CONSTRUCTION OF EXPLOSIVE ORDNANCE DISPOSAL FACILITY MOODY AIR FORCE BASE, GEORGIA

ENVIRONMENTAL ASSESSMENT

July 2008

Report Documentation Page

Form Approved
OMB No. 0704-0188

1. REPORT DATE	2. REPORT TYPE	3. DATES COVERED
JUL 2008		**00-00-2008 to 00-00-2008**

4. TITLE AND SUBTITLE	5a. CONTRACT NUMBER
Construction of Explosive Ordnance Disposal Facility Moody Air Force Base, Georgia Environmental Assessment	5b. GRANT NUMBER
	5c. PROGRAM ELEMENT NUMBER
6. AUTHOR(S)	5d. PROJECT NUMBER
	5e. TASK NUMBER
	5f. WORK UNIT NUMBER
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) **23rd Wing,Moody AFB,GA,31699**	8. PERFORMING ORGANIZATION REPORT NUMBER
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)	10. SPONSOR/MONITOR'S ACRONYM(S)
	11. SPONSOR/MONITOR'S REPORT NUMBER(S)

12. DISTRIBUTION/AVAILABILITY STATEMENT
Approved for public release; distribution unlimited

13. SUPPLEMENTARY NOTES

14. ABSTRACT

15. SUBJECT TERMS

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT **unclassified**	b. ABSTRACT **unclassified**	c. THIS PAGE **unclassified**	**Same as Report (SAR)**	**60**	

The approval of this document serves only as official written documentation that the environmental effects of the proposed action and any alternatives have been considered and analyzed per NEPA/EIAP. This document should not be construed to mean that the proponent has authorization or approval to conduct or implement the proposed action or any of the alternatives. Final approval and authorizations to conduct this action must be obtained through the proponent's chain-of-command IAW applicable DoD, AF, and Wing policies, directives, and instructions.

CONSTRUCTION OF EXPLOSIVE ORDNANCE DISPOSAL FACILITY
MOODY AIR FORCE BASE, GEORGIA

FINDING OF NO SIGNIFICANT IMPACT

1.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

1.1 Proposed Action

Moody Air Force Base (AFB) proposes to construct a new explosives ordnance disposal flight (EOD) facility. The purpose of this action is to replace an outdated facility that was not configured to support current EOD mission requirements and to relocate the facility to a new site that would increase the ability of the flight to conduct explosives safety training. Currently, the EOD flight is housed in a wooden facility that was constructed in 1954 and is in need of major repairs because of improper configuration, an aged electrical system, termite damage, and a leaking roof. With EOD manning rates 40% higher than in 2006 and a corresponding increase in equipment and vehicles, the current facility is not capable of adequately housing and meeting the needs of the EOD flight. The proposed EOD facility will contain state-of-the-art equipment, and will be sized appropriately to contain personnel, equipment, and vehicles. Additionally, the relocation of the facility will increase efficiency by relocating personnel closer to the Combat Arms Training and Maintenance (CATM) and EOD ranges and isolating the facility from other assets to maximize the ability to conduct explosives safety training.

The facility will be approximately 12,000 square feet (120 by 100 feet) with a 4,800 square feet (60 by 80 feet) parking lot and fenced compound immediately adjacent to the facility. The facility will be constructed in two phases: Phase 1 -- a 7,000 square feet (70 by 100 feet) building with 4,800 square feet parking lot; Phase 2 -- a 5,000 square feet (50 x 100 feet) adjacent building. The facility will consist of a reinforced concrete foundation and floor slab, concrete framing, insulated maintenance-free exterior masonry walls, and a standing seam metal roof. The facility will contain state-of-the-art communication, electrical, fire protection, heating, air conditioning, and ventilation systems to meet the needs of the EOD flight. The facility will be designed to include adequate office and administrative space, a training room, a certified classified briefing room, a technical orders library, an operations control center, a weapons vault, industrial and maintenance work areas, physical fitness area, a laundry and a kitchenette. In addition, the facility would provide for the proper storage and maintenance of the base support emergency response vehicle, the remote transport system robotic platforms, classified materials and Secret Internet Protocol Router Network (SIPRNET).

1.2 Alternatives

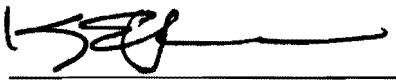
The three alternatives to the proposed action are: 1) to construct a new EOD facility on the site of the existing EOD facility; 2) to construct a new EOD facility at the intersection of Range Road and Crash Trail 2; and, 3) the no action alternative.

2.0 SUMMARY OF ENVIRONMENTAL IMPACTS

The EA analyzed the potential environmental effects of implementing the proposed action and alternative on the following resources: cultural resources; explosives safety standards; hazardous materials, pollution, and contaminants; physical resources, vegetation resources, water resources, and wildlife resources. The proposed action and alternatives would result in a slight disturbance to vegetation and wildlife resources, but these were not considered significant because of the limited duration of effect and the small size of the proposed construction area. None of the other resources were deemed likely to be affected by the proposed action or alternatives. Therefore, there would not be any significant impacts to the environment as a result of implementation of the proposed action or any of the evaluated alternatives. Also, there were no significant cumulative effects noted that would occur as a result of implementation of the proposed action or any of the evaluated alternatives.

3.0 CONCLUSION:

The attached EA was prepared and evaluated pursuant to the National Environmental Policy Act (Public Law 91-190, 42 U.S.C. 4321 *et seq.*) and according to 32 Code of Federal Regulations 989, *The Environmental Impact Analysis Process.* Based on the findings of the environmental assessment, no significant impact is anticipated from implementation of the proposed action. I have concluded that the proposed project titled, "Construction of Explosives Ordnance Disposal Facility" does not constitute a "major Federal action significantly affecting the quality of the human environment" when considered individually or cumulatively in the context of the referenced act, including both direct and indirect impacts. Therefore, issuance of a Finding of No Significant Impact is warranted, and an environmental impact statement is not required. Pursuant to Executive Order (EO) 11988 and EO 11990, the authority delegated in Secretary of the Air Force Order 791.1, and taking the above information into account, I find there is no practicable alternative to this action.



KENNETH E. TODOROV, Colonel, USAF
Commander, 23rd Wing

11 AUG 08
Date

CONSTRUCTION OF EXPLOSIVE ORDNANCE DISPOSAL FACILITY
Moody Air Force Base, Georgia

Environmental Assessment

Table of Contents

Page

List of Figures

List of Tables

CONSTRUCTION OF EXPLOSIVE ORDNANCE DISPOSAL FACILITY
MOODY AIR FORCE BASE, GEORGIA

ENVIRONMENTAL ASSESSMENT

1.0 PURPOSE OF AND NEED FOR THE PROPOSED ACTION

1.1 Background, Purpose, and Need for the Proposed Action

Moody Air Force Base (AFB) proposes to construct a new explosives ordnance disposal flight (EOD) facility. The purpose of this action is to replace an outdated facility that was not configured to support current EOD mission requirements and to relocate the facility to a new site that would increase the ability of the flight to conduct explosives safety training. Currently, the EOD flight is housed in a wooden facility that was constructed in 1954 and is in need of major repairs because of improper configuration, an aged electrical system, termite damage, and a leaking roof. With EOD manning rates 40% higher than in 2006 and a corresponding increase in equipment and vehicles, the current facility is not capable of adequately housing and meeting the needs of the EOD flight. The proposed EOD facility will contain state-of-the-art equipment, and will be sized appropriately to contain personnel, equipment, and vehicles. Additionally, the relocation of the facility will increase efficiency by relocating personnel closer to the Combat Arms Training and Maintenance (CATM) and EOD ranges and isolating the facility from other assets to maximize the ability to conduct explosives safety training.

1.2 Location of Proposed Action

Moody AFB is located in south-central Georgia about 10 miles northeast of Valdosta on 11,457 acres of federally owned land in Lowndes and Lanier counties (Figure 1-1). The installation consists of the main base (5,094 acres), Grand Bay Range (5,874 acres), and the Grassy Pond Recreational Annex (489 acres), which is located 25 miles southwest of the main base.

The proposed action and all of the alternatives would be contained entirely within the boundary of the installation. The proposed construction site is located along the southern-central boundary of the installation adjacent to Range Road and immediately south of the CATM range (Figure 1-2). The location of alternative locations for the construction of this facility is shown in Figure 1-2. Additional site-specific information and descriptions of each alternative location are provided below under Section 3.0, Affected Environment and Consequences.

1.3 Scope of the Environmental Review

The proposed action and alternatives have the potential to affect certain environmental resources. These potentially affected resources in this area have been identified through previous communications with state and federal agencies, on-site surveys by installation

staff, biological and cultural resources surveys, and reviews of past environmental documents. Specific environmental resources with the potential for environmental consequences from implementation of the proposed action or the alternatives include:

- Cultural Resources
- Explosives Safety Standards
- Hazardous Materials, Pollutants, and Contaminants
- Physical Resources
- Vegetation Resources
- Water Resources
- Wildlife Resources

Based upon an initial screening of potential environmental consequences by installation personnel, it was determined that the proposed action and alternatives were not likely to affect noise, transportation and circulation, socioeconomics and environmental justice, air quality, airspace management or Air Traffic Control. Therefore, the environmental consequences of these resource areas were not analyzed in this document since the potential for impacts was considered to be negligible or nonexistent:

- *Noise.* Under the proposed action, temporary and minor increases in noise in the immediate vicinity of the project site would occur during construction and demolition activities. However, noise generated by required construction and demolition equipment and trucks, operating sporadically and during normal business hours, would represent a negligible impact relative to the ambient noise levels at Moody AFB, which are dominated by aircraft noise.

- *Transportation and Circulation.* Implementation of the proposed action would result in temporary and minor changes to transportation and traffic circulation patterns on the installation during construction and demolition. However, because of the current tempo of construction and demolition activities related to the Base Realignment and Closure (BRAC) actions, any increase or change to traffic patterns on the installation as a result of the proposed action would be negligible and non-cumulative. Following construction of the facility, there would be a slight increase in traffic in the immediate area of the facility, but this would be off-set by the reduction in traffic at the previous location.

- *Socioeconomics and Environmental Justice*. Implementation of the proposed action would not affect socioeconomic resources and would fully comply with Executive Order (EO) 12898, *Federal Actions to Address Environmental Justice in Minority and Low-income Populations*, and EO 13045, *Protection of Children from Environmental Health Risks and Safety Risks*. The proposed action would occur within the boundaries of Moody AFB; no change in personnel levels would occur; no impacts to schools, children, or minority populations would occur; and the scale of the proposed construction/demolition expenditures would not result in noticeable direct or indirect effects to the economy. As no permanent population centers, low-income communities, or minority communities exist near the

proposed project site, no communities would be exposed to adverse socioeconomic or environmental justice impacts.

- *Air Quality*. In regards to air quality, Moody AFB is not classified as a major source of criteria pollutants and does not have a Title V permit. Currently, Moody AFB operates under a Synthetic Minor Permit for Hazardous Air Pollutants (HAPs) that was issued on 31 August 1998. Lowndes County is an attainment area for all NAAQS "criteria" pollutants. The proposed project would result in minor and temporary increases in emissions from construction and demolition vehicles, but these would not result in a noticeable change to the overall emissions from Moody AFB. Long-term, the new EOD facility would not be a source of emissions and would have no impact on air quality at Moody AFB or within Lowndes County.

- *Airspace Management and Air Traffic Control*. The proposed action will have no effect on airspace management, air traffic control, or the operation of any aircraft within Moody AFB or the surrounding airfield environment.

1.4 Applicable Regulatory Requirements

Based on the scope of the environmental review, it has been determined that the following laws and regulations apply to the proposed action and are considered in this environmental document:

- 32 Code of Federal Regulations 989, *The Environmental Impact Analysis Process* (EIAP)
- Air Force Instruction 32-7064, *Integrated Natural Resources Management*
- Clean Water Act (CWA)
- Executive Order (EO) 11988, *Floodplain Management*
- Executive Order (EO) 11990, *Protection of Wetlands*
- National Environmental Policy Act (NEPA)
- National Historic Preservation Act (NHPA)
- Resource Conservation and Recovery Act (RCRA)
- Sikes Act

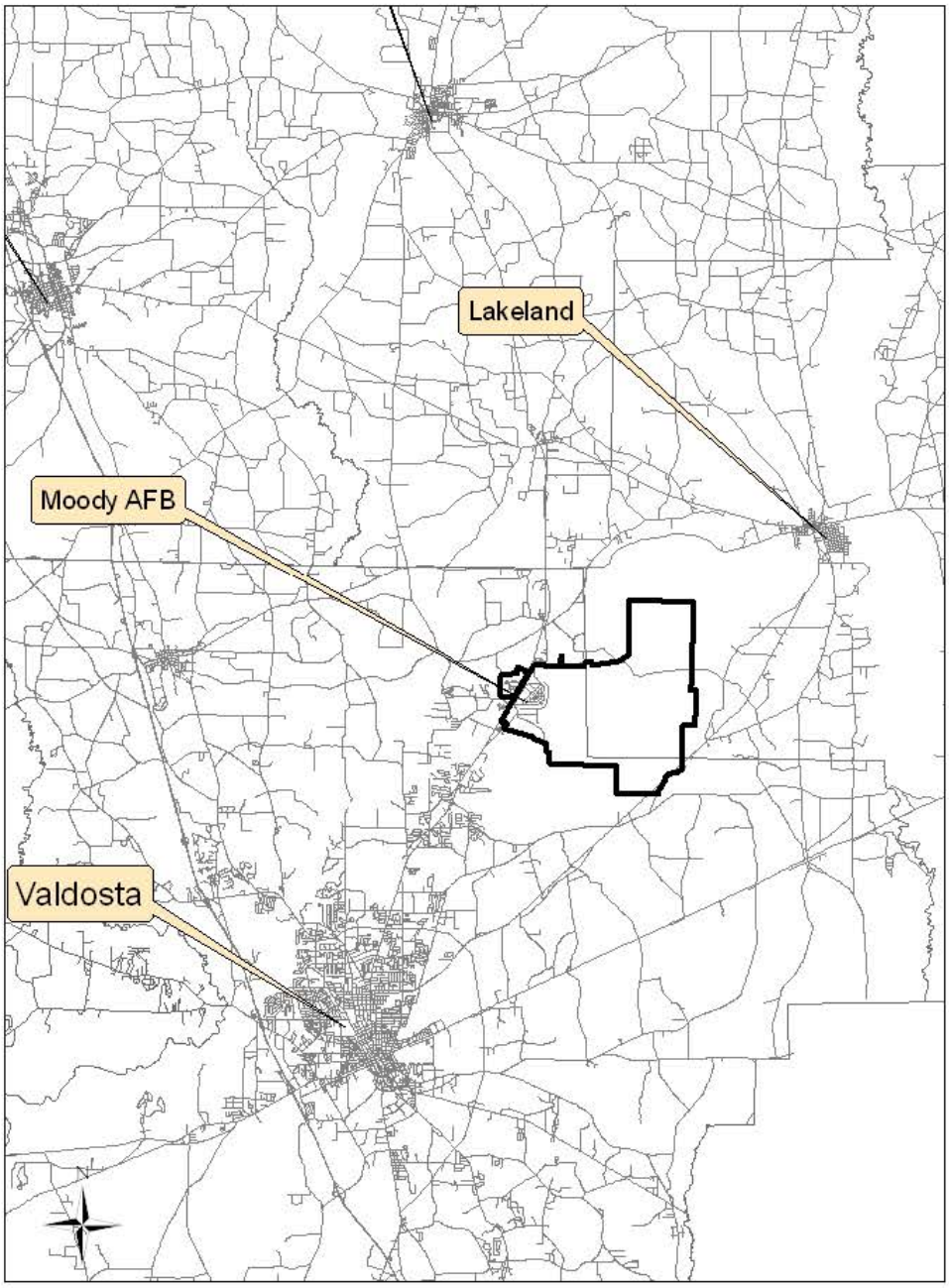
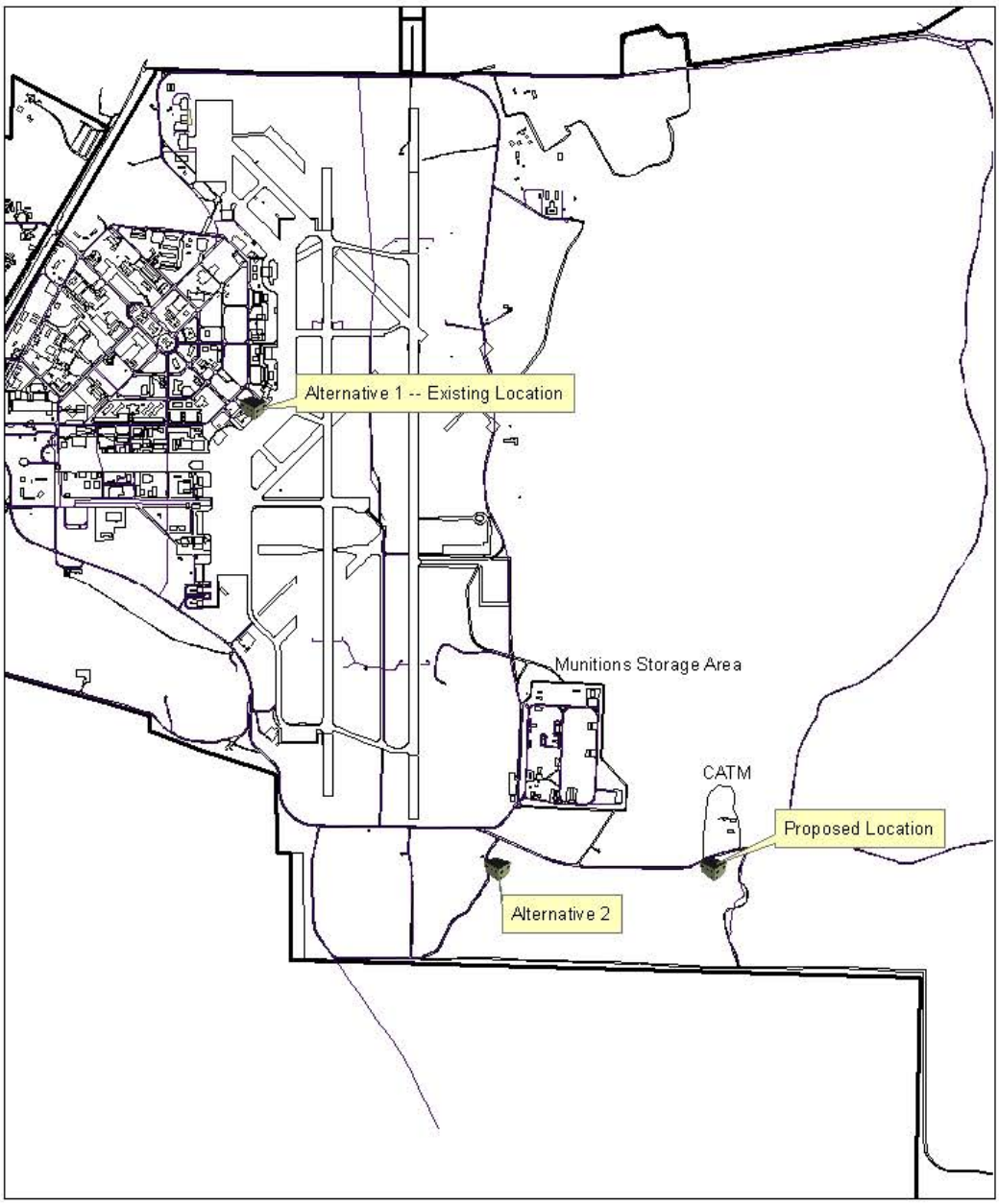


Figure 1-1
Moody Air Force Base General Location



Location of Proposed Action and Alternatives
New Explosives Ordnance Facility
Moody AFB, GA

Figure 1-2

2.0 DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

2.1 Minimum Selection Criteria

The Air Force considered several alternatives to the proposed action. In the initial screening of these alternatives, the Air Force took into consideration minimum selection criteria. Only those alternatives that met these criteria were considered suitable for detailed analysis. The selection criteria were conformance to existing laws, Air Combat Command, Department of the Air Force, and Department of Defense policy and regulations, compatibility with the Base Master Plan and the Moody AFB military mission. Additionally, the facility had to be geographically isolated from other facilities and had to be located in an area that was suitable for the storage and containment of explosives.

2.2 Detailed Description of the Proposed Action

The proposed action is to replace an outdated and improperly configured facility with a new EOD facility located just south of the Combat Arms Training and Maintenance (CATM) range adjacent to Range Road in Lanier County (Figure 2-1). This facility will contain state-of-the-art equipment, will be sized appropriately to contain personnel, equipment, and vehicles, and will increase efficiency by relocating personnel closer to the Munitions Area, the main A-10 arming/de-arming area, and the CATM and EOD ranges.

The facility will be approximately 12,000 square feet (120 by 100 feet) with a 4,800 square feet (60 by 80 feet) parking lot and fenced compound immediately adjacent to the facility. The facility will be constructed in two phases: Phase 1 -- a 7,000 square feet (70 by 100 feet) building with 4,800 square feet parking lot; Phase 2 -- a 5,000 square feet (50 x 100 feet) adjacent building. The facility will consist of a reinforced concrete foundation and floor slab, concrete framing, insulated maintenance-free exterior masonry walls, and a standing seam metal roof. The facility will contain state-of-the-art communication, electrical, fire protection, heating, air conditioning, and ventilation systems to meet the needs of the EOD flight. The facility will be designed to include adequate office and administrative space, a training room, a certified classified briefing room, a technical orders library, an operations control center, a weapons vault, industrial and maintenance work areas, physical fitness area, a laundry and a kitchenette. In addition, the facility would provide for the proper storage and maintenance of the base support emergency response vehicle, the remote transport system robotic platforms, classified materials and Secret Internet Protocol Router Network (SIPRNET).

Currently, this site is located underneath a mature loblolly pine forest with moderate amounts of midstory and understory vegetation. To prepare the site for use, all vegetation in the proposed construction site would be cleared, and stumps would be removed. The site would be graded, smoothed, and prepared for construction. Although the actual size of the completed facilities would only be 16,800 square feet, approximately 25,000 square feet (0.60 acres) would be disturbed during the overall construction process. As part of the construction of the new facility, the site would be

landscaped with appropriate plantings of grass and ornamental trees. Following construction, this facility will be occupied by the 24-person EOD flight. All personnel will be based from this building, and all equipment and vehicles used by the EOD flight will be stored in this facility.

The existing EOD facility would be demolished and the site would be cleared as a potential location for future development. Figure 2-2 shows the location of the existing EOD facility in proximity to other installation assets, including the proposed construction location for the new EOD facility.

2.3 Alternatives to the Proposed Action

The three alternatives to the proposed action are: 1) to construct a new EOD facility on the site of the existing EOD facility; 2) to construct a new EOD facility at the intersection of Range Road and Crash Trail 2; and, 3) the no action alternative.

2.3.1 Alternative 1

This alternative is similar in size and scope to the proposed action. However, instead of relocating the new EOD facility to a new site and constructing a new squadron operation/AMU facility in its location, the existing facility would be demolished and the new EOD facility built in its current location. Since this alternative involves the replacement on an existing facility, very limited ground disturbance would be required, and vegetation removal would be limited to grass and ornamental plantings.

One of the minimum selection criteria for alternatives was that the new EOD facility be geographically isolated from other facilities and located in an area that was suitable for the storage and containment of explosives. The existing EOD facility is located adjacent to the flight line and other facilities, limiting its utilization as a functioning explosives storage and training facility. Additionally, this space could better be utilized by organizations with direct flight line responsibilities. The environmental effects of this alternative are further evaluated in this document although the resultant use of a new facility in this location would not fulfill the stated requirements for the EOD flight. Figure 2-3 shows the location of this alternative.

2.3.2 Alternative 2

This alternative is similar in size and scope to the proposed action. However, the facility would be sited south of Range Road adjacent to Crash Trail 2 in Lowndes County (Figure 2-4). Currently, the proposed site is vegetated with five-year old slash pine seedlings, grasses, and herbaceous plants. As with the proposed action, all vegetation in this area would be removed, and the site would be leveled and graded to facilitate construction. This alternative would also include the paving of Crash Trail 2 to the entrance of the new EOD facility. The environmental effects of this alternative will be further analyzed in this document.

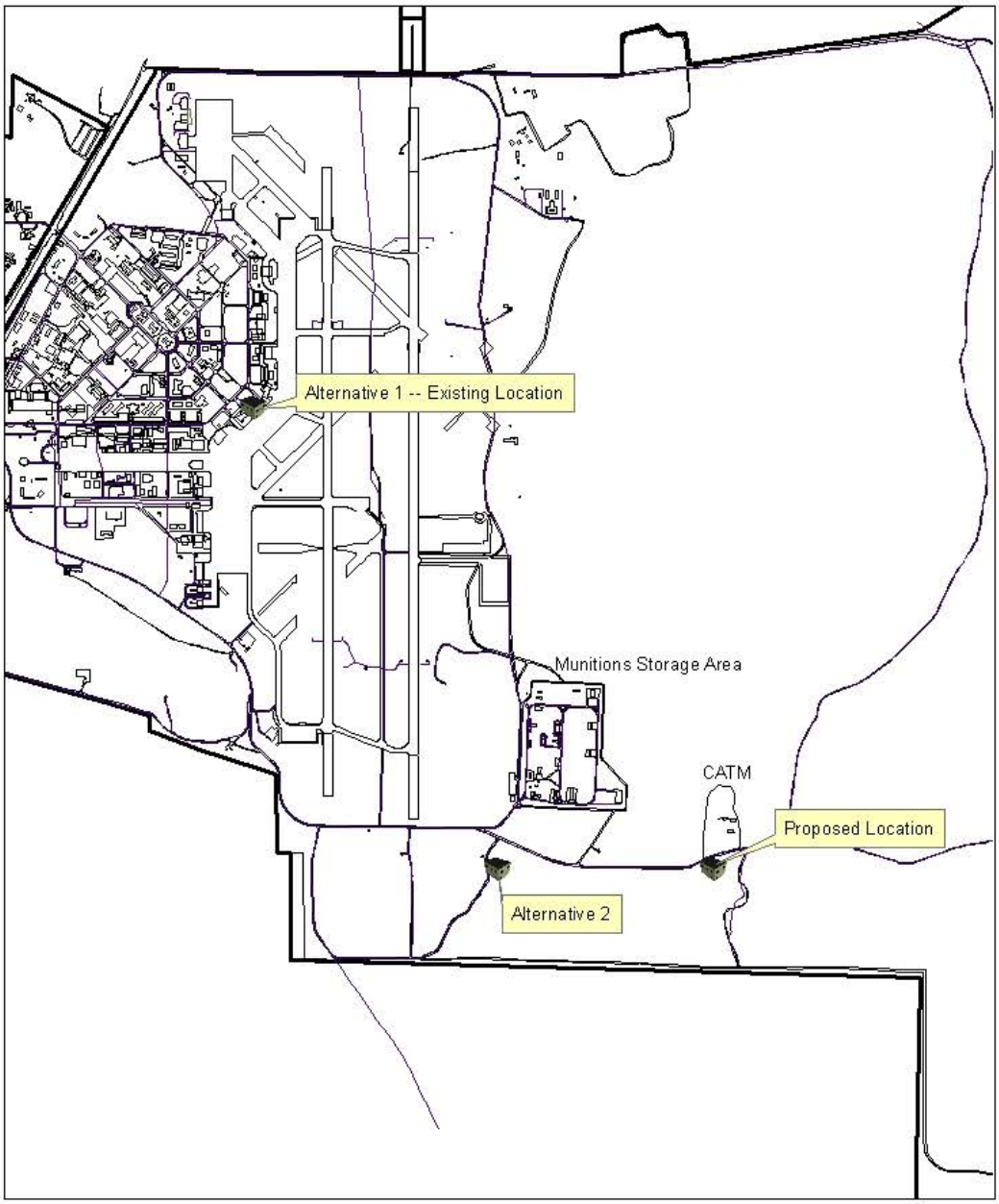
2.3.3 No Action Alternative

Under this alternative, a new EOD facility would not be constructed, and the EOD flight would continue to occupy their current, under-sized and poorly configured facility. Additionally, EOD training would continue to be hampered because of the proximity of other facilities and flight line assets to the existing EOD facility, which limits the storage and handling of explosives materials. It is likely that extensive repairs and modifications to this facility would be required to allow for the continued use of this deteriorating facility. Per 32 CFR 989, the environmental effects of this alternative will be further analyzed in this document.

Location of Proposed Action
New Explosives Ordnance Facility
Moody AFB, GA

N

Figure 2-1



Location of Proposed Action and Alternatives
New Explosives Ordnance Facility
Moody AFB, GA

Figure 2-2

Location of Alternative 1 -- Existing Facility Location
New Explosives Ordnance Facility
Moody AFB, GA

Figure 2-3

Location of Alternative 2
New Explosives Ordnance Facility
Moody AFB, GA

N
W E
S

Figure 2-4

3.0 AFFECTED ENVIRONMENT AND CONSEQUENCES

3.1 INTRODUCTION

The physical and biological components of the proposed project area and the alternative sites are described below under each applicable section. Additional information on the biological and cultural resources on Moody AFB is available in the Moody AFB Integrated Natural Resources Management Plan, the Moody AFB Natural Heritage Inventory Final Report, and the Moody AFB Integrated Cultural Resources Management Plan. These documents are available for review in the Environmental Flight.

Neither the proposed action or any of the analyzed alternatives would have adverse effects to areas of critical environmental concern, coastal zones, wilderness areas, wild or scenic rivers, hazardous waste sites, archeological remains, historic sites, or Native American religious concerns since none of these resources are located within the proposed project construction limits.

3.2 Cultural Resources

Cultural resources consist of prehistoric and historic districts, sites, structures, artifacts, and any other physical evidence of human activity considered relevant to a culture or community for scientific, traditional, religious, or other reasons. They include archeological resources (both prehistoric and historic), historic architectural resources, and American Indian sacred sites and traditional cultural properties. Historic properties are defined by 36 CFR 60.4 as significant archeological, architectural, or traditional resources that are defined as either eligible or ineligible for listing in the National Register of Historic Places (NHPA). Under the National Historic Preservation Act (NHPA), federal agencies are required to consider the effects of their undertakings on historic properties listed or eligible for listing in the National Register. NHPA obligations for a federal agency are independent from NEPA/EIAP and must be complied with even when an environmental document is not required. The Native American Graves and Repatriation Act (NAGPRA) of 1990 protects Native American burials sites and controls the removal of human remains, funerary objects, sacred objects, and items of cultural patrimony on federal and tribal lands.

3.2.1 Existing Conditions

Lying within the Tifton upland region of the Georgia Coastal Plain, Moody AFB has a varied cultural sequence. Inhabitants of the Georgia Coastal Plain are thought to have thrived from the Pre-Paleo-Indian (>11,000 years before present (BP)) through Paleo-Indian (11,000-9,000 BP) periods, the Archaic Period (9,800-2,500 BP), the Woodland Period (2,500 BP - 1000 AD), and the Mississippian Period (1000-1540 AD). Historic sites range from Mississippian times through the Cold War Era, with an Early European presence also represented on the Georgia Coastal Plain. Most of the known archeological sites in this region are from the Woodland and Mississippian Periods. However, relatively little archeology has been conducted in Lowndes and Lanier counties.

A Phase I Archeological Survey of Moody AFB was accomplished in 1995. As a result of this survey, the Air Force identified numerous archeological sites on the installation, including one site (9LW71/9LW70) recommended as eligible for listing in the National Register and three sites (9LW52, 9LW63, and 9LW67) as potentially eligible for listing on the National Register (Figure 3-1). As a result of additional surveys that extended the known boundaries of the sites, 9LW71 and 9LW70 were consolidated into one site. This is a multi-component site with late Paleo-Indian, Early Archaic, and Woodland artifacts. Site 9LW67 is a multi-component site with historic and Woodland artifacts and is less than 50 percent disturbed. Site 9LW63 is a prehistoric site of unknown origin and remains undisturbed. Site 9LW52 is a large prehistoric artifact scatter believed to be less than 50 percent disturbed and is in a silvicultural area. One historic building, the Water Tower (Building 618), was determined to be potentially eligible for listing on the National Register. The water tower was built in 1941 and is a 200,000 gallon capacity steel water tower with an elevated tank. The water tower is considered significant because of its relation to World War II mobilization and training activities at the local level and because it is one of the few remaining recognizable structures that has existed on the installation since the installation's creation in 1941. There are no known Traditional Cultural Resources and/or Sacred Sites as defined under NAGPRA identified on Moody AFB.

3.2.2 Environmental Consequences

Analysis of potential impacts to cultural resources includes impacts that may occur by physically damaging or destroying all or part of a resource, altering the surrounding environment that contributes to the resource's significance, or neglecting the resource to the extent that it deteriorates or is destroyed. Archeological sites are fragile and nonrenewable resources that may suffer varying degrees of impact from natural and human-created effects. A site's scientific value is closely tied to its context or deposition history. Therefore, any action that disturbs the soil or surface vegetation can damage or destroy that context and expose artifacts to looters. Historic structures can be damaged directly by damaging the structure itself or indirectly by affecting the visual impact to the historic structure and its surrounding area. Impacts are assessed by identifying the types and locations of proposed activities as well as their proximity to known cultural resources.

3.2.2.1 Proposed Action: Construction South of CATM

Based on current information on cultural resources at Moody AFB, no potential impacts to archeological resources or historic structures are expected from the proposed action. The proposed action would result in the ground disturbance of less than one acre of previously undisturbed land located 2,700 feet from Site 9LW63, the closest archeological site that is potentially eligible for listing (Figure 3-2). However, since there are no historic structures or archeological sites on or near the proposed EOD facility construction site, there should be no significant impact to cultural resources as a result of clearing and construction in this area. Construction personnel would be instructed to stop

work and notify the base archeologist if artifacts are discovered during ground disturbance activities on the site. To ensure compliance with Section 106 of the NHPA, the State Historic Preservation Officer (SHPO) will be consulted prior to implementation of any actions on this site, and any recommendations from the SHPO would be applied to minimize impacts to cultural resources.

The current EOD facility is over 50 years old and has not been evaluated for historical significance to date. However, because of the numerous alterations and construction upgrades that have occurred to this facility since its construction, it is unlikely to possess historical significance. The State Historic Preservation Officer (SHPO) will be consulted prior to the demolition of this facility, and any recommendations made by the SHPO would be implemented to document the historical significance, if any, of this facility

In summary, there should be no significant impacts to any cultural resources as a result of implementation of this alternative at Moody AFB. Prior to implementation of this action, the SHPO would be consulted in accordance with the NHPA.

3.2.2.2 Alternative 1: Construction on Existing Site

Under this alternative, the existing facility would be demolished and the new EOD facility constructed on the same location, resulting in limited ground disturbance within an already disturbed urban environment. Based on archeological surveys conducted on the installation, there are no archeological sites located west of the runways or in the main base cantonment areas. Therefore, there would be no impacts to archeological resources as a result of implementation of this alternative.

The water tower is located 200 feet from the current EOD facility (Figure 3-3). However, the actions proposed for implementation under this alternative would not have a direct or indirect affect on the water tower. The resulting facility would be no larger than any of the surrounding facilities, and will not be any higher than the original, which should preserve the view of this historical structure. As noted above, the current EOD facility is over 50 years old and has not been evaluated for historical significance to date. However, because of the numerous alterations and construction upgrades that have occurred to this facility since its construction, it is unlikely to possess historical significance. The State Historic Preservation Officer (SHPO) will be consulted prior to the demolition of this facility, and any recommendations made by the SHPO would be implemented to document the historical significance, if any, of this facility. Therefore, there should not be any significant impacts to historical buildings or structures as a result of implementation of this alternative.

In summary, there should be no significant impacts to any cultural resources as a result of implementation of this alternative at Moody AFB. Prior to implementation of this action, the SHPO would be consulted in accordance with the NHPA.

3.2.2.3 Alternative 2: Construction on Crash Trail 2

Based on current information on cultural resources at Moody AFB, no potential impacts to archeological resources or historic structures are expected from the proposed action. The proposed action would result in the ground disturbance of less than one acre of previously disturbed land located 800 feet southwest of Site 9LW63, the closest archeological site that is potentially eligible for listing (Figure 3-4). This proposed construction location was previously forested, with the trees harvested in 2000 and the site mechanically prepared and planted with slash pine seedlings in 2003, resulting in limited soil disturbance. Since there are no historic structures or archeological sites on or near the proposed EOD facility construction site, there should be no significant impact to cultural resources as a result of clearing and construction in this area. Construction personnel would be instructed to stop work and notify the base archeologist if artifacts are discovered during ground disturbance activities on the site. To ensure compliance with Section 106 of the NHPA, the State Historic Preservation Officer (SHPO) will be consulted prior to implementation of any actions on this site, and any recommendations from the SHPO would be applied to minimize impacts to cultural resources.

As noted above, the current EOD facility is over 50 years old and has not been evaluated for historical significance to date. However, because of the numerous alterations and construction upgrades that have occurred to this facility since its construction, it is unlikely to possess historical significance. The State Historic Preservation Officer (SHPO) will be consulted prior to the demolition of this facility, and any recommendations made by the SHPO would be implemented to document the historical significance, if any, of this facility

In summary, there should be no significant impacts to any cultural resources as a result of implementation of this alternative at Moody AFB. Prior to implementation of this action, the SHPO would be consulted in accordance with the NHPA.

3.2.2.3 No Action Alternative

Under this alternative, a new EOD facility would not be constructed and the existing EOD facility would not be demolished. However, it is likely that repairs and modifications to the existing facility would occur to enable the facility to continue to be used by the EOD flight. As noted above, the water tower is located 200 feet from the current EOD facility (Figure 3-3). However, any repair or modifications to this facility would all occur within the immediate proximity of the facility and would not have a direct or indirect effect on the water tower. Because current facility is over 50 years old, the SHPO would be consulted prior to structural repairs or modifications to this facility, and any recommendations made by the SHPO to document the historical significance, if any, of this facility would be completed prior to implementation. As a result, there should not be any significant impacts to cultural resources as a result of the continued implementation of this alternative.

3.3 EXPLOSIVES SAFETY STANDARDS

Explosives safety standards concern the identification of hazards and states safety precautions and rules when working with explosives. Air Force Manual 91-201, *Explosives Safety Standards*, is the central source for explosive safety criteria on Air Force bases. This manual prescribes quantity-distance (Q-D) arcs surrounding explosives handling and storage facilities and prohibits the construction of non-explosives related inhabited buildings within this Q-D zones.

3.3.1 Existing Conditions

Quantity-distance (Q-D) arcs have been prescribed for Moody AFB and are identified on base planning maps (Figure 3-5). These Q-D arcs are primarily associated with the storage of explosives and munitions in the Munitions Storage Area (MSA). Additional Q-D arcs have been mapped around the Hot Cargo Pad and the Safe Haven area. However, the Q-D arcs in these areas are only in effect with explosives-laden aircraft or vehicles are contained within these areas. The location of permanent and temporary Q-D arcs was considered during the planning and siting process for the new EOD facility.

3.3.2 Environmental Consequences

3.3.2.1 Proposed Action: Construction South of CATM

The proposed location of the new EOD facility south of the CATM range is outside the Q-D arcs for Moody AFB per AFMAN 91-201. However, access to the site would occur primarily on Range Road, which bisects Q-D arcs associated with the MSA and Safe Haven areas. Personnel who work in this facility would be listed as mission-essential and would be permitted to transit through the Q-D arcs within the Public Traffic Routes (PTR) and Potential Explosion Sites (PES) en-route to their facility. Per AFMAN 91-201, Section 3.28, only minimal Q-D arcs would need to be established around this facility because of the small quantity of explosives required for EOD proficiency training. These Q-D arcs would only be in effect when the explosives were actually on-site and would not interfere with other base operations, including the use of Range Road or the CATM Range. Therefore, there would be no significant effects on explosives safety standards for the installation as a result of implementation of this alternative.

3.3.2.2 Alternative 1: Construction on Existing Site

A new EOD facility sited in the same location as the current facility would be outside the Q-D arcs for Moody AFB. The use of explosives for proficiency training would not be allowed at this location because of its proximity to other installation facilities and assets. Therefore, there would be no significant effects on explosives safety standards for the installation as a result of implementation of this alternative.

3.3.2.3 Alternative 2: Construction on Crash Trail 2

The proposed location of the new EOD facility adjacent to Crash Trail 2 is outside the Q-D arcs for Moody AFB per AFMAN 91-201. However, access to the site would occur primarily on Range Road, which bisects Q-D arcs associated with the MSA and Safe Haven areas. Personnel who work in this facility would be listed as mission-essential and would be permitted to transit through the Q-D arcs within the Public Traffic Routes (PTR) and Potential Explosion Sites (PES) en-route to their facility. Per AFMAN 91-201, Section 3.28, only minimal Q-D arcs would need to be established around this facility because of the small quantity of explosives required for EOD proficiency training. These Q-D arcs would only be in effect when the explosives were actually on-site and would not interfere with other base operations, including the use of Range Road or the CATM Range. Therefore, there would be no significant effects on explosives safety standards for the installation as a result of implementation of this alternative.

3.3.2.4 Alternative 3: No Action Alternative

The environmental effects of continuing to use the existing EOD facility would be similar to Alternative 1, Construction on the Existing Site. Therefore, there would be no significant effects on explosives safety standards for the installation as a result of implementation of this alternative.

3.4 HAZARDOUS MATERIALS, POLLUTANTS, AND CONTAMINANTS

Hazardous materials, pollutants, and contaminants primarily deals with substances regulated under the Toxic Substances Control Act (TSCA) and historical contamination of the natural environment, including soil, surface water, and ground water.

3.4.1 Existing Conditions

Toxic Substances Control Act (TSCA). The TSCA regulates approximately 75,000 industrial chemicals currently produced and used in the United States. Of these, asbestos containing material (ACM), radon, and lead-based paint (LBP) are items of particular concern.

Human exposure to asbestos through inhalation of asbestos fibers over a long time period has been shown to be harmful, potentially leading to the development of serious illnesses such as mesothelioma and asbestosis. Asbestos-containing material (ACM) and ACM abatement is regulated by the U.S. Environmental Protection Agency (USEPA) and the U.S. Occupational Safety and Health Administration (OSHA). Asbestos fiber emissions into the ambient air are regulated in accordance with Section 112 of the Clean Air Act, which established the National Emissions Standards for Hazardous Air Pollutants (NESHAP). The Asbestos Hazard Emergency Response Act (AHERA), Public Law (P.L.) 99-519 and P.L. 101-637, address worker protection for employees who work around or remediate ACM.

Human exposure to lead has been determined to be an adverse health risk by the U.S. Environmental Protection Agency (USEPA) and the U.S. Occupational Safety and Health Administration (OSHA). Sources of exposure to lead are through dust, soils, and paint. Lead was used as an additive and pigment in paints for many years prior to 1978. In 1978, Congress passed legislation restricting the use of lead in paint, and the Department of Defense followed suit by implementing a ban on the use of any paints containing lead additives or pigments. It is very likely that most of the facilities on Moody AFB that were constructed prior to 1978 contain some levels of LBP unless previously abated. Any projects that require alteration or demolition of pre-1978 structures or those with known LBP are reviewed to ensure that project designs capture the appropriate abatement and disposal requirements for LBP. Projects that are likely to crush lead-containing coatings to a form that can be inhaled or ingested are managed in accordance with federal, state, and local transportation, treatment, storage, and disposal requirements. The Moody AFB Lead-Based Paint Management Plan provides specific policy and guidance to identify and address LBP hazards and to protect the public from exposure to these hazards. The plan also provides guidance on proper management/disposal of material containing LBP.

Radon is a cancer-causing natural radioactive gas that is invisible and that cannot be smelled or tasted. It is the leading cause of lung cancer among non-smokers and the second leading cause of lung cancer in America. An initial radon screening was conducted at Moody AFB in 1988. The screening did not identify any radon concentrations greater than the USEPA's recommended 4 picocuries per liter (pCi/l) action level. Radon concentrations identified within sampled structures were less than 1.4 pCi/l and no mitigation measures were required.

Pesticides, herbicides, rodenticides, and fungicides are used throughout the installation to control pest populations at the direction of the entomology office. While Moody AFB employs an integrated pest management program to minimize the use of these chemicals, they are commonly applied for the control of fire ants, fleas, mosquitoes, termites, and weeds.

There are no known TSCA-regulated substances or contamination concerns at any of the proposed construction sites (e.g. south of CATM or adjacent to Crash Trail 2).

Building 665, the existing EOD facility, is known to have asbestos-containing transite siding and has the potential to contain lead-based paint based on the age of the facility. Installation records suggest that chlordane or other similar chemicals may have been historically used at this facility to treat termites. Based on limited sampling in the soils underlying other facilities on the installation, it is likely that chlordane or chlordane-derivatives are present in the soil under this facility.

Environmental Restoration Program (ERP). The Environmental Restoration Program (ERP) is used by the U.S. Air Force to identify, characterize, clean-up, and restore sites contaminated with toxic and hazardous substances, low-level radioactive materials,

petroleum, oils, lubricants, and other pollutants and contaminants. The ERP has established a process to evaluate past disposal sites, control the migration of contaminants, identify potential hazards to human health and the environment, and remediate the sites. Moody AFB has an active ERP that manages numerous sites within the boundaries of the installation (Figure 3-6).

3.4.2 Environmental Consequences

3.4.2.1 Proposed Action: Construction South of CATM

There are no issues of concern related to hazardous materials, pollutants, or contaminants at the proposed construction site for the new EOD facility. However, there are several issues of concern related to the demolition of the existing EOD facility, including the known presence of asbestos, and the likely presence of lead-based paint and residual pesticide contamination in the soil underlying the facility.

In accordance with Georgia State Rule 391-3-12-.02, *Standards for Asbestos Emission Controls*, and CFR 40, Title 61, Part M, *National Emissions Standards for Hazardous Air Pollutants*, asbestos-containing building materials (ACM) would be removed prior to demolition. Permits would be obtained from the Environmental Protection Division of the Georgia Department of Natural Resources to authorize the removal and disposal of these ACM in a safe and environmentally friendly manner.

Because there is a high potential for LBP to be present in the existing EOD facility, the demolition contractor would be required to sample for the presence of LBP prior to demolition and disposal of the structure. Demolition of this facility would be in accordance with TSCA, Titles I and IV, OSHA, and the Georgia EPD Rules for Lead-based Paint Abatement and Certification (OCGA Chapter 391-3-24). Any lead-containing wastes would be disposed of in accordance with applicable state and federal regulations, and would require a waste manifest and disposal at a state-approved facility. Lead-based paint materials do not have to be treated as hazardous waste as long as they are not removed from a structure prior to demolition. Because of these precautions and legal requirements, the demolition of this facility, even if it does contain LBP, would not be considered a significant adverse effect and would actually provide beneficial long-term benefits because the amount of LBP on the installation would be decreased.

While there is the potential for residual pesticides to be present in the soils underlying Building 665, the levels of these residual pesticides recorded at other facilities on the base are lower than risk levels established by the U.S. Environmental Protection Agency (USEPA). Additionally, chlordane and its derivatives are volatile and would disappear from the soil as it is disturbed and exposed to the environment. Although there would not be any human health concerns as a result, workers would be notified of the potential presence of pesticides in the soil and would be cautioned to wear appropriate personal protective equipment (PPE).

There are no ERP sites located within the boundaries of the proposed construction site. Therefore, this site has never received intensive investigation and no soil samples have been taken from the area. Therefore, it cannot be guaranteed that contaminated soils will not be encountered during ground disturbance activities. Personnel will be instructed to halt work and notify the Compliance Element of the Environmental Flight if potentially contaminated soils are discovered during operations.

The existing EOD facility is located on ERP Site SS-38, Flightline Area. Contamination in this area is limited to groundwater contamination only. There is no known soil contamination associated with this ERP site. However, it cannot be guaranteed that contaminated soils will not be encountered during ground disturbance activities associated with the demolition of this facility. Personnel will be instructed to halt work and notify the ERP Program Manager if potentially contaminated soils are discovered during operations. No ERP construction waiver would be required. There would be no significant impacts to ERP sites as a result of the proposed action.

Because the proposed action involves the demolition of this facility, the long-term effects of this action would be beneficial in regards to the presence of hazardous materials, pollutants, and contaminants on the installation as these items are abated and disposed of safely in accordance with federal and state regulations, laws, and policies. There would be no short-term effects on human health or safety because workers would be protected from exposure to these substances. Therefore, there would be no significant detrimental effects on these resources as a result of implementation of this alternative.

3.4.2.2 Alternative 1: Construction on Existing Site

The environmental impacts of this alternative would be similar in size and scope to the impacts identified for the proposed action. There would be no significant detrimental effects on these resources as a result of implementation of this alternative.

3.4.2.3 Alternative 2: Construction on Crash Trail 2

The environmental impacts of this alternative would be similar in size and scope to the impacts identified for the proposed action. There would be no significant detrimental effects on these resources as a result of implementation of this alternative.

3.4.2.4 Alternative 3: No Action Alternative

As noted above, Building 665, the existing EOD facility, is known to contain ACM and potentially has LBP. Under this alternative, the facility will have to undergo periodic maintenance and repairs to remain functional, and ACM and LBP may be encountered. Additionally, in the event the maintenance and/or repairs involve soil disturbance or limited demolition of the facility, soils with residual pesticides could be encountered.

In accordance with Georgia State Rule 391-3-12-.02, *Standards for Asbestos Emission Controls*, and CFR 40, Title 61, Part M, *National Emissions Standards for Hazardous Air Pollutants*, asbestos-containing building materials (ACM) would be abated during

maintenance and/or repair activities. Permits would be obtained from the Environmental Protection Division of the Georgia Department of Natural Resources to authorize the removal and disposal of these ACM in a safe and environmentally friendly manner.

Because there is a high potential for LBP to be present in the existing EOD facility, contractors performing renovations and/or maintenance would be required to sample for the presence of LBP prior to alterations to the structure. Any renovations and/or maintenance activities in this facility would be conducted in accordance with TSCA, Titles I and IV, OSHA, and the Georgia EPD Rules for Lead-based Paint Abatement and Certification (OCGA Chapter 391-3-24). Any lead-containing wastes would be disposed of in accordance with applicable state and federal regulations, and would require a waste manifest and disposal at a state-approved facility. Lead-based paint materials do not have to be treated as hazardous waste as long as they are not removed from a structure prior to demolition. Because of these precautions and legal requirements, the renovation and/or maintenance of this facility, even if it does contain LBP, would not be considered a significant adverse effect and would actually provide beneficial long-term benefits because the amount of LBP on the installation would be decreased.

While there is the potential for residual pesticides to be present in the soils underlying Building 665, the levels of these residual pesticides recorded at other facilities on the base are lower than risk levels established by the U.S. Environmental Protection Agency (USEPA). Additionally, chlordane and its derivatives are volatile and would disappear from the soil as it is disturbed and exposed to the environment. Although there would not be any human health concerns as a result, workers would be notified of the potential presence of pesticides in the soil and would be cautioned to wear appropriate personal protective equipment (PPE).

Because the proposed action involves the maintenance and/or repair of this facility, the long-term effects of this action would be beneficial in regards to the presence of hazardous materials, pollutants, and contaminants on the installation as these items are abated and disposed of safely in accordance with federal and state regulations, laws, and policies. There would be no short-term effects on human health or safety because workers would be protected from exposure to these substances. Therefore, there would be no significant detrimental effects on these resources as a result of implementation of this alternative.

3.5 PHYSICAL RESOURCES

Physical resources are defined as the geology, topography, and soils of a given area. The geology of an area includes bedrock materials, mineral deposits, and fossil remains. Topography refers to terrain, dominant landforms, and other visible features. Soils are unconsolidated materials on or near the surface and are defined by classifications and associations. A soil classification is a broad term for the general type of soil found in a larger area (e.g., hydric, alluvial, or clay soils), while soil associations are site-specific and are based on the particular soil type or complex found at that location.

Control of erosion and sedimentation is managed under state and federal regulations. The state of Georgia requires agencies that disturb at least 1.0 acres of land to obtain a permit under the Georgia Erosion and Sedimentation Control Act (GESCA). While the Georgia Soil and Water Conservation Commission is the state agency that has primary responsibility for this act, authority to review projects and issue permits has been delegated to the county level, where appropriate, to facilitate individual county and city level planning efforts and goals.

As authorized by the Clean Water Act, the National Pollutant Discharge Elimination System (NPDES) permit program controls water pollution by regulating sources that discharge pollutants into waters of the United States. There are two types of sources: point sources and non-point sources. Point sources are discrete conveyances such as pipes or man-made ditches that have well-defined outfalls. Non-point sources are non-discrete areas that contribute to storm water runoff, such as open fields or most construction sites. Individual homes that are connected to a municipal system, use a septic system, or do not have a surface discharge do not need an NPDES permit; however, industrial, municipal, and other facilities must obtain permits if their discharges go directly to surface waters. Additionally, NPDES permits are required for land disturbance activities, including construction and/or demolition actions, that disturb at least 1.0 acres of land. While the USEPA is the federal agency responsible for enforcement of this program, authority to review projects and issue permits has been delegated to the Georgia EPD.

Prime farmland soils are protected under the Farmland Protection Policy Act, which is administered by the Natural Resources Conservation Service (NRCS). This law was promulgated to reduce the substantial decrease in the amount of open farmland in the United States. Specifically, federal agencies are directed to prevent the unnecessary and irreversible conversion of farmland to nonagricultural uses. If prime farmland soils are impacted by proposed federal actions, a prime farmland evaluation (USDA Form 1006) must be completed and the federal agency must consult with the NRCS.

3.5.1 Existing Conditions

Geologically, Moody AFB is located in the Tifton Upland District, East Gulf Coastal Plain Section, Coastal Plain Province, Atlantic Plain Major Division physiographic province. The predominant landform on about 80% of this area consists of moderately

dissected, irregular plains of marine origin formed by deposition of continental sediments on to the submerged shallow continental shelf, which was later exposed when the sea receded from this area. The most important stratigraphic unit is the Suwannee Limestone, which contains the upper portions of the Floridan Aquifer. This layer ranges in thickness from approximately 200 to 250 feet and is usually less than 200 feet below ground surface.

The Tifton Upland District is characterized by flat to sloping plateaus separated by shallow river valleys, broad wetland depressions, and karst topography. Elevations in the Tifton Upland District range from 480 feet in the north to 150 feet in the southeast indicating the regional slope. The northwestern and northern boundary of this area is the base of the Pelham Escarpment, which rises as much as 200 feet above the Dougherty Plain. The eastern boundary follows eastern drainage divide of the Alapaha River.

Specifically, Moody AFB is located on the level plateau between the Withlacoochee River to the west and the Alapaha River to the east. Land surface elevations on Moody AFB vary from its lowest point on the eastern portion at 190 feet MSL to about 240 feet MSL near the center of the base. Slopes range from 0 to 5 percent on the installation.

Surface soils in the Tifton Upland District are characterized by sandy clay interbedded with fine sand to coarse-grained sand and sandy limestone. General characteristics of this region include well-drained soils and slopes ranging from 0 to 12 percent. The upland soils were formed from deep sedimentary sands and clays, with lower alluvial soils formed from eroded uplands. The two most dominant soil associations at Moody AFB include the Tifton-Pelham-Fuquay and the Dasher associations. The majority of the cantonment area (located immediately east of Georgia State Highway 125) consists of the Tifton-Pelham-Fuquay association containing soils with a sandy surface layer and a loamy subsoil. The Dasher association covers the majority of the Grand Bay Range, and consists of soils in marshes, swamps, and drainage ways.

Descriptions of the predominant soil associations at Moody AFB include the following:

3.5.1.1 Tifton-Pelham-Fuquay. This association consists of nearly level and gently sloping soils on ridge tops, hillsides, and in drainage ways that dissect the ridges. The ridges are typically less than one mile wide, and the drainage ways range from about 50 to 250 feet wide. This association makes up about 36 percent of the soils in Lowndes County, where the proposed training sites on Moody AFB are located. Tifton soils make up about 49 percent of the association, Pelham soils about 16 percent, the Fuquay soils about 8 percent, and the minor soils about 27 percent. Tifton and Fuquay soils are generally located along the ridges, and Pelham soils are in drainage ways and intermittently ponded depressions. Tifton soils are well drained and nearly level or very gently sloping. Typically, the surface layer is brown loamy sand about 8 inches thick. The subsoil is sandy-clay loam and extends to a depth of 60 inches or more. Pelham soils are poorly drained and nearly level. Typically, the surface layer is black loamy sand about 8 inches thick. The subsurface layer is gray loamy sand about 17 inches think. The subsoil extends to a depth of 65 inches or more. Fuquay soils are well drained and

nearly level or very gently sloping. Typically, the surface layer is dark grayish-brown loamy sand about 7 inches think. The subsurface layer is light yellowish-brown loamy sand about 14 inches thick. The subsoil is dominantly sandy-clay loam and extends to a depth of 60 inches or more. Minor soils in this association are the well-drained Dothan, Nankin, and Sunsweet soils and the moderately well-drained Stilson soils. Dothan, Nankin, and Sunsweet soils are on ridges and hillsides, as are Tifton and Fuquay soils, and the more sloping Sunsweet soils are on short hillsides. Stilson soils occur on low uplands.

Most of the cultivated land in Lowndes County is on Tifton and Fuquay soils. Corn, tobacco, soybeans, cotton and peanuts are the major agricultural crops. Also, some areas are used for some permanent pasture. The main concern of management is control of erosion on the gently sloping soils. Pelham soils are used mainly for producing timber, but some areas are in pasture. This association generally has slight limitations for most non-farm uses, but because of wetness and flooding, Pelham soils are severely limited for crop production.

3.5.1.2 Dasher. These soils are characteristic of swampy areas and level, very poorly drained organic soils in flooded areas.

Clarendon soils are defined as moderately well drained loamy sands. This soil is nearly level, with slopes of less than 2%. The topsoil is about eight inches thick and is comprised of dark gray loamy sand. The subsoil extends to about 65" and is a sandy clay loam. This soil is low in natural fertility and organic matter and is strongly acidic with moderate permeability. Clarendon soils are classified as prime farmland soils by the Natural Resources Conservation Service (NRCS).

The two Tifton soils are both well drained loamy sands with slight slopes averaging between 2 and 5%. The Tifton urban complex soils are generally more level as a result of significant mechanical shaping. The topsoil is about eight inches deep and consists of a brown loamy sand. The subsoil extends to a depth of more than 60 inches, and is a sandy clay. These soils are moderate in fertility and low in organic matter, and have moderate permeability.

Olustee sand is a poorly drained, nearly level soil comprised primarily of sand. The topsoil consists of a very dark gray sand about seven inches thick. It is underlain by a weakly cemented, very dark grayish brown sand that extends to a depth of about 12 inches. The subsoil is about 65 inches deep, and is comprised of a gray sandy clay loam mottled with brown. This soil is low in fertility and organic matter and has moderate permeability.

Pelham loamy sands are poorly drained, nearly level soils. The topsoil is about eight inches thick and consists of a black loamy sand. The subsoil is a gray loamy sand with mottling that extends to a depth of 65 inches. This soil is low in natural fertility and has moderate amounts of organic matter. This soil has a low potential for most nonfarm uses

because of flooding and wetness. Pelham loamy sands are classified as hydric soils in Georgia by the NRCS.

3.5.2 Environmental Consequences

3.5.2.1 Proposed Action: Construction South of CATM

The two soil types underlying this area are Olustee Sand (Oa) and Leefield Loamy Sand (Le), both of which are poorly drained and nearly level. They are not classified as either hydric soils or prime farmland soils, although they typically have low potential for most nonfarm uses, including construction, because of periodic wetness.

The Proposed Action would result in a limited impact to soils and other physical resources as less than one acre of soils would be disturbed under this action. Construction of the EOD facility would not significantly affect the geologic units underlying the site, and would not result in significant changes to topography, although it is likely the site would require additional fill to permit construction. The land use in the area would change from unimproved to improved, however this would not be significant because less than one acre in the 60-acre forest stand would be affected.
As mentioned above, the soils underlying this area are not classified as prime farmland soils by the NRCS, so there would be no conversion or impacts to these resources as a result of implementation of the Proposed Action. Soils would be disturbed during construction activities, but given the flat topography of the proposed construction site, storm water runoff and overland flow velocities from rainfall events on disturbed ground would be slow, and there should be no significant erosion or sedimentation impacts. Although the proposed disturbance is not large enough to trigger the requirements to obtain a permit under the NPDES Storm Water Phase II regulations of the Clean Water Act or the Georgia Erosion and Sedimentation Control Act, an erosion and sedimentation control plan would still be developed and implemented on the site. This plan would include, at a minimum, silt fences and a 50-foot vegetative barrier to minimize soil erosion and sedimentation. In the long-term, there would be an increase in storm water as a result of an increase in impermeable surfaces in the area. However, this would not be significant and should not result in increases in erosion and sedimentation because the facility, including the parking lot, would be designed with curbing and permanent vegetative barriers to minimize overland flows resulting from rainfall events.

In summary, the temporary disturbance of soils would result in a slight chance of erosion and sedimentation, but this is not considered significant because of the erosion and sedimentation control measures that would be implemented. In the long-term, there would be a change in land use from unimproved to improved as the site is developed. However, the change in land use would not be significant because of the small size of the area in relation to the overall size of the surrounding forest stand. There would be long-term increases in storm water because of the addition of impermeable surfaces, but these would be minor and would be designed to minimize erosion and sedimentation through the use of curbing and permanent vegetative barriers. Therefore, there should be no significant impact to physical resources as a result of implementation of this alternative.

3.5.2.2 Alternative 1: Construction on Existing Site

The existing EOD facility is located on Tifton-Urban Land Complex soils (TuB). These nearly level soils are highly suited for nonfarm uses, and occur most commonly in heavily populated and industrial areas. Tifton-Urban Land Complex soils are not considered hydric soils and are not classified as prime farmland soils.

Effects on physical resources from implementation of this alternative would be minimal. Soil disturbance would be limited to the existing location, which was previously disturbed and is located in a developed part of the installation. There would be no change in land use since this area is already classified as improved grounds.

Because the proposed land disturbance is less than 1.0 acres, no permits would be required to accomplish this action. However, an erosion and sedimentation control plan would still be developed and implemented to minimize erosion and sedimentation from this site. At a minimum, this plan would include the installation of silt fences.

There would not be an increase in storm water runoff from this alternative since the amount of impermeable surfaces would not be increased, and there would be no change to the installation's existing storm water permits.

Therefore, there would not be any significant impact to physical resources from implementation of this alternative, either short-term or long-term.

3.5.2.3 Alternative 2: Construction on Crash Trail 2

There is one soil type underlying this proposed construction location: Olustee Sand (Oa). As noted above, Oa is characterized as being poorly drained and nearly level. It is not a hydric soil or a prime farmland soil, and typically has a low potential for most nonfarm uses, including construction, because of periodic wetness.

The environmental effects from this alternative would be similar in size, scope, and effect to those of the proposed action, and no permits would be required. The temporary disturbance of soils would result in a slight chance of erosion and sedimentation, but this is not considered significant because of the erosion and sedimentation control measures that would be implemented. In the long-term, there would be a change in land use from unimproved to improved as the site is developed. However, the change in land use would not be significant because of the small size of the area in relation to the overall size of the surrounding forest stand. There would be long-term increases in storm water because of the addition of impermeable surfaces, but these would be minor and would be designed to minimize erosion and sedimentation through the use of curbing and permanent vegetative barriers. Therefore, there should be no significant impact to physical resources as a result of implementation of this alternative.

3.5.2.4 Alternative 3: No Action Alternative

Under this alternative, there would be no soil disturbances or changes to storm water runoff or land use. Therefore, there would be no impact on physical resources as a result of implementation of this alternative.

3.6 VEGETATION RESOURCES

This section focuses on vegetation types or species that are important to the function of the ecosystem or are protected under federal or state law. For this EA, the term *vegetation* is defined as all existing terrestrial plant communities, including threatened, endangered, or sensitive plant species. Rare, threatened, and endangered (RTE) species are included in this definition. The affected environment for vegetation includes only those areas potentially subject to ground or vegetative disturbance.

3.6.1 Existing Conditions

Moody AFB lies within the Outer Coastal Plain Forest (OCPF) province of the U.S. lowland ecoregion. The OCPF is dominated by temperate rainforest, also called temperate evergreen forest and laurel forest. It differs from the equatorial and tropical rainforest by having fewer species of trees and hence, large populations of individual species. Trees are not as tall as in the low latitude rainforest, leaves usually are smaller and more leathery, and the leaf canopy is less dense.

The trees commonly found in the southeastern United States are pines (*Pinus spp.*), oaks (*Quercus spp*), and members of the laurel and magnolia families. Southeastern forests usually have a well- developed lower stratum of vegetation that includes tree ferns, small palms, shrubs, and herbaceous plants. Lianas and epiphytes are abundant. An example of conspicuous epiphyte accumulation at low elevations is the Spanish “moss” (*Tillandsia usneoides*) that festoons the oaks, bald cypress (*Taxodium distichum*), and other trees of the eastern Gulf Coast. Forests of longleaf, loblolly, and slash pine dominate large areas of sandy upland xerophytic habitat as a subclimax forest, maintained by frequent fires. Vast areas of gum-bay swamps and scrub-shrub wetlands exist throughout the area. Bald cypress and pond cypress (*Taxodium ascendens*) are dominant trees in swamps and cypress domes throughout the region.

The majority of the pine forests found in the southeastern U.S. represent second-growth forests established after a disturbance event, such as a catastrophic wildfire or deforestation activity (natural or anthropogenic). Under natural conditions, lightning-caused summer fires were an important component in maintaining pine-dominated ecosystems in the coastal plain area. These fires not only burned through pine stands in upland and flatwoods areas, but would also burn wetlands and hammocks during periods of extreme drought. These periodic fires maintained the pine subclimax forest by controlling hardwood competition, encouraged the growth of herbaceous vegetation, and

maintained open water areas within the wetlands by removing layers of peat and sphagnum moss.

Located in the lower coastal plain physiographic region within the OCPF, Moody AFB possesses a diversity of habitats. Both areas are dominated by pines and lowland hardwoods and support a wide array of plant and wildlife species typical of these systems.

Habitats featured at Moody AFB include upland pine forest, pine flatwoods, gum-bay-shrub swamps, upland hardwood hammocks, and freshwater ponds. Unimproved areas of Moody AFB feature several distinct natural communities or ecosystems. These communities range from xeric to hydric, with transitions and dynamic interactions between the different areas. Natural communities on Moody AFB include upland pine forests, pine flatwoods, and extensive areas comprised of various wetland communities. The primary key ecological feature of Moody AFB is the vast area contained in wetlands. Wetlands cover approximately 5,500 acres (46.4%) on the installation, with the vast majority of this acreage being concentrated in the Grand Bay/Banks Lake ecosystem complex. The Carolina bays are typically vegetated with a scrub-shrub cover type; wetter areas transition into a black gum-cypress swamp association with pockets of open water. The black gum-cypress swamp association is primarily vegetated with an overstory of black gum and cypress, but contains significant numbers of red maples (*Acer rubrum*) and sweetbays (*Magnolia virginiana*). The understory vegetation is moderately dense and consists of heaths, redbay (*Persea palustris*), wax myrtle (*Myrica cerifera*), cinnamon fern (*Osmunda cinnamomea*), chain fern (*Woodwardia virginica*), and greenbrier (*Smilax spp*). In the transition areas from wetlands to uplands, pond pine (*Pinus serotina*), slash pine, and dense thickets of evergreen shrubs and palmetto become more predominant as the soils transition from hydric to mesic. Eventually, the upland areas are comprised predominantly of a pine forest type, established either through natural community succession or through artificial regeneration (i.e., pine plantations).

Surveys were undertaken in 1993-94 to classify natural ecosystems and to identify the presence of protected species on the installation. This survey did not identify any plant species that were listed as threatened or endangered by either the U.S. Fish and Wildlife Service or the Georgia DNR. Two plant species, the green-fly orchid (*Epidendrum conopseum*) and the hooded pitcher plant (*Sarracenia minor*), were characterized by the Georgia DNR as "unusual," meaning that they deserved special consideration because of the potential for commercial exploitation. Three other plant species, blue maidencane (*Amphicarpum muehlenbergianum*), climbing heath (*Pieris phillyreifolia*), and needle palm (*Rhapidophyllum hystrix*), are considered rare or uncommon by the state Natural Heritage Program, but are not officially listed as such by the state of Georgia.

3.6.1.1 Proposed Action: Construction South of CATM

The proposed construction site is located underneath a mixed 70-year old slash and loblolly pine/water oak forest, which is approaching the upper limits of maturity. The trees in this area are widely spaced, with a total basal area (BA) of 60 square foot per acre

(Pine BA: 40; Hardwood BA: 20). The pines in this area average 16 inches diameter at breast height (dbh), which is measured at 4.5 feet above the ground, and are around 90 feet in height. The scattered water oaks are generally smaller, averaging about 8 inches dbh and 40 feet in height, but there are a couple of individual water oaks that are over 20 inches dbh and approaching 70 feet in height. The midstory is basically absent, with only a few scattered redbay and sweetleaf (*Symplocos tinctoria*) trees on the site. The understory is very sparse, with less than 10% coverage. Understory plant species include blueberries (*Vaccinium* sp.), saw palmetto (*Serenoa repens*), gallberry (*Ilex glabra*), and wild grapes (*Vitis* sp.). None of the rare or unusual plant species discovered during the 1993-94 surveys occur on this site.

3.6.1.2 Alternative 1: Construction on Existing Site

Vegetation in this area is limited to plants including as part of the landscaping of the Moody AFB developed area. There are several small grassed areas surrounding the building, with the largest being about 50 feet by 100 feet in size. There are 11 trees planted adjacent to this facility: one yellow-poplar (*Liriodendron tulipifera*) and 10 crepe-myrtles (*Lagerstromeia indica*). The yellow poplar is about 24 inches dbh and 60 feet tall while the crepe-myrtles only average about 4 inches dbh and are about 17 feet in height. None of the rare or unusual plant species discovered during the 1993-94 surveys occur on this site.

3.6.1.3 Alternative 2: Construction on Crash Trail 2

The proposed construction site for this alternative is currently part of a 4-year old slash pine plantation. These trees were planted in the winter of 2004 after the site was mechanically site prepared and bedded. The plantation was sprayed to control competing vegetation in 2005, and currently the only other major vegetation on the site consists of broomsedge (*Andropogon virginicus*) growing underneath the 10-foot tall pines. There are other scattered woody plants on the site, such as gallberry, but they are a minor component of the vegetation because of the herbicide applications. None of the rare or unusual plant species discovered during the 1993-94 surveys occur on this site.

3.6.1.4 Alternative 3: No Action Alternative

As noted in 3.6.1.2 above, vegetation in this area is limited to plants including as part of the landscaping of the Moody AFB developed area. There are several small grassed areas surrounding the building, with the largest being about 50 feet by 100 feet in size. There are 11 trees planted adjacent to this facility: one yellow-poplar and 10 crepe-myrtles. The yellow poplar is about 24 inches dbh and 60 feet tall while the crepe-myrtles only average about 4 inches dbh and are about 17 feet in height. None of the rare or unusual plant species discovered during the 1993-94 surveys occur on this site.

3.6.2 Environmental Consequences

3.6.2.1 Proposed Action: Construction South of CATM

In order to construct the EOD facility, the site would have to be cleared and leveled, with the trees, stumps, and associated logging debris (slash) being removed for off-site disposal. It is likely the slash would be carried to the installation's burn pit and piled for future burning; however, the contractor may be directed to carry the slash off-base for disposal as part of his contract. Following construction, the site would be landscaped and would likely contain areas of planted grass, shrubs, and ornamental trees similar to those found on other developed parts of the installation.

Under this action, less than 50 trees would be removed, with the majority of these being immature water oaks. Given the location of this site within a larger pine forest, the removal of less than one acre of native trees from this site would not be considered a significant environmental impact. The trees that would be removed are common to this region and are well-represented in other areas on the installation. As noted above, there are no listed, rare, or unusual species located on this site, so the proposed activities under this alternative would not result in any impacts to these species.

The demolition of the existing EOD facility would require the removal of 11 ornamental trees and would result in the disturbance of the grassy areas around the facility. The crepe-myrtles would be dug up and either replanted on the installation or disposed of through burning at the installation slash disposal burn pit. Given the size of the yellow-poplar, this tree would be cut down and the stump removed, with the slash either being burned at the installation burn pit or carried off-base for disposal. Following demolition and clearing of this facility, the site would be planted in grass and maintained as an improved landscape.

In summary, implementation of this alternative would remove less than one acre of native vegetation from the installation, but this is not considered a significant impact. The removal of 11 ornamental trees out of the 8,000 ornamental trees on the installation as part of the demolition project would not be considered a significant loss and would be off-set through the normal landscaping and planting of ornamental trees on main base. Therefore, there would be no significant impacts as a result of implementation of this alternative.

3.6.2.2 Alternative 1: Construction on Existing Site

The environmental effects of this action would be similar to those described for the proposed action concerning the removal of trees to facilitate the demolition of the existing EOD facility. In the short-term, 11 ornamental trees would be removed and the grassy areas around the facility would be disturbed. The crepe-myrtles would be dug up and either replanted on the installation or disposed of through burning at the installation slash disposal burn pit. Given the size of the yellow-poplar, this tree would be cut down and the stump removed, with the slash either being burned at the installation burn pit or

carried off-base for disposal. Following demolition and reconstruction on the site, the area would be landscaped with grass, shrubs, and trees similar to other facilities on main base.

In summary, the short-term removal of the grass and the 11 trees surrounding this facility would not be considered significant within the overall context of the Moody AFB urban forest, which contains over 8,000 individual trees. In the long-term, there would be no change in vegetation resources as the site is re-landscaped. Therefore, there would be no significant impacts on vegetation resources as a result of implementation of this alternative.

3.6.2.3 Alternative 2: Construction on Crash Trail 2

In order to construct the EOD facility, the site would have to be cleared and leveled, with the trees and associated logging debris (slash) being removed for disposal. It is likely the slash would be carried to the installation's burn pit and piled for future burning; however, the contractor may be directed to carry the slash off-base for disposal as part of his contract. Following construction, the site would be landscaped and would likely contain areas of planted grass, shrubs, and ornamental trees similar to those found on other developed parts of the installation.

Under this action, approximately 500 immature slash pines would be removed. However, the removal of less than one acre of immature pine saplings would not be considered significant because there are over 2,000 acres of upland pine forests in various stages of growth, from recently planted to mature. As noted above, there are no listed, rare, or unusual species located on this site, so the proposed activities under this alternative would not result in any impacts to these species.

The demolition of the existing EOD facility would require the removal of 11 ornamental trees and would result in the disturbance of the grassy areas around the facility. The crepe-myrtles would be dug up and either replanted on the installation or disposed of through burning at the installation slash disposal burn pit. Given the size of the yellow-poplar, this tree would be cut down and the stump removed, with the slash either being burned at the installation burn pit or carried off-base for disposal. Following demolition and clearing of this facility, the site would be planted in grass and maintained as an improved landscape.

In summary, implementation of this alternative would remove less than one acre of immature slash pines from the installation, but this is not considered a significant impact. The removal of 11 ornamental trees out of the 8,000 ornamental trees on the installation as part of the demolition project would not be considered a significant loss and would be off-set through the normal landscaping and planting of ornamental trees on main base. Therefore, there would be no significant impacts as a result of implementation of this alternative.

3.6.1.4 Alternative 3: No Action Alternative

There would be no potential for disturbance to vegetation resources as a result of implementing this alternative. Therefore, there would be no impacts to these resources.

3.7 Water Resources

Water resources include both surface and subsurface water and floodplains. Surface water includes all lakes, ponds, rivers, streams, impoundments, and wetlands within a defined area or watershed. Subsurface water, commonly referred to as groundwater, is typically found in certain areas known as aquifers. Aquifers are areas of mostly high porosity soil where water can be stored between soil particles and within soil pore spaces. Groundwater and surface water are both impacted by storm water infiltration and runoff generated during rain events. Floodplains are areas that are flooded periodically by the lateral overflow of surface water bodies, including rivers, creeks, and other wetlands. Floodplains are geographically defined as the area flooded during a certain return interval; generally, the federal protection of floodplains is concerned with the area that would be flooded once every 100 years (e.g. 100-year or regulatory floodplain). Floodplains are mapped for the U.S. by the Federal Emergency Management Agency (FEMA).

The Clean Water Act (CWA) of 1972 is the primary federal law that protects the nation's waters, including lakes, rivers, aquifers, and coastal areas. The primary objective of the CWA is to restore and maintain the integrity of the nation's waters. Storm Water management is regulated under the National Pollutant Discharge Elimination System (NPDES) section of the CWA. All construction and industrial activities that have the potential to impact storm water quality or disturb more than 1.0 acres of land must be permitted under NPDES regulations.

Wetlands are considered sensitive habitats and are subject to federal regulatory authority under Section 404 of the CWA and Executive Order (EO) 11990, *Protection of Wetlands*. Jurisdictional wetlands are defined as those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Areas meeting the federal wetland definition are under the regulatory authority of the U.S. Army Corps of Engineers (USACE), and permits are required for wetland modifications. Per AFI 32-7064, Air Force actions that disturb wetlands, even if they are not jurisdictional wetlands, also require the preparation of a *Finding of No Practicable Alternative (FONPA)*, which "documents that there are no practicable alternatives to such construction, and that the proposed action includes all practicable measures to minimize harm to wetlands" (AFI 32-7064, Chapter 3.6, EIAP For Actions that May Affect Wetlands). Per a memorandum from Headquarters, Air Force (HAF), dated 8 March 2001, the authority to approve FONPAs has been delegated to the vice-commander of Air Force Major Commands (MAJCOMs).

Executive Order 11988, *Floodplains Management*, directs government agencies to avoid adverse effects and incompatible development in floodplains. If construction is unavoidable, then the agencies must ensure the action conforms to applicable floodplain protection standards, and that accepted flood-proofing and other flood protection measures are applied to the construction. Per the 8 March 2001 memorandum from HAF, Air Force actions that disturb floodplains also require the preparation of a *Finding of No Practicable Alternative (FONPA)*, which documents that there are no practicable alternatives to such construction, and that the proposed action includes all practicable measures to minimize harm to floodplains. The authority to approve FONPAs has been delegated to the vice-commander of Air Force Major Commands (MAJCOMs). Additionally, if an action is taken within a floodplain that permanently alters the flood hazard delineations on a National Flood Insurance Program map, the installation must submit an analysis reflecting those changes to FEMA (AFI 32-7064, Chapter 4.3, Assessment of Proposed Action with a Floodplain).

3.7.1 Existing Conditions

Moody AFB is located within the Alapaha Watershed Unit. The Alapaha Watershed Unit is approximately 1.2 million acres in size, and drains to the southwest, into the Upper Suwannee River Watershed (1.7 million acres). The Upper Suwannee River Watershed drains into the Lower Suwannee River watershed (1 million acres) which in turn flows into the Gulf of Mexico.

Surface water from the eastern portion of Moody AFB (Grand Bay Range) flows towards Grand Bay Creek, located centrally along the eastern boundary of the installation. Surface water from the southern part of the main base flows into Mission Lake, which in turn flows through several Carolina Bays to Grand Bay Creek. Drainage east of the airfield is directed into Moody Bay, a Carolina Bay which eventually drains into Grand Bay Creek. Grand Bay Creek flows southeast into the Alapaha River and eventually empties into the Suwannee River. Surface water from the northwestern corner of main base drains northwest, forming the headwaters of Beatty Creek (Branch). Beatty Creek flows west into Cat Creek and on to the Withlacoochee River. The Withlacoochee River eventually empties into the Suwannee River.

Approximately 5,500 acres of Moody AFB are covered by wetlands, comprising a significant portion of the 12,000 acre Grand Bay-Banks Lake wetland complex. This complex is the largest blackwater wetlands complex in Georgia outside of the Okefenokee Swamp. This complex is composed of several broad Carolina Bays and shallow lakes, interconnected by cypress-black gum swamp. Open water in this complex is primarily limited to Banks Lake, a man-made lake dammed in the early 1800's to provide power for a grist mill. Moody AFB has three lakes within its boundaries: Shiner Pond, a 65-acre lake located north of Shiner Pond Road in Old Field Bay, Mission Lake, a 27-acre lake located southwest of the Moody AFB airfield, and the Golf Course Pond, a 2-acre pond located between the Quiet Pines Golf Course and the installation housing area.

The jurisdictional wetland survey for the main base of Moody AFB was reaccomplished in 2007 per directives from the U.S. Army Corps of Engineers (USACE) indicating that wetland delineations older than 10 years were not deemed suitable for consultation purposes. This new delineation was conducted in April and May of 2007 by Engineering-Environmental Management, Inc., (E^2M) using techniques outlined in the 1987 USACE *Wetlands Delineation Manual*, Technical Report Y-87-1. The boundaries of wetlands and the waters of the U.S. were marked in the field and digitally delineated using a Trimble Pro-XR global positioning satellite (GPS) system. The updated delineation was incorporated into the Moody AFB GeoBase Geographic Information System (GIS).

Groundwater occurs within two major water-bearing zones at Moody AFB, the surficial aquifer system and the Floridan aquifer system. Although groundwater is generally 10 to 20 feet below the ground surface, the main water-bearing formation underlying Moody AFB is an artesian aquifer containing naturally high concentrations of sulfate, hydrogen sulfide, and iron. The water quality is attributable to the presence of the sulfate minerals gypsum and celestite in the host rock.

The surficial aquifer is composed of fine to coarse sands, gravels, silt, clayey silts, and clays. Water quality is generally good, and yields are usually less than 50 gallons per minute. The Floridan aquifer is the primary water-bearing unit in the area. Water quality is generally good and yields are plentiful. The Floridan aquifer furnishes almost all the local water for commercial, industrial, domestic, irrigation, and municipal use. The aquifer is typically encountered at a depth of 150 feet and is usually under artesian conditions.

There are several Environmental Restoration Program (ERP) sites located in or near wetlands or water resources throughout the installation. Primarily, contamination on these sites is limited to groundwater, with minimal soil contamination and no recorded surface water contamination. Background groundwater analyses have confirmed that several metals occur naturally in the area of Moody AFB. Recordable levels of barium, cadmium, copper, iron, manganese, and zinc occur in the groundwater.

As part of the national Map Modernization Program initiative, FEMA has produced Preliminary Digital Flood Insurance Rate Maps (DFIRMs) and the corresponding Flood Insurance Study (FIS) for both the incorporated and unincorporated areas of Lowndes County, which covers the majority of Moody AFB. Digital floodplain maps for Lanier County are not available, so the extent of regulatory floodplains for the north-eastern part of the installation is unknown. The available digital floodplain maps have been incorporated into the Moody AFB GeoBase GIS program. Generally, regulatory floodplains exist in the southeastern corner of main base and are associated with two Carolina bays (Moody Bay and Dudley's Bay). Figure 3-7 shows the location of wetlands and water resources, including the location of 100-year floodplains, on main base in proximity to the locations for the proposed action and alternatives.

3.7.2 Environmental Consequences

3.7.2.1 Proposed Action: Construction South of CATM

As shown in Figure 3-7, there are no wetlands or water resources located within the location for the proposed construction of the new EOD facility. This site is situated north of a jurisdictional wetland and west of the 100-year floodplain. Also as shown in Figure 3-7, there are no wetlands or water resources located at the site of the existing EOD facility, which would be demolished as part of the proposed action. As such, there would be no direct impacts on water resources as a result of implementation of this alternative, and no permits or other approvals relative to water resources would be required to implement this action.

There is a potential for indirect impacts to water resources as a result of implementation of this alternative. Disturbance associated with the construction of the new EOD facility and the demolition of the existing EOD facility could result in temporary soil erosion and sedimentation until the site is either revegetated or covered with an impermeable surface. To minimize the potential for erosion and sedimentation, silt fences and vegetative barriers would be employed at both locations as a best management practice (BMP). The proper application of these BMPs would ensure that there would be no significant impacts to water resources as a result of implementation of this action.

There is also a potential for a long-term indirect impact to wetlands and water resources as a result of pollution from storm water runoff from the parking lot at the new EOD facility. Because of this potential for impacts to wetlands and water resources from Moody AFB facilities, structures, and actions, Moody AFB has developed a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP ensures that installation actions are conducted in a manner that minimizes the potential for storm water pollution and ensures that the installation complies with the conditions of its storm water discharge permit. The SWPPP requires the application of BMPs, including physical barriers such as booms, to be installed in outfalls adjacent to parking lots and other impermeable areas to prevent storm water contamination. Because of the application of the SWPPP, the long-term indirect impacts to wetlands as a result of constructing the new EOD facility are not expected to be significant or to be a significant source of pollution of wetlands or water resources.

Therefore, there would not be any significant long-term or short-term impacts to water resources as a result of implementation of the proposed action.

3.7.2.2 Alternative 1: Construction on Existing Site

As shown in Figure 3-7, there are no wetlands or water resources located at the site of the existing EOD facility. Potential impacts to water resources as a result of implementation of this alternative would be limited to those associated with storm water runoff, both during demolition/construction and the long-term use of the new facility. In accordance with the Moody AFB SWPPP, BMPs, such as silt fences, would be implemented to

minimize the potential for erosion and sedimentation during the demolition and construction phases.

As a result of increased numbers of personnel utilizing the new EOD facility, the potential for the runoff of petroleum, oil, and lubricants from privately owned and government vehicles would increase slightly. However, since the overall base population will not be increasing as a result of this action, there will not be an overall increase in base storm water runoff. Therefore, the existing BMPs that have been employed on main base in the developed area to control pollution associated with storm water should be sufficient to handle any increase associated with building and using a new EOD facility in this location. These BMPs, including the use of booms and other physical barriers, would prevent any long-term impacts from storm water pollution resulting from the use of the new facility.

Therefore, there would not be any significant long-term or short-term impacts to water resources as a result of implementation of this alternative.

3.7.2.3 Alternative 2: Construction on Crash Trail 2

As shown in Figure 3-7, there are no wetlands or water resources located within this alternative location for the proposed construction of the new EOD facility. This site is situated north and east of jurisdictional wetlands associated with the airfield drainage. There are no floodplains near this site. Also, as indicated in 3.7.2.1 above, there are no wetlands or water resources located at the site of the existing EOD facility, which would be demolished as part of this alternative. As such, there would be no direct impacts on water resources as a result of implementation of this alternative, and no permits or other approvals relative to water resources would be required to implement this action.

This alternative would result in long-term and short-term indirect impacts to wetlands and water resources on the installation similar to those described for the proposed action in 3.7.2.1 above. Also, the same BMPs would be implemented for this alternative, which would minimize these impacts and result in no significant impacts on wetlands or water resources. Therefore, there would not be any significant long-term or short-term impacts to water resources as a result of implementation of this alternative.

3.7.2.4 Alternative 3: No Action Alternative

Under this alternative, there would be no change in existing impacts to wetlands or water resources. Therefore, there would not be any significant long-term or short-term impacts to water resources as a result of the no action alternative.

3.8 Wildlife Resources

3.8.1 Existing Conditions

This section focuses on wildlife species that are important to the function of the ecosystem or are protected under federal or state law. For this EA, the term *wildlife* includes all vertebrate animals within the proposed project area, consisting of fish, amphibians, reptiles, bird, and mammals. Rare, threatened, and endangered (RTE) animal species are included in this definition. The affected environment for wildlife includes only those areas potentially subject to ground or vegetative disturbance or where proposed actions have the potential to affect these species.

General surveys for rare, threatened, and endangered (RTE) species, including eastern indigo snakes, gopher tortoises, wood storks, bald eagles, and striped newts were conducted in 1993-94 by The Nature Conservancy and in 1995 by Geo-Marine. Surveys specifically for the federally threatened eastern indigo snake and the federally threatened flatwoods salamander were conducted in 2002 and 2003-2004, respectively. During the planning and environmental analysis process, installation personnel conduct additional, site-specific surveys for known RTE species that are likely to occur in the area.

3.8.1.1 Proposed Action: Construction South of CATM

As noted in 3.6.1.1, this site is located within a mixed 70-year old slash and loblolly pine/water oak forest. Animal species identified during biological surveys in this area include those species commonly found in similar habitats in south Georgia. Specifically, the following animals either occur or are likely to occur in this forest:

> Mammals: Opossum (*Didelphis virginiana*), raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*), gray fox (*Urocyon cinereoargenteus*), gray squirrel (*Sciurus carolinensis*), fox squirrel (*S. niger*), eastern cottontail rabbit (*Sylvilagus floridanus*), white-tailed deer (*Odocoileus virginianus*), and various small rodents.
>
> Birds: Northern bobwhite quail (*Colinus virginianus*), red-shouldered hawk (*Buteo lineatus*), yellow-billed cuckoo (*Coccyzus americanus*), ruby-throated hummingbird (*Archilochus colubris*), woodpeckers (downy (*Picoides pubescens*), red-bellied (*Melanerpes carolinus*), flicker (*Colaptes aurates*)), American crow (*Corvus brachyrhychos*), Carolina chickadee (*Parus carolinensis*), tufted titmouse (*Parus bicolor*), brown-headed nuthatch (*Sitta pusilla*), Carolina wren (*Thryothonis ludovicianus*), blue-gray gnatcatcher (*Polioptila caerulea*), ruby-crowned kinglet (*Regulus calendula*), white-eyed (*Vireo griseus)* and red-eyed (*Vireo olivaceus*) vireos, northern parula (*Parula americana*), common grackle (*Quiscalus quiscula*), summer tanager (*Piranga rubra*), Eastern towhee (*Pipilo erythrophthalmus*), and white-throated sparrow (*Zonotrichia albicollis*).
>
> Reptiles and Amphibians: Eastern box turtle (*Terrapene carolina carolina*), eastern fence lizard (*Sceloporus undulatus*), five-lined skink (*Eumeces*

inexpectatus), canebrake (timber) rattlesnake (*Crotalus horridus atricaudatus*), black racer (*Coluber constrictor*), little grass frog (*Pseudacris ocularis*), squirrel tree frog (*Hyla squirella*), eastern spadefoot toad (*Scaphiopus holbrooki)* and other similar lizards, frogs, and toads.

There are no known RTE species located on this site based on surveys conducted by biological researches and installation personnel over the past 20 years. Specifically, this site is not deemed suitable habitat for gopher tortoises, indigo snakes, or flatwoods salamanders.

3.8.1.2 Alternative 1: Construction on Existing Site

Wildlife species on this location would be limited to those commonly found in developed, urban areas in south Georgia. While specific biological surveys of this area have not been conducted, species that could be expected to occur near this location would include rodents and songbirds such as the northern mockingbird (*Mimus polyglottis*), northern cardinal (*Cardinalis cardinalis*), mourning dove (*Zenaida macroura*), and the Eurasian collared dove (*Streptopeleia decaocto*). Mammalian species other than rodents would be unlikely to occur in this location because of its proximity to the airfield and the developed cantonment area. However, a raccoon or opossum might occasionally be seen foraging or passing through this area, even though the site would not be considered suitable long-term habitat for these species.

There are no known RTE species located on this site based on surveys conducted by biological researches and installation personnel over the past 20 years. Specifically, this site is not deemed suitable habitat for gopher tortoises, indigo snakes, or flatwoods salamanders.

3.8.1.3 Alternative 2: Construction on Crash Trail 2

As indicated in 3.6.3.1, the proposed construction site for this alternative is currently part of a 4-year old slash pine plantation with very low vegetative biodiversity. Wildlife surveys conducted in this area following the planting of the slash pines resulted in the identification of species commonly associated with early successional habitat in south Georgia. Bird species recorded as commonly occurring on the site include Carolina chickadees, white-eyed vireos, Carolina wrens, and American crows. Specific surveys for mammals, reptiles, and amphibians has not been conducted on this site since the creation of the plantation, but trapping in similar areas on the installation indicate that common rodent species, such as eastern cotton rats and house mice are likely to occur on the site. Very few reptiles or amphibians would be expected because of the lack of suitable habitat, including isolated wetlands.

There are no known RTE species located on this site based on surveys conducted by biological researches and installation personnel over the past 20 years. Specifically, this site is not deemed suitable habitat for gopher tortoises, indigo snakes, or flatwoods salamanders.

3.8.1.4 Alternative 3: No Action Alternative

The expected occurrence of wildlife species on this site would be the same as that listed for Alternative 1 in 3.7.1.2 above.

3.8.2 Environmental Consequences

The construction of new facilities has the potential to affect wildlife species both directly and indirectly. Wildlife can be impacted directly through injury, harassment, or disturbance which causes a disruption in normal activities, such as foraging or reproduction. These direct impacts can negatively affect species by increasing energetic demands as a result of fleeing from the human presence or being forced to forage outside of normal areas. Additionally, reproductive success could be hampered if the construction activities prevent wildlife species from caring for young or completing other required reproductive activities.

Indirect effects include the alteration of the habitat or other physical parameters which have an effect on short-term or long-term survival and reproductive success. Examples of indirect effects that may result from construction activities include habitat destruction or alteration during the construction process.

3.8.2.1 Proposed Action: Construction South of CATM

Construction activities associated with the proposed action could produce long-term minor impacts to wildlife species as a result of disturbance on the site by construction equipment or increases in noise or human presence. While biological surveys did not note the presence of nests, dens, or other permanent animal inhabitations on the site, it is likely that some species, especially migratory songbirds, squirrels, and other rodents use the proposed construction location for these purposes, and these sites would be destroyed during construction of the facility. Smaller, less mobile species and those seeking refuge in burrows (e.g., rodents) could inadvertently be killed during construction activities. Additionally, the proposed action would result in the permanent destruction of less than one acre of wildlife habitat. However, these impacts are not considered significant because this habitat type is well-represented in the southeastern United States, and the species likely to be displaced or killed are common, abundant species in the area.

Additional short-term minor impacts to wildlife, including the displacement of wildlife from otherwise suitable habitat in the immediate vicinity of the project area, could possible occur. While construction is actively occurring on this site, wildlife species would likely alter normal foraging and reproductive activities immediately adjacent to this site because of an increase in noise from construction equipment and an increase in human presence. However, these impacts are considered temporary, and re-establishment of normal foraging and reproductive activities by wildlife species near the proposed EOD facility would occur either after habituation or following cessation of construction activities. All of the wildlife species noted on this site are common and

abundant species that are known to co-exist with humans in other semi-disturbed and developed areas.

Biological surveys conducted over the last 20 years have indicated that there are no RTE species located on this site. Therefore, the proposed action has no potential to affect RTE species.

The demolition of the existing EOD facility and reclamation of the site would produce temporary minor benefits to wildlife species. The increase of about one acre of landscaped vegetation would provide additional foraging and nesting habitat for common wildlife species in the developed areas of Moody AFB. However, any population changes or increases in urban wildlife habitat as a result of this action would not be considered significant in the long-term or when considered on a landscape level.

Overall, there would be no short-term or long-term significant impacts to wildlife resources as a result of implementation of the proposed action.

3.8.2.2 Alternative 1: Construction on Existing Site

Because implementation of this alternative does not involve the disturbance or modification of wildlife habitat and because there are no resident wildlife species located on this site, there would be no short-term or long-term significant impacts to wildlife resources. The demolition of the existing facility and the construction of the new facility would not result in any change to landscaped vegetation or urban wildlife habitat on Moody AFB. Therefore, there would not be any significant impacts to wildlife resources as a result of implementation of this alternative.

3.8.2.3 Alternative 2: Construction on Crash Trail 2

Impacts to wildlife resources as a result of implementation of this alternative would be similar in size and scope to those addressed under the proposed action in 3.8.2.1 above. However, overall impacts would be lessened because of the lower biodiversity on this site and the overall absence of significant numbers of wildlife species within this pine plantation.

In the absence of construction or other disturbance, this site would eventually develop into a mature pine forest similar in composition to the proposed action location. It is assumed that wildlife species similar to those described in 3.8.1.1 would occur on the site at this time (approximately 60 years in the future). Regardless, the loss of less than one acre of a future mature pine forest with its associated wildlife species would not be considered significant because this habitat type is well-represented in the southeastern United States, and the species likely to be displaced or killed are common, abundant species in the area.

Therefore, there would be no significant impacts on wildlife resources as a result of implementation of this alternative.

3.8.2.4 Alternative 3: No Action Alternative

Under this alternative, the demolition of the existing EOD facility and the construction of a new EOD facility would not occur. Therefore, no potential for disturbance to wildlife resources would be possible, and there would be no impacts to these resources.

3.9 Cumulative Effects

3.9.1 Definition of Cumulative Effects

The Council on Environmental Quality (CEQ) implementing guidelines for NEPA require that both the direct and the cumulative effects of an action be evaluated and published. Cumulative effects (impacts) are the incremental impacts of an action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency or person undertakes such other actions. In other words, an environmental assessment must determine if non-significant direct effects caused by implementation of the proposed action or any of the alternatives would become significant if considered in concert with other actions occurring within the area of interest, defined both geographically and temporally. Actions overlapping with or in close proximity to the proposed action would be expected to have more potential for an incremental impact than those more geographically separated. Similarly, actions that coincide, even partially, in time would tend to offer a higher potential for cumulative effects.

To identify cumulative effects, the analysis needs to address two fundamental questions:

1. Does a relationship exist such that affected resource areas of the proposed action or alternatives might interact with the affected resource areas of past, present, or reasonably foreseeable actions?

2. If such a relationship exists, then does an assessment reveal any potentially significant impacts not identified when the proposed action is considered alone?

3.9.2 Scope of Cumulative Effects Analysis

The scope of the cumulative effects analysis involves both the geographic extent of the effects and the time frame in which the effects could be expected to occur, as well as a description of what resources could potentially be cumulatively affected. Of all the issues and concerns presented and analyzed in this document, the only resources with the potential to be affected cumulatively was determined to be vegetation and wildlife resources.

When addressing cumulative impacts to vegetation and wildlife resources, the geographic extent for the cumulative effects analysis are the proposed construction sites in which the proposed action and alternatives have the potential to impact, primarily concentrating on

past, present, and reasonably foreseeable actions on and within the boundaries of Moody AFB.

The time frame for cumulative effects analysis would center on the timing of the proposed action and would continue into the foreseeable future; additionally, actions with the potential to impact vegetation and wildlife resources that were implemented within the past four years would be included for analysis.

3.9.3 Past, Present, and Reasonably Foreseeable Actions

Numerous other activities, conducted by private and local, state, and federal government agencies, have been conducted on Moody AFB during the past two years, and more actions are expected to continue into the future. For the purposes of analysis, only those actions with the potential to directly affect vegetation and wildlife resources would be addressed.

Past and Present Actions Relevant to the Proposed Action

- *Field Training Activities, 820 SFG, Moody AFB.* In 2000, the 820th Security Forces Group was bedded down at Moody AFB. Included in this action was the use of various wooded areas through main base and Grand Bay Range as field training sites. Field training occurs year-round on the installation, and includes land navigation, force-on-force training, station training, air base defense training, driver's proficiency training, and weapons qualification and proficiency training. Up to 250 personnel from the 820 SFG participate in field training activities on Moody AFB at a given time; however, because of deployment, the number of persons currently being trained is generally much lower.

- *Base Closure and Realignment Actions for 2006, Moody AFB.* Following recommendations from the Base Realignment and Closure Commission (BRAC), Moody AFB would distribute its training aircraft (T-38C and T-6A aircraft) to other Air Education and Training Command locations to consolidate training. Moody AFB would receive 48 A/OA-10 aircraft in their place. These aircraft would be based out of Moody AFB and would utilize Grand Bay Range for part of their training requirement.

- *Civil Engineer Contingency Training, Moody AFB, GA.* In 2007, the Civil Engineer Squadron developed and implemented contingency training within the boundaries of Moody AFB. In addition to conducting military training activities within the forested areas of the installation, this action included the clearing and development of a Field Training Exercise/Bivouac (FTX) site along the north-central boundary of the installation. The development of this site included the removal of all existing vegetation from the area and the construction of concrete slabs for tent foundations. A total of 7.13 acres of habitat was removed to facilitate this action.

Reasonably Foreseeable Actions Relevant to the Proposed Action

- *Common Battlefield Airmen Training (CBAT), Moody AFB.* Moody AFB is being considered as a potential location for the beddown of the CBAT mission, which would include a 200-acre cantonment area to be built on the selected installation. Students in the CBAT would receive training in small unit tactics, force-on-force training, convoy training, and land navigation in addition to small arms proficiency. If this mission is bedded down at Moody AFB, all training except for small arms proficiency, would be conducted at off-base locations. An Environmental Impact Statement (EIS) is currently in-progress to address the environmental effects of this proposed action.

3.9.4 Cumulative Effects Analysis

The development of the Civil Engineer FTX site and the proposed development of the CBAT cantonment area adjacent to the FTX site were determined to have long-term minor effects on vegetation and wildlife resources at Moody AFB as approximately 200 acres of upland forest and wildlife habitat, including habitat for the federally threatened indigo snake, would be removed. None of the other identified past, present, or reasonably foreseeable future actions have been determined to cause significant effects to vegetation or wildlife resources on the installation.

The beddown of the A/OA-10 aircraft at Moody AFB included 40 construction, renovation, or infrastructure improvement projects scheduled to occur from 2006 through 2010. These projects resulted in similar impacts to landscaped vegetation and urban wildlife habitat as those identified in this environmental assessment. The demolition of the existing EOD facility and the possible construction of a new EOD facility in the same location would result in either benign or a slight increases to urban wildlife habitat, indicating that there would not be any significant impact when considered cumulatively with other actions.

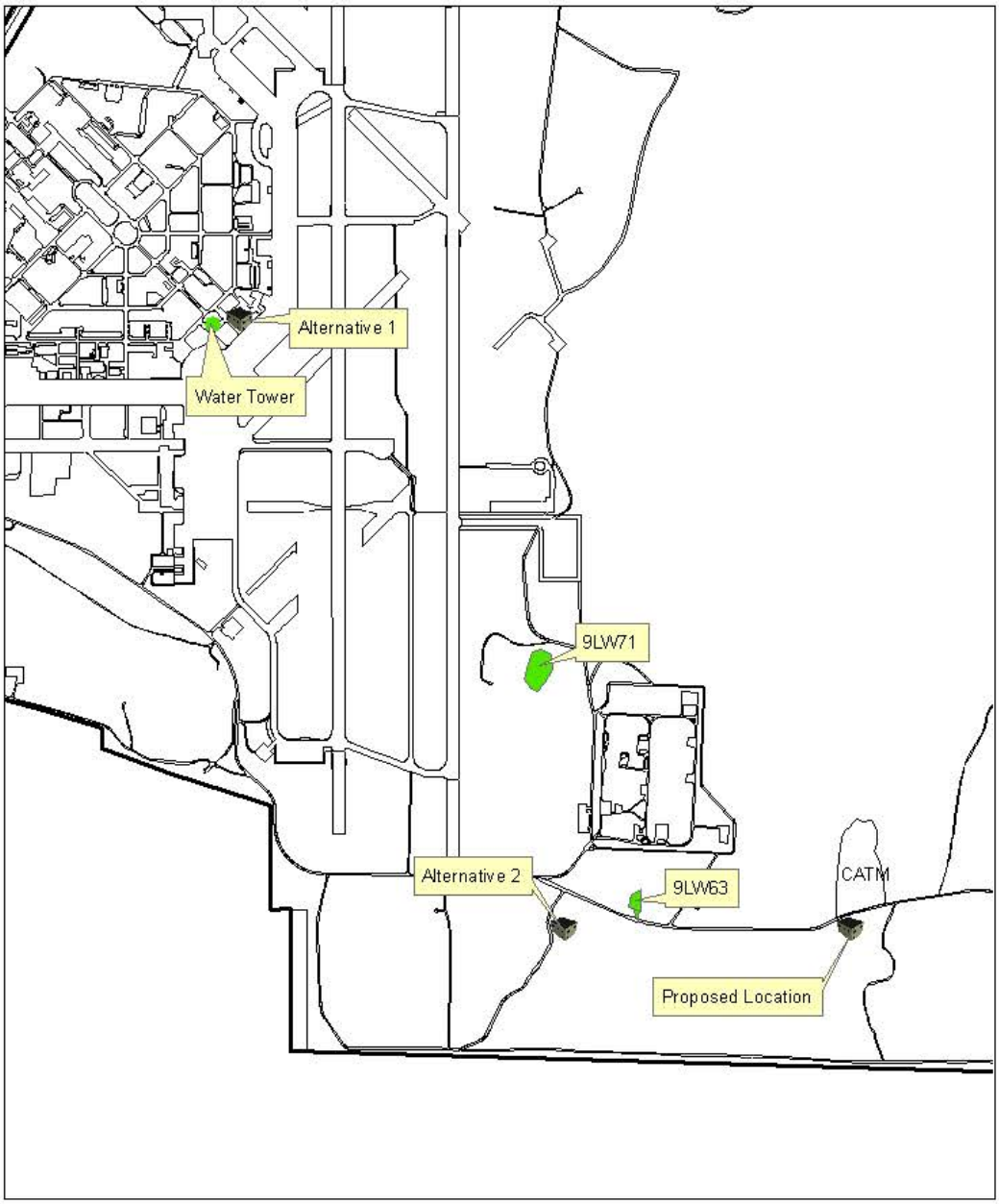
When the impacts of these past, present, and reasonably foreseeable future actions are considered cumulatively with the expected environmental impacts of the proposed action and Alternative 2, Construction on Crash Trail 2, there are no expected significant cumulative impacts, primarily because of the small size of the proposed EOD facility (less than one acre of total disturbance) and its geographic isolation from these other projects. Vegetation and wildlife populations impacted by these other past, present, and reasonably foreseeable future actions on the main base of Moody AFB are generally separate and disjunct. In other words, the same resources are not being impacted, thus indicating that there will not be cumulative impacts to either vegetation or wildlife resources.

Therefore, there should not be any significant cumulative effects when the proposed action or the evaluated alternatives are considered in relation with any of these other actions.

Table 3-1 -- Predicted effects of each of the alternatives

Issues & Concerns	Proposed Action	Alternative 1: Construction on Existing Site	Alternative 2: Construction on Crash Trail 2	Alternative 3: No Action Alternative
Cultural Resources	No significant effect.	No significant effect.	No significant effect.	No significant effect.
Explosives Safety Standards	No significant effect.	No significant effect.	No significant effect.	No significant effect.
Hazardous Materials, Pollution, and Contaminants	Beneficial removal of lead-based paint and asbestos from existing facility. No significant effect.	Beneficial removal of lead-based paint and asbestos from existing facility. No significant effect.	Beneficial removal of lead-based paint and asbestos from existing facility. No significant effect.	Beneficial removal of lead-based paint and asbestos from existing facility. No significant effect.
Physical Resources	No significant effect.	No significant effect.	No significant effect.	No significant effect.
Vegetation Resources	Less than one acre of common south Georgia vegetation would be removed. No significant effect.	No significant effect.	Less than one acre of common south Georgia vegetation would be removed. No significant effect.	No significant effect.
Water Resources	No significant effect.	No significant effect.	No significant effect.	No significant effect.

Issues & Concerns	Proposed Action	Alternative 1: Construction on Existing Site	Alternative 2: Construction on Crash Trail 2	Alternative 3: No Action Alternative
Wildlife Resources	Less than one acre of wildlife habitat would be removed. Long-term minor displacement and potential killing of some less mobile wildlife species. No significant effect.	No significant effect.	Less than one acre of wildlife habitat would be removed. Long-term minor displacement and potential killing of some less mobile wildlife species. No significant effect.	No significant effect.
Cumulative Effects	No anticipated significant cumulative effects.	No anticipated significant cumulative effects.	No anticipated significant cumulative effects.	No anticipated significant cumulative effects.



Proximity of Cultural Resources to Proposed Sites
New Explosives Ordnance Facility
Moody AFB, GA

N

Figure 3-1

Proximity of Cultural Resources to the Proposed Location
New Explosives Ordnance Facility
Moody AFB, GA

N

Figure 3-2

Proximity of Cultural Resources to Alternative Location 1
New Explosives Ordnance Facility
Moody AFB, GA

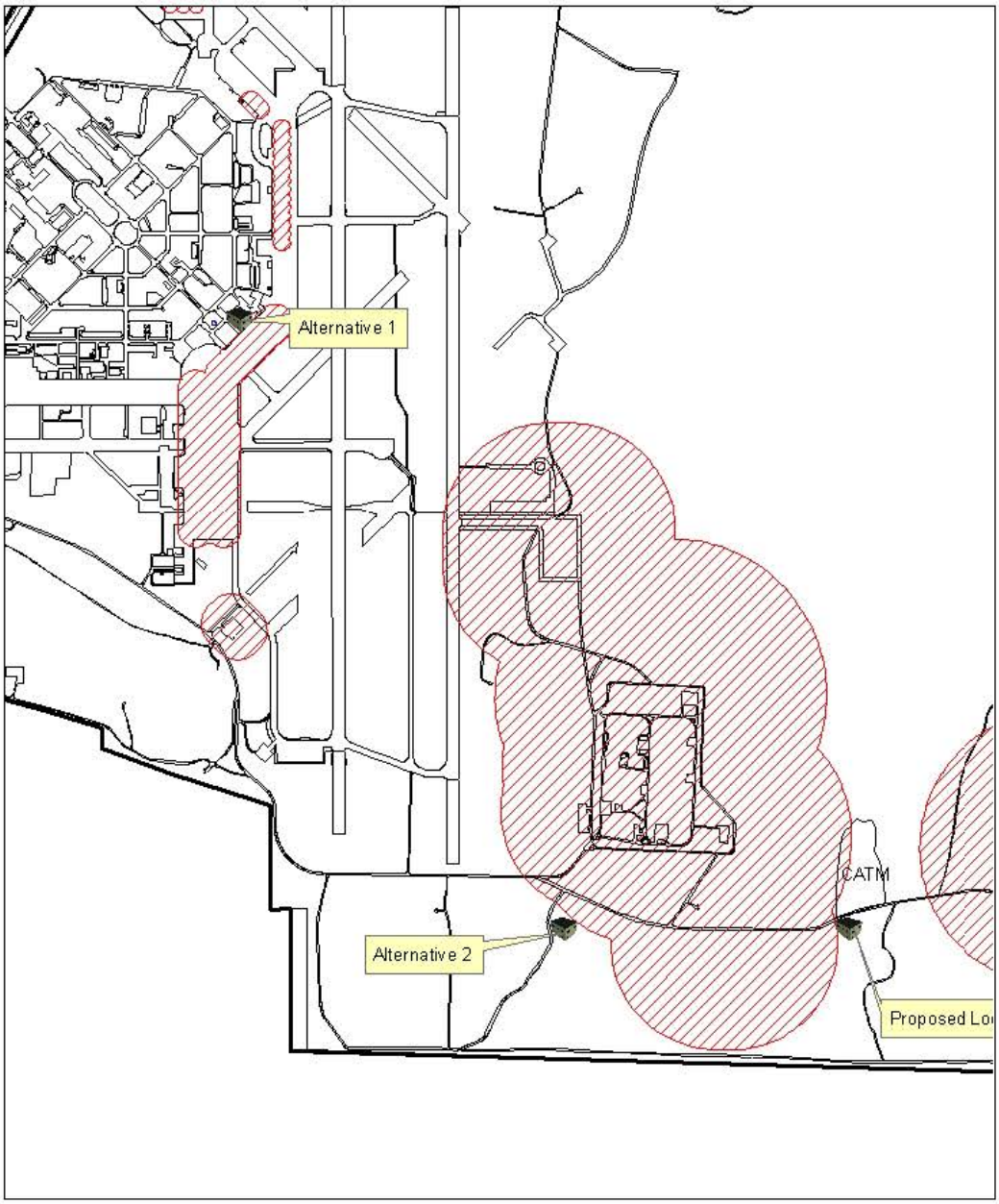
N

Figure 3-3

Proximity of Cultural Resources to Alternative Location 2
New Explosives Ordnance Facility
Moody AFB, GA

N

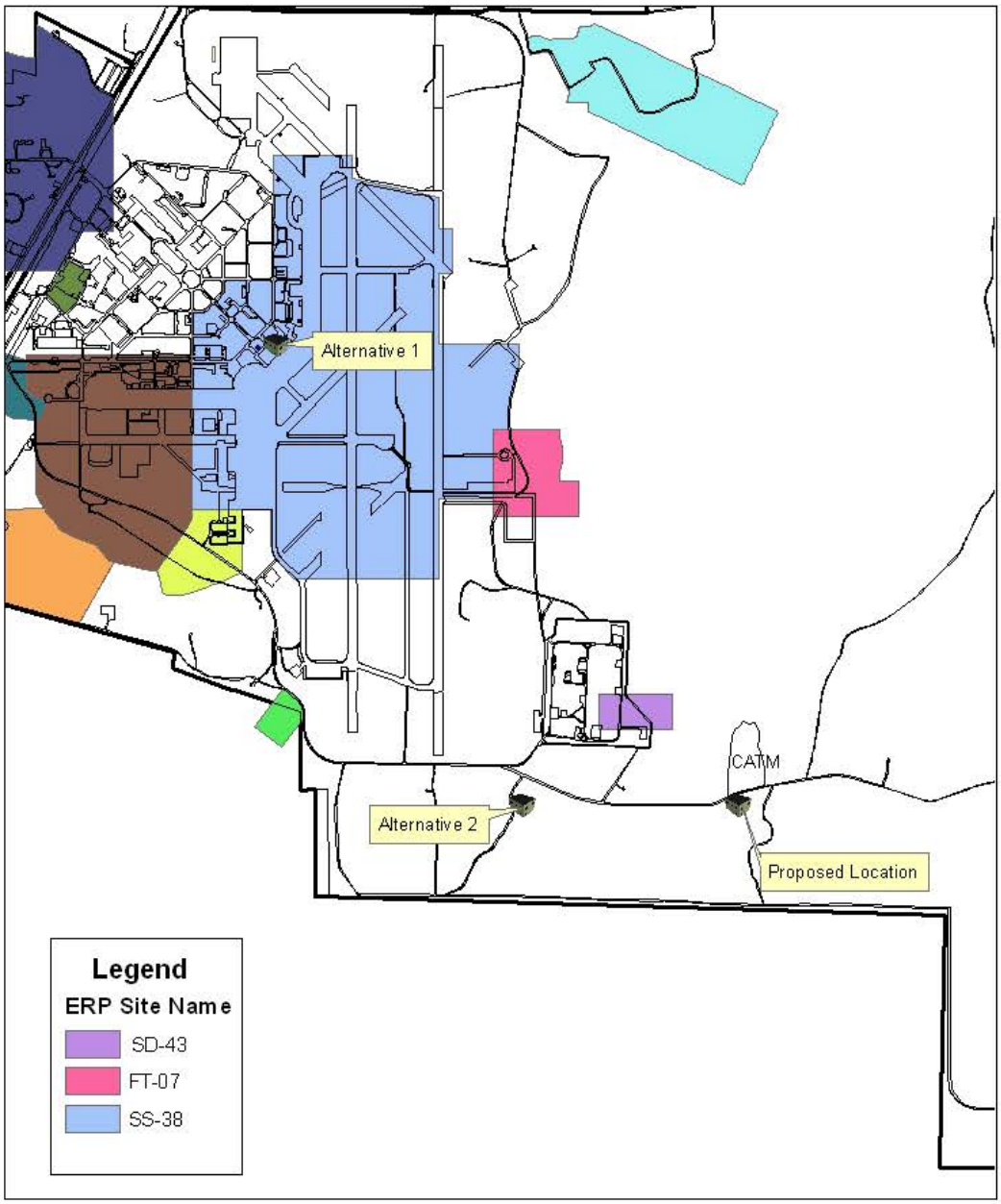
Figure 3-4



Proximity of Quantity-Distance Arcs to Proposed Sites
New Explosives Ordnance Facility
Moody AFB, GA

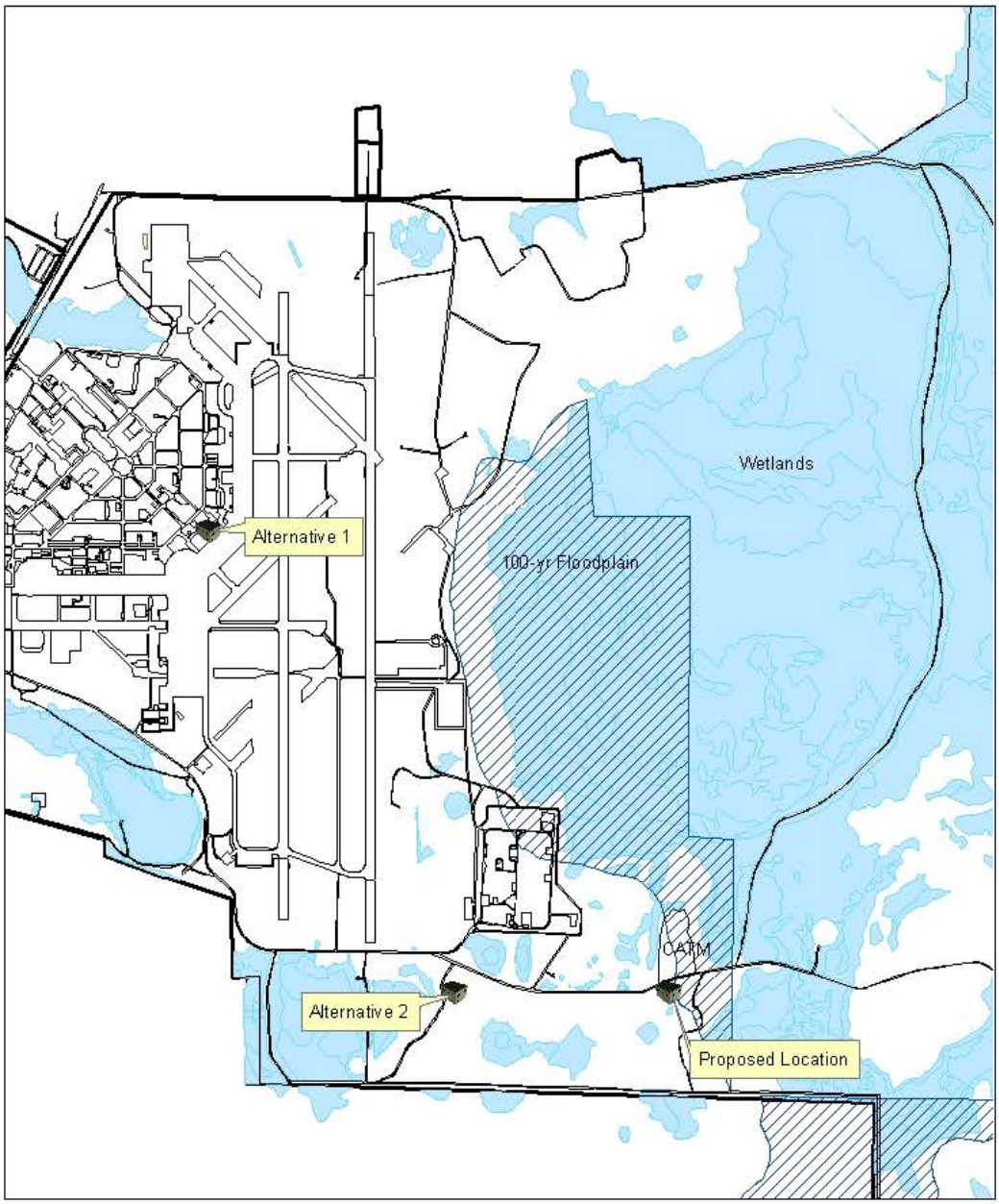
N

Figure 3-5



Proximity of ERP Sites to Proposed Sites
New Explosives Ordnance Facility
Moody AFB, GA

Figure 3-6



Proximity of Wetlands and Floodplains to Proposed Locations
New Explosives Ordnance Facility
Moody AFB, GA

Figure 3-7

4.0 PERMITS AND REQUIRED CONSULTATIONS AND APPROVALS

4.1 National Historic Preservation Act. In accordance with Section 106 of the National Historic Preservation Act, if either the proposed action was to be implemented, the State Historic Preservation Office would have to be consulted prior to any ground disturbance.

4.2 Endangered Species Act. In accordance with Section 7 of the Endangered Species Act, the U.S. Fish and Wildlife Service must be consulted prior to implementation because the proposed action has the potential to affect, but not adversely affect, the federally listed indigo snake as a result of long-term habitat loss. This consultation would have to be completed prior to any ground disturbing activities.

4.3 NPDES Storm Water Phase II and Georgia Erosion and Sedimentation Control Act. In accordance with these regulations, an erosion and sedimentation control plan would have to be developed for the construction of the proposed FTX site and would have to address the implementation of best management practices to minimize soil erosion and sedimentation. A Notice of Intent would have to be filed with the Georgia EPD under the storm water regulations, and a Lanier County Land Disturbing Permit would have to be obtained prior to implementation of any ground disturbance on the site.

4.4 Public Notification and Review

In accordance with 32 CFR 989 and 23 WG/JA directives, the following organizations were afforded the opportunity to review and comment on an earlier draft of this document along with the general public:

-- Lanier County Commissioners
-- Georgia State Historic Preservation Office
-- Georgia State Clearinghouse