from a range of stakeholders and, after evaluating their input, propose the necessary guidance to make these approaches work. Moreover, the EPA will continue to work with a number of Federal agencies to ensure that those agencies comply with these new standards in cost-effective, common sense ways. The guidance and rules (e.g., revisions to NSR and conformity) will be completed by the end of 1998.

The EPA will continue to work with the Small Business Administration (SBA) because small businesses are particularly concerned about the potential impact resulting from future control measures to meet the revised PM and ozone standards. The EPA, in partnership with SBA, will work with the States to include in their SIPs flexible regulatory alternatives that minimize the economic impact and paperwork burden on small businesses to the greatest possible degree consistent with public health protection.

The EPA and the Department of Defense will continue to work towards assuring that the CAA's general conformity provisions are applied appropriately so as to maintain the air quality

benefits of this requirement consistent with the Department's goals for cost-saving consolidation of the defense infrastructure and the economic viability for civilian use of former military bases, in support of base realignment and closure activities.

In addition, understanding that critical training using smoke and obscurants must continue to ensure the training and readiness of the military, the EPA will work with the Department of Defense to develop a policy that ensures that a local area will not be redesignated to nonattainment solely on the basis of the use of obscurants or smoke for such purposes. While there is a need to keep the public informed of violations of air quality standards, if any were to occur, there is no need to curtail the training or limit it to certain weather conditions.

The EPA will also work closely with the Department of Agriculture and the Agriculture Air Quality Task Force on any agricultural issues associated with the ozone and PM standards. By establishing new standards for particulate matter smaller than 2.5 micrometers in diameter (PM_{2.5}), as opposed to tightening the existing standards for particles smaller than 10 micrometers (PM₁₀), the EPA is actually focusing regulatory attention away from farming and tilling issues. Indeed, soils and agriculture comprise a much smaller portion of the PM_{2.5} problem than they do of the PM₁₀ problem. The EPA will issue guidance to the States to ensure that in meeting the PM_{2.5} standards they focus their control strategies on sources of fine particles, rather than coarse particles (those particles larger than PM_{2.5}).

Finally, the EPA will continue to work with the interagency group addressing fire and air quality issues. The EPA recognizes the inevitability of fire, and the important role of fire in natural systems. The interagency group will develop policies and practices to assure compatibility between fire and air quality programs consistent with public health, safety, and environmental protection.

APPENDIX 1

Interagency Research Program

The EPA has concluded that the current scientific knowledge provides a strong basis for the revised ozone and PM₁₀ standards and the new PM_{2.5} standards. However, for both pollutants there exist uncertainties about the health effects and their causes that can benefit from further study. The complex chemistry of their formation and the potential for the regional transport of their precursor pollutants and ozone and PM also needs to be better understood to design effective control strategies to reduce their concentrations in the ambient air. The research program is structured to prioritize those projects that ensure research activities are focused on high-priority topics and that the research carried out by various agencies is both complementary and timely. The EPA will reach out to form partnerships with the private sector and State and local governments in performing the research wherever possible.

Particulate Matter Research

As discussed elsewhere, the EPA will complete another full scientific and technical review of the PM standards by 2002. Simultaneous with the planning for the current criteria review in 1993, the EPA began a process of increasing emphasis on PM research. As discussed above, commenters on the proposed PM NAAQS also expressed significant concerns about the science. The steps discussed below are intended to address the concerns raised by the commenters.

Based on the recently completed comprehensive scientific review, the EPA is again reassessing its research priorities to address the most recent understanding of these uncertainties with the development of two documents, entitled PM Research Needs for Human Health Risk Assessment and ORD PM Research Program Strategy. These documents are designed to highlight significant health research needs and EPA/ORD's strategy to address a subset of those needs as well as research needs for implementing the standards. Both documents were reviewed by the Clean Air Scientific Advisory Committee (CASAC) in a November 1996 meeting, and are currently undergoing revisions to address CASAC comments.

These documents, in turn, will help to guide an expansion of an ongoing government-wide effort to target and coordinate Federal research on particulate matter. The EPA, in partnership with other

Federal agencies, will develop a greatly expanded coordinated interagency PM research program. The program will contribute to expanding the science associated with particulate matter health effects, as well as developing improved monitoring methods and cost-effective mitigation strategies. For example, the Department of Health and Human Services is conducting research on respiratory disease and could undertake surveillance of PM-related health effects. Significant emphasis will be placed on coordinating research on health effects, biological mechanism causing effects, monitoring, source-receptor relationships, speciation of PM, identification of sources, control technologies and regional transport for particulate matter with corresponding research on ozone and other related pollutants including regional haze. To assist State and local efforts in completing planning requirements and reducing PM, the EPA will work cooperatively with the Department of Agriculture, Department of Defense, Department of Energy, Department of Transportation, and other affected Federal agencies to refine existing, limited analytical models for PM₁₀ and to develop new reliable predictive models for PM_{2.5}.

Tropospheric (Ground Level) Ozone Research

To ensure that the ozone NAAQS and their implementation continue to be based on the best available science, the EPA will continue its research efforts on tropospheric or ground level ozone. As with the setting and implementation of virtually all health-based environmental standards, there remain scientific uncertainties associated with the effects of ozone and the means of reducing them. The EPA has participated in an inter-governmental public/private partnership called the North American Research Strategy for Tropospheric Ozone (NARSTO) that involves a coordinated effort to identify and address key issues in the emissions, transport, and mitigation of photochemical pollutants. Further, with the completion of the ozone Criteria Document, the EPA has reassessed the uncertainties and research needs on the health and ecological effects of ozone at workshops held in March and May 1997, respectively. The EPA is currently developing a health and ecological effects research needs document for ozone, which will be submitted for review by CASAC.

In addition, the EPA will continue broader efforts to coordinate Federal research on tropospheric ozone. The public/private NARSTO partnership is a model cooperative effort already begun in the area of atmospheric processes and risk management. NARSTO's membership spans government, utilities and other industries, and the academic community -- all following a single national research agenda. The EPA will also work in partnership with other Federal agencies to address research needs on ozone health and ecological effects. For example, the Department of Health and Human Services is conducting research on respiratory disease and could undertake surveillance of ozone-related health effects. These research efforts will be coordinated to ensure research activities are focused on high-priority topics and that the research carried out by various agencies is complementary. Significant emphasis will be placed on coordinating both health effects, monitoring, source-receptor, and control technologies for ozone with corresponding research on particulate matter and other related pollutants subject to significant regional transport.

G.3 CALCULATIONS FOR MOBILE SOURCE EMISSIONS

The first nine pages of this subsection provide information concerning the development of the Mobile Source emission estimates that would occur under the three development alternatives. These results are based upon information that was available on August 14, 1997.

Calculation of Mobile Source Emissions are dependent upon a series of variables and the model applied. The mobile source emission calculations for this EIS were based upon the use of the USEPA's Mobile 5a and Mobile 5b model emission factors. Supporting information that was used in the development of the calculations includes the following:

- Estimated traffic origins and destinations projected for the reuse of Fort McClellan based upon information provided by the FMRRRA;
- a five-page Technical Memorandum dated 12 May 1997 that includes seven pages of supporting calculations and climatic data;

- a one-page Technical Memorandum dated 11 August 1997 that provides clarifying information concerning the average vehicle speed used in the Mobile 5a and 5b modeling for Fort McClellan.

**Fort McClellan, Alabama
Environmental Impact Statement
Mobile Source Estimates
MHIR**

Estimated Number of Trips per Day	87,750
Baseline Number of Trips per Day	29,375
Estimated Increase In Trips per Day	58,375
Estimated Number of Trips per Year	21,306,875
Amount on Post - Internal (%)	20.0%
Amount from Anniston/Oxford (%)	48.0%
Amount from Saks/Weaver (%)	16.0%
Amount from Jacksonville/Piedmont (%)	12.0%
Amount from Gadsden/Alexander (%)	4.0%
Total Trips on Post - Internal	4,261,375
Total Trips from Anniston/Oxford	10,227,300
Total Trips from Saks/Weaver	3,409,100
Total Trips from Jacksonville/Piedmont	2,556,825
Total Trips from Gadsden/Alexander	852,275
Estimated Miles Per Trip on Post - Internal	1.0
Estimated Miles Per Trip from Anniston/Oxford	5.0
Estimated Miles Per Trip from Saks/Weaver	3.0
Estimated Miles Per Trip from Jacksonville/Piedmont	8.0
Estimated Miles Per Trip from Gadsden/Alexander	15.0
Total VMT from on Post - Internal	4,261,375
Total VMT from Anniston/Oxford	51,136,500
Total VMT from Saks/Weaver	10,227,300
Total VMT from Jacksonville/Piedmont	20,454,600
Total VMT from Gadsden/Alexander	12,784,125
Total VMT for MHIR	98,863,900

**Fort McClellan, Alabama
Environmental Impact Statement
Mobile Source Estimates
MIR**

Estimated Number of Trips per Day	59,800
Baseline Number of Trips per Day	29,375
Estimated Increase In Trips per Day	30,425
Estimated Number of Trips per Year	11,105,125
Amount on Post - Internal (%)	20.0%
Amount from Anniston/Oxford (%)	48.0%
Amount from Saks/Weaver (%)	16.0%
Amount from Jacksonville/Piedmont (%)	12.0%
Amount from Gadsden/Alexander (%)	4.0%
Total Trips on Post - Internal	2,221,025
Total Trips from Anniston/Oxford	5,330,460
Total Trips from Saks/Weaver	1,776,820
Total Trips from Jacksonville/Piedmont	1,332,615
Total Trips from Gadsden/Alexander	444,205
Estimated Miles Per Trip on Post - Internal	1.0
Estimated Miles Per Trip from Anniston/Oxford	5.0
Estimated Miles Per Trip from Saks/Weaver	3.0
Estimated Miles Per Trip from Jacksonville/Piedmont	8.0
Estimated Miles Per Trip from Gadsden/Alexander	15.0
Total VMT from on Post - Internal	2,221,025
Total VMT from Anniston/Oxford	26,652,300
Total VMT from Saks/Weaver	5,330,460
Total VMT from Jacksonville/Piedmont	10,660,920
Total VMT from Gadsden/Alexander	6,663,075
Total VMT for MIR	51,527,780

**Fort McClellan, Alabama
Environmental Impact Statement
Mobile Source Estimates
MLIR**

Estimated Number of Trips per Day	44,150
Baseline Number of Trips per Day	29,375
Estimated Increase In Trips per Day	14,775
Estimated Number of Trips per Year	5,392,875
Amount on Post - Internal (%)	20.0%
Amount from Anniston/Oxford (%)	48.0%
Amount from Saks/Weaver (%)	16.0%
Amount from Jacksonville/Piedmont (%)	12.0%
Amount from Gadsden/Alexander (%)	4.0%
Total Trips on Post - Internal	1,078,575
Total Trips from Anniston/Oxford	2,588,580
Total Trips from Saks/Weaver	862,860
Total Trips from Jacksonville/Piedmont	647,145
Total Trips from Gadsden/Alexander	215,715
Estimated Miles Per Trip on Post - Internal	1.0
Estimated Miles Per Trip from Anniston/Oxford	5.0
Estimated Miles Per Trip from Saks/Weaver	3.0
Estimated Miles Per Trip from Jacksonville/Piedm	8.0
Estimated Miles Per Trip from Gadsden/Alexande	15.0
Total VMT from on Post - Internal	1,078,575
Total VMT from Anniston/Oxford	12,942,900
Total VMT from Saks/Weaver	2,588,580
Total VMT from Jacksonville/Piedmont	5,177,160
Total VMT from Gadsden/Alexander	3,235,725
Total VMT for MLIR	25,022,940

Fort McClellan, Alabama
Environmental Impact Statement
Criteria Pollutant Emission Estimates
For Mobile Sources (USEPA-Mobile 5a)

Criteria Pollutant	Emission Factor for vehicles (g/mi)	Total Vehicle Miles Traveled (miles/yr)	Criteria Pollutant Emissions	
			(lbs/yr)	(tons/yr)
MHIR				
CO	26.74	98,863,900	5,822,953	2,911
HC	2.61	98,863,900	568,359	284
NOx	2.03	98,863,900	442,057	221
MIR				
CO	26.74	51,527,780	3,034,918	1,517
HC	2.61	51,527,780	296,228	148
NOx	2.03	51,527,780	230,400	115
MLIR				
CO	26.74	25,022,940	1,473,818	737
HC	2.61	25,022,940	143,854	72
NOx	2.03	25,022,940	111,887	56

Notes:

- (1) These emissions factors are based on the Federal test Procedure Average Vehicle Speed (i.e. 19.6 mph)
- (2) Emission factors are based on an average of both the summer and winter values
- (3) Grams are converted to pounds by dividing by 454

Fort McClellan, Alabama
Environmental Impact Statement
Criteria Pollutant Emission Estimates
For Mobile Sources (USEPA-Mobile 5a)

Criteria Pollutant	Emission Factor for vehicles ^a (g/mi)	Total Vehicle Miles Traveled (miles/yr)	Criteria Pollutant Emissions	
			(lbs/yr)	(tons/yr)
MHIR				
CO	34.2	98,863,900	7,447,457	3,724
HC	3.46	98,863,900	753,456	377
NOx	2.19	98,863,900	476,899	238
MIR				
CO	34.2	51,527,780	3,881,608	1,941
HC	3.46	51,527,780	392,701	196
NOx	2.19	51,527,780	248,559	124
MLIR				
CO	34.2	25,022,940	1,884,988	942
HC	3.46	25,022,940	190,703	95
NOx	2.19	25,022,940	120,705	60

Notes:

- (1) These emissions factors are based on 7 mph below the Federal Test Procedure Average Vehicle Speed (i.e. 12.6 mph)
- (2) Emission factors are based on an average of both the summer and winter values
- (3) Grams are converted to pounds by dividing by 454

Fort McClellan, Alabama
Environmental Impact Statement
Criteria Pollutant Emission Estimates
For Mobile Sources (USEPA-Mobile 5a)

Criteria Pollutant	Emission Factor for vehicles ^a (g/mi)	Total Vehicle Miles Traveled (miles/yr)	Criteria Pollutant Emissions	
			(lbs/yr)	(tons/yr)
MHIR				
CO	20.42	98,863,900	4,446,698	2,223
HC	2.14	98,863,900	466,010	233
NOx	2.02	98,863,900	439,879	220
MIR				
CO	20.42	51,527,780	2,317,615	1,159
HC	2.14	51,527,780	242,884	121
NOx	2.02	51,527,780	229,265	115
MLIR				
CO	20.42	25,022,940	1,125,481	563
HC	2.14	25,022,940	117,950	59
NOx	2.02	25,022,940	111,336	56

Notes:

- (1) These emissions factors are based on 5 mph above the Federal Test Procedure Average Vehicle Speed (i.e. 24.6 mph)
- (2) Emission factors are based on an average of both the summer and winter values
- (3) Grams are converted to pounds by dividing by 454

Fort McClellan, Alabama
Environmental Impact Statement
Criteria Pollutant Emission Estimates
For Mobile Sources (USEPA-Mobile 5b)

Criteria Pollutant	Emission Factor for vehicles (g/mi)	Total Vehicle Miles Traveled (miles/yr)	Criteria Pollutant Emissions	
			(lbs/yr)	(tons/yr)
MHIR				
CO	26.43	98,863,900	5,755,447	2,878
HC	2.59	98,863,900	564,003	282
NOx	2.09	98,863,900	455,122	228
MIR				
CO	26.43	51,527,780	2,999,734	1,500
HC	2.59	51,527,780	293,958	147
NOx	2.09	51,527,780	237,209	119
MLIR				
CO	26.43	25,022,940	1,456,732	728
HC	2.59	25,022,940	142,752	71
NOx	2.09	25,022,940	115,194	58

Notes:

- (1) These emissions factors are based on the Federal Test Procedure Average Vehicle Speed (i.e. 19.6 mph)
- (2) Emission factors are based on an average of both the summer and winter values
- (3) Grams are converted to pounds by dividing by 454

Fort McClellan, Alabama
Environmental Impact Statement
Criteria Pollutant Emission Estimates
For Mobile Sources (USEPA-Mobile 5b)

Criteria Pollutant	Emission Factor for vehicles ^a (g/mi)	Total Vehicle Miles Traveled (miles/yr)	Criteria Pollutant Emissions	
			(lbs/yr)	(tons/yr)
MHIR				
CO	33.8	98,863,900	7,360,352	3,680
HC	3.44	98,863,900	749,101	375
NOx	2.25	98,863,900	489,964	245
MIR				
CO	33.8	51,527,780	3,836,209	1,918
HC	3.44	51,527,780	390,431	195
NOx	2.25	51,527,780	255,369	128
MLIR				
CO	33.8	25,022,940	1,862,941	931
HC	3.44	25,022,940	189,601	95
NOx	2.25	25,022,940	124,012	62

Notes:

- (1) These emissions factors are based on 7 mph below the Federal Test Procedure Average Vehicle Speed (i.e. 12.6 mph)
- (2) Emission factors are based on an average of both the summer and winter values
- (3) Grams are converted to pounds by dividing by 454

**Fort McClellan, Alabama
Environmental Impact Statement
Criteria Pollutant Emission Estimates
For Mobile Sources (USEPA-Mobile 5b)**

Criteria Pollutant	Emission Factor for vehicles ^a (g/mi)	Total Vehicle Miles Traveled (miles/yr)	Criteria Pollutant Emissions	
			(lbs/yr)	(tons/yr)
MHIR				
CO	20.19	98,863,900	4,396,613	2,198
HC	2.13	98,863,900	463,833	232
NOx	2.07	98,863,900	450,767	225
MIR				
CO	20.19	51,527,780	2,291,511	1,146
HC	2.13	51,527,780	241,749	121
NOx	2.07	51,527,780	234,939	117
MLIR				
CO	20.19	25,022,940	1,112,804	556
HC	2.13	25,022,940	117,398	59
NOx	2.07	25,022,940	114,091	57

Notes:

- (1) These emissions factors are based on 5 mph above the Federal Test Procedure Average Vehicle Speed (i.e. 24.6 mph)
- (2) Emission factors are based on an average of both the summer and winter values
- (3) Grams are converted to pounds by dividing by 454

Mike:

Following are the estimated traffic origins\destinations projected for the reuse of Ft. McClellan. This projected traffic distribution is based primarily on estimates provided by the local regional planning staff.

Existing traffic count data (1995) and proposed road improvements (e.g. new by-pass, internal road, etc.) were used in traffic assignments. The existing baseline (1995) ADT for Ft. McClellan traffic is estimated at 23,500.

Assume that 20% of the total ADT generated will be internal (within the reuse area) with each trip assumed to be a distance of 1 mile. The remaining ADT is distributed off-base (external) as follows.

Projected Traffic Origin\Destination for Reuse Plan

<i>Origin</i>	<i>Percent Total</i>	<i>Average Distance\Trip</i>
Anniston\Oxford (south), Hwy 21	60%	5 miles
Saks\Weaver (immediate west), Hwy 431	20%	3 miles
Jacksonville\Piedmonth (north), Hwy 21	15%	8 miles
Gadsden\Alexander (west), Hwy 431	5%	15 miles

Don

Traffic Calculations

4/18/97
from Don B.

Fort McClellan EIS - Reuse Plan Multipliers/Impacts (Cantonment Area Only)															
Plan "A" (FMC Preferred Plan) Medium High Intensity	Total Acres	Development Ratio*	Net Buildable Acreage** (excl. streets)**	Units/Acre	Total Units	Household Size	% Building Coverage (FAR)	Gross Building Area (sf)**	% Impervious Surface	Net Acres Impervious Surface	Trips/Unit of Measurement	Total Vehicular Trips (Daily)***	Employees/Unit of Measurement	Total Employees (daytime population)	Resident Population
Retail	228		182				.07	590,000	.45	100	46.81/Ksf	27,600	1/600sf	983	
Office	116		93				.16	673,300	.45	52	4.0/empl	14,200	1/190sf	3,543	
Office, R & D	25		20				.37	326,700	.70	18	2.7/empl	2,000	1/450sf	726	
Residential	398		318	1.3	515	2.5			.25	100	7.0/DU	3,600			1,288
Retirement	425		340	2.5	1,060	2.0			.30	128	3.5/DU	3,700			2,120
Industrial	924		739				.14	4,500,000	.45	390	3.34/empl	25,000	1/600sf	7,500	
Education/Training	202		162				.15	1,100,000	.45	90	7.5/emp	8,700	1/950sf	1,156	
Active Recreation	771		na						.05	39	2.33/acre	1,800	1/15 acres	51	
Wetlands/Passive Recreation	1609		na					na	na	na	na	na	na	na	
Lagard Park Expansion/Mus.	150		na						.05	7	2.33/acre	350	1/25 acres	5	
Yahoo Retreat	350		na						.10	35	2.33/acre	800	1/15 acres	23	
New Road (by-pass)										25					
TOTAL AVERAGE	5,198		1,854		1,575			7,190,000		984		87,750		13,989	3,408

* Ratio of developed property (e.g. developed sites with structures, parking lots, streets, landfills, lakes, lagoons) to total amount of property available for development.

** 20% deducted from gross acreages for streets.

*** Rounded to nearest 100.

Fort McClellan EIS - Reuse Plan Multipliers/Impacts (Cantonment Area Only)															
Plan "B" (spin-off plan) Medium Intensity	Total Acres	Development Ratio*	Net Buildable Acreage (excl. streets)**	Units/Acre	Total Units	Household Size	% Building Coverage (FAR)	Gross Building Area (sf)**	% Impervious Surface	Net Acres Impervious Surface	Trips/Unit of Measurement	Total Vehicular Trips (Daily)***	Employees/Unit of Measurement	Total Employees (daytime population)	Resident Population
Retail	228		182				.05	400,000	.37	83	46.81/Ksf	18,700	17750sf	533	
Office	116		93				.12	486,000	.40	45	4.0/empl	7,800	1/250sf	1,945	
Office, R & D	25		20				.30	261,000	.60	16	2.7/empl	1,600	1/450sf	580	
Residential	398		318	1.0	398	2.5			.25	95	7.0/DU	2,800			995
Retirement	425		340	2.0	850	2.0			.30	120	3.5/DU	3,000			1,700
Industrial	924		739				.12	3,863,000	.40	360	3.34/empl	17,200	17750sf	5,150	
Education/Training	202		162				.12	847,000	.40	78	7.5/emp	5,300	1/1200sf	705	
Active Recreation	771		na						.05	39	2.33/acre	1,800	1/15 acres	51	
Wetlands/Passive Recreation	1609		na					na	na	na	na	na	na	na	
Lagard Park Expansion/Mus.	150		na						.05	7	2.33/acre	350	1/25 acres	5	
Yahoo Retreat	350		na						.10	35	2.33/acre	800	1/15 acres	23	
New Road (by-pass)										25					
TOTAL AVERAGE	5,198		1,854		1,248			5,857,000		903		59,800		8,992	2,695

* Ratio of developed property (e.g. developed sites with structures; parking lots; streets; landfills; lakes; lagoons) to total amount of property available for development.

** 20% deducted from gross acreages for streets.

*** Rounded to nearest 100.

Fort McClellan EIS - Reuse Plan Multipliers/Impacts (Cantonment Area Only)															
Plan "C" (spin-off plan) Medium Low Intensity	Total Acres	Development Ratio*	Net Buildable Acreage** (excl. streets)**	Units/Acre	Total Units	Household Size	% Building Coverage (FAR)	Gross Building Area (sf)**	% Impervious Surface	Net Acres Impervious Surface	Trips/Unit of Measurement	Total Vehicular Trips (Daily)***	Employees/Unit of Measurement	Total Employees (daytime population)	Resident Population
Retail	228		182				.04	315,000	.33	75	46.81/Ksf	14,700	1/900sf	350	
Office	116		93				.10	400,000	.36	42	4.0/empl	4,600	1/350sf	1,142	
Office, R & D	25		20				.25	218,000	.55	14	2.7/empl	1,100	1/550sf	400	
Residential	398		318	.75	300	2.5			.25	95	7.0/DU	2,100			750
Retirement	425		340	2.0	850	2.0			.30	120	3.5/DU	3,000			1,700
Industrial	924		739				.10	3,219,000	.36	332	3.34/empl	11,900	1/900sf	3,577	
Education/Training	202		162				.10	706,000	.35	72	7.5/emp	3,800	1/1400sf	504	
Active Recreation	771		na					na	.05	38	2.33/acre	1,800	1/15 acres	51	
Wetlands/Passive Recreation	1609		na					na	na	na	na	na	na	na	
Lagard Park Expansion/Mus.	150								.05	7	2.33/acre	350	1/25 acres	5	
Yahoo Retreat	350								.10	35	2.33/acre	600	1/15 acres	23	
New Road (by-pass)										25					
TOTAL/AVERAGE	5,198		1,854		1,150			4,858,000		855		44,150		6,062	2,450

* Ratio of developed property (e.g. developed sites with structures, parking lots; streets; landfills; lakes; lagoons) to total amount of property available for development.

** 20% deducted from gross acreages for streets.

*** Rounded to nearest 100.

TECHNICAL MEMORANDUM

12 May 1997

To: Mike Grimm, St. Louis
From: Chris Easter, Oakland
Re: Mobile 5a/5b Modeling Results for Ft. McClellan

INTRODUCTION

This memorandum summarizes the methods, results and conclusions for the Mobile 5a/5b modeling completed as part of the Fort McClellan Reuse Environmental Impact Statement (E.I.S). The output from Mobile 5a and 5b provide the appropriate emissions factors to use for calculation of emissions from mobile sources which are projected as part of the project. Mobile 5a and 5b provide emissions factors for Hydrocarbons (HC), Carbon monoxide (CO) and Nitrogen oxides (NOX).

METHODS

Mobile 5b is the most recent version of the USEPA approved model for mobile source calculations. Mobile 5b was developed by the USEPA for calculating emissions based on estimates of vehicle miles traveled for a specific geographic area and includes adjustments for emissions reductions and increases which were a result of the Gasoline Detergent Additive Regulations passed in 1994. Currently Mobile 5b has several different applications including validation of proposed transportation control measures in State Implementation Plans (SIP) and emissions estimates for projects with mobile source emissions such as the Ft. McClellan Reuse E.I.S. For this particular project Mobile 5a was also run because the State of Alabama, where Ft. McClellan is located, is still using Mobile 5a as its official mobile source air emissions model. Mobile 5a is the USEPA approved version of the modeling software that was available prior to Mobile 5b.

Several phone contacts were made with US EPA Region IV in Atlanta, Georgia and the State of Alabama for information to assist in the development of the model input file. Through the model input file discussions it was determined that the State of Alabama does not have a formal Inspection Maintenance Program due, in part, to the state's current air quality attainment status. Other model inputs were also confirmed, during these discussions, such as seasonal Reid Vapor Pressure (RVP) and the status of anti-tampering programs in Alabama.

Mobile 5a and Mobile 5b outputs were similar with a overall increase in Mobile 5b results for NOX and decreases in HC and CO. For both the Mobile 5a and 5b model runs sensitivity analysis was performed for the average vehicle speed parameter (i.e. we ran the model at the Federal Test Procedure (FTP) average (19.6) and 5 mph above and 7 mph below the FTP average). The average vehicle speed values were chosen to provide a wide range of speed variation in the model runs. Meteorological data was taken from the National Oceanographic and Atmospheric Administration (NOAA) for the weather station at Anniston, Alabama which is in reasonably close proximity to the project site. To take into account seasonal meteorological fluctuations the final model runs were completed for both summer (i.e. July 1) and winter (i.e. January 1) and averaged together for the final calculations. The year to model was chosen as twenty (20) years from the present (i.e. 2017). The same input parameters were used for both Mobile 5a and 5b. Please see the following for the input file parameters:

MOBILE 5a/5b INPUT FILE PARAMETERS:

- *Vehicle Fleet Mix* = National Default Values
- *Tampering Rates* = National Default Values
- *Average Vehicle Speed* = The Federal Test Procedure average (i.e. 19.6 mph) and sensitivity analysis at 5 mph above and 7 mph below the FTP average (i.e. 12.6 and 24.6 mph)
- *Annual Mileage Accumulation Rates* = National Default Values
- *Basic Exhaust Emissions Rates* = National Default Values
- *Inspection/Maintenance Program, Special Conditions Correction Factors, Anti-Tampering Program* = None
- *Local Parameters*
 - ASTM Fuel Volatility Class modification = None
 - Maximum/Minimum Daily Temperatures = 90/69 d.f. for summer and 52/33 d.f. for winter
 - Reid Vapor Pressure = 9.5 psi for Summer and 11.1 psi for Winter
 - Altitude = low elevation setting (i.e. approximately 500 feet)
 - Year to Model = 2017
- *Correction of Exhaust Emissions (Daily Emissions vs. Peak Hour Emissions)* = Daily emissions
- *Pollutants to Quantify* = HC, NOX and CO
- *Type of Hydrocarbons to Quantify* = Total HC
- *Summing of Exhaust Phases* = Grand Sum mode

RESULTS

The Mobile 5a and 5b output files (i.e. the emissions factors for NOX, CO and HC) are summarized in the tables below (Tables 1 and 2). In the model outputs the emissions factors are presented by vehicle type, the table below summarizes the totals, as appropriate for this type of application, for all vehicles based on the average annual vehicle accumulation rate parameter.

Table 1 - Mobile 5a Output Results

Pollutant	Season	Vehicle Speed	Factor (Grams/Mile)
HC	Winter	12.6 mph	3.59
	Summer	12.6 mph	3.33
	Annual Average	12.6 mph	3.46
	Winter	19.6 mph	2.71
	Summer	19.6 mph	2.50
	Annual Average	19.6 mph	2.61
	Winter	24.6 mph	2.21
	Summer	24.6 mph	2.07
	Annual Average	24.6 mph	2.14
CO	Winter	12.6 mph	38.16
	Summer	12.6 mph	30.22
	Annual Average	12.6 mph	34.20
	Winter	19.6 mph	29.89
	Summer	19.6 mph	23.58
	Annual Average	19.6 mph	26.74
	Winter	24.6 mph	22.82
	Summer	24.6 mph	18.01
	Annual Average	24.6 mph	20.42
NOX	Winter	12.6 mph	2.30
	Summer	12.6 mph	2.07
	Annual Average	12.6 mph	2.19
	Winter	19.6 mph	2.14
	Summer	19.6 mph	1.92
	Annual Average	19.6 mph	2.03
	Winter	24.6 mph	2.13
	Summer	24.6 mph	1.91
	Annual Average	24.6 mph	2.02

Table 2 - Mobile 5b Output Results

Pollutant	Season	Vehicle Speed	Factor (Grams/Mile)
HC	Winter	12.6 mph	3.56
	Summer	12.6 mph	3.31
	Annual Average	12.6 mph	3.44
	Winter	19.6 mph	2.69
	Summer	19.6 mph	2.48
	Annual Average	19.6 mph	2.59
	Winter	24.6 mph	2.19
	Summer	24.6 mph	2.06
	Annual Average	24.6 mph	2.13
CO	Winter	12.6 mph	37.72
	Summer	12.6 mph	29.87
	Annual Average	12.6 mph	33.80
	Winter	19.6 mph	29.54
	Summer	19.6 mph	23.31
	Annual Average	19.6 mph	26.43
	Winter	24.6 mph	22.56
	Summer	24.6 mph	17.81
	Annual Average	24.6 mph	20.19
NOX	Winter	12.6 mph	2.36
	Summer	12.6 mph	2.14
	Annual Average	12.6 mph	2.25
	Winter	19.6 mph	2.19
	Summer	19.6 mph	1.98
	Annual Average	19.6 mph	2.09
	Winter	24.6 mph	2.17
	Summer	24.6 mph	1.96
	Annual Average	24.6 mph	2.07

The emissions calculations are summarized, by Land Use Plan, in the attached tables provided by the St. Louis office and modified based on the Mobile 5a and 5b results. The emissions totals are calculated using the Federal Test Procedure average value vehicle speed (i.e. 19.6 mph) and 7 mph below and 5 mph above the average to analyze emission sensitivity to a variance in average vehicle speeds. Vehicle Miles Traveled (VMT) are taken directly from the information provided by the St. Louis office.

CONCLUSIONS

Through the use of the USEPA's Mobile 5a and 5b model emissions factors were derived based on the set of assumptions in the model input file. The model outputs are directly linked to the input parameters. For the Fort McClellan model runs the model default values or averages were used for several of the input parameters (e.g. Vehicle Fleet Mix, Average Vehicle Speed and Annual Mileage Accumulation Rates). As more information is available, with respect to the project, it is possible that input parameters may be modified to produce a more refined set of emissions factors. With respect to the sensitivity analysis done by varying the vehicle speeds there was a significant decrease in Carbon monoxide and Hydrocarbon emissions and a slight decrease in Nitrogen oxides emissions as the model vehicle speed was increased. Also, with the use of Mobile 5b emissions decreased for HC and CO and increased for NOX. The variance between the two generations of modeling software can be attributed to the modifications in chemistry of reformulated gas which is calculated in Mobile 5b results only. This analysis provides a valuable planning tool with regard to the magnitude and relative impact of NOX, CO and HC emissions in the proposed project area.

FT McClellan 2017
MOBILE5a (26-Mar-93)
Winter

Minimum Temp: 33. (F) Maximum Temp: 52. (F)
Period 1 RVP: 11.1 Period 2 RVP: 11.1 Period 2 Yr: 2017

Total HC emission factors include evaporative HC emission factors.

Emission factors are as of Jan. 1st of the indicated calendar year.

Cal. Year: 2017 Region: Low Altitude: 500. Ft.
I/M Program: No Ambient Temp: 46.9 / 46.9 / 46.9 F
Anti-tam. Program: No Operating Mode: 20.6 / 27.3 / 20.6
Reformulated Gas: No

Veh. Type: LDGV LDGT1 LDGT2 LDGT HDGV LDDV LDDT HDDV MC All Veh

Veh. Spd.: 12.6 12.6 12.6 12.6 12.6 12.6 12.6 12.6 12.6
VMT Mix: 0.579 0.205 0.089 0.033 0.002 0.005 0.083 0.005

Composite Emission Factors (Gm/Mile)

Total HC: 3.22 3.91 5.44 4.37 5.47 0.68 0.93 2.84 4.19 3.59
Exhst CO: 36.45 43.54 58.93 48.19 39.15 2.17 2.41 16.85 41.93 38.16
Exhst NOX: 1.56 1.86 2.59 2.08 3.63 1.30 1.47 7.84 0.88 2.30

Emission factors are as of Jan. 1st of the indicated calendar year.

Cal. Year: 2017 Region: Low Altitude: 500. Ft.
I/M Program: No Ambient Temp: 46.9 / 46.9 / 46.9 F
Anti-tam. Program: No Operating Mode: 20.6 / 27.3 / 20.6
Reformulated Gas: No

Veh. Type: LDGV LDGT1 LDGT2 LDGT HDGV LDDV LDDT HDDV MC All Veh

Veh. Spd.: 19.6 19.6 19.6 19.6 19.6 19.6 19.6 19.6 19.6
VMT Mix: 0.579 0.205 0.089 0.033 0.002 0.005 0.083 0.005

Composite Emission Factors (Gm/Mile)

Total HC: 2.46 2.97 4.13 3.32 3.47 0.51 0.70 2.13 3.17 2.71
Exhst CO: 28.73 34.94 47.29 38.67 25.26 1.44 1.60 11.17 26.82 29.89
Exhst NOX: 1.49 1.79 2.49 2.00 3.87 1.09 1.23 6.58 0.97 2.14

Emission factors are as of Jan. 1st of the indicated calendar year.

Cal. Year: 2017 Region: Low Altitude: 500. Ft.
I/M Program: No Ambient Temp: 46.9 / 46.9 / 46.9 F
Anti-tam. Program: No Operating Mode: 20.6 / 27.3 / 20.6
Reformulated Gas: No

Veh. Type: LDGV LDGT1 LDGT2 LDGT HDGV LDDV LDDT HDDV MC All Veh

Veh. Spd.: 24.6 24.6 24.6 24.6 24.6 24.6 24.6 24.6 24.6
VMT Mix: 0.579 0.205 0.089 0.033 0.002 0.005 0.083 0.005

Composite Emission Factors (Gm/Mile)

Total HC: 1.99 2.45 3.40 2.73 2.67 0.42 0.58 1.78 2.80 2.21
Exhst CO: 21.69 26.99 36.53 29.87 19.74 1.13 1.26 8.80 21.32 22.82
Exhst NOX: 1.54 1.79 2.49 2.00 4.04 1.00 1.13 6.05 1.08 2.13

1FT McClellan 2017
MOBILE5a (26-Mar-93)
Summer

Minimum Temp: 69. (F) Maximum Temp: 90. (F)
Period 1 RVP: 9.5 Period 2 RVP: 9.5 Period 2 Yr: 2017

Total HC emission factors include evaporative HC emission factors.

Emission factors are as of July 1st of the indicated calendar year.

Cal. Year: 2017 Region: Low Altitude: 500. Ft.
I/M Program: No Ambient Temp: 85.2 / 85.2 / 85.2 F
Anti-tam. Program: No Operating Mode: 20.6 / 27.3 / 20.6
Reformulated Gas: No

Veh. Type:	LDGV	LDGT1	LDGT2	LDGT	HDGV	LDDV	LDDT	HDDV	MC	All Veh
Veh. Spd.:	12.6	12.6	12.6		12.6	12.6	12.6	12.6	12.6	
VMT Mix:	0.578	0.205	0.089		0.033	0.002	0.005	0.083	0.005	
Composite Emission Factors (Gm/Mile)										
Total HC:	3.00	3.42	4.70	3.80	6.29	0.68	0.93	2.84	6.80	3.33
Exhst CO:	28.96	32.31	44.86	36.09	38.20	2.17	2.41	16.85	37.28	30.22
Exhst NOX:	1.34	1.58	2.20	1.76	3.43	1.30	1.47	7.84	0.71	2.07

Emission factors are as of July 1st of the indicated calendar year.

Cal. Year: 2017 Region: Low Altitude: 500. Ft.
I/M Program: No Ambient Temp: 85.2 / 85.2 / 85.2 F
Anti-tam. Program: No Operating Mode: 20.6 / 27.3 / 20.6
Reformulated Gas: No

Veh. Type:	LDGV	LDGT1	LDGT2	LDGT	HDGV	LDDV	LDDT	HDDV	MC	All Veh
Veh. Spd.:	19.6	19.6	19.6		19.6	19.6	19.6	19.6	19.6	
VMT Mix:	0.578	0.205	0.089		0.033	0.002	0.005	0.083	0.005	
Composite Emission Factors (Gm/Mile)										
Total HC:	2.26	2.56	3.52	2.85	4.38	0.51	0.70	2.13	5.97	2.50
Exhst CO:	22.82	25.93	36.00	28.96	24.65	1.44	1.60	11.17	23.85	23.58
Exhst NOX:	1.29	1.51	2.11	1.69	3.66	1.09	1.23	6.57	0.79	1.92

Emission factors are as of July 1st of the indicated calendar year.

Cal. Year: 2017 Region: Low Altitude: 500. Ft.
I/M Program: No Ambient Temp: 85.2 / 85.2 / 85.2 F
Anti-tam. Program: No Operating Mode: 20.6 / 27.3 / 20.6
Reformulated Gas: No

Veh. Type:	LDGV	LDGT1	LDGT2	LDGT	HDGV	LDDV	LDDT	HDDV	MC	All Veh
Veh. Spd.:	24.6	24.6	24.6		24.6	24.6	24.6	24.6	24.6	
VMT Mix:	0.578	0.205	0.089		0.033	0.002	0.005	0.083	0.005	
Composite Emission Factors (Gm/Mile)										
Total HC:	1.86	2.14	2.93	2.38	3.65	0.43	0.58	1.78	5.67	2.07
Exhst CO:	17.23	20.03	27.81	22.38	19.26	1.13	1.26	8.80	18.96	18.01
Exhst NOX:	1.33	1.51	2.11	1.69	3.82	1.00	1.13	6.05	0.87	1.91

M170 Warning:

Exhaust emissions for gasoline fueled vehicles beginning in 1995 have been reduced as a result of Gasoline Detergent Additive Regulations (1994).

Winter

Minimum Temp: 33. (F) Maximum Temp: 52. (F)
Period 1 RVP: 11.1 Period 2 RVP: 11.1 Period 2 Yr: 2017

Total HC emission factors include evaporative HC emission factors.

Emission factors are as of Jan. 1st of the indicated calendar year.

Cal. Year: 2017		Region: Low			Altitude: 500. Ft.					
		I/M Program: No			Ambient Temp: 46.9 / 46.9 / 46.9 F					
		Anti-tam. Program: No			Operating Mode: 20.6 / 27.3 / 20.6					
		Reformulated Gas: No								
Veh. Type:	LDGV	LDGT1	LDGT2	LDGT	HdGV	LDDV	LDDT	HDDV	MC	All Veh
Veh. Spd.:	12.6	12.6	12.6		12.6	12.6	12.6	12.6	12.6	
VMT Mix:	0.579	0.205	0.089		0.033	0.002	0.005	0.083	0.005	
Composite Emission Factors (Gm/Mile)										
Total HC:	3.19	3.87	5.39	4.33	5.42	0.68	0.93	2.84	4.15	3.56
Exhst CO:	36.02	43.02	58.22	47.61	38.69	2.17	2.41	16.85	41.44	37.72
Exhst NOX:	1.52	1.82	2.54	2.04	3.55	1.30	1.47	9.05	0.86	2.36

Emission factors are as of Jan. 1st of the indicated calendar year.

Cal. Year: 2017		Region: Low			Altitude: 500. Ft.					
		I/M Program: No			Ambient Temp: 46.9 / 46.9 / 46.9 F					
		Anti-tam. Program: No			Operating Mode: 20.6 / 27.3 / 20.6					
		Reformulated Gas: No								
Veh. Type:	LDGV	LDGT1	LDGT2	LDGT	HdGV	LDDV	LDDT	HDDV	MC	All Veh
Veh. Spd.:	19.6	19.6	19.6		19.6	19.6	19.6	19.6	19.6	
VMT Mix:	0.579	0.205	0.089		0.033	0.002	0.005	0.083	0.005	
Composite Emission Factors (Gm/Mile)										
Total HC:	2.44	2.94	4.09	3.29	3.44	0.51	0.70	2.13	3.15	2.69
Exhst CO:	28.38	34.52	46.72	38.21	24.97	1.44	1.60	11.17	26.50	29.54
Exhst NOX:	1.46	1.75	2.44	1.96	3.78	1.09	1.23	7.59	0.95	2.19

Emission factors are as of Jan. 1st of the indicated calendar year.

Cal. Year: 2017		Region: Low			Altitude: 500. Ft.					
		I/M Program: No			Ambient Temp: 46.9 / 46.9 / 46.9 F					
		Anti-tam. Program: No			Operating Mode: 20.6 / 27.3 / 20.6					
		Reformulated Gas: No								
Veh. Type:	LDGV	LDGT1	LDGT2	LDGT	HdGV	LDDV	LDDT	HDDV	MC	All Veh
Veh. Spd.:	24.6	24.6	24.6		24.6	24.6	24.6	24.6	24.6	
VMT Mix:	0.579	0.205	0.089		0.033	0.002	0.005	0.083	0.005	
Composite Emission Factors (Gm/Mile)										
Total HC:	1.97	2.42	3.37	2.71	2.65	0.42	0.58	1.78	2.78	2.19
Exhst CO:	21.43	26.67	36.10	29.52	19.51	1.13	1.26	8.80	21.07	22.56
Exhst NOX:	1.51	1.75	2.44	1.96	3.95	1.00	1.13	6.99	1.05	2.17

M170 Warning:

Exhaust emissions for gasoline fueled vehicles beginning in 1995 have been reduced as a result of Gasoline Detergent Additive Regulations (1994).

Summer

Minimum Temp: 69. (F) Maximum Temp: 90. (F)
Period 1 RVP: 9.5 Period 2 RVP: 9.5 Period 2 Yr: 2017

Total HC emission factors include evaporative HC emission factors.

Emission factors are as of July 1st of the indicated calendar year.

Cal. Year: 2017		Region: Low		Altitude: 500. Ft.						
I/M Program: No		Ambient Temp: 85.2 / 85.2 / 85.2 F		Operating Mode: 20.6 / 27.3 / 20.6						
Anti-tam. Program: No		Reformulated Gas: No								
Veh. Type:	LDGV	LDGT1	LDGT2	LDGT	HGV	LDDV	LDDT	HDDV	MC	All Veh
Veh. Spd.:	12.6	12.6	12.6		12.6	12.6	12.6	12.6	12.6	
VMT Mix:	0.578	0.205	0.089		0.033	0.002	0.005	0.083	0.005	
Composite Emission Factors (Gm/Mile)										
Total HC:	2.98	3.39	4.66	3.78	6.25	0.68	0.93	2.84	6.77	3.31
Exhst CO:	28.61	31.92	44.32	35.66	37.75	2.17	2.41	16.85	36.84	29.87
Exhst NOX:	1.31	1.54	2.15	1.73	3.36	1.30	1.47	9.05	0.70	2.14

Emission factors are as of July 1st of the indicated calendar year.

Cal. Year: 2017		Region: Low		Altitude: 500. Ft.						
I/M Program: No		Ambient Temp: 85.2 / 85.2 / 85.2 F		Operating Mode: 20.6 / 27.3 / 20.6						
Anti-tam. Program: No		Reformulated Gas: No								
Veh. Type:	LDGV	LDGT1	LDGT2	LDGT	HGV	LDDV	LDDT	HDDV	MC	All Veh
Veh. Spd.:	19.6	19.6	19.6		19.6	19.6	19.6	19.6	19.6	
VMT Mix:	0.578	0.205	0.089		0.033	0.002	0.005	0.083	0.005	
Composite Emission Factors (Gm/Mile)										
Total HC:	2.24	2.55	3.49	2.83	4.36	0.51	0.70	2.13	5.95	2.48
Exhst CO:	22.55	25.62	35.57	28.62	24.36	1.44	1.60	11.17	23.57	23.31
Exhst NOX:	1.26	1.48	2.07	1.66	3.58	1.09	1.23	7.59	0.77	1.98

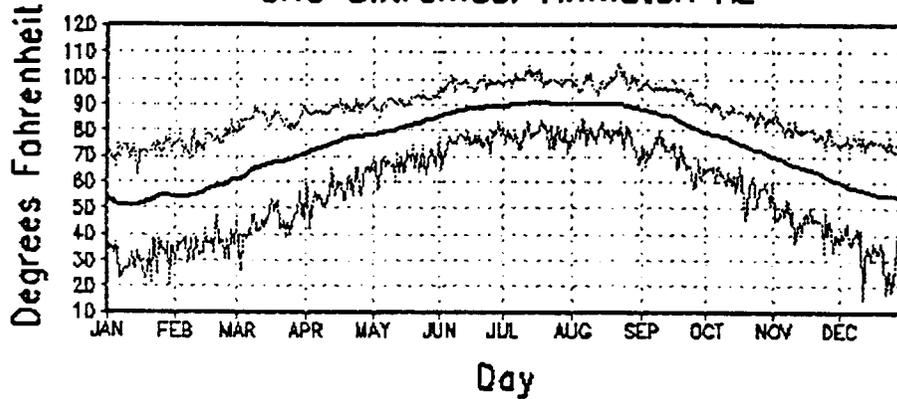
Emission factors are as of July 1st of the indicated calendar year.

Cal. Year: 2017		Region: Low		Altitude: 500. Ft.						
I/M Program: No		Ambient Temp: 85.2 / 85.2 / 85.2 F		Operating Mode: 20.6 / 27.3 / 20.6						
Anti-tam. Program: No		Reformulated Gas: No								
Veh. Type:	LDGV	LDGT1	LDGT2	LDGT	HGV	LDDV	LDDT	HDDV	MC	All Veh
Veh. Spd.:	24.6	24.6	24.6		24.6	24.6	24.6	24.6	24.6	
VMT Mix:	0.578	0.205	0.089		0.033	0.002	0.005	0.083	0.005	
Composite Emission Factors (Gm/Mile)										
Total HC:	1.84	2.13	2.90	2.36	3.63	0.43	0.58	1.78	5.65	2.06
Exhst CO:	17.03	19.79	27.48	22.11	19.03	1.13	1.26	8.80	18.74	17.81
Exhst NOX:	1.30	1.48	2.07	1.66	3.74	1.00	1.13	6.98	0.85	1.96

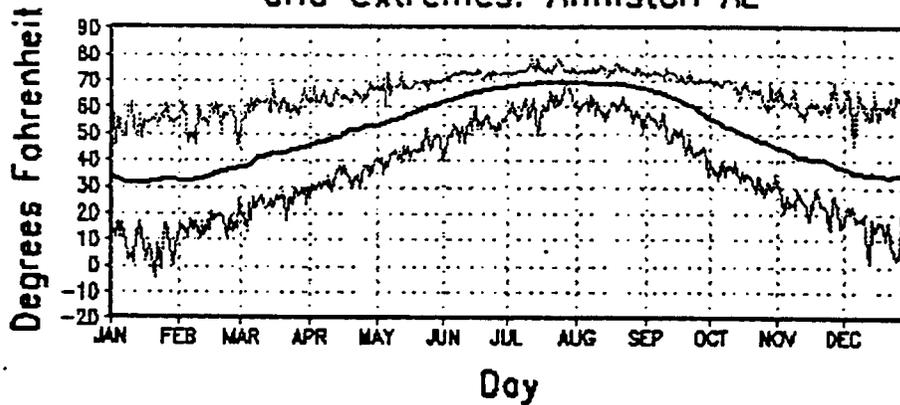
Lat=33.3N Lon=85.5W Elevation=604 feet
 Number of years available from 1961 to 1990: 28

Maximum temperature 1961 to 1990: 106 F Minimum temperature 1961 to 1990: -5 F
 Mean Annual Precipitation: 52.6 inches Mean Annual Snowfall: 1.2 inches

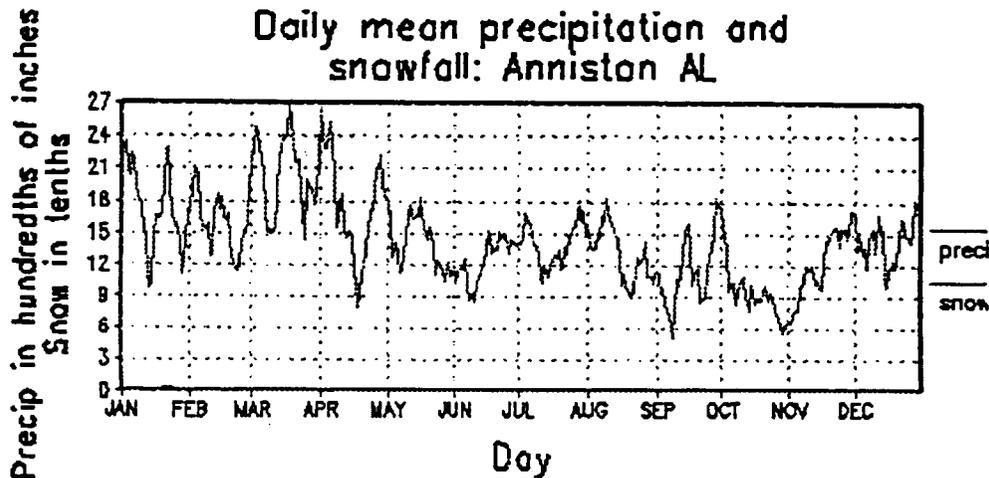
Daily mean maximum temperature and extremes: Anniston AL



Daily mean minimum temperature and extremes: Anniston AL



Daily mean precipitation and snowfall: Anniston AL

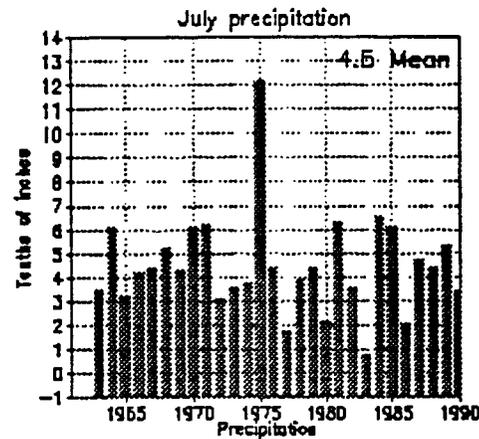
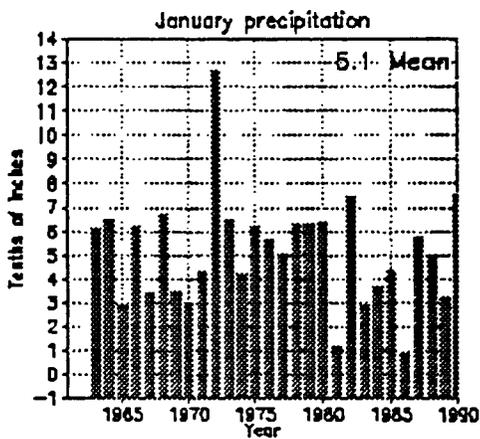
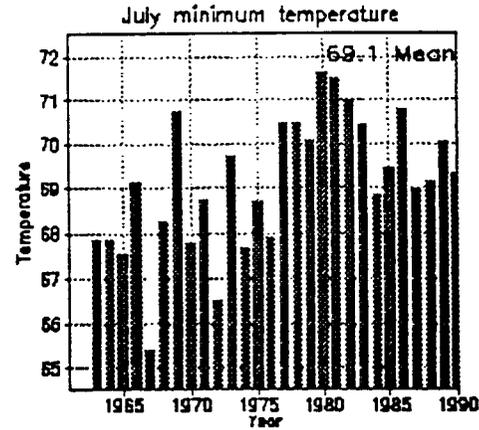
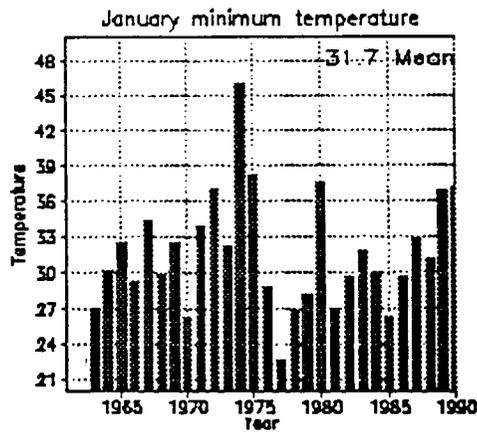
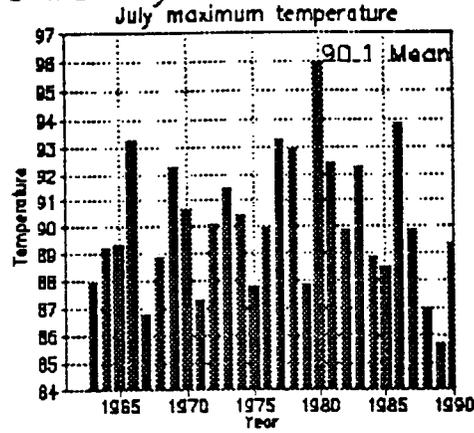
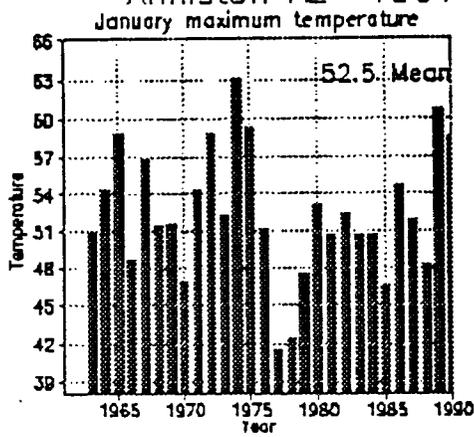


Daily % chance precipitation, wind speed and % sunshine

Monthly anomalies 1961-1990

Lat=33.3N Lon=85.5W Elevation=604 feet
Number of years available from 1961 to 1990: 28

Anniston AL 1961-1990 Monthly Means



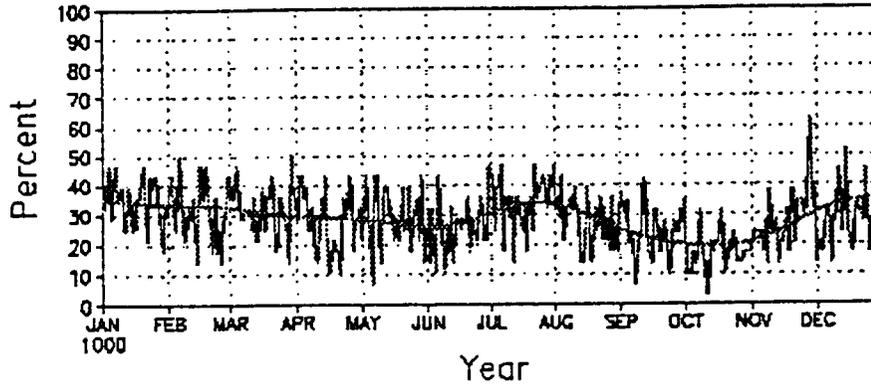
Lat=33.3N Lon=85.5W Elevation=604 feet

Annual average chance of precipitation: 28.7%

Annual average wind speed: -999.0 mph

Annual average percent of available sun: -999.0%

Daily Chance of Precipitation
Anniston AL



TECHNICAL MEMORANDUM

11 August 1997

To: Mike Grimm, St. Louis
From: Chris Easter, Oakland
Re: Federal Test Procedure (FTP) Average Vehicle Speed

This memorandum is in response to your request for clarification on the average vehicle speed used in the Mobile 5a/5b modeling for the Fort McClellan and Fort Chaffee Reuse EIRs. I was able to clarify this issue through several phone discussions with the USEPA and by reviewing the Code of Federal Regulations.

- The USEPA conducted a series of vehicle tests (in 1973) for Light-Duty cars and trucks driving in a hypothetical urban setting (vehicle speeds are documented in Speed versus Time sequence tables in 40 CFR, Part 86, Appendix I).
- During these Urban Dynamometer tests, emissions were recorded for "Gaseous Exhausts THC, CO, NO(x), CO(2), Particulates, and Evaporative HC".
- Samples were collected in Tedlar bags and analyzed for the above listed pollutants.
- 40 CFR, Part 86, Appendix 1 lists the Time versus Speed sequences used for the testing. On one of the testing cycles, or "bags" as the EPA calls them, a distance of 7.5 miles is covered over a time of 1371 seconds which actually averages out to between 19.6 and 19.7 miles per hour. (the EPA uses 19.6 mph).
- The testing sequences are done at a constant 75 degrees Fahrenheit.
- Mobile 5a/5b emissions factors are based on the data collected during the test sequences and then correction factors were used to manipulate the models for other speeds.

References

- (1) Phone discussions during the week ending 8/8/97 with the following individuals at the USEPA Mobile Source Laboratory/Modeling Group in Ann Arbor, Michigan: Terry Newell, Connie Rodwan and Marcel Holberschat.
- (2) 40 CFR, Part 86, Subpart B, 86.127-00 "Test Procedures; Overview"
- (3) 40 CFR, Part 86, Appendix I

G.4 CALCULATIONS FOR FUGITIVE PM-10 EMISSIONS FROM CONSTRUCTION ACTIVITIES

The first page of this subsection provides information concerning fugitive PM-10 emissions that would be anticipated as a result of construction activities. As noted on analysis, these results are based upon information that was available on August 14, 1997 and assumed:

- acres disturbed do not include "Active Recreation or Wetlands/Passive Recreation" areas;
- construction would occur over a 20-year period;
- an average of 230 working days per year would be available to complete construction activities, and that half of those days (155 days total) would be used for site preparation;
- four days of disturbance will occur per acre;
- the emission factor for uncontrolled fugitive dust emissions from ground-disturbing activities will be approximately 1.2 tons per acre per month as delineated in AP-42, Fifth Edition, Section 13.2.3; and that
- PM10 will represent approximately 24 percent of TSP.

Also provided in this subsection is the supporting information used in the development of the various reuse plan multipliers for the three implementation alternatives.

**Fort McClellan
Environmental Impact Statement
Fugitive PM-10 Emissions From Construction Activities**

	MHIR	MIR	MLIR
Total Acres Disturbed:	2,818	2,818	2,818
Acres Disturbed/Year:	140.9	140.9	140.9
Average Daily Disturbed Acreage:	4.9	4.9	4.9
Emission Factor (lbs PM-10/acre-day):	30.0	30.0	30.0
Average Daily PM-10 Emissions (lb/day):	147.0	147.0	147.0
Total Annual PM-10 Emissions (tons/year):	8.5	8.5	8.5

Assumptions:

Acres disturbed do not include "Active Recreation, Wetlands/Passive Recreation".

Construction would occur over a 20 year period and disturbance occurs at the same rate throughout this period.

An average of 230 working days per year and that half of these days (115) would be used for site preparation.

4 acre-days of disturbance are assumed per acre.

Emission factor for uncontrolled fugitive dust (particulate matter) emissions from ground-disturbing activities: 1.2 tons/acre/month, AP-42, Fifth Edition, Section 13.2.3.

Assume PM10 is 24% of TSP. This is an average for top soil removal, aggregate hauling, and cut/fill operations (EPA Gap Filling PM10 Emission Factors for Selected Open Dust Sources, February, 1988)

Example Calculation:

Emission Factor

$$\frac{1.2 \text{ tons}}{\text{acre-month}} \times \frac{12 \text{ months}}{1 \text{ year}} \times \frac{1 \text{ year}}{230 \text{ days}} \times \frac{2000 \text{ lb}}{1 \text{ ton}} = \frac{125 \text{ lbs}}{\text{acre-day}} \times 0.24 \text{ PM}_{10}/\text{TSP} = \frac{30.0 \text{ lbs PM}_{10}}{\text{acre-day}}$$

Average daily disturbed acreage:

$$\frac{2,818 \text{ acres disturbed}}{1} \times \frac{1}{20 \text{ years}} \times \frac{4 \text{ acre-days of disturb.}}{\text{acre}} \times \frac{1 \text{ year}}{115 \text{ days}} = 4.9 \text{ acres}$$

Average daily PM-10 emissions:

$$4.9 \text{ acres} \times \frac{30.0 \text{ lbs PM}_{10}}{\text{acre-day}} = \frac{147.0 \text{ lbs PM}_{10}}{\text{day}}$$

Total annual PM10 emissions:

$$\frac{147.0 \text{ lbs PM}_{10}}{\text{day}} \times \frac{115 \text{ days}}{\text{year}} \times \frac{1 \text{ ton}}{2000 \text{ lbs}} = \frac{8.5 \text{ tons PM}_{10}}{\text{year}}$$

Fort McClellan EIS - Reuse Plan Multipliers/Impacts (Cantonment Area Only)															
Plan "A" (FMC Preferred Plan) Medium High Intensity	Total Acres	Development Ratio*	Net Buildable Acreage (exclu. streets)**	Units/Acre	Total Units	Household Size	% Building Coverage (FAR)	Gross Building Area (sf)***	% Impervious Surface	Net Acres Impervious Surface	Trips/Unit of Measurement	Total Vehicular Trips (Daily)***	Employees/Unit of Measurement	Total Employees (daytime population)	Resident Population
Retail	228		182				.07	590,000	.45	100	46.81/ksf	27,600	1/600sf	983	
Office	116		93				.16	673,300	.45	52	4.0/empl	14,200	1/190sf	3,543	
Office, R & D	25		20				.37	326,700	.70	18	2.7/empl	2,000	1/450sf	726	
Residential	398		318	1.3	515	3.0			.25	100	7.0/DU	3,600			1,545
Retirement	425		340	2.5	1,060	2.0			.30	128	3.5/DU	3,700			2,120
Industrial	924		739				.14	4,500,000	.45	390	3.34/empl	25,000	1/600sf	7,500	
Education/Training	202		162				.15	1,100,000	.45	90	7.5/emp	8,700	1/950sf	1,158	
Active Recreation	771		na						.05	39	2.33/acre	1,800	1/15 acres	51	
Wetlands/Passive Recreation	1609		na					na	na	na	na	na	na	na	
Lagard Park Expansion/Mus.	150		na						.05	7	2.33/acre	350	1/25 acres	5	
Yahoo Retreat	350		na						.10	35	2.33/acre	800	1/15 acres	23	
New Road (by-pass)										25					
TOTAL AVERAGE	5,198		1,854		1,575			7,190,000		984		87,750		13,989	3,665

* Ratio of developed property (e.g. developed sites with structures; parking lots; streets; landfills; lakes; lagoons) to total amount of property available for development.

** 20% deducted from gross acreages for streets.

*** Rounded to nearest 100.

Disturbed Acres = 5,198 - 1,609 - 771 = 2,818 total acres

Fort McClellan EIS - Reuse Plan Multipliers/Impacts (Cantonment Area Only)															
Plan "B" (spin-off plan) Medium Intensity	Total Acres	Development Ratio*	Net Buildable Acreage (exclu. streets)**	Units/Acre	Total Units	Household Size	% Building Coverage (FAR)	Gross Building Area (sf)**	% Impervious Surface	Net Acres Impervious Surface	Trips/Unit of Measurement	Total Vehicular Trips (Daily)***	Employees/Unit of Measurement	Total Employees (daytime population)	Resident Population
Retail	228		182				.05	400,000	.37	83.46.81/Ksf	18,700	1/750sf	533		
Office	116		93				.12	486,000	.40	45 4.0/empl	7,800	1/250sf	1,945		
Office, R & D	25		20				.30	261,000	.60	16 2.7/empl	1,600	1/450sf	580		
Residential	398		318	1.0	398	3.0			.25	95 7.0/DU	2,800				1,194
Retirement	425		340	2.0	850	2.0			.30	120 3.5/DU	3,000				1,700
Industrial	924		739				.12	3,863,000	.40	360 3.34/empl	17,200	1/750sf	5,150		
Education/Training	202		162				.12	847,000	.40	78 7.5/emp	5,300	1/1200sf	705		
Active Recreation	771		na						.05	39 2.33/acre	1,800	1/15 acres	51		
Wetlands/Passive Recreation	1609		na					na	na	na	na	na	na		
Lagard Park Expansion/Mus.	150		na						.05	7 2.33/acre	350	1/25 acres	5		
Yahoo Retreat	350		na						.10	35 2.33/acre	800	1/15 acres	23		
New Road (by-pass)										25					
TOTAL/AVERAGE	5,198		1,854		1,248			5,857,000		903	59,800		8,992		2,894

* Ratio of developed property (e.g. developed sites with structures; parking lots; streets; landfills; lakes; lagoons) to total amount of property available for development.

** 20% deducted from gross acreages for streets.

*** Rounded to nearest 100.

Fort McClellan EIS - Reuse Plan Multipliers/Impacts (Cantonment Area Only)															
Plan "C" (spin-off plan) Medium Low Intensity	Total Acres	Development Ratio*	Net Buildable Acreage (exclu. streets)**	Units/Acre	Total Units	Household Size	% Building Coverage (FAR)	Gross Building Area (sf)***	% Impervious Surface	Net Acres Impervious Surface	Trips/Unit of Measurement	Total Vehicular Trips (Daily)***	Employees/Unit of Measurement	Total Employees (daytime population)	Resident Population
Retail	228		182				.04	315,000	.33	75	46.81/Ksf	14,700	1/900sf	350	
Office	116		93				.10	400,000	.36	42	4.0/empl	4,600	1/350sf	1,142	
Office, R & D	25		20				.25	218,000	.55	14	2.7/empl	1,100	1/550sf	400	
Residential	398		318	.75	300	3.0			.25	95	7.0/DU	2,100			900
Retirement	425		340	2.0	850	2.0			.30	120	3.5/DU	3,000			1,700
Industrial	924		739				.10	3,219,000	.36	332	3.34/empl	11,900	1/900sf	3,577	
Education/Training	202		162				.10	706,000	.35	72	7.5/emp	3,800	1/1400sf	504	
Active Recreation	771		na					na	.05	38	2.33/acre	1,800	1/15 acres	51	
Wetlands/Passive Recreation	1609		na					na	na	na	na	na	na	na	na
Lagard Park Expansion/Mus.	150								.05	7	2.33/acre	350	1/25 acres	5	
Yahoo Retreat	350								.10	35	2.33/acre	800	1/15 acres	23	
New Road (by-pass)										25					
TOTAL/AVERAGE	5,198		1,854		1,150			4,858,000		855		44,150		6,052	2,600

* Ratio of developed property (e.g. developed sites with structures; parking lots; streets; landfills; lakes; lagoons) to total amount of property available for development.

** 20% deducted from gross acreages for streets.

*** Rounded to nearest 100.

G.5 CALCULATIONS FOR CONSTRUCTION EQUIPMENT EMISSIONS

Specific information describing the project duration, daily hours of operation, or specific usage of heavy construction equipment varies from project to project. For purposes of analysis, the type of construction equipment and the hours of operation anticipated during the proposed construction projects were estimated using industry standard building construction cost estimating methodologies (Means, 1997). The following were used as a basis of analysis.

Assumptions:

1. Disturbed area = total area - active and passive recreation areas for the three proposed plans.
2. Surface topography assumed at 2 percent slope for cut and fill operations (impervious areas only).
3. Site clearing and grading would occur on the entire disturbed area.
4. 10 percent of impervious area less building area would be covered with 4 inch portland cement concrete.
5. 90 percent of impervious area less building area would be covered with 4 inch asphaltic concrete.
6. Emissions from asphalt paving would be from the operation of a hot mix asphalt batching plant. This was assumed because emissions from asphalt batching (either on-post or off-post) would be within the geographic boundary of the Air Quality Control Region.
7. Unit weight of asphalt is estimated as 130 pounds per cubic foot.
8. 60 days would be required for site clean-up.

Combustive emissions from construction equipment exhaust were estimated from USEPA approved emissions factors for heavy-duty diesel-powered construction equipment (USEPA 1985b). The following represents sample calculations for estimating annual carbon monoxide (CO) emissions from bulldozer operations and hot mix asphalt batching plant operations used in MHIR, respectively.

Dozer Operations:

From USEPA, 1985: Table II-7.1; CO emission factor for a heavy-duty diesel powered bulldozer = 1.794 pounds per hour (lbs/hr)

$$\text{CO Emissions} = (1.794 \text{ lbs/hr}) \times (16,472.5 \text{ hrs/yr}) \times (1 \text{ ton}/2,000 \text{ lbs})$$

$$\text{CO Emissions} = 14.8 \text{ tons per year (tpy)}$$

Asphalt Batching Operations:

From USEPA, 1995: Table 11.1-2; CO emission factor for a hot mix asphalt batching plant = 0.34 pounds per ton asphalt (lbs/ton)

$$\text{CO Emissions} = (0.34 \text{ lbs/ton}) \times (535,135 \text{ ft}^3/\text{yr}) \times (130 \text{ lbs}/\text{ft}^3) \times (1 \text{ ton}/2,000 \text{ lbs})^2$$

$$\text{CO Emissions} = 5.91 \text{ tpy}$$

The emissions factors used to calculate air pollutant emissions from the operation of heavy-duty diesel-

powered construction equipment and a batch mix hot mix asphalt plant are provided below in the following table:

Heavy-Duty Diesel-Powered Construction Equipment USEPA, 1985: Table II-7.1					
Equipment	Emission Factors (pounds per hour)				
	CO	VOC	NO_x	SO_x	PM₁₀
Backhoe	1.794	0.304	1.260	0.137	0.112
Blower	12.100	0.410	0.320	0.017	0.021
Bulldozer	1.257	0.425	3.840	0.463	0.406
Concrete Truck	1.794	0.304	4.166	0.454	0.256
Crane	0.675	0.018	1.691	0.143	0.139
Dump Truck	1.794	0.304	4.166	0.454	0.256
Front-End Loader	0.572	0.291	1.890	0.182	0.172
Paver	0.675	0.183	1.691	0.143	0.139
Roller	0.030	0.083	0.962	0.067	0.050
Scraper	1.257	0.052	0.713	0.086	0.061
Striper	12.100	0.410	0.320	0.017	0.021
18-Wheel Truck	1.794	0.304	4.166	0.454	0.256
Batch Mix Hot Mix Asphalt Plant USEPA, 1995: Table 11.1-2 and Table 11.1-7					
Operation	Emission Factors (pounds per ton of asphalt)				
	CO	VOC	NO_x	SO_x	PM₁₀
Asphalt Batching Plant	0.340	0.017	0.025	0.005	0.020
Assumed Unit Weight of Asphalt = 130.0 pounds per cubic-foot					

The annual construction equipment operating hours and the construction equipment exhaust emissions anticipated from the proposed construction activities associated with the proposed action and alternatives are provided below in the following tables:

Construction Equipment	Annual Construction Equipment Operating Hours		
	MHIR	MIR	MLIR
Backhoe	4.5	3.6	3.0
Blower	12.8	12.8	12.8
Bulldozer	16,472.5	15,178.7	14,412.2
Concrete Truck	1,342.9	1,260.9	1,218.3
Crane	0.0	0.0	0.0
Dump Truck	16,802.0	15,469.7	14,693.4
Front-End Loader	16,478.2	15,165.6	14,399.6
Paver	23.8	22.3	21.6
Roller	71.1	66.7	64.5
Scraper	14.3	13.4	12.9
Striper	12.8	12.8	12.8
18-Wheel Truck	185.3	164.6	159.0

	Proposed Construction Equipment Emissions - Tons Per Year (tpy)		
	MHIR	MIR	MLIR
CO Equipment Emissions (tpy)	31.69	29.22	27.77
CO Asphalt Emissions (tpy)	5.91	5.55	5.36
Total CO Emissions (tpy)	37.61	34.77	33.14
VOC Equipment Emissions (tpy)	8.70	8.01	7.61
VOC Asphalt Emissions (tpy)	0.30	0.28	0.27
Total VOC Emissions (tpy)	8.99	8.29	7.88
NO _x Equipment Emissions (tpy)	85.44	78.73	74.81
NO _x Asphalt Emissions (tpy)	0.43	0.41	0.39
Total NO_x Emissions (tpy)	85.88	79.13	75.21
SO _x Equipment Emissions (tpy)	9.48	8.73	8.30
SO _x Asphalt Emissions (tpy)	0.09	0.08	0.08
Total SO_x Emissions (tpy)	9.57	8.82	8.64
PM ₁₀ Equipment Emissions (tpy)	7.11	6.55	6.23
PM ₁₀ Asphalt Emissions (tpy)	0.35	0.33	0.32
Total PM₁₀ Emissions (tpy)	7.46	6.88	6.54

G.6 CALCULATIONS FOR PRESCRIBED BURNING EMISSIONS REDUCTION

This subsection of the Air Quality Supporting Documentation includes information used in the calculation of prescribed burning emission reductions that would likely occur under the reuse alternatives. Included in the is subsection are the following materials:

- Contact Memorandum number 25 dated May 9, 1997 concerning Air Emission Reductions at FMC;
- pages 2-26 and 2-27 of the 1994 & 1995 Air Emission Inventory for the US Army Chemical and Military Police Centers and Fort McClellan dated May 1997;
- Table A-22 which captures emissions from prescribed burning for Fort McClellan, AL; and
- three pages of hand calculations for prescribed burning at FMC.

Contact Memorandum

EIS for Disposal and Reuse of Fort McClellan, Alabama

Memo Number: 25
Person Contacted: Ray Mulholland, Gordon Horseley
(205) 848-3092
Organization: FMC Environmental
Location: Fort McClellan
Contacted By: Mike Grimm
Date: May 9, 1997
Subject: Air Emission Reduction at FMC

The two largest air emission sources currently at FMC are fog oil training and prescribed burning. I contacted Ray Mulholland to discuss with him if either of these two sources will be reduced after BRAC. Ray told me that fog oil training will be eliminated since it is being transferred to Fort Leonard Wood. For the prescribed burning, he had me talk to Gordon Horseley. Gordon told me that their goal is to prescribe burn 1,500 - 2,000 acres per year. Their latest emission inventory has 4,000 acres burned in 1993. Gordon stated that this is higher than normal years. Approximately 35% of the burning occurs on the Main Post and 65% occurs on Pelham. After BRAC, prescribed burning on the Main Post won't be conducted by the Army, however, someone else (yet to be identified) may still conduct the prescribed burning. The Army will still be responsible for prescribed burning in the Pelham area. He stated that prescribed burning in this area could actually increase.

Although not discussed during the telephone conversation, Pelham Range will continue to be used for fog oil obscurant training by Army National Guard and Army Reserve personnel. The quantities of fog oil used by the Army National Guard and Army Reserve in the future will remain consistent with their present usage.

1994 & 1995 AIR EMISSION INVENTORY

for the

U.S. ARMY CHEMICAL AND MILITARY POLICE CENTERS AND FORT McCLELLAN

Fort McClellan



FORT McCLELLAN, ALABAMA

Delivery Order 0041

Modification 001

Contract No. DACW-92-D-0020

by

CH2M HILL

2567 Fairlane Drive

Montgomery, AL 36116

May 1997

and Housing. Detailed emissions calculations from firefighter training are shown in Table A-18 in Appendix A for 1994 and Table A-18 in Appendix B for 1995.

2.3.12.1 Firefighter Training Emissions: Actual

Emissions were estimated based on emission factors from AP-42 Table 2.4-1 (*Open Burning of Municipal Refuse*). The emission factors are given in units of lb/ton. It is assumed that the average basic wood construction building has a density of 50 lb/ft². The following is a sample calculation of CO emissions in 1994 from firefighter training:

$$\frac{2,070 \text{ ft}^2}{\text{yr}} \times \frac{50 \text{ lb}}{\text{ft}^2} \times \frac{1 \text{ ton}}{2,000 \text{ lb}} \times 85 \text{ lb/ton} = 4,399 \text{ lb CO/yr}$$

2.3.12.2 Firefighter Training Emissions: Potential

Potential emissions from firefighter training were estimated assuming that one 1,000 sq ft building is burned every week of the year, totaling 52,000 ft² burned. The following calculation determines potential SO₂ emissions from firefighter training:

$$\frac{52,000 \text{ ft}^2}{\text{yr}} \times \frac{50 \text{ lb}}{\text{ft}^2} \times \frac{1 \text{ ton}}{2,000 \text{ lb}} \times 1.0 \text{ lb/ton} = 1,300 \text{ lb SO}_2/\text{yr}$$

2.3.13 Prescribed Burning

Approximately 2,500 acres of forest land was prescribed burned in 1994 and 1995 for both Pelham Range and the Training areas at Fort McClellan. A total of 10,000 acres was targeted to be burned but prescribed burning of this amount has not occurred in ten years. A prescribed burn involves the combustion of debris and underbrush in order to prevent fuel build-up on the forest floor. As a result, the danger of a wildfire occurrence is reduced. Detailed calculations for emissions from prescribed burning are presented in Table A-22 in Appendix A for 1994 and Table A-22 in Appendix B for 1995.

2.3.13.1 Prescribed Burning Emissions: Actual

Emissions were estimated based on fuel loading factors and emission factors from AP-42 Table 11.1-3 and Table 11.1-4. The fuel loading factor is given in units of tons/acre and emission factors are given in units of g/kg which is converted to lb/ton. The following is a sample calculation of CO emissions in 1994 from prescribed burning:

$$\frac{2,500 \text{ acres}}{\text{yr}} \times \frac{9 \text{ tons}}{\text{acre}} \times \frac{175 \text{ g CO}}{\text{kg}} \times \frac{2 \text{ lb/ton}}{\text{g/kg}} = 7,875,000 \text{ lb CO/yr}$$

2.3.13.2 Prescribed Burning Emissions: Potential

Potential emissions are based on a maximum of 10,000 acres of land being burned per year for 1994 and 1995. The following calculation determines potential NO_x emissions from prescribed burning:

$$\frac{10,000 \text{ acres}}{\text{yr}} \times \frac{9 \text{ tons}}{\text{acre}} \times \frac{2 \text{ g NO}_x}{\text{kg}} \times \frac{2 \text{ lb/ton}}{\text{g/kg}} = 360,000 \text{ lb NO}_x/\text{yr}$$

2.3.14 Wastewater Treatment Emissions

The Wastewater Treatment Plant (WWTP) at Fort McClellan is along the Anniston-Jacksonville Highway 21, near the western boundary of Fort McClellan. The WWTP is owned by the Department of Defense (DOD), but is operated by the city of Anniston. The WWTP processes domestic sewage from Fort McClellan and the Linlock community in the city of Anniston. The system's design capacity was downgraded from 4.5 MGD to 2.2 MGD in 1993. The annual throughput of wastewater from Fort McClellan for the years 1994 and 1995 were 0.128 MGD and 0.139 MGD, respectively. Detailed emissions calculations from wastewater treatment are presented in Table A-20 in Appendix A for 1994 and Table A-20 in Appendix B for 1995.

2.3.14.1 Wastewater Treatment Emissions: Actual

Emissions were estimated based on emission factors from the Surface Impoundment Modeling System (SIMS), version 2.0, developed by EPA. The emission factor was given in units of lb/gal of VOC. Furthermore, EPA assumes that domestic WWTPs accept approximately 16% of the total throughput from industrial sources. The following is a sample calculation of VOC emissions in 1994 from the WWTP:

$$\frac{46.6 \text{ Mgal}}{\text{yr}} \times \frac{0.00011 \text{ lb VOC}}{\text{gal}} \times \frac{10^6 \text{ gal}}{\text{Mgal}} \times 16\% = 822 \text{ lb VOC/yr}$$

2.3.14.2 Wastewater Treatment Emissions: Potential

Potential emissions from the WWTP are determined by applying the emission factor directly to the maximum design capacity of the plant. The following calculation determines potential VOC emissions from the WWTP:

$$\frac{803 \text{ Mgal}}{\text{yr}} \times \frac{0.00011 \text{ lb VOC}}{\text{gal}} \times \frac{10^6 \text{ gal}}{\text{Mgal}} \times 16\% = 14,133 \text{ lb VOC/yr}$$

Table A-22
Emissions from Prescribed Burning
Fort McClellan, AL

Initial data needed for emission calculations for prescribed burning

Actual land burned during 1995 - 2,500 acres
 Maximum land burned* - 10,000 acres
 Fuel loading factor - 9 tons/acre

* 10,000 acres is the target total area per year for prescribed burning. However, burning this amount has not been accomplished in ten years.

Emission factors, from AP-42, Table 11.1-3 and 11.1-4

Constituent	Emission Factor
CO	175 g/kg
NOx	2.00 g/kg
Particulate	17.0 g/kg
PM10	13.0 g/kg
SOx (1)	g/kg
VOC, non-methane	3.50 g/kg

(1) - SOx emissions are negligible

Calculation of Actual and Potential Criteria Pollutant Emission Rates.

Constituent	Annual Actual (lb/yr)	Annual Actual (ton/yr)	Potential to Emit (lb/yr)	Potential to Emit (ton/yr)
CO	7,875,000	3,938	31,500,000	15,750
NOx	90,000	45	360,000	180
Particulate	765,000	383	3,060,000	1,530
PM10	585,000	293	2,340,000	1,170
SOx	0	0	0	0
VOC	157,500	79	630,000	315

Actual emissions (lb/yr) = Land burned (acres/yr) x Fuel loading (tons/acre) x Emission factor (g/kg) x 2.0 (lb/ton)/(g/kg)

Actual emissions (ton/yr) = Actual emissions (lb/yr) / 2,000 lb/ton

Potential emissions (lb/yr) = Max. Land burned (acre/yr) x Fuel loading (ton/acre) x Emission factor (g/kg) x 2.0 (lb/ton)/(g/kg)

Potential emissions (ton/yr) = Potential emissions (lb/yr) / 2,000 lb/ton

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For 1993 prescribed burning occurred on 4,000 total acres

A more typical year is 1,500 - 2,000 acres.

Approximately 35% occurs on main post and 65% on Pelham range.

Assume 1,500 Acres/yr is typical for analysis purposes.

$$1,500 \frac{\text{acres}}{\text{yr}} \times 35\% \text{ for main post} = 525 \text{ Acres/yr main post}$$

$$1,500 \text{ Acres/yr} \times 65\% \text{ for Pelham} = 975 \text{ Acres/yr pelham}$$

For the region emissions:

Assume main post prescribed burning is reduced by 50%

Assume Pelham prescribed burning is increased by 10%

Net acreage burned

$$525 (0.50) + 975 (1.10) = 1335 \text{ Acres/yr}$$

Net reduction from a typical year:

$$1500 - 1335 = 165 \text{ acres}$$

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Emission Reduction by Prescribed Burning Airway Reduction

PM₁₀

$$165 \text{ acres} * \frac{9 \text{ tons}}{\text{acre}} * \frac{13 \text{ g PM}_{10}}{\text{kg}} * \frac{2 \text{ lb/ton}}{1 \text{ g/kg}} * \frac{1 \text{ ton}}{2000 \text{ lbs}} = 19.3 \frac{\text{ton}}{\text{yr}}$$

CO

$$165 \text{ acres} * \frac{9 \text{ tons}}{\text{acre}} * \frac{175 \text{ g CO}}{1 \text{ kg}} * \frac{2 \text{ lb/ton}}{1 \text{ g/kg}} * \frac{1 \text{ ton}}{2000 \text{ lbs}} = 2599 \text{ tpy}$$

VOC

$$165 * 9 * 3.5 * 2 * \frac{1}{2000} = 5.2 \text{ tpy}$$

NO_x

$$165 * 9 * \frac{2 \text{ g NO}_x}{1 \text{ kg}} * \frac{2 \text{ lb/ton}}{1 \text{ g/kg}} * \frac{1 \text{ ton}}{2000 \text{ lbs}} = 3.0 \text{ tpy}$$

SO₂

Zero emissions

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Emission Reduction by not burning 1,500 acres/yr (MLIR Only)

PM₁₀

$$1,500 \text{ acres} * 9 \frac{\text{tons}}{\text{acre}} * \frac{13 \text{ g PM}_{10}}{\text{kg}} * \frac{2 \text{ lb/ton}}{1 \text{ g/kg}} * \frac{1 \text{ ton}}{2000 \text{ lbs}} = 175.5 \text{ tpy}$$

CO

$$1,500 \text{ acres} * 9 \frac{\text{tons}}{\text{acre}} * \frac{175 \text{ g CO}}{1 \text{ kg}} * \frac{2 \text{ lb/ton}}{1 \text{ g/kg}} * \frac{1 \text{ ton}}{2000 \text{ lbs}} = 2362.5 \text{ tpy}$$

VOC

$$1,500 \text{ acres} * 9 \frac{\text{tons}}{\text{acre}} * \frac{3.5 \text{ g CO}}{1 \text{ kg}} * \frac{2 \text{ lb/ton}}{1 \text{ g/kg}} * \frac{1 \text{ ton}}{2000 \text{ lbs}} = 47.3 \text{ tpy}$$

NO_x

$$1,500 \text{ acres} * 9 \frac{\text{tons}}{\text{acre}} * \frac{2 \text{ g NO}_x}{1 \text{ kg}} * \frac{2 \text{ lb/ton}}{1 \text{ g/kg}} * \frac{1 \text{ ton}}{2000 \text{ lbs}} = 27 \text{ tpy}$$

SO_x

zero emissions