DRAFT

ENVIRONMENTAL ASSESSMENT (EA)

FOR

COMPREHENSIVE GROUND TRAINING ON MAIN BASE MOODY AIR FORCE BASE, GEORGIA

Prepared for:

Moody Air Force Base

July 2021

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PRIVACY ADVISORY

This Environmental Assessment (EA) is provided for public comment in accordance with the National Environmental Policy Act (NEPA), the President's Council on Environmental Quality NEPA Regulations (40 Code of Federal Regulations [CFR] §§ 1500-1508), and 32 CFR § 989, Environmental Impact Analysis Process (EIAP).

The EIAP provides an opportunity for public input on Air Force decision making, allows the public to offer input on alternative ways for the Air Force to accomplish what it is proposing, and solicits comments on the Air Force's analysis of environmental effects.

Public commenting allows the Air Force to make better, informed decisions. Letters or other written or oral comments provided may be published in the EA. As required by law, comments provided will be addressed in the EA and made available to the public. Providing personal information is voluntary. Any personal information provided will be used only to identify your desire to make a statement during the public comment portion of any public meetings or hearings or to fulfill requests for copies of the EA or associated documents. Private addresses will be compiled to develop a mailing list for those requesting copies of EA; however, only the names of the individuals making comments and specific comments will be disclosed. Personal home addresses and phone numbers will not be published in the EA.

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DRAFT ENVIRONMENTAL ASSESSMENT FOR COMPREHENSIVE GROUND TRAINING ON MAIN BASE MOODY AIR FORCE BASE, GEORGIA

a. Responsible Agency: United States Air Force (Air Force)

b. Cooperating Agency: None

c. Proposals and Actions: This Environmental Assessment (EA) analyzes current and proposed expanded comprehensive ground training activities and the establishment of new training areas at Moody Air Force Base (AFB) Main Base. The 23d Wing and 93d Air Ground Operations Wing at Moody AFB conduct comprehensive ground training within both designated training areas and across the airfield and cantonment at Moody AFB. The types of military ground training historically and currently conducted, as well as proposed to be conducted in the future, are common military activities that include the use of a small-arms firing range for live weapons training and qualification; the use of designated training areas for maneuvers, force-on-force rescue, real-world deployment, land navigation, convoy movement and protection, and counter-improvised explosive devices training; explosives training; Multi-Capable Airmen (MCA)/Agile Combat Employment (ACE) training; the use of helicopter landing zones for jump operations, personnel insertion/extraction, and crash rescue field training exercises; military working dog training; M-320 grenade launcher training and qualification; and integrated base defense training. Training activities can include the use of Explosive Ordnance Disposal (EOD) explosive tools and demolition explosives, simunitions, Multiple Integrated Laser Engagement System, pyrotechnics, ground burst simulators, blanks, smokes, and flares. Equipment used during training activities include vehicles such as Mine-Resistant Ambush-Protected vehicle, HMMWV (Humvee) , 6x6 cargo truck, utility terrain vehicles, all-terrain vehicles, and generator Environmental Control Unit trailer; Small Unmanned Aircraft Systems; and HH-60W helicopters.

d. For additional Information: Mr. Lorence Busker, 23d Civil Engineer Squadron, 3485 Georgia Street, Moody Air Force Base, Georgia 31699-1707; telephone: (229) 257-2396; email: lorence.busker@us.af.mil.

e. Designation: Draft EA

f. Abstract: This EA has been prepared pursuant to provisions of the National Environmental Policy Act, Title 42 United States Code Sections 4321 to 4347, implemented by Council on Environmental Quality Regulations, Title 40, Code of Federal Regulations (CFR) Parts 1500-1508, and 32 CFR 989, *Environmental Impact Analysis Process.* Potentially affected environmental resources were identified in coordination with local, state, and federal agencies. Specific environmental resources with the potential for environmental consequences include land use; noise; air quality; earth resources; water resources; biological resources; cultural resources; socioeconomics; environmental justice; infrastructure, transportation, and utilities; hazardous materials, Environmental Restoration Program (ERP), and toxic substances; and health and safety.

The purpose of the Proposed Action is to continue the current military ground training activities at Moody AFB and to support future ground training activities on the Main Base to better support Department of Defense (DOD) training requirements. The Proposed Action is needed to train and qualify both Moody AFB personnel and non-Moody AFB

personnel in small unit tactics; personnel extrication; land navigation; force-on-force; shoot, move, communicate; MCA/ACE; use of EOD tools and equipment; Joint Terminal Attack Controller, Ranger Assessment Course, and weapons use to prepare for deployment overseas and future missions.

Two alternatives were analyzed: Alternative 1, Expanded Ground Training on Main Base and Alternative 2, No Action Alternative. Alternative 1 would continue these military ground training activities at Moody AFB, would increase the training activities in existing training areas by 50 percent to accommodate future growth in training needs, and would provide additional designated training areas and training opportunities on Main Base to better support DOD ground training requirements. The No Action Alternative would continue existing training activities but would neither expand ground training in existing training area nor designate additional training areas on Main Base.

The analysis of the affected environment and environmental consequences of implementing Alternative 1 concluded that by implementing expanded ground training on Main Base, there would be no significant adverse impacts on the following resources: land use; noise; air quality; earth resources; water resources; biological resources; cultural resources; socioeconomics; environmental justice; infrastructure, transportation, and utilities; hazardous materials, ERP, and toxic substances; or health and safety. Moody AFB is an active installation with new construction and demolition actions under way and future development actions in the planning phase. Reasonably foreseeable impacts on air quality, soils, noise, and socioeconomics associated with facility and infrastructure construction, demolition, and renovation would be minor and short in duration.

DRAFT FINDING OF NO SIGNIFICANT IMPACT / FINDING OF NO PRACTICABLE ALTERNATIVE

COMPREHENSIVE GROUND TRAINING ON MAIN BASE, MOODY AIR FORCE BASE, GEORGIA

Pursuant to provisions of the National Environmental Policy Act (NEPA), 42 United States Code §§ 4321 to 4370h; Council on Environmental Quality (CEQ) Regulations, 40 Code of Federal Regulations (CFR) Parts 1500-1508; and 32 CFR 989, *Environmental Impact Analysis Process,* the United States Air Force (Air Force) prepared the attached Draft Environmental Assessment (EA) to address the potential environmental consequences associated with the current and proposed expanded comprehensive ground training activities and the establishment of new training areas at Moody Air Force Base (AFB) Main Base.

Purpose and Need

The purpose of the Proposed Action is to continue the current military ground training activities at Moody AFB and to support future ground training activities on the Main Base to better support Department of Defense (DOD) training requirements.

The Proposed Action is needed to train and qualify both Moody AFB personnel and non-Moody AFB personnel in small unit tactics; personnel extrication; land navigation; force-on-force; shoot, move, communicate; Multi-Capable Airmen (MCA)/Agile Combat Employment (ACE); use of Explosive Ordnance Disposal (EOD) tools and equipment; Joint Terminal Attack Controller, Ranger Assessment Course, and weapons use to prepare for deployment overseas and future missions. It is anticipated that mission requirements will continue to grow, and new military training areas and activities would be needed for conventional tactical training. The shortage of available on-installation ground training areas has created scheduling conflicts and has forced Air Force personnel to travel to other DOD installations, including those outside of the state of Georgia, for training activities. Increasing training opportunities within the boundaries of Moody AFB would reduce travel time and associated costs and improve safety by limiting transportation of weapons and possible interactions with the public while conducting training activities on other DOD installations.

Description of Proposed Action and Alternatives

The types of military training activities conducted on Main Base are common military ground training and include the use of firing ranges for live weapons training and weapons qualification; the use of training areas for maneuvers, force-on-force rescue, real-world deployment, land navigation, convoy movement and protection, rotary-wing aircraft operations, and explosives training; helicopter landing zones (HLZs) for helicopter pilot training, personnel insertion and extraction, and crash rescue field training exercises; and MCA/ACE training. Training activities can include the use of 5.56 millimeter (mm) and 7.62 mm blanks in rifles and machine guns, simunitions, Multiple Integrated Laser Engagement System (MILES), pyrotechnics, ground burst simulators (GBSs), smoke grenades, flares, EOD explosive tools and demolition explosives, and other significant noise-producing hazardous objects.

The majority of these training activities occur within designated training areas on Main Base. The following are established ground training areas on Main Base as well as the current military training activities that occur in ground training areas:

- **Training Area 1 and the Rapid Runway Repair Pad**: Maneuvers and rapid runway repair.
- **Obstacle Course within Training Area 1**: No current training activities.
- **Training Area 2**: Maneuvers, light medium tactical vehicle familiarization, Mine-Resistant Ambush-Protected (MRAP) vehicle and utility terrain vehicle (UTV) operations, and counter-improvised explosive devices (C-IED).
- **Training Area 3**: Maneuvers, convoy movement, light medium tactical vehicle familiarization, MRAP vehicle and UTV operations, extrication, force-on-force, C-IED, simunitions, GBSs, blanks, smokes, and military working dog (MWD).
- **Training Area 4**: Maneuvers, light medium tactical vehicle familiarization, MRAP vehicle and UTV operations, force-on-force, C-IED, simunitions, GBSs, blanks, smokes, and MWD.
- **Field Training Exercise (FTX) Site:** Bivouac, force-on-force, simunitions, GBSs, blanks, and smokes.
- **Military Operations in Urban Terrain (MOUT) Facility:** Maneuvers, convoy movement, light medium tactical vehicle familiarization, MRAP vehicle and UTV operations, tactical combat-causality care (TCCC), close quarters battle (CQB), C-IED, simunitions, GBSs, blanks, smokes, and small unmanned aerial systems (SUAS).
- **M-320 Range:** Maneuvers, M-203/M-320 grenade launcher, simunitions, GBSs, smokes, and blanks.
- **Survival, Evasion, Resistance, Escape (SERE) Training Area:** Maneuvers, force-on-force, simunitions, GBSs, blanks, smokes, and MWD.
- **Combat Arms Training and Maintenance (CATM) Range:** Live fire with shotgun, 9 mm, 5.56 mm, and 7.62 mm ammunition.
- **Unimproved Areas on Main Base:** MWD and EOD.

Under the Proposed Action, the Air Force is proposing to continue current ground training activities on Moody AFB Main Base, increase some ground training activities within existing training areas, and establish additional suitable ground training areas on the Main Base, where possible, to better support DOD training requirements and reduce conflicts in scheduling training activities between user groups.

Under the Proposed Action, a new FTX Site, EOD Proficiency Range, Training Area 5, TCCC Training Area, and MCA/ACE Training Area would be established. Under the Proposed Action, training events would increase by 50 percent in the existing training areas, increasing the number of personnel, vehicles, equipment, and munitions used in training at Moody AFB. Overall, the Proposed Action would increase the number of personnel operations conducting ground training activities on Main Base by approximately 60 percent with the creation of additional training areas. The type of equipment and training munitions proposed to be used during ground training activities would not change, but the amount of equipment and munitions used for training would increase under the Proposed Action.

Eight alternatives were considered but eliminated from further consideration because they did not meet the selection standards or had been evaluated previously and determined to not be viable. Therefore, two alternatives were analyzed: Alternative 1, Expanded Ground Training on Main Base, and Alternative 2, No Action Alternative.

Alternative 1

Alternative 1 would continue military ground training activities, including training area maintenance activities, at Moody AFB Main Base; would increase the training activities in established training areas on Main Base by 50 percent to accommodate future growth in training; would create the TCCC Training Area and implement C-IED training on existing firebreaks and crash trails in Training Area 3; would construct, use, and maintain a new FTX site; establish two additional HLZs at the MOUT Facility; renew the lease between the 38th Rescue Squadron and the state of Georgia for the continued use of the Grand Bay Wildlife Management Area (WMA) state-owned lands for training; establish, use, and maintain Training Area 5; establish, use, and maintain an MCA/ACE Training Area; and establish a new EOD Proficiency Range on Main Base.

No Action Alternative

No action means that an action would not take place, and the resulting environmental effects from taking no action would be compared with the effects of allowing the proposed activity to go forward. The No Action Alternative would maintain the status quo and continue existing training activities. The No Action Alternative would neither expand ground training in existing training areas nor designate additional training areas on Main Base or within the Grand Bay WMA.

Summary of Findings

Potentially affected environmental resources were identified through communications with state and federal agencies and review of past environmental documentation. Specific environmental resources with the potential for environmental consequences include land use; noise; air quality; earth resources; water resources; biological resources; cultural resources; socioeconomics; environmental justice; infrastructure, transportation, and utilities; hazardous materials, Environmental Restoration Program (ERP), toxic substances; and health and safety.

Under Alternative 1, there would be no adverse impacts on land use from the continuation of current ground training activities. All training activities, including the maintenance and use of existing training areas, occur on Main Base, and the primary purpose of Moody AFB is military training and support activities.

There would be long-term minor adverse effects on noise with expanded ground training on Main Base. Effects would be from increases in small-arms noise from ground training activities on Main Base. Peak noise levels would primarily increase south of Main Base in the Grand Bay WMA where there are no sensitive receptors present. Increases in noise would not substantially increase the number of individuals within areas normally not recommended for noise-sensitive land uses or generate individual acoustic events loud enough to damage hearing or structures.

There would be long-term minor adverse effects on air quality from expanded ground training on Main Base. Effects would be from increases in emissions from ground training activities

throughout the installation (i.e., additional heavy vehicle use, personnel, and munitions use). Increases in emissions would not exceed the Prevention of Significant Deterioration major source threshold values, and Alternative 1 would not contribute to a violation of any federal, state, or local air regulation.

There would be minor adverse impacts on earth resources from the implementation of Alternative 1. Impacts would primarily be related to the disturbance of soils during current and proposed off-road training activities using vehicles and equipment and from the creation of new training areas.

Under Alternative 1, there would be minor adverse impacts on water resources. Impacts on surface waters would occur from increased stormwater runoff from new training areas and increased sediment transport in stormwater from current and proposed training activities that occur off road, especially off-road activities that use vehicles and equipment. The proposed EOD Proficiency Range would be partially located within the 100-year floodplain. However, the removal of trees within the floodplain to create a clear line of sight to the observation point would not alter the 100-year floodplain or cause induced flooding. There would be no impacts on jurisdictional waters of the United States, including wetlands, from dredge or fill activities under Alternative 1.

The construction, maintenance, and use of proposed new training areas on Main Base would have minor adverse impacts on biological resources under Alternative 1. Direct impacts on vegetation and wildlife would occur from the conversion of forested habitat to military training areas. Long-term impacts on wildlife would occur from ground training activities in these newly established training areas, including noise from vehicle and equipment use and small arms training, that would disturb relatively common breeding and foraging wildlife species. The implementation, maintenance, and use of new FTX Site and TCCC Training Areas may affect but is not likely to adversely affect the gopher tortoise (*Gopherus polyphemus*), a federally listed candidate species under the Endangered Species Act.

There would be no impacts on cultural resources under Alternative 1. No building demolition or modification would occur within the expanded training areas or within the cantonment. The proposed increase in personnel training, including the use of equipment and vehicles, would have no effect on the two buildings eligible for the National Register of Historic Places.

There would be no impacts on socioeconomics from the continuation of current training activities at established training areas on Main Base. No change in employment or housing would occur. There would be no disproportionate impacts on minority populations, low-income communities, or children from the continuation and expansion of ground training activities and the establishment of new ground training areas at Moody AFB.

There would be no modification or change in use of Moody AFB's electric, natural gas, or communication distribution systems. The Moody AFB water and wastewater systems are adequate to support the increased demands by more personnel training operations. The Advanced Disposal E. S. Evergreen Municipal Solid Waste Landfill has adequate capacity to accept the additional solid waste generated from expanded ground training activities. Alternative 1 would have short- and long-term minor adverse effects on traffic and

transportation. Only small, slightly noticeable changes to on-base traffic would be expected with the implementation of this alternative.

Current and proposed training activities, including the expansion of ground training into new training areas, would continue to use very small amounts of hazardous materials. With compliance with DOD and Air Force requirements, minor adverse impacts from the increased use of hazardous materials and increased generation of hazardous waste are expected from the implementation of Alternative 1. No impacts on active ERP sites that overlap existing and proposed training areas are anticipated under Alternative 1.

Alternative 1 would have minor adverse impacts on health and safety as a result of increased training activities and the expansion of ground training into new training areas. However, training activities would adhere to established procedures and all personnel would follow DOD and Occupational Safety and Health Administration standards, reducing the risk of potential injuries and accidents during ground training.

Finding of No Practicable Alternative

Pursuant to Executive Order (EO) 11990, *Protection of Wetlands*, EO 11988, *Floodplain Management*, and Air Force Manual (AFMAN) 32-7003, *Environmental Conservation*, the Air Force hereby provides notice of the potential impacts on wetland or floodplain as a result of the Proposed Action. Jurisdictional wetlands are present in the proposed EOD Proficiency Range and MCA/ACE Training Area. Further, potential impacts on the 100-year floodplain may occur as a result of the proposed EOD Proficiency Range.

Three alternatives for the EOD Proficiency Range in addition to the No Action Alternative were reviewed during the EA development process under the requirements of NEPA. Two of the three alternatives were eliminated from further detailed analysis because they did not meet AFMAN 32-3001, *Explosive Ordnance Disposal (EOD) Program Supplement* and AFMAN 91-201, *Explosive Safety Standards* criteria. Further, the two alternatives eliminated would also be located in the 100-year floodplain. There is no practicable alternative to implementing the proposed EOD Proficiency Range outside of wetlands and the floodplain as AFMAN 32-3001 and AFMAN 91-201 criteria require that its siting be distant from existing facilities and infrastructure, and the only areas not developed on Main Base distant from existing infrastructure are proximate to and within wetlands and the 100-year floodplain.

The development, use, and maintenance of the EOD Proficiency Range would result in the mechanical removal of existing trees and shrubs in the 100-year floodplain to create and maintain an appropriate line of sight. Tree removal would not alter the 100-year floodplain or cause induced flooding. There are 6.6 acres of wetlands in the 500-foot buffer area for the proposed EOD Proficiency Range. However, tree removal for the proposed EOD Proficiency Range would not occur in jurisdictional wetlands and would be limited to clearing the trees for a 100-foot buffer around the detonation point and for a sightline to the observation point. Therefore, there would be no impacts on jurisdictional wetlands from the proposed EOD Proficiency Range.

Approximately 2 acres of jurisdictional wetlands are located at the southern end of the proposed MCA/ACE Training Area. However, training activities in these wetlands would be limited to personnel movement and no dredge or fill activities would occur in these jurisdictional wetlands.

Pursuant to EO 11990, *Protection of Wetlands*, EO 11988, *Floodplain Management*, AFMAN 32-7003, *Environmental Conservation*, and the authority delegated by Secretary of the Air Force Order 791.1, and taking the above information into account, I find that there is no practicable alternative to this action and that the Proposed Action includes all practicable measures to minimize harm to the wetland and floodplain environments.

Mitigation

The EA analysis concluded that the Proposed Action or its alternatives would not result in significant environmental impacts; therefore, no mitigation measures are required. Best management practices are described, and environmental commitments are recommended where applicable.

Conclusion

Finding of No Significant Impact / Finding of No Practicable Alternative. After review of the EA prepared in accordance with the requirements of NEPA; CEQ regulations; and 32 CFR 989, *Environmental Impact Analysis Process,* which is hereby incorporated by reference, I have determined that the current and proposed comprehensive ground training activities and establishment of additional training areas on Main Base at Moody AFB, Georgia, would not have a significant impact on the quality of the human or natural environment. Accordingly, an Environmental Impact Statement will not be prepared. This decision has been made after considering all submitted information, including a review of public and agency comments submitted during the 30-day public comment period, and considering a full range of practical alternatives that meet project requirements and are within the legal authority of the United States Air Force.

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DEE JAY KATZER, Colonel, USAF DATE
Chief, Civil Engineer Division (ACC/A4C)

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GLOSSARY OF ABBREVIATIONS AND ACRONYMS

23 CES	23d Civil Engineer Squadron	IICEP	Interagency and Intergovernmental Coordination for Environmental Planning
23 SFS	23d Security Forces Squadron	INRMP	Integrated Natural Resources Management Plan
23 WG	23d Wing	JTAC	Joint Terminal Attack Controller
38 RQS	38th Rescue Squadron	MCA	Multi-Capable Airmen
820 BDG	820th Base Defense Group	mm	millimeter
93 AGOW	93d Air Ground Operations Wing	MMT	million metric tons
ACAM	Air Conformity Applicability Model	MILES	Multiple Integrated Laser Engagement System
ACE	Agile Combat Employment	MOUT	Military Operations in Urban Terrain
AFB	Air Force Base	MRAP	Mine-Resistant Ambush Protected
AFI	Air Force Instruction	MWD	military working dog
AFMAN	Air Force Manual	N/A	not applicable
Air Force	United States Air Force	NAAQS	National Ambient Air Quality Standards
APE	Area of Potential Effect	NEPA	National Environmental Policy Act
AQCR	Air Quality Control Region	NEW	net explosive weight
BMP	best management practice	NHPA	National Historic Preservation Act
CATM	Combat Arms Training and Maintenance	NOA	Notice of Availability
CED	Explosive Ordnance Disposal Flight	NO_x	nitrogen oxides
CEIE	Civil Engineer Squadron, Installation Management Flight, Environmental Management Element	NRHP	National Register of Historic Places
CEQ	Council on Environmental Quality	OSHA	Occupational Safety and Health Administration
CES	Civil Engineer Squadron	PAN	percussion-actuated neutralizer
CFR	Code of Federal Regulations	Pb	lead
C-IED	counter-improvised explosive device	PCB	polychlorinated biphenyl
CO	carbon monoxide	ppm	parts per million
CO_{2e}	carbon dioxide equivalent	$PM_{2.5}$	particulate matter, less than 2.5 microns in diameter
CSAR	Combat Search and Rescue	PM_{10}	particulate matter, less than 10 microns in diameter
CQB	Close Quarters Battle	PPE	personal protective equipment
dB	decibel	PSD	Prevention of Significant Deterioration
dBA	A-weighted decibel	ROI	Region of Influence
dBP	peak decibel	RRR	Rapid Runway Repair

DCE	1,1-dichloroethene	SARNAM2	Small-Arms Range Noise Assessment Model
DNL	day-night average sound level	SDZ	surface danger zone
DNR	Department of Natural Resources	SERE	Survival, Evasion, Resistance, Escape
DOD	Department of Defense	SFS	Security Forces Squadron
EA	Environmental Assessment	SO_2	sulfur dioxide
EIAP	Environmental Impact Analysis Process	SUAS	small unmanned aerial systems
EIS	Environmental Impact Statement	SWPPP	Stormwater Pollution Prevention Plan
EO	Executive Order	TCCC	tactical combat-causality care
EOD	Explosive Ordnance Disposal	TCE	trichloroethene
ERP	Environmental Restoration Program	TDY	temporary duty
ESOHC	Environmental Safety and Occupational Health Council	TTP	tactics, techniques, and procedures
FONSI	Finding of No Significant Impact	US	United States
FTX	Field Training Exercise	USC	United States Code
GBS	ground burst simulator	USEPA	US Environmental Protection Agency
GHG	greenhouse gas	USFWS	US Fish and Wildlife Service
HLZ	helicopter landing zone	UTV	utility terrain vehicle
ICRMP	Integrated Cultural Resources Management Plan	VOC	volatile organic compound
IED	improvised explosive device	WMA	Wildlife Management Area
IDP	Installation Development Plan		

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1.0 PURPOSE OF AND NEED FOR ACTION

1.1 Introduction

The 23d Wing (23 WG) and 93d Air Ground Operations Wing (93 AGOW) at Moody Air Force Base (AFB), Georgia, conduct comprehensive ground training on the Main Base within both designated training areas and across the airfield and cantonment. Moody AFB is in Lowndes and Lanier counties, approximately 10 miles northeast of the city of Valdosta, Georgia. Moody AFB includes the Main Base (5,518 acres), the adjacent Grand Bay Range (5,874 acres), and the Grassy Pond Recreational Annex (489 acres), which is located 25 miles southwest of the Main Base (**Figure 1-1**).

The current mission of the 23 WG at Moody AFB is to organize, train, and equip the Flying Tigers to employ and execute the Global Precision Attack, Personnel Recovery, and Agile Combat Support service core functions to meet worldwide Combatant Commander requirements. The 23 WG organizes, trains, and employs combat-ready A-10C, HC-130J, HH-60W, and nonaircraft Guardian Angel Weapons System and consists of approximately 5,500 military and civilian personnel, including a geographically separated unit in Florida. The 23 WG comprises the following five Groups located at Moody AFB, Georgia:

- The 347th Rescue Group directs flying and maintenance of one of two active-duty Groups in the US Air Force (Air Force) dedicated to Personnel Recovery (Combat Search and Rescue [CSAR]).
- The 23d Fighter Group directs the flying operations for the Air Force's largest A-10C fighter Group, consisting of two combat-ready A-10 Thunderbolt II attack aircraft flying squadrons and an operations support squadron.
- The 23d Mission Support Group trains, equips, and deploys personnel support forces to build, protect, and sustain air bases worldwide for combat air operations.
- The 23d Medical Group provides outpatient medical, dental, occupational, environmental, and preventive healthcare services in support of installation personnel.
- The 23d Maintenance Group is responsible for the operation and quality of organization and intermediate-level maintenance and repair supporting combat-ready HC-130Js, HH-60Ws, and A-10Cs. The Group oversees the 23 WG's maintenance training program and ensures the workforce qualifications and capability for worldwide deployment of personnel and cargo.

The 93 AGOW provides highly trained ground combat forces capable of integrating air and space power into the ground scheme of fire and maneuver. They provide Joint Force Commanders with expertise on the integration of air power with extending the Theater Air Control System for the Joint Forces Air Component Commander. The 93 AGOW comprises three operational Groups, one of which, the 820th Base Defense Group (820 BDG), is located at Moody AFB. The 820 BDG provides planning, training, equipment, and preparation to its three Base Defense Squadrons and one Combat Operations Squadron. The 820 BDG provides the ground forces necessary to protect the Air Force’s resources. All 820 BDG personnel are always ready to deploy and maintain combat and specialty training standards.

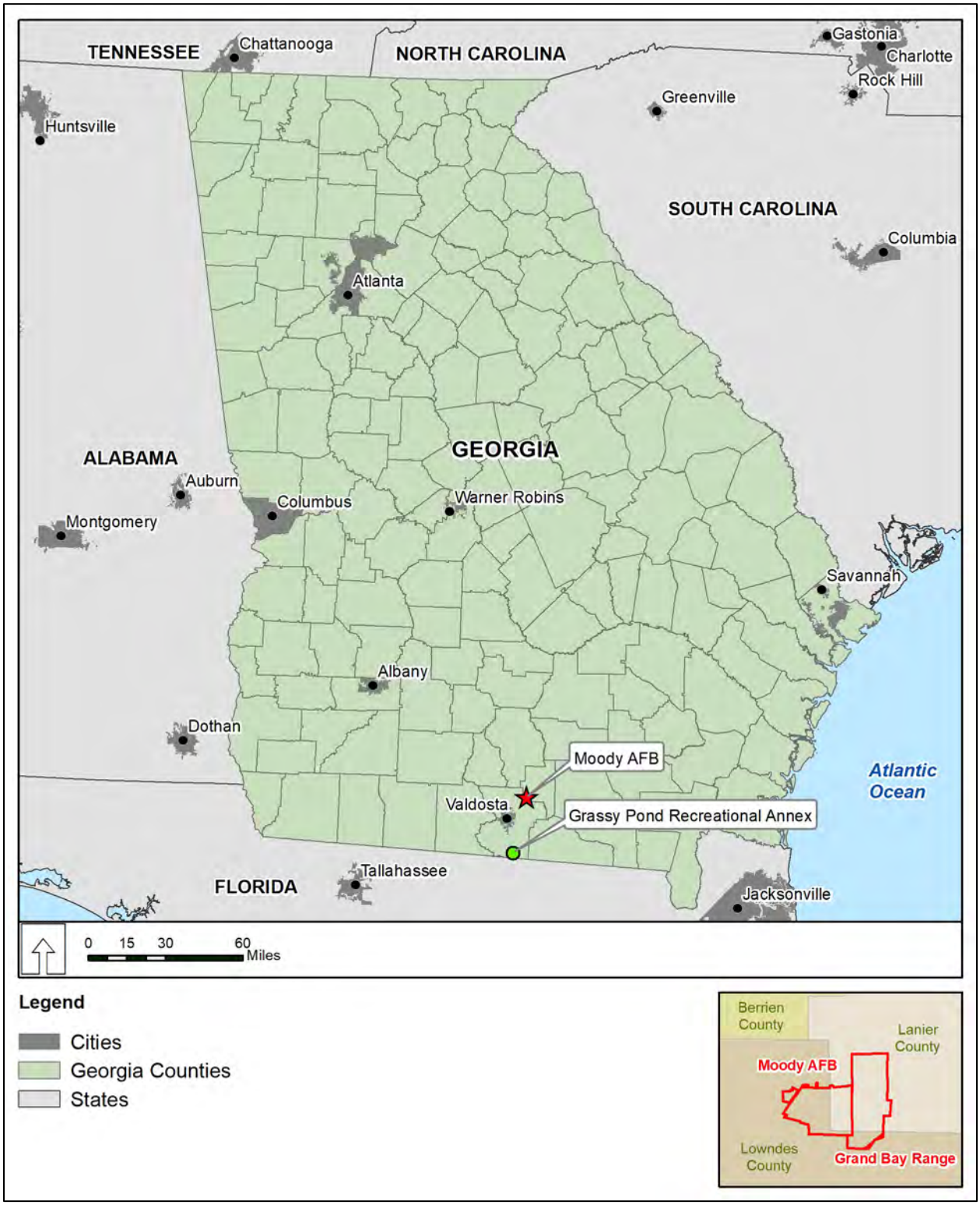


Figure 1-1. Location of Moody Air Force Base

Ground training on the Main Base is primarily conducted by the 38th Rescue Squadron (38 RQS), which is part of the 347th Rescue Group; the 23d Security Forces Squadron (23 SFS) and 23d Civil Engineer Squadron (23 CES), which are part of the 23d Mission Support Group; and the 820 BDG, which is part of the 93 AGOW.

1.2 Need for the Action

The Proposed Action is needed to train and qualify both Moody AFB personnel and non-Moody AFB personnel in small unit tactics; personnel extrication; land navigation; force-on-force; shoot, move, communicate; Multi-Capable Airmen (MCA)/Agile Combat Employment (ACE); use of Explosive Ordnance Disposal (EOD) tools and equipment; Joint Terminal Attack Controller (JTAC), Ranger Assessment Course, and weapons use to prepare for deployment overseas and future missions. It is anticipated that mission requirements will continue to grow, and new military training areas and activities would be needed for conventional tactical training. The shortage of available on-installation ground training areas has created scheduling conflicts and has forced Air Force personnel to travel to other Department of Defense (DOD) installations, including those outside of the state of Georgia, for training activities. Increasing training opportunities within the boundaries of Moody AFB would reduce travel time and associated costs and improve safety by limiting transportation of weapons and possible interactions with the public while conducting training activities on other DOD installations.

1.3 Purpose of the Action

The purpose of the Proposed Action is to continue the current military ground training activities at Moody AFB and to support future ground training activities on the Main Base to better support DOD training requirements.

1.4 Overview of Existing Training Areas

The types of military training activities conducted at Moody AFB are common military ground training and include the use of firing ranges for live weapons training and weapons qualification; the use of training areas for maneuvers, force-on-force rescue, real-world deployment, land navigation, convoy movement and protection, rotary-wing aircraft operations, and explosives training; helicopter landing zones (HLZs) for helicopter pilot training, personnel insertion and extraction, and crash rescue field training exercises; and MCA/ACE training. Training activities can include the use of 5.56 millimeter (mm) and 7.62 mm blanks in rifles and machine guns, simunitions, Multiple Integrated Laser Engagement System (MILES), pyrotechnics, ground burst simulators (GBSs), smoke grenades, flares, EOD explosive tools and demolition explosives, and other significant noise-producing hazardous objects. **Table 1-1** presents the military training areas at Moody AFB Main Base, a brief description of the types of training that occur at each area, and the Air Force Groups and Squadrons that utilize the area. **Figure 1-2** presents the locations of the existing military training areas on the Main Base.

Table 1-1. Ground Training Areas on Moody Air Force Base

Training Area	Current Military Training	Current User Groups
Training Area 1 and RRR Pad	Maneuvers and rapid runway repair	38 RQS, 820 BDG, 23 CES
Obstacle Course	None	None
Training Area 2	Maneuvers, light medium tactical vehicle familiarization, MRAP vehicle and UTV operations, and C-IED	38 RQS, 820 BDG, 23 SFS, 93 AGOW
Training Area 3	Maneuvers, convoy movement, light medium tactical vehicle familiarization, MRAP vehicle and UTV operations, extrication, force-on-force, C-IED, simunitions, GBSs, blanks, smokes, and MWD	38 RQS, 820 BDG, 23 SFS, 93 AGOW
Training Area 4	Maneuvers, light medium tactical vehicle familiarization, MRAP vehicle and UTV operations, force-on-force, C-IED, simunitions, GBS, blanks, smokes, and MWD	38 RQS, 820 BDG, 23 SFS, 93 AGOW
FTX Site	Bivouac, force-on-force, simunitions, GBSs blanks, and smokes	38 RQS, 820 BDG, 23 CES
Military Operations in Urban Terrain Facility	Maneuvers, convoy movement, light medium tactical vehicle familiarization, MRAP vehicle and UTV operations, TCCC, CQB, C-IED, simunitions, GBSs, blanks, smokes, and SUAS	38 RQS, 820 BDG, 93 AGOW, 23 CES/CED
M-320 Range	Maneuvers, M-203/M-320 grenade launcher, simunitions, GBSs, smokes, and blanks	38 RQS, 820 BDG, 23 SFS
SERE Training Area	Maneuvers, force-on-force, simunitions, GBS, blanks, smokes, and MWD	38 RQS, 820 BDG, 23 SFS, 93 AGOW
CATM Range	Live fire with shotgun, 9 mm, 5.56 mm, and 7.62 mm ammunition	38 RQS, 820 BDG, 23 SFS, 93 AGOW, 23 CES
Unimproved Areas on Main Base	MWD and EOD	23 SFS, 23 CES/CED

RRR – Rapid Runway Repair; **RQS** – Rescue Squadron; **BDG** – Base Defense Group; **CES** – Civil Engineer Squadron; **MRAP** - Mine-Resistant Ambush-Protected; **UTV** – utility terrain vehicle; **C-IED** – counter-improvised explosive devices; **SFS** – Security Forces Squadron; **AGOW** – Air Ground Operations Wing; **GBS** – ground burst simulator; **MWD** – military working dog; **FTX** – Field Training Exercise; **TCCC** – tactical combat-causality care; **CQB** – Close Quarters Battle; **SUAS** – small unmanned aerial systems; **CED** – Explosive Ordnance Disposal Flight; **SERE** – Survival, Evasion, Resistance, Escape; **CATM** – Combat Arms Training and Maintenance; **mm** – millimeter; **EOD** – Explosive Ordnance Disposal

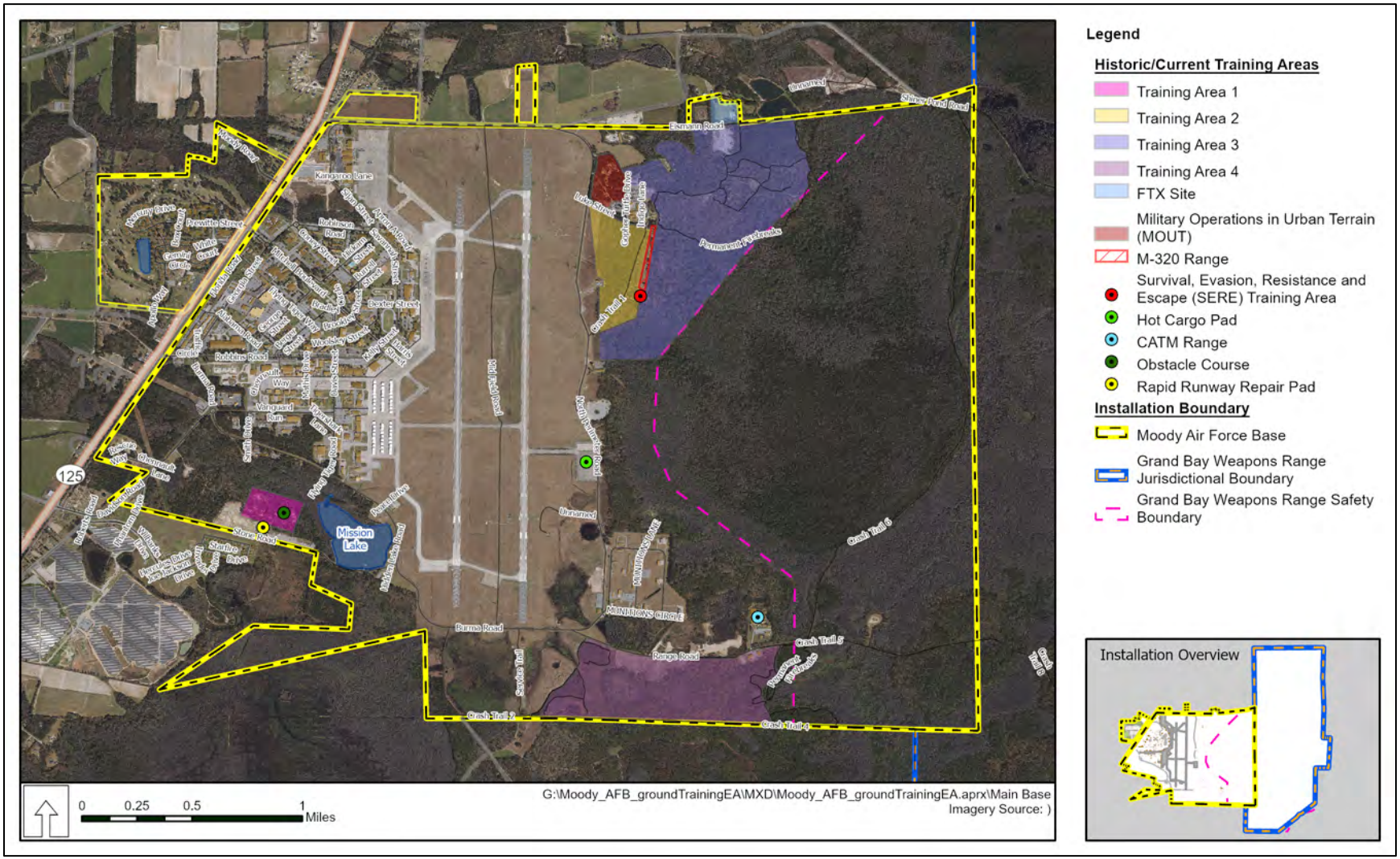


Figure 1-2. Designated Ground Training Areas on Moody Air Force Base Main Base

1.4.1 *Training Area 1, Obstacle Course, and Rapid Runway Repair Pad*

Training Area 1 is located in the southwest portion of the Main Base along the Moody AFB southwestern boundary. Geographically, the Obstacle Course is contiguous with Training Area 1, and the Rapid Runway Repair (RRR) Pad is adjacent to Training Area 1 (**Figure 1-3**). There are no buildings located on Training Area 1. However, the Obstacle Course contains structures for obstacle course training.

Historic and Current Use

Training Area 1 was historically used for land navigation and force-on-force training activities. The Obstacle Course was historically used primarily by the 820 BDG as well as by the 38 RQS until it was closed due to an accident in 2005. The Obstacle Course has not been used since. Repairs to structures in the Obstacle Course have been ongoing, but repairs have not been completed and the Obstacle Course remains closed to training activities.

Training Area 1 is currently used for land navigation; force-on-force maneuvers; basic movement drills; field tactics; simulated attacks; convoy movement and protection; extrication; Survival, Evasion, Resistance, Escape (SERE); and tactical combat casualty training. No GBSs, simunitions, blanks, smoke grenades, or flares are used during training activities in Training Area 1. Training events occur up to 10 times monthly at Training Area 1. The 38 RQS uses Training Area 1 for strategic standdown training approximately three times annually.

The RRR Pad has a crater where the 23 CES can simulate runway damage. Twice annually CES trains by excavating the crater and subsequently using heavy equipment to repair it. This includes the use of a grader, dump trucks, a backhoe, a boom on a skid steer, a vibratory roller, a sweeper, and an asphalt cutting saw. Up to 150 personnel participate in each training event.

1.4.2 *Training Area 2*

Training Area 2 is located east of the Moody AFB airfield and west of Training Area 3 (**Figure 1-4**).

Historic and Current Use

Training activities have historically been and are currently limited to land navigation and movement training along the existing roads by the 820 BDG primarily because of the presence of gopher tortoise (*Gopherus polyphemus*) burrows in Training Area 2. Light medium tactical vehicle (2.5-ton capacity) familiarization and Mine-Resistant Ambush-Protected (MRAP) vehicle and utility terrain vehicle (UTV) operations occur along existing roads. Gopher tortoise burrows have been and currently are avoided during all training activities. No training munitions or explosives are used in Training Area 2.

Training Area 2 is used for flight-level training, which includes a maximum of approximately 50 personnel per training event. Training activities occur up to approximately 10 times per month in Training Area 2.

1.4.3 *Training Area 3*

Training Area 3 is located east of Training Area 2 and abuts the surface danger zone (SDZ) for the Grand Bay Range (**Figure 1-5**).

Historic and Current Use

Training Area 3 has historically been and currently is used by the 820 BDG and 38 RQS for land navigation, force-on-force, maneuvers, basic movement drills, tactical movements, shoot-move-communicate, simulated attacks, convoy movement and protection, extrication, bivouac overnight, and military working dog (MWD) training. GBSs, simunitions, blanks, flashbang grenades, and smoke grenades are used in Training Area 3. Light medium tactical vehicle familiarization and MRAP vehicle and UTV operations occur primarily along existing roads and fire breaks. Flight-level training occurs at Training Area 3 by the 820 BDG with a maximum of approximately 50 personnel per training event. Training activities occur approximately 20 times monthly at Training Area 3.

The 38 RQS conducts extrication training and ground assault training in Training Area 3. For extrication training, the 38 RQS sets junk vehicles with all their fluids removed in the training area to train on personnel extrication procedures. Training by the 38 RQS includes approximately 16 personnel per training event, and training occurs approximately twice monthly.

1.4.4 *Field Training Exercise Site*

The Field Training Exercise (FTX) Site is located north of Training Area 3 and adjacent to the Main Base's northern boundary (**Figure 1-5**).

Historic and Current Use

The FTX Site has historically been and is currently used for military combat support for CES force training, which includes field deployment, construction, and repair methods typical of Civil Engineer units. During training, unit personnel convoy to the FTX Site in approximately 30 vehicles and setup a bivouac site consisting of small shelter systems, such as 12-person tents, that serve as temporary housing for approximately 60 troops during each training event. Portable toilets are brought to the FTX Site to support troops during training, and all meals are either meals ready to eat or provided by food services. Combat skill and force protection training include foot movements of squad-sized forces. Combat skill, convoy, and force protection training can include the use of weapons with 5.56 mm blanks and GBSs. As part of training, a base defense operations center is established at the bivouac site on the FTX Site, with hasty fighting positions constructed around the perimeter. The FTX Site is also used by CES/Explosive Ordnance Disposal Flight (CED) for explosive tool training. Explosive tool training at the FTX Site includes approximately five personnel at each training event with approximately six training events annually.

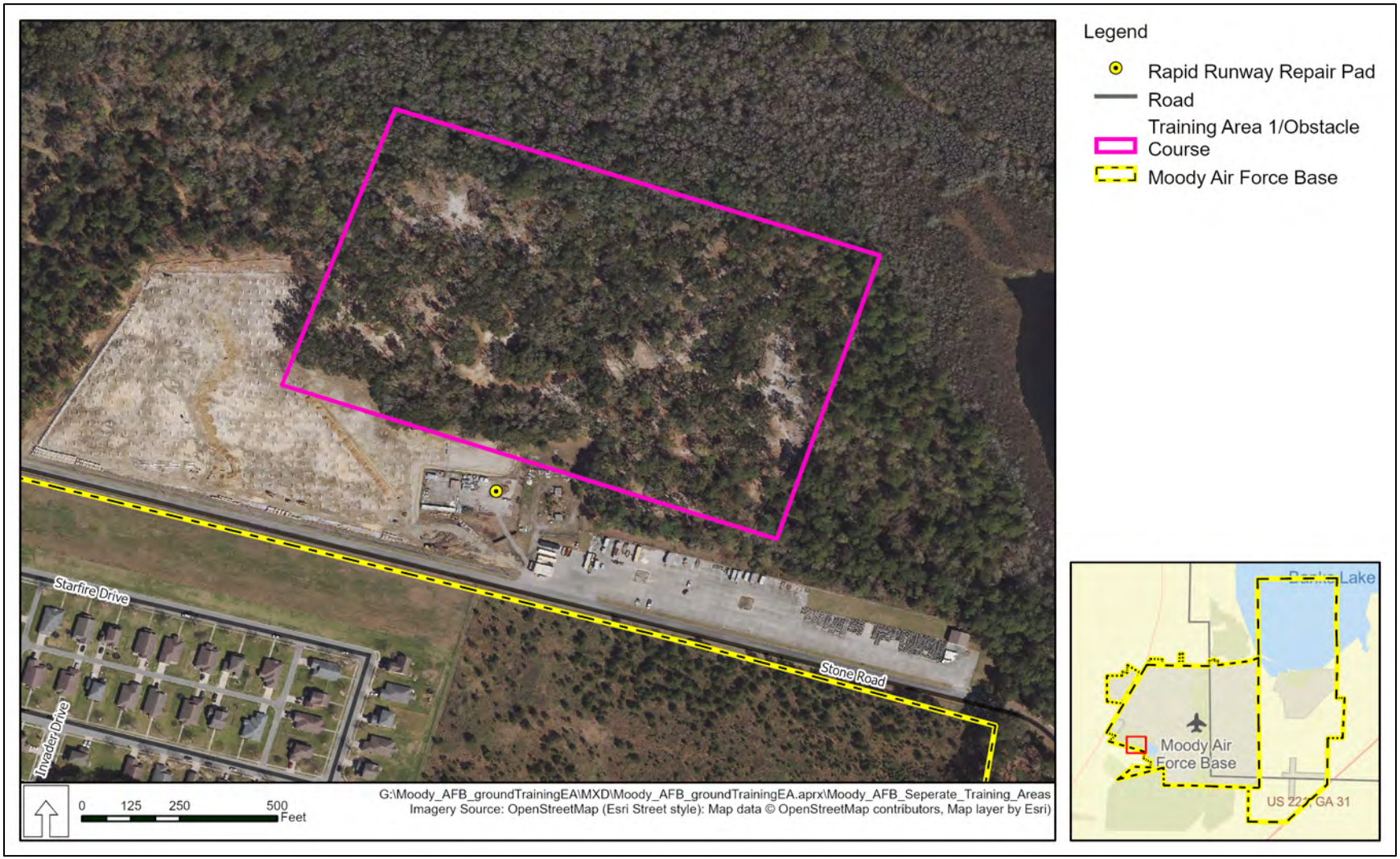


Figure 1-3. Training Area 1, Obstacle Course, and Rapid Runway Repair Pad Locations

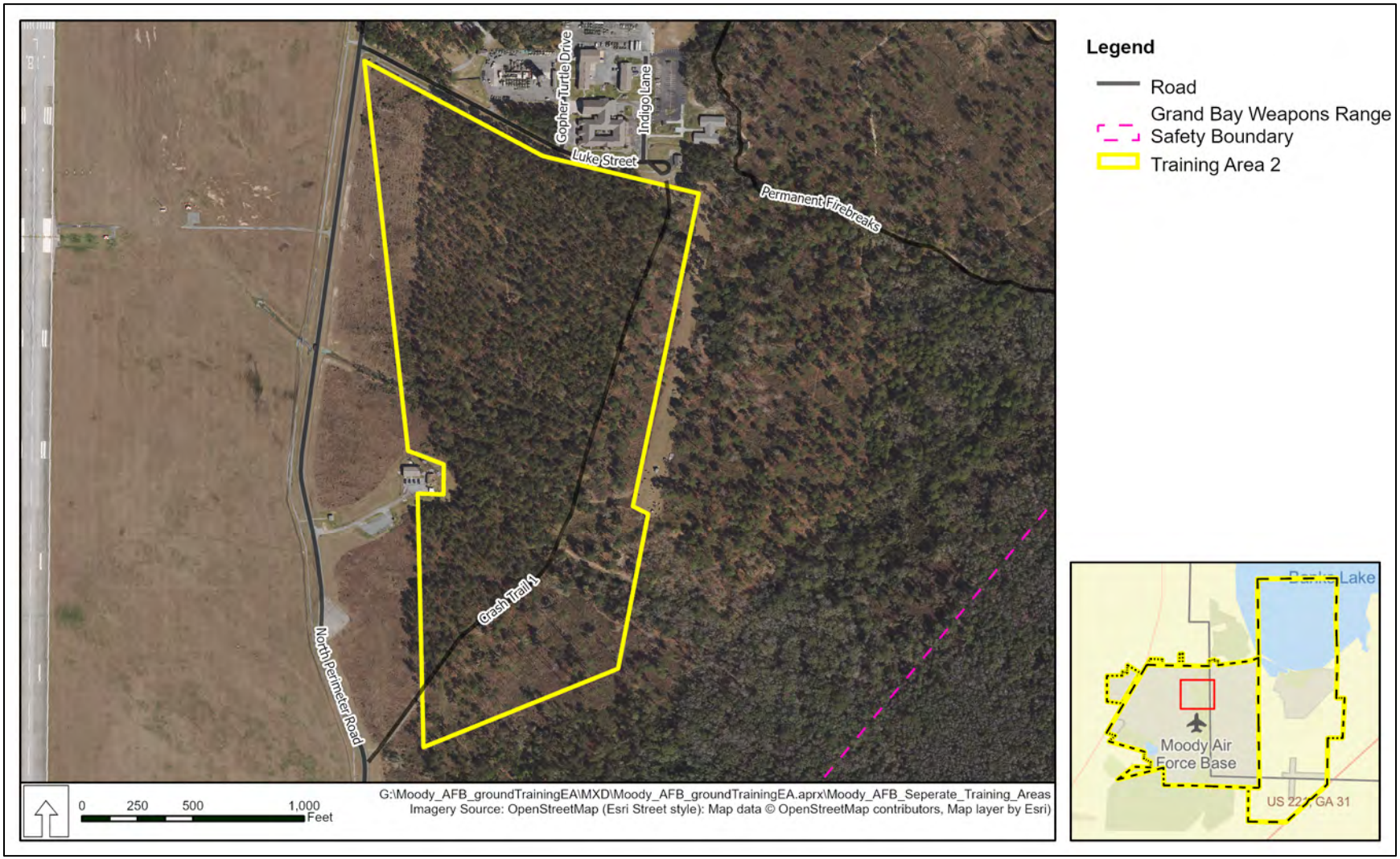


Figure 1-4. Training Area 2 Location

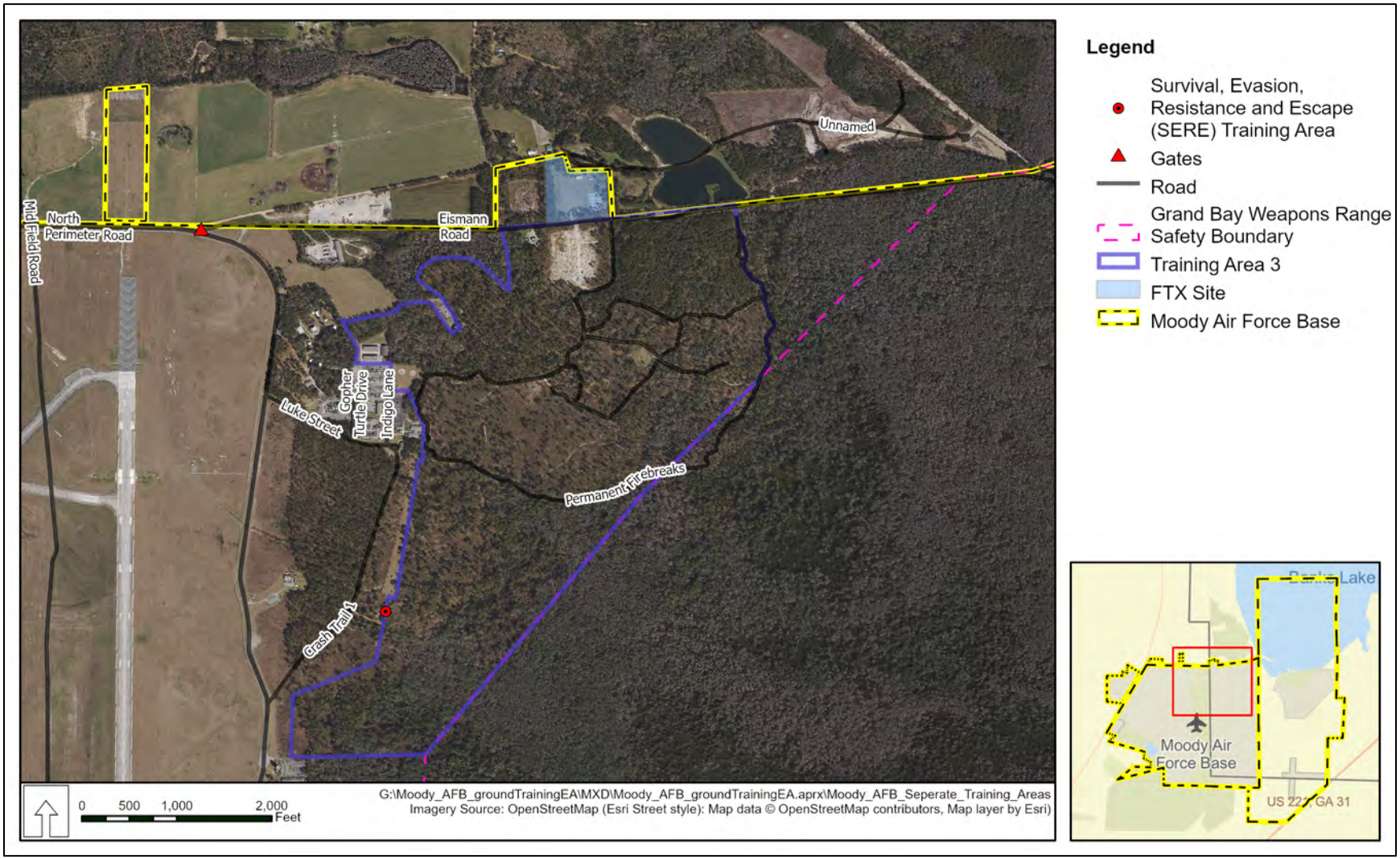


Figure 1-5. Training Area 3; Survival, Evasion, Resistance, and Escape Training Area; and Field Training Exercise Locations

1.4.5 *Training Area 4*

Training Area 4 is located on the southeast portion of the Main Base and is primarily a forested area with several unimproved roads within and along the perimeter of the training area (**Figure 1-6**).

Historic and Current Use

Training activities in Training Area 4 by the 820 BDG and 38 RQS have historically been and currently are the same as described for Training Area 3. Flight-level training occurs with a maximum of approximately 50 personnel per training event at Training Area 4. Training Area 4 is used up to approximately 10 times per month for training activities.

Land navigation training by the 23 CES currently occurs approximately twice annually in Training Area 4. Approximately 30 personnel participate in the land navigation training during each of the two annual training events. Explosive tool training by the 23 CES/CED is similar to the explosive tool training currently conducted by the 23 CES/CED at the FTX Site and occurs approximately six times annually with five personnel participating in each training event.

1.4.6 *Survival, Evasion, Resistance, Escape Training Area*

The SERE Training Area is located east of Training Area 2 and west of Training Area 3 (**Figure 1-5**).

Historic and Current Use

Historic and current training activities in the SERE Training Area are limited to force maneuvers and SERE specialist training operations. Training activities in the SERE Training Area include the use of simunitions, GBSs, smokes, and blanks. SERE training events include up to 30 personnel conducting evasion movement and improvised shelter building utilizing naturally occurring material and survival fire starting using deadfall and dead standing timber. Four-pole canopy tents are typically used for spark arrest during fire starting training. The SERE Training Area is used up to approximately twice monthly for training activities.

1.4.7 *Military Operations in Urban Terrain Facility*

The Military Operations in Urban Terrain (MOUT) Facility consists of a cluster of cinder-block one-story and two-story buildings arranged in a village setting. The buildings have doors, replacement shutter windows, electricity to power lights and equipment, and rappelling tie-downs on the side of the two-story buildings (**Figure 1-7**). Two HLZs are also located within the MOUT Facility.

Historic and Current Use

The MOUT Facility has historically been and currently is used to train security forces in urban and city tactics, techniques, and procedures (TTPs) utilizing close-quarters battle training activities. Training activities focus on clearing facilities. GBSs, simunitions, blanks, flashbang grenades, and smoke grenades are used during training activities at the MOUT Facility. Vehicles used include six-pack trucks and Humvees. Light medium tactical vehicle familiarization and MRAP vehicle and UTV operations occur primarily along existing roads. Live-fire training also occurs in the enclosed shoot house. MWD training includes mass scent

exercises in the MOUT Facility. Training in the MOUT Facility by the 820 BDG and JTAC occurs approximately 12 times monthly and involves up to 30 personnel per training event. Training in the MOUT Facility by the 38 RQS occurs approximately 10 times annually with approximately 25 personnel per training event.

Explosive tool training by the 23 CES/CED is similar to the explosive tool training currently conducted by the 23 CES/CED at the FTX Site and Training Area 4 and occurs approximately six times annually with five personnel participating in each training event.

The HLZs are used approximately three times weekly with an average of four landings and four hoverings by HH-60s at each HLZ per sortie. Approximately 150 parachute jumpers per month land at the HLZs with support from three UTVs.

Small unmanned aerial systems (SUAS) are used at the MOUT Facility during ground training activities by the 93 AGOW. The RQ-11B Raven is the SUAS deployed by the 93 AGOW to support 820 BDG training operations in the MOUT Facility.

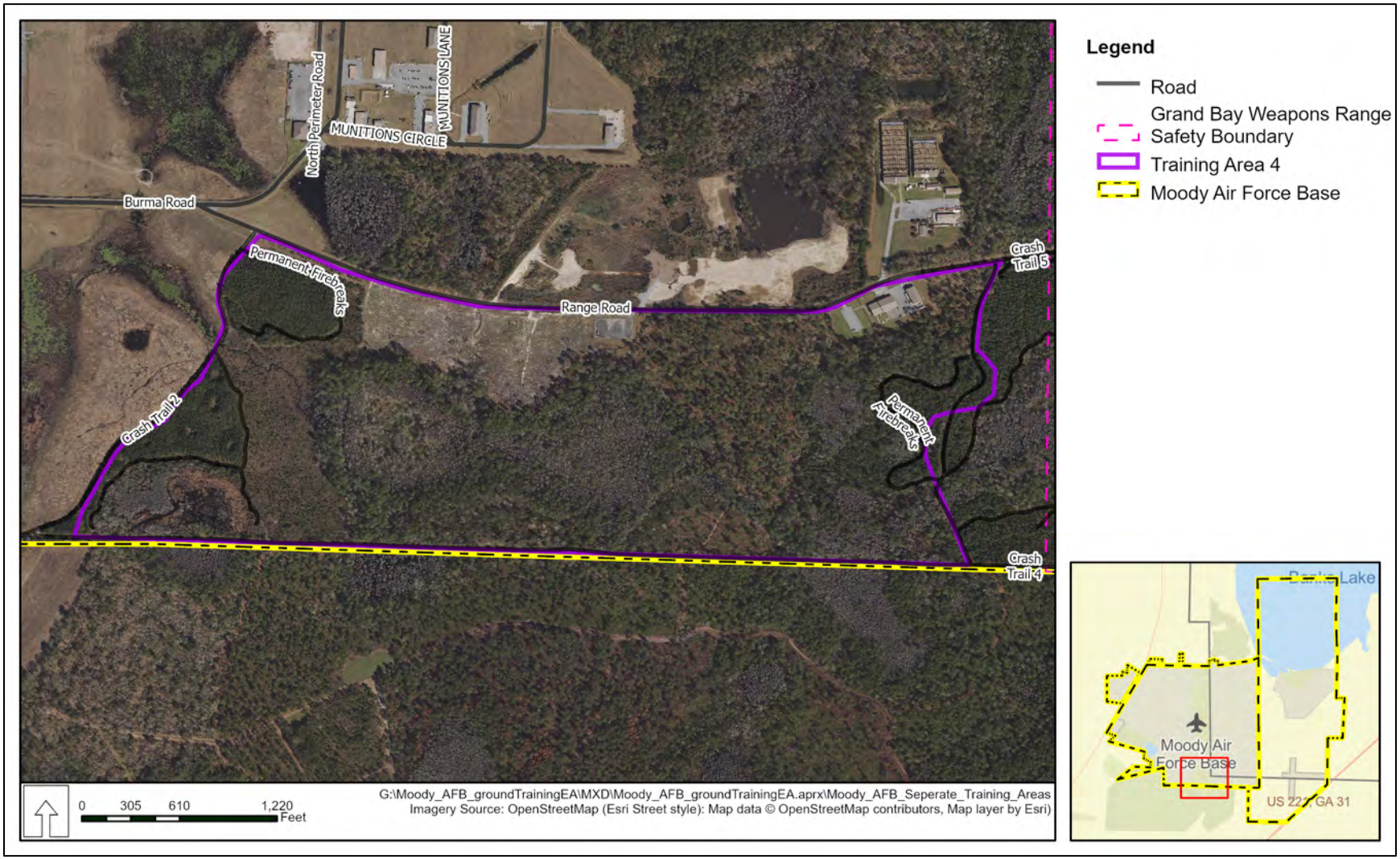


Figure 1-6. Training Area 4 Location

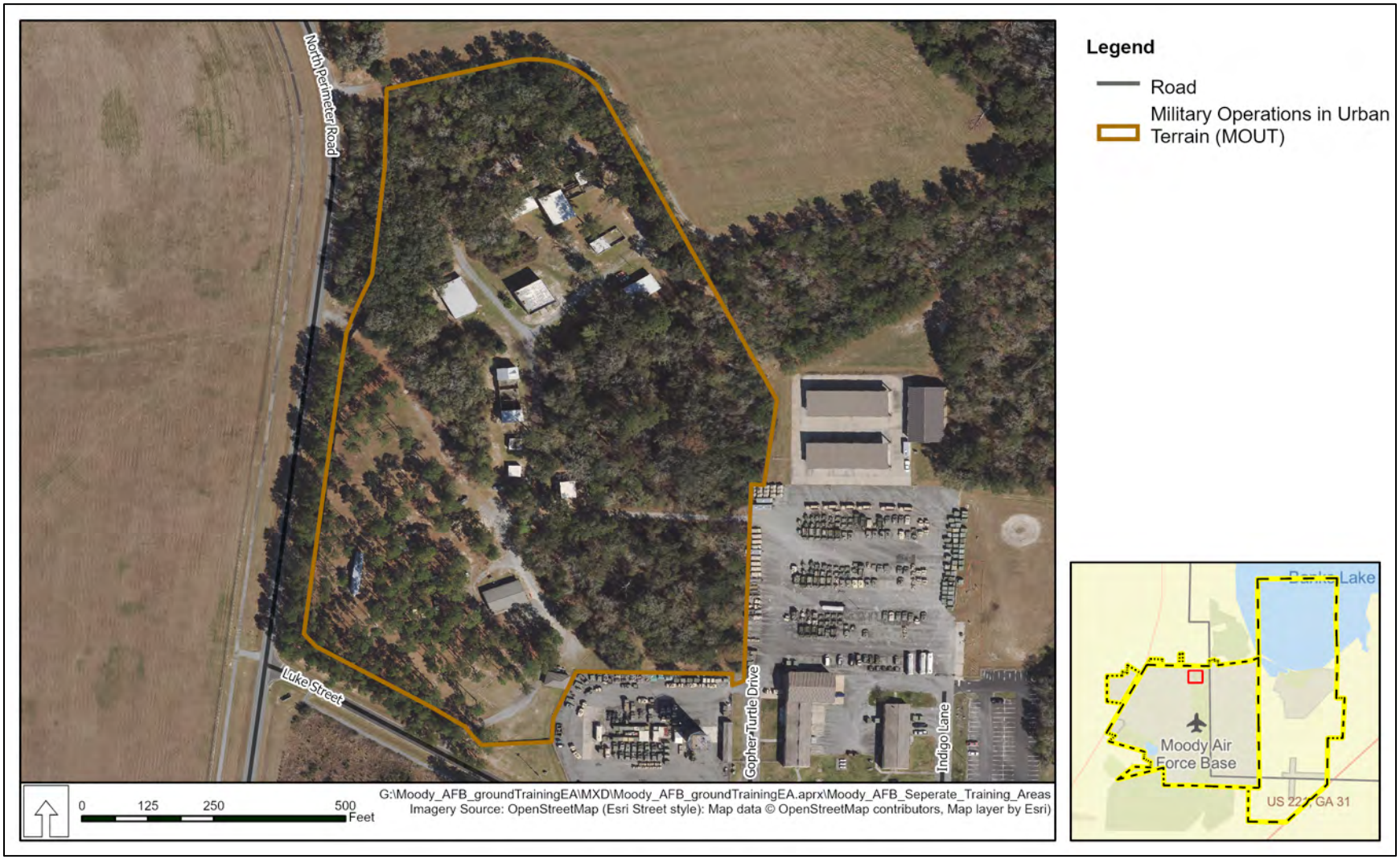


Figure 1-7. Military Operations in Urban Terrain Facility Location

1.4.8 *M-320 Range*

The M-320 Range (formerly named the M-203 Range) is located near the 820 BDG headquarters complex between Training Areas 2 and 3 (**Figure 1-8**).

Historic and Current Use

Historically, the M-203 grenade launcher training was conducted at the Combat Arms Training and Maintenance (CATM) Range at Moody AFB. However, with the expansion of the CATM Range in 2004, the M-203 Range was created to support M-203 grenade launcher training. Currently, the M-320 Range is used for grenade launcher training using 40 mm grenade launchers launching inert practice grenades only. Grenade launcher training at the M-320 Range occurs approximately three times monthly and involves up to 10 personnel per training event.

1.4.9 *Combat Arms Training and Maintenance Range*

The CATM Range is located off Range Road in the southeastern portion of Main Base (**Figure 1-9**). The CATM Range is a small-arms live-fire range that includes defined firing lanes and targets.

Historic and Current Use

Weapons qualification and proficiency training at the CATM Range involves the use of M9 (9 mm) pistols, shotguns, M16 rifles, and three different types of M249, M60, and M240 machine guns (5.56 mm and 7.62 mm ammunition). Approximately 4,700 personnel use the CATM Range annually for small-arms live-fire training.

1.4.10 *Unimproved Areas on Main Base and Cantonment*

All unimproved areas on the Main Base, as well as unimproved areas and buildings in the cantonment, have historically been and are currently used for training activities such as MWD and EOD training. The MWD training places boxes bearing explosives on crash trails throughout Main Base (except within densely wooded areas to avoid interactions with other animals), in the recreational vehicle parking area, and in all buildings in the cantonment and in unimproved areas. The MWD training on crash trails and other unimproved areas on Main Base occurs approximately twice weekly and involves approximately six personnel during each training event. The MWD training routinely uses the 820 BDG vehicle parking area, the theater meeting center in Building 107, and Building 932 for after-hours training.

The 23 CES conducts integrated defense training in unimproved areas in the cantonment twice annually with up to 150 personnel. Integrated defense training includes defensive fighting position using dummy rifles. The 23 CES/CED conducts training in unimproved areas throughout the Main Base, including crash trails, fire breaks, and established training areas. Training involves the use of tools such as robotic vehicles and various explosives items, to include .50 caliber impulse cartridges or balls, blasting caps, standard detonating cord, fuse lighters, igniters, and percussion-actuated neutralizer (PAN) cartridges. Sandbags are placed in front and behind tools that project slugs, fluids, or shots to limit directional force. The 23 CES/CED uses an estimated 2,548 explosive tools and items annually during training activities in unimproved areas on the Main Base and in the cantonment.

The 38 RQS conducts Tree Let Down Training quarterly, which is a practice procedure to let down a person whose parachute has caught in a tree. Different trees are used through the Main Base for the Tree Let Down Training by the 38 RQS.

MCA/ACE training is currently limited to aircraft fueling activities on and around the Hot Cargo Pad (see **Figure 1-2**). Also, the 38 RQS uses the Hot Cargo Pad approximately twice monthly as an HLZ with one to two HH-60 helicopters and up to 10 personnel conducting rescue training operations. The 38 RQS conducts half the training events in the daytime and half at night, with the use of chemical lights during the nighttime training.

1.4.11 *Grand Bay Wildlife Management Area*

A license agreement between the Georgia Department of Natural Resources (DNR) and the 38 RQS was in place historically to allow training activities in a portion of the Grand Bay Wildlife Management Area (WMA), located south of the Main Base (**Figure 1-10**). The license agreement lapsed but is currently in review for renewal and signature. The previous license agreement required the 38 RQS to provide advance notification to the Georgia DNR before the start of training activities. Training activities were limited to land navigation, maneuvers, and force-on-force; the use of simunitions, blanks, GBSs, smoke grenades, and flares were prohibited.

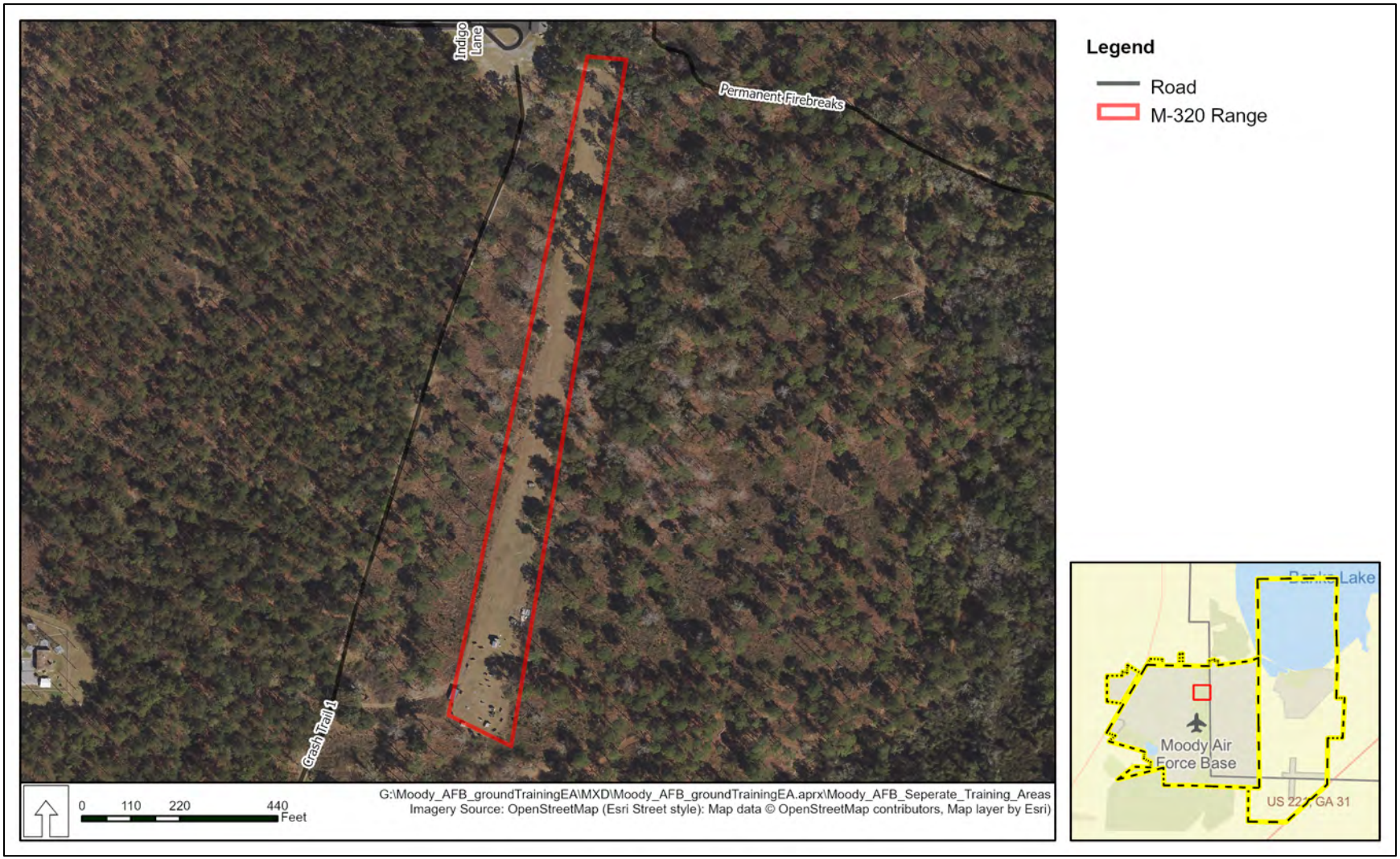


Figure 1-8. M-320 Range Location

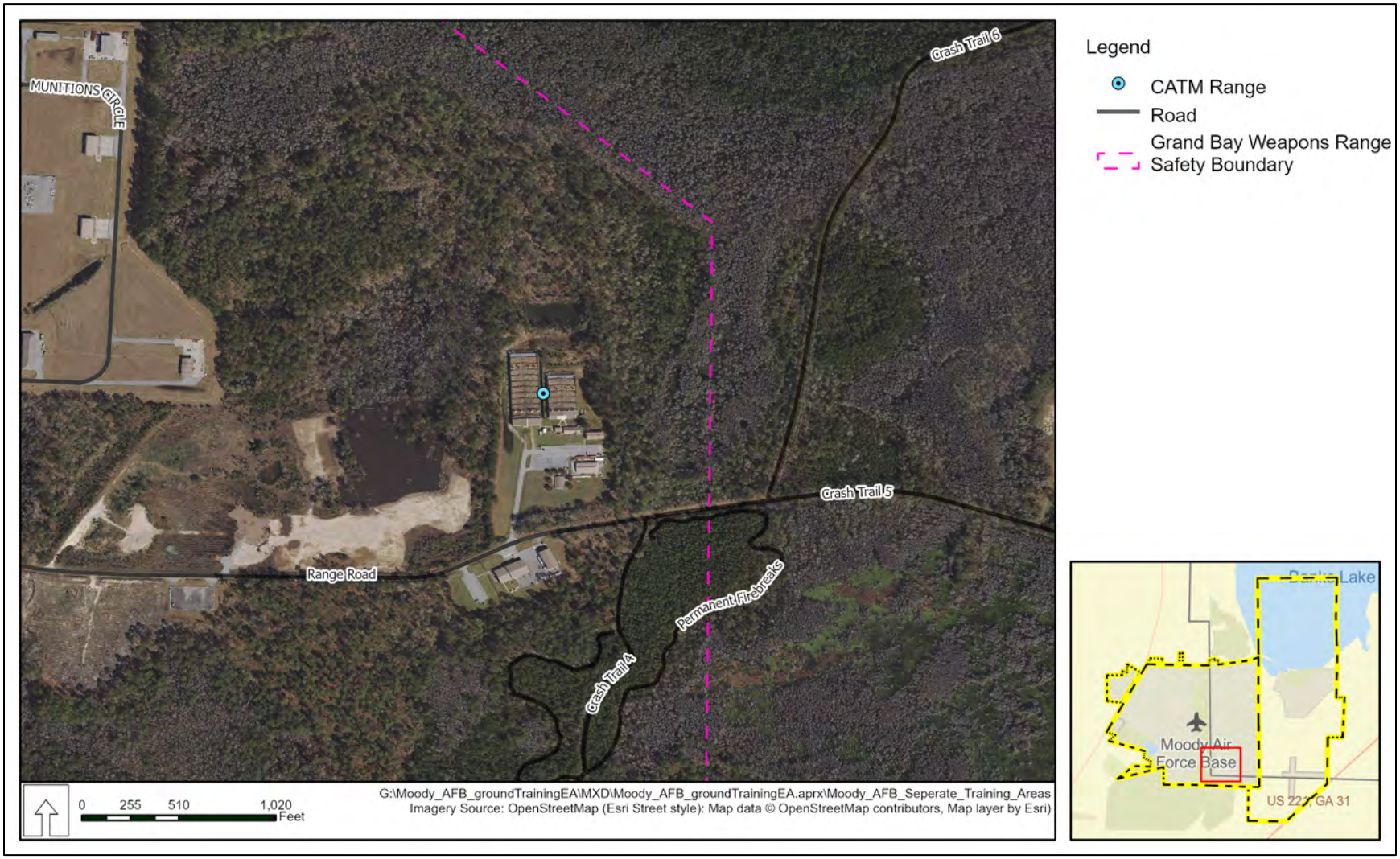


Figure 1-9. Combat Arms Training and Maintenance Range Location

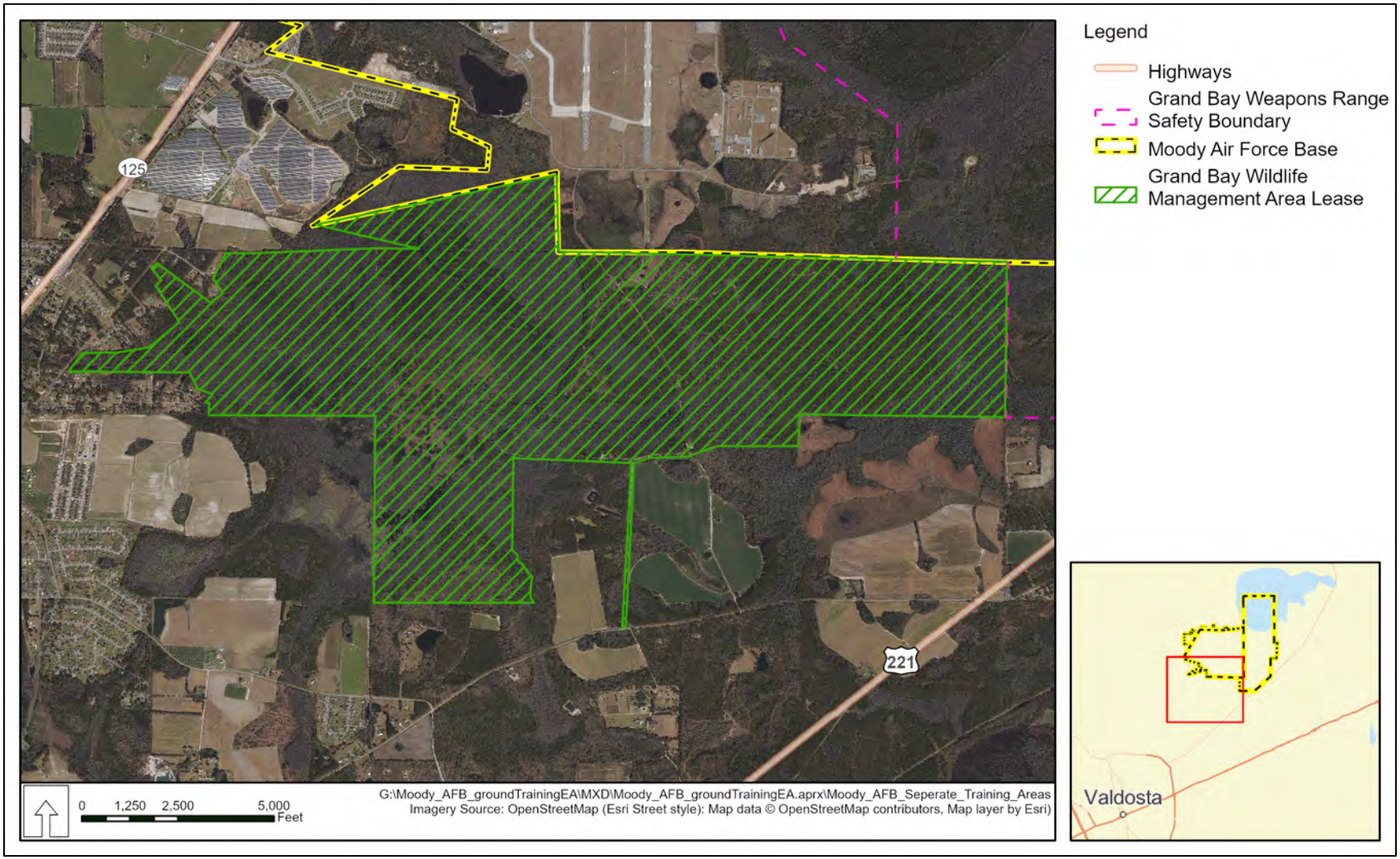


Figure 1-10. Grand Bay Wildlife Management Area Lease Location

1.5 Scope of the Environmental Analysis

This Environmental Assessment (EA) analyzes the potential environmental consequences associated with current and future military ground training activities on Moody AFB Main Base. This EA has been prepared in accordance with the National Environmental Policy Act (NEPA) (42 United States Code [USC] 4321-4347), the Council on Environmental Quality (CEQ) Regulations (40 Code of Federal Regulations [CFR] § 1500-1508), and 32 CFR § 989, et seq., *Environmental Impact Analysis Process* (EIAP). NEPA is the basic national requirement for identifying environmental consequences of federal decisions. NEPA ensures that environmental information is available to the public, agencies, and the decision maker before decisions are made and before actions are taken.

NEPA, which is implemented through the CEQ regulations, requires federal agencies to consider alternatives to the Proposed Action and to analyze potential impacts of alternative actions. The potential impacts of the Proposed Action and its alternatives that are described in this document will be assessed in accordance with the Air Force's EIAP (32 CFR § 989), which requires that impacts on resources be analyzed in terms of their context, duration, and intensity. To help the public and decision makers understand the implications of impacts, they will be described in the short and long term, cumulatively, and within context. The expected geographic scope of any potential consequences is identified as the Region of Influence (ROI). The Moody AFB Main Base is the ROI for the Proposed Action.

1.6 Decision to Be Made

This EA evaluates the potential environmental consequences of implementing the Proposed Action to conduct comprehensive ground training on Moody AFB Main Base. Based on the analysis in this EA, Moody AFB will make one of three decisions regarding the Proposed Action: 1) choose the alternative action that best meets the purpose of and need for this project and sign a Finding of No Significant Impact (FONSI), allowing implementation of the selected alternative; 2) initiate preparation of an Environmental Impact Statement (EIS) if it is determined that significant impacts would occur through implementation of the action alternatives; or 3) select the No Action Alternative, whereby the Proposed Action would not be implemented. As required by NEPA and its implementing regulations, preparation of an environmental document must precede final decisions regarding the proposed project and be available to inform decision makers of the potential environmental impacts.

1.7 Interagency/Intergovernmental Coordination and Consultations

1.7.1 *Interagency Coordination and Consultation*

The environmental analysis process, in compliance with NEPA guidance, includes public and agency review of information pertinent to the Proposed Action. Scoping is an early and open process for developing the breadth of issues to be addressed in an EA and for identifying significant concerns related to an action. Per the requirements of the Intergovernmental Cooperation Act of 1968 (42 USC § 4231[a]) and Executive Order (EO) 12372, *Intergovernmental Review of Federal Programs*, federal, state, and local agencies with jurisdiction that could potentially be affected by the Proposed Action were notified during the development of this EA. Those Interagency and Intergovernmental Coordination for Environmental Planning (IICEP) letters and responses are included in **Appendix A**.

1.7.2 *Government-to-Government Consultation*

The National Historic Preservation Act (NHPA), Section 106 and its implementing regulations at 36 CFR Part 800, direct federal agencies to consult with federally recognized Native American tribes historically affiliated with the land underlying the area of potential effects. Consistent with NHPA Section 106, Department of Defense Instruction 4710.02, *Department of Defense Interactions with Federally Recognized Tribes*, and Air Force Instruction (AFI) 90-2002, *Air Force Interaction with Federally-Recognized Tribes*, federally recognized tribes that are historically affiliated with lands in the vicinity of the Proposed Action have been invited to consult on all proposed undertakings that have the potential to affect properties of cultural, historical, or religious significance to the tribes. The tribal consultation process is distinct from NEPA consultation or the interagency coordination process, and it requires separate notification of all relevant tribes. The timelines for tribal consultation are also distinct from those of other consultations. The Installation Commander is the point of contact for consultation with Native American tribes. Government-to-government consultation documentation is included in **Appendix A.**

1.7.3 *Other Agency Consultations*

Per the requirements of Section 7 of the Endangered Species Act, and implementing regulations (50 CFR § 402), findings of effect and requests for concurrence will be submitted to the US Fish and Wildlife Service (USFWS). Compliance with Section 106 of the NHPA and implementing regulations (36 CFR § 800) will be accomplished through coordination with the Georgia State Historic Preservation Officer. Agency correspondence is included in **Appendix A.**

1.8 Applicable Laws and Environmental Regulations

Implementation of the Proposed Action would involve coordination with several organizations and agencies. Adherence to the requirements of specific laws, regulations, best management practices, and necessary permits are described in detail in each resource section in Chapter 3.

1.8.1 *National Environmental Policy Act*

NEPA requires that federal agencies consider the potential environmental consequences of proposed actions. The law's intent is to protect, restore, or enhance the environment through well-informed federal decisions. The CEQ was established under NEPA for the purpose of implementing and overseeing federal policies as they relate to this process. In 1978, the CEQ issued *Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act* (40 CFR §§ 1500-1508 [CEQ 1978]). These regulations specify that an EA be prepared to accomplish the following:

- Briefly provide sufficient analysis and evidence for determining whether to prepare an EIS or a FONSI.
- Aid in an agency's compliance with NEPA when no EIS is necessary.
- Facilitate preparation of an EIS when one is necessary.

Further, to comply with other relevant environmental requirements (e.g., the Endangered Species Act and NHPA) in addition to NEPA and to assess potential environmental impacts, the EIAP and decision-making process for the Proposed Action involve a thorough examination of environmental resources potentially affected by the Proposed Action.

1.8.2 *The Environmental Impact Analysis Process*

The EIAP is the process by which the Air Force facilitates compliance with environmental regulations (32 CFR § 989, *Environmental Impact Analysis Process*), including NEPA, which is the primary legislation affecting the agency's decision-making process.

1.9 Public and Agency Review of Environmental Assessment

The proposed project is subject to EO 11988, *Floodplain Management*, and EO 11990, *Protection of Wetlands* requirements and objectives because the proposed EOD Proficiency Range on Main Base is partially located within a floodplain and a wetland. The Air Force published an Early Public Notice to provide the opportunity for advance public comment to determine possible public concerns on potential project impacts (**Appendix B**). The advance public comment period was 13 June 2021 through 13 July 2021. The Air Force also solicited public comments on potential project alternatives. No comments were received.

A Notice of Availability (NOA) of the Draft EA and FONSI will be published in *The Valdosta Daily Times* and *The Lanier County Advocate* announcing the availability of the EA for review for a period of 30 calendar days. The NOA will invite the public to review and comment on the Draft EA. The public and agency comments are provided in **Appendix B.**

Copies of the Draft EA and FONSI will also be made available for review at the following locations:

- South Georgia Regional Library, 2906 Julia Drive, Valdosta, Georgia 31602
- Lanier County Library, 124 South Valdosta Road, Lakeland, Georgia 31635

2.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

2.1 Proposed Action

The Air Force is proposing to continue current ground training activities on Moody AFB Main Base as described in **Section 1.4,** increase some ground training activities within existing training areas as described in **Section 1.4,** and establish additional suitable ground training areas to better support DOD training requirements and reduce conflicts in scheduling training activities between user groups. Under the Proposed Action, training events would increase by 50 percent in the existing training areas, increasing the number of personnel, vehicles, equipment, and munitions used in training at Moody AFB. Also, under the Proposed Action, additional new ground training areas would be established to accommodate maneuvers, bivouac training, squad and convoy movement and protection, MCA/ACE training, C-IED training, tactical combat-casualty care (TCCC) training, and EOD training to better support future ground training activities on the Main Base.

2.2 Selection Standards

In accordance with 32 CFR 989.8(c), the development of selection standards is an effective mechanism for the identification, comparison, and evaluation of reasonable alternatives. The following selection standards were developed to be consistent with the purpose of and need for the Proposed Action and to address pertinent mission, environmental, safety, and health factors. Therefore, the reasonable alternatives to the Proposed Action must achieve the following:

1. Allow for a proposed training activity to be conducted on the Main Base to reduce travel time and maximize safety of military personnel during training activities.
2. Maximize the use of existing infrastructure, facilities, and training areas on the Main Base.
3. Establish new training in areas of adequate size and location on Main Base to accommodate the intended training activities and associated SDZs without adversely impacting the current mission.
4. Normalize and incorporate day-to-day training activities at Moody AFB Main Base for both Moody AFB-stationed Groups and personnel as well as personnel not stationed at Moody AFB participating in training exercises at Moody AFB.
5. Be compatible with the Moody AFB Installation Development Plan (IDP; Moody AFB 2015a) and minimize constraints on the flexibility of future development.

The selection standards were used to evaluate alternative ground training areas that met or partially met the selection standards and were carried forward for further detailed analysis in the EA. Although the No Action Alternative will be analyzed, under the No Action Alternative, additional training events in existing training areas, modifications to existing training areas, and development of new training areas would not occur; therefore, the purpose and need would not be met.

2.3 Detailed Description of the Alternatives

NEPA and the CEQ regulations mandate the consideration of reasonable alternatives to the Proposed Action. “Reasonable alternatives” are those that also could be utilized to meet the purpose of and need for the Proposed Action. The NEPA process is intended to support flexible,

informed decision making; the analysis provided by this EA and feedback from the public and other agencies will inform decisions made about whether, when, and how to execute the Proposed Action.

Training Area 1, the Obstacle Course, and RRR Pad; Training Area 2; Training Area 3; Training Area 4; SERE Training Area; MOUT Facility; M-320 Range; CATM Range; and training in the Grand Bay WMA are established training areas on or adjacent to the Main Base, and there are no other alternatives identified for these training areas that meet the project's purpose and need as well as the selection standards. Replacing these established training areas on the Main Base would not allow for training activities to be conducted at an existing training area to reduce travel time and maximize safety of military personnel during training activities; would not maximize the use of existing infrastructure, facilities, and training areas; and would not be compatible with the Moody AFB IDP. Therefore, no alternative locations were considered for the training activities that currently occur in these existing training areas. The Grand Bay Range provides 5,874 acres of land adjacent to Main Base. However, most of Grand Bay Range consists of jurisdictional wetlands and is within the 100-year floodplain. Further, the Grand Bay Range is used for air-to-ground training and ground-based live ordnance training for up to 14 hours per day on weekdays. Current and proposed ground training activities could not occur on Grand Bay Range or within its safety danger zones during air-to-ground training and live ordnance training activities.

Most of Main Base is developed and used for base and community support activities, family and officer housing, and airfield operations. The safety danger zones for the Grand Bay Range extend into the eastern portion of Main Base, which overlaps most of Main Base available for operations and training activities. Further, jurisdictional wetlands are present within much of the undeveloped areas of Main Base (Moody AFB 2015a). Therefore, only four percent of the Main Base (222 of the 5,518 acres) is undeveloped, unconstrained, and available to establish new ground training areas on Main Base.

Accommodating an increase in military personnel who would conduct training in the future is required to meet the project's purpose and need. Moody AFB recognizes that an increase in ground training activities is projected to meet future mission requirements. Projections by the 23 WG and 820 BDG personnel who coordinate and organize ground training activities estimate that training events at Moody AFB would increase by 50 percent. There are no alternatives to proposed future increased training events on Moody AFB Main Base that meet the purpose and need.

2.4 Alternatives Eliminated from Further Consideration

Eight alternatives for new training areas were considered but eliminated from further consideration because they did not meet the selection standards or had been evaluated previously:

1. **New FTX Site.** Alternatives to a new Civil Engineer Contingency Training FTX Site were evaluated in the 2018 *Environmental Assessment (EA) for Installation Development at Moody Air Force Base, Georgia* (Moody AFB 2018a), and the alternatives in that EA evaluation and FONSI are incorporated by reference.

2. **Additional HLZs at MOUT.** Alternative locations for HLZs at the MOUT to support the proposed increase in 820 BDG ground training activities were evaluated; however, the helicopter operations are associated with the types of training the 820 BDG currently conducts exclusively at the MOUT Facility; therefore, no alternative HLZ locations proximate to the MOUT Facility were identified that meet the 820 BDG's training requirements conducted at the MOUT Facility (**Table 2-1**). Therefore, alternative locations for additional HLZs at the MOUT Facility were not carried forward as an alternative.

3. **38 RQS Water Training.** The use of Grassy Pond at the Grassy Pond Recreation Annex (see **Figure 1-1**) was considered for the 38 RQS CSAR training helicopter water work. Grassy Pond is larger than Mission Lake (see **Figure 1-2**) and is on Moody AFB; however, Grassy Pond is not located on the Main Base. Because Grassy Pond is not located on the Moody AFB Main Base, it does not meet the selection standards, including providing for training opportunities on the Main Base to minimize training activities that require airmen to leave the Main Base to conduct training activities (**Table 2-1**). Therefore, the use of Grassy Pond for water work by the 38 RQS was not carried forward as an alternative.

4. **Additional Squad Movement Training Area.** An additional training area for squad movement and convoy movement and protection is needed to reduce training area scheduling conflicts at Moody AFB. To support these training activities, an undeveloped area with existing unimproved roads is needed. Other locations on the Main Base evaluated with unimproved roads are either not currently developed or entirely undeveloped, would require the construction of new unimproved roads instead of taking advantage of existing roads, are not of adequate size to accommodate the intended training activities, or are not compatible with the Moody AFB IDP. Therefore, there are no alternative locations on the Main Base that meet the selection standards for additional squad movement and convoy movement and protection training (**Table 2-1**).

5. **MCA/ACE Training Area.** To determine an appropriate location for the designated MCA/ACE Training Area, nine separate locations were initially evaluated. Of the nine locations evaluated, three were determined to not be proximate to a location on the airfield where training with aircraft could occur. MCA/ACE training specifically requires the use of multiple aircraft during training activities, and therefore these three locations evaluated did not meet the selection standard for training areas to be established in areas of adequate size and location to accommodate the intended training activities (**Table 2-1**). The remaining six locations (shown in **Figure 2-7**), including the Hot Cargo Pad, met the selection standards and are collectively carried forward as the proposed MCA/ACE Training Area under Alternative 1.

6. **EOD Proficiency Range on Main Base.** Any location evaluated for the EOD Proficiency Range must meet Air Force Manual (AFMAN) 32-3001, *Explosive Ordnance Disposal (EOD) Program Supplement* and AFMAN 91-201 *Explosive Safety Standards* criteria, as well as the selection standards. Three alternative locations on the Main Base were evaluated for the EOD Proficiency Range (**Figure 2-2**); two of the three alternatives evaluated did not meet the selection standards (**Table 2-1**). Alternative A did not meet the spacing requirements set by AFMAN 91-201 as well as the Moody AFB IDP

guidance. Alternative B is located on a former skeet range managed under the Military Munitions Response Program; therefore, this alternative does not meet the selection standard of being compatible with the Moody AFB IDP. Alternative C meets the AFMAN 32-3001 and AFMAN 91-201 criteria as well as all selection standards and is the proposed location for the new EOD Proficiency Range on the Main Base as described under Alternative 1 (**Figure 2-1**).

7. **TCCC Training Area and Counter-Improvised Explosive Device (C-IED) Training in Training Area 3.** Numerous locations for a TCCC training area were evaluated within undeveloped areas of Main Base as well as within established training areas. The TCCC needs a substantial area of land to support the size and function of the training activities and must be established within or adjacent to existing training areas for the training synergy available for personnel to combine training activities. Preferably the TCCC would be able to take advantage of already cleared areas such as roads and firebreaks. Additionally, constructing a C-IED lane specifically for C-IED training was previously considered, but determined that C-IED training could occur on existing crash trails and firebreaks. Only Training Area 3 offers the proximity to other similar training operations, is large enough to provide the land area needed for the TCCC, and has numerous firebreaks and roads that can be improved for use as these new training areas (**Table 2-1**).

8. **Force-on-Force Training in Training Area 1.** In addition to the training activities described in **Section 1.4,** the 820 BDG proposed force-on-force exercises in Training Area 1 with the use simunitions, blanks, and GBSs during the force-on-force exercises. When force-on-force training would include the use of simunitions in Training Area 1, a portion of Burma Road would have been closed during those training activities for the safety of vehicles, bicyclists, and pedestrians. The additional force-on-force exercises would have involved up to 20 personnel per training event with training events occurring as often as six times monthly. However, the proposed use of simunitions, blanks, and GBSs during the force-on-force exercises would extend the 104 peak decibel (dBP) noise contour (see **Section 3.2.1** for noise analysis methodology) to extend south of Main Base and into military family housing (**Figure 2-2**). Individuals and residences within the 104 dBP noise contour would be exposed to ongoing very loud intrusive acoustical events. These events would be very loud outside and clearly perceptible inside buildings, loud enough to interfere appreciably with verbal communication, sleep, and other common daily activities. Noise within the 104 dBP noise contours would be loud enough and frequent enough to be considered incompatible with residential land uses. Therefore, to reduce the impacts from noise on residential areas, force-on-force training would be restricted to daytime hours only with no force-on-force training in Training Area 1 from 1900 to 0700 hours daily. The 820 BDG requires force-on-force training activities during nighttime hours to meet the training mission requirements. Therefore, the requirement to train only during daytime hours with the use of simunitions, blanks, and GBSs in Training Area 1 does not meet the training mission. Further, the inability to conduct force-on-force training activities at night would not normalize and incorporate day-to-day training activities at Moody AFB Main Base (**Table 2-1**).

1 **Table 2-1. Comparison of the Alternatives Evaluated with the Selection Standards**

Selection Standard	Alternatives Evaluated						
	Additional HLZs at the MOUT Facility	38 RQS Water Training	Additional Squad Movement Training Area	MCA/ACE Training Area	EOD Proficiency Range on the Main Base	TCCC and C-IED at Training Area 3	Force-on-Force Training in Training Area 1
Allow for a proposed training activity to be conducted on the Main Base to reduce travel time and maximize safety of military personnel during training activities.	Yes	**No**	Yes	Yes	Yes	Yes	Yes
Maximize the use of existing infrastructure, facilities, and training areas on the Main Base.	**No**	Yes	**No**	**No**	Yes	Yes	Yes
Establish new training in areas of adequate size and location on Main Base to accommodate the intended training activities and associated SDZs without adversely impacting the current mission.	**No**	Yes	**No**	**No**	**No**	Yes	Yes
Normalize and incorporate day-to-day training activities at Moody AFB Main Base for Moody AFB-stationed Groups and personnel.	Yes	**No**	Yes	Yes	Yes	Yes	**No**

Selection Standard	Alternatives Evaluated						
	Additional HLZs at the MOUT Facility	**38 RQS Water Training**	**Additional Squad Movement Training Area**	**MCA/ACE Training Area**	**EOD Proficiency Range on the Main Base**	**TCCC and C-IED at Training Area 3**	**Force-on-Force Training in Training Area 1**
Be compatible with the Moody AFB IDP and minimize constraints on the flexibility of future development.	Yes	Yes	**No**	**No**	**No**	Yes	Yes

HLZ – helicopter landing zone; **MOUT** – Military Operations in Urban Terrain; **38 RQS** – 38 Rescue Squadron; **MCA** – Multi-Capable Airmen; **ACE** – Agile Combat Employment; **EOD** – Explosive Ordnance Disposal; **TCCC** – tactical combat-casualty care; **C-IED**; counter-improvised explosive device; **SDZ** – surface danger zone; **AFB** – Air Force Base; **IDP** – Installation Development Plan

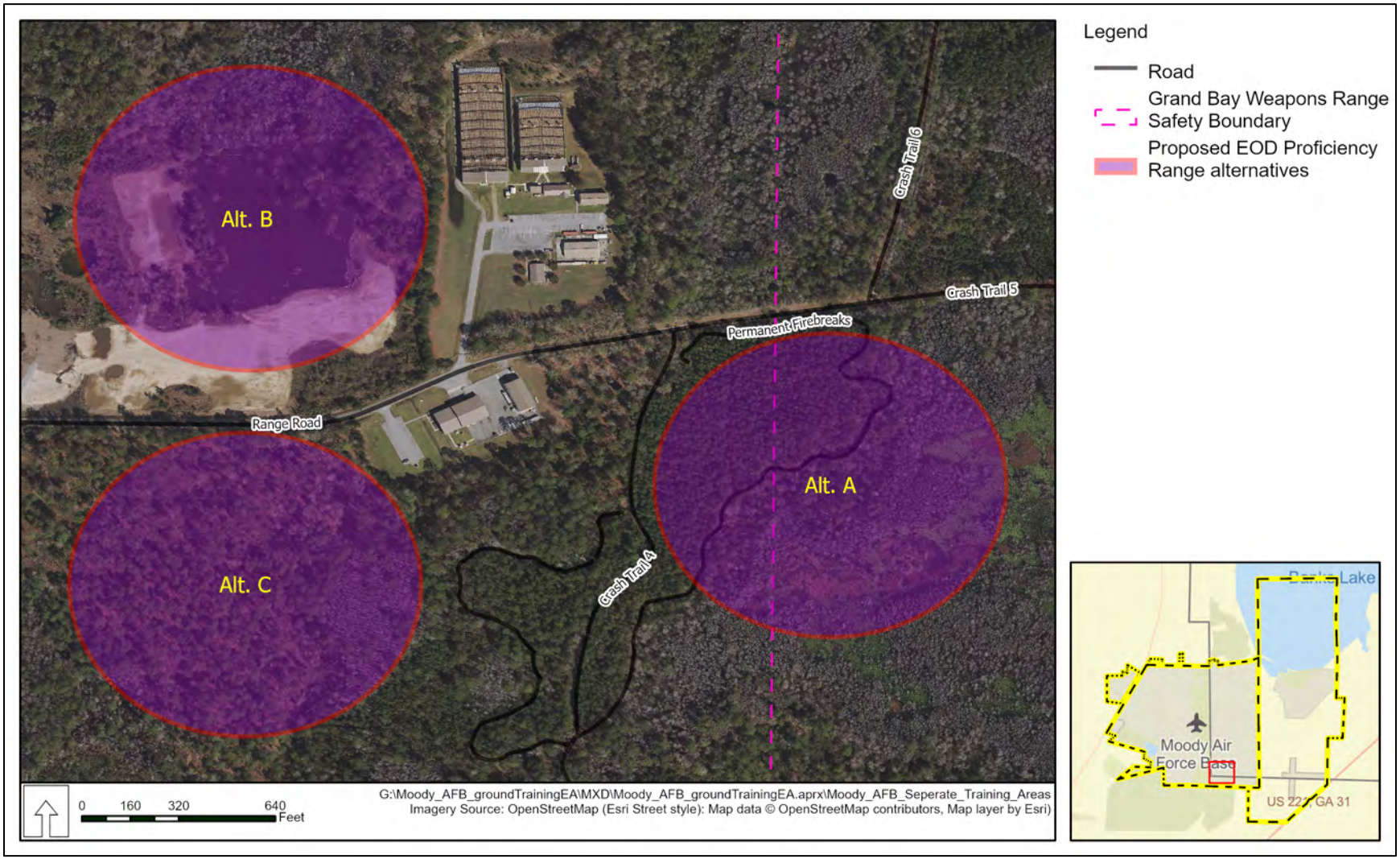


Figure 2-1. EOD Proficiency Range Alternative Locations

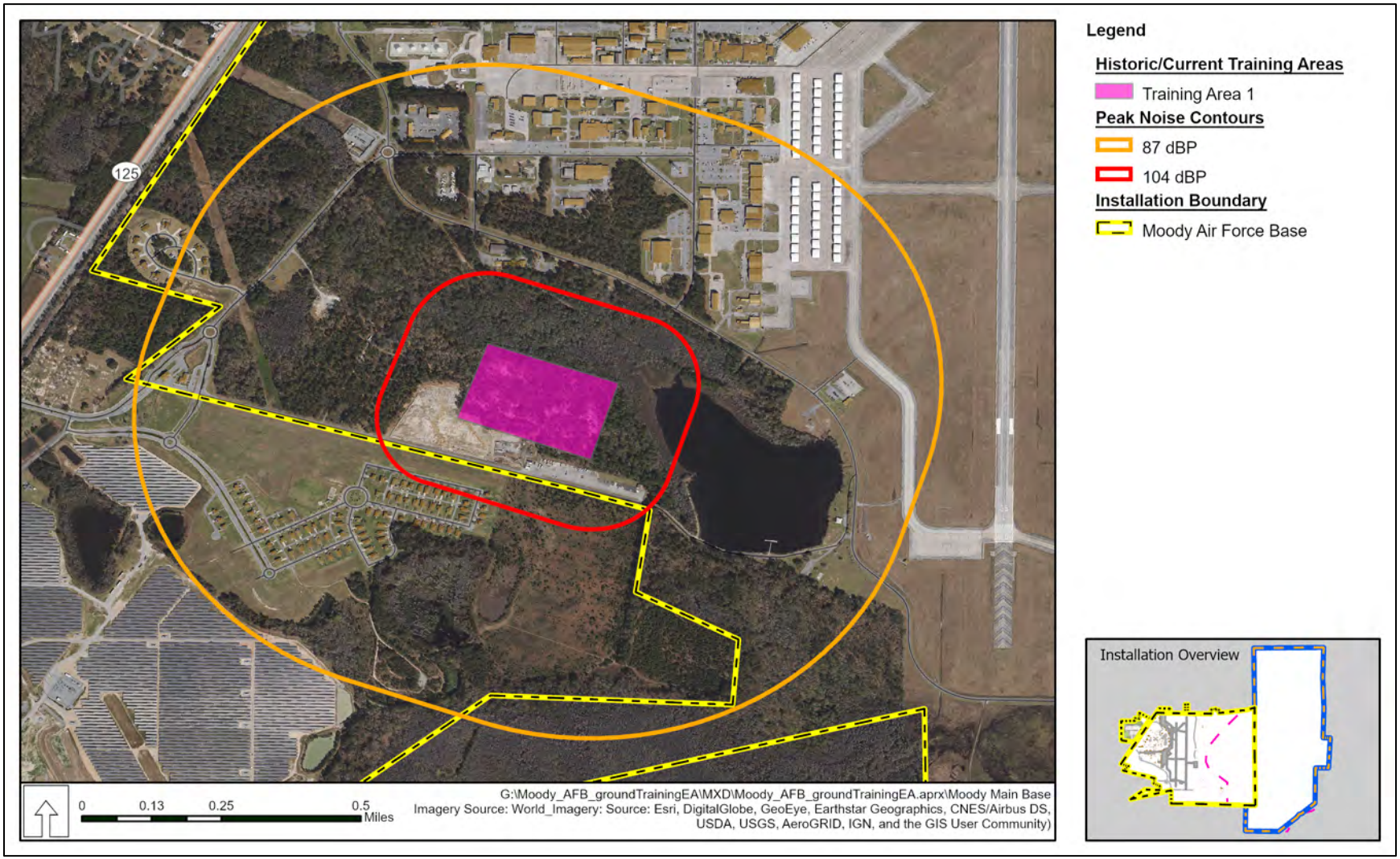


Figure 2-2. Small-Arms Noise Contours for Force-on-Force Training in Training Area 1 at Moody Air Force Base Main Base

2.4.1 *Alternative 1: Expanded Ground Training on the Main Base*

Under Alternative 1, a new FTX Site, EOD Proficiency Range, Training Area 5, tactical combat-casualty care (TCCC) training area, and MCA/ACE Training Area would be established (**Figure 2-3 and Table 2-2**). Further, additional training activities proposed on Main Base would also increase personnel operations. Overall, Alternative 1 would increase the number of personnel operations (i.e., the number of times military personnel would conduct the training operation; therefore, one person may conduct the same training operation multiple times) conducting ground training activities on Main Base by approximately 89 percent with additional training activities and the creation of additional training areas (**Table 2-2**). The type of equipment and training munitions proposed to be used during ground training activities would not change, but the amount of equipment and munitions used for training would increase under Alternative 1 (**Tables 2-2 and 2-4**). Additionally, the number of live munitions expended at the CATM Range during small-arms qualification and maintenance training would also increase under Alternative 1 (**Table 2-5**).

Table 2-2. Current and Proposed Personnel Operations Conducting Ground Training Annually on Main Base

Training Area	Current Personnel Training Operations	Proposed 50 Percent Increase in Existing Training Operations	Proposed Personnel Operations from Additional Training Events	Proposed Total Personnel Training Operations
Training Area 1 and RRR Pad	500	250	0	750
Obstacle Course	0	0	600	600
Training Area 2	500	250	0	750
Training Area 3	3,844	1,922	5,050	10,816
FTX Site	1,474	737	0	2,211
Training Area 4	2,490	1,245	0	3,735
SERE Training Area	720	360	0	1,080
MOUT Facility	4,350	2,175	0	6,525
M-320 Range	360	180	0	540
CATM Range	4,703	2,352	0	7,055
Unimproved Areas on Main Base	900	450	0	1,350
Grand Bay WMA	0	0	500	500
Training Area 5	N/A	N/A	500	500
EOD Proficiency Range	N/A	N/A	1,080	1,080
Total	**19,841**	**9,921**	**7,730**	**37,492**

RRR – Rapid Runway Repair; **FTX** – Field Training Exercise; **SERE** – Survival, Evasion, Resistance, Escape; **MOUT** – Military Operations in Urban Terrain; **CATM** – Combat Arms Training and Maintenance; **WMA** – Wildlife Management Area; **EOD** – Explosive Ordnance Disposal; **N/A** – not applicable

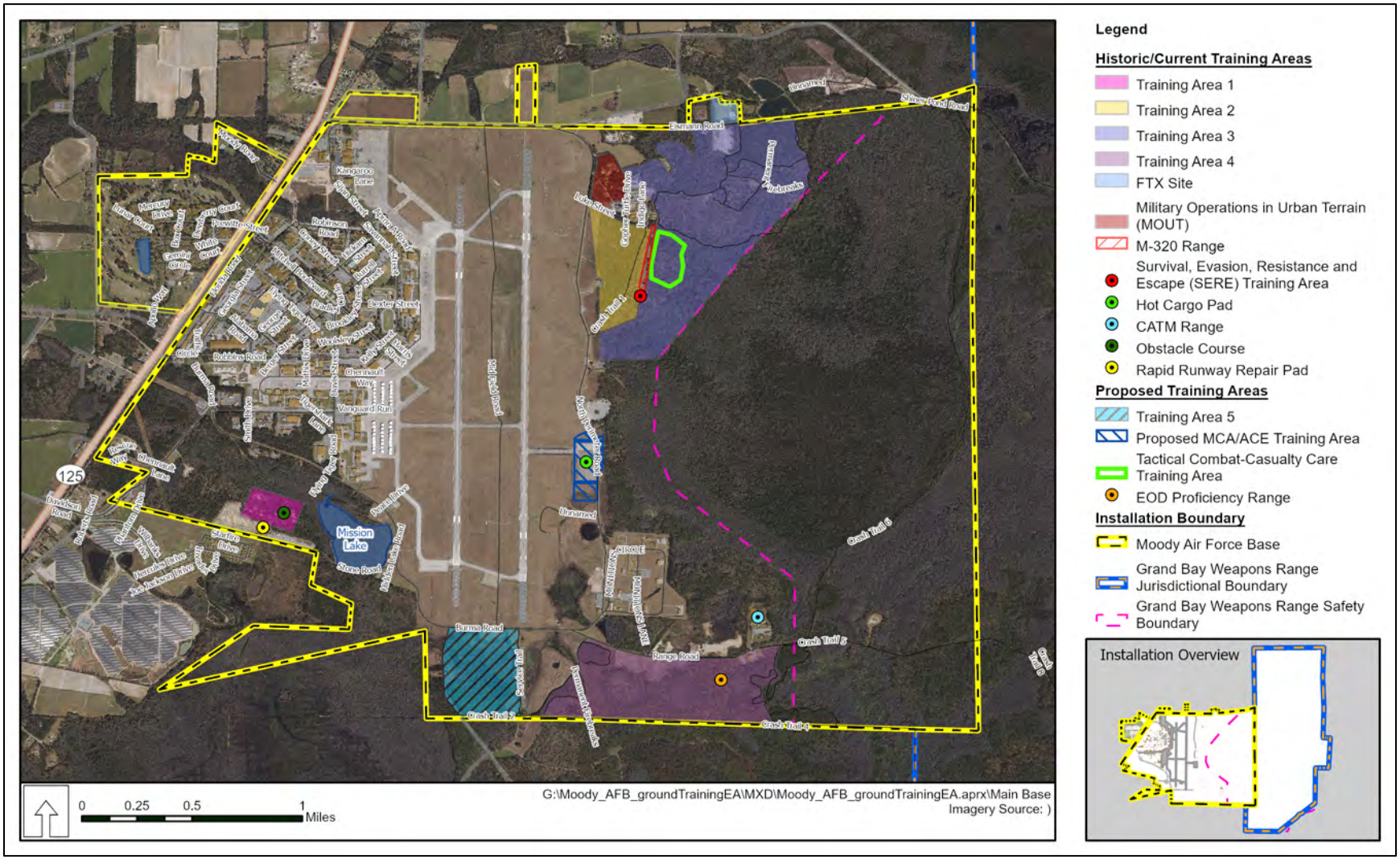


Figure 2-3. Current and Proposed Training Areas on Moody Air Force Base Main Base

Table 2-3. Current and Proposed Equipment Used in Ground Training Annually at Moody Air Force Base Main Base

Training Area	Humvee and Six-Pack Truck		Excavator, Grader, and Bobcat		MRAP Vehicle		Military All-Terrain and Utility Terrain Vehicles		HH-60		RQ-11B	
	Current	Proposed	Current	Proposed	Current	Proposed	Current	Proposed	Current	Proposed	Current	Proposed
Training Area 1 and RRR Pad	100	620	6	6	0	0	0	200	0	0	0	0
Obstacle Course	0	0	0	0	0	0	0	0	0	0	0	0
Training Area 2	100	150	0	0	0	0	0	0	0	0	0	0
Training Area 3	2,000	4,250	0	0	240	960	440	660	4	16	0	0
FTX Site	245	365	0	0	0	0	0	0	0	0	0	0
Training Area 4	1,230	1,840	0	0	240	360	200	300	0	0	0	0
SERE Training Area	125	185	0	0	0	0	0	0	0	0	0	0
MOUT Facility	1,640	2,460	0	0	0	0	72	108	300	450	166 (663 hours)	249 (995 hours)
M-320 Range	0	0	0	0	0	0	0	0	0	0	0	0
CATM Range	0	0	0	0	0	0	0	0	0	0	0	0
Unimproved Areas on Main Base	280	420	0	0	0	20	0	20	0	0	0	0
Grand Bay WMA	0	100	0	0	0	0	0	0	0	0	0	0
Training Area 5	0	100	0	0	0	0	0	0	0	0	0	0
EOD Proficiency Range	0	180	0	0	0	0	0	0	0	0	0	0
Total	**5,720**	**10,670**	**6**	**6**	**480**	**1,340**	**712**	**1,288**	**304**	**466**	**166**	**249**

MRAP – Mine-Resistant Ambush Protected; **RRR** – Rapid Runway Repair; **FTX** – Field Training Exercise; **SERE** – Survival, Evasion, Resistance, Escape; **MOUT** – Military Operations in Urban Terrain; **CATM** – Combat Arms Training and Maintenance; **WMA** – Wildlife Management Area; **EOD** – Explosive Ordnance Disposal

Table 2-4. Current and Proposed Annual Munitions Use during Training Activities at Moody Air Force Base Main Base

Training Area	5.56 mm Blanks		7.62 mm Blanks		.50 Caliber Blanks		Smoke Grenade and Flares		Grenade Simulator		GBS		Marking Cartridges		M-320 Grenade	
	Current	Proposed	Current	Proposed	Current	Proposed	Current	Proposed	Current	Proposed	Current	Proposed	Current	Proposed	Current	Proposed
Training Area 1 and RRR Pad	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Obstacle Course	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Training Area 2	0	0	7,500	11,250	30,000	45,000	0	0	0	0	60	90	0	0	0	0
Training Area 3	763	1,145	0	0	0	0	400	600	311	466	109	164	0	0	0	0
FTX Site	0	650	0	950	0	0	0	0	0	0	0	0	0	0	0	0
Training Area 4	0	800	0	1,200	0	800	300	450	300	450	407	610	0	0	0	0
SERE Training Area	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MOUT Facility	57,286	85,929	7,600	11,400	3,500	5,250	118	177	85	128	118	177	32,237	48,356	0	0
M-320 Range	0	0	0	0	0	0	500	750	500	750	500	750	0	0	6,880	10,320
CATM Range	See Table 2-5 for Current and Proposed Munitions Use at the CATM Range.															
Unimproved Areas on Main Base	0	0	0	0	24	48	0	0	0	0	0	0	0	0	0	0

Training Area	5.56 mm Blanks		7.62 mm Blanks		.50 Caliber Blanks		Smoke Grenade and Flares		Grenade Simulator		GBS		Marking Cartridges		M-320 Grenade	
	Current	Proposed	Current	Proposed	Current	Proposed	Current	Proposed	Current	Proposed	Current	Proposed	Current	Proposed	Current	Proposed
Grand Bay WMA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Training Area 5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EOD Proficiency Range	0	0	0	0	0	48	0	12	0	12	0	12	0	0	0	0
Total	**58,049**	**88,524**	**15,100**	**24,800**	**33,524**	**51,146**	**1,318**	**1,989**	**1,196**	**1,806**	**1,194**	**1,803**	**32,237**	**48,356**	**6,880**	**10,320**

1 **mm** – millimeter; **GBS** – ground burst simulator; **RRR** – Rapid Runway Repair; **FTX** – Field Training Exercise; **SERE** – Survival, Evasion, Resistance, Escape;
2 **MOUT** – Military Operations in Urban Terrain; **CATM** – Combat Arms Training and Maintenance; **WMA** – Wildlife Management Area; **EOD** – Explosive Ordnance
3 Disposal

Table 2-5. Annual Current and Proposed Munitions Use at the Combat Arms Training and Maintenance Range, Moody Air Force Base

Weapons	Current Rounds	Proposed Rounds
M9 (9 mm) Pistol	211,548	317,322
Shotgun	3,842	5,763
M16 (5.56 mm) Rifle and M249 (5.556 mm) Machine Gun	699,457	1,049,186
M60/M240 (7.62 mm) Machine Gun	0	161,728

mm – millimeter

Training Area 1, Obstacle Course, and RRR Pad. Under the Alternative 1, the Obstacle Course would be fully repaired and made operational for training activities. The repaired Obstacle Course would be used by the 820 BDG and 38 RQS approximately once per month, and each training event would include approximately 50 personnel.

Training Area 2. No new training activities are proposed in Training Area 2 under Alternative 1. The types of training activities would continue as described in **Section 1.4,** and the training frequency would increase by 50 percent under Alternative 1.

Training Area 3. Under Alternative 1, all training activities described in **Section 1.4** for Training Area 3 would continue, and the existing training activities would increase by 50 percent, including a 50 percent increase in the use of blanks, simunitions, GBSs, smoke grenades, and flares. Under Alternative 1, a TCCC training area would be added to Training Area 3 (**Figure 2-4**). The TCCC would consist of approximately 12 acres and would disturb an approximately 3.6-acre portion of Training Area 3 to allow for the use of MRAP vehicles with an HLZ to support TCCC training scenarios. An enemy bunker/earthen berm and two security halt areas would be constructed to simulate enemy fire and provide a 360-degree turnaround area and simulated checkpoint. An approximately 2-acre HLZ would be constructed to support the TCCC training scenarios. Approximately four MRAP vehicles would operate in the TCCC twice weekly (day or night) with up to 40 personnel being trained per day. During training operations, HH-60 helicopters would operate in the area and utilize the HLZ approximately four times annually. Blanks, simunitions, GBSs, smoke grenades, and flares would be used for the training activities at the TCCC training area.

Additionally, under Alternative 1, C-IED training that mimics the operational driving conditions with emplaced improvised explosive device (IED) simulators would be located along existing crash trails and firebreaks in the southern end of Training Area 3 and the MOUT (**Figure 2-4**). No new road construction or widening would be required to implement the C-IED training. C-IED training would consist of 8-hour training events up to twice daily and would include day and night training. C-IED training would occur approximately 232 days annually. Vehicles used during C-IED training would include MRAP vehicles, Humvees, various light medium tactical vehicles, extended cab pickup trucks (six-pack trucks), generators on trailers, and UTVs.

Blanks, simunitions, GBSs, smoke grenades, and flares would be used during C-IED training activities.

FTX Site. A new 4-acre Civil Engineer Contingency Training FTX Site is being constructed adjacent to Training Area 3 and south of the existing FTX Site (**Figure 2-5**) and is described in the 2018 *Environmental Assessment (EA) for Installation Development at Moody Air Force Base, Georgia* (Moody AFB 2018a). Under Alternative 1, this FTX Site construction would be completed, and 23 CES training activities as described for the current FTX Site in **Section 1.4** would instead occur at the new FTX Site. The new FTX Site would also be available to other military and civilian user groups as described in the 2018 EA (Moody AFB 2018a). The existing FTX Site would continue to be used for maneuvers and bivouac training; however, the use of simunitions, GBSs, smoke grenades, and flares would not occur at the existing FTX Site under the Proposed Action. Overall, the training frequency would increase by 50 percent under Alternative 1 with two FTX Sites available for training activities.

Training Area 4. Under Alternative 1, training activities in Training Area 4 would continue as described in **Section 1.4,** and the existing training activities would increase by 50 percent, including a 50 percent increase in the use of blanks, simunitions, GBSs, smoke grenades, and flares.

SERE Training Area. Under Alternative 1, training activities in the SERE Training Area would continue as described in **Section 1.4,** and the current training activities would increase by 50 percent, including a 50 percent increase in the use of blanks, simunitions, GBSs, smoke grenades, and flares.

MOUT Facility. Under Alternative 1, training activities in the MOUT Facility would continue as described in **Section 1.4,** and the current training activities would increase by 50 percent, including a 50 percent increase in the use of blanks, simunitions, GBSs, smoke grenades, and flares. In addition to continuing the current training activities, under Alternative 1, the 820 BDG would establish two additional HLZs in the MOUT Facility for use during the increased training activities involving HH-60s.

M-320 Range. Under Alternative 1, training activities in the M-320 Range would continue as described in **Section 1.4,** and the current training activities would increase by 50 percent, including a 50 percent increase in the use of M-320 inert grenades.

CATM Range. Under Alternative 1, training activities in the CATM Range would continue as described in **Section 1.4** with the current live-fire training increasing by 50 percent under the Proposed Action.

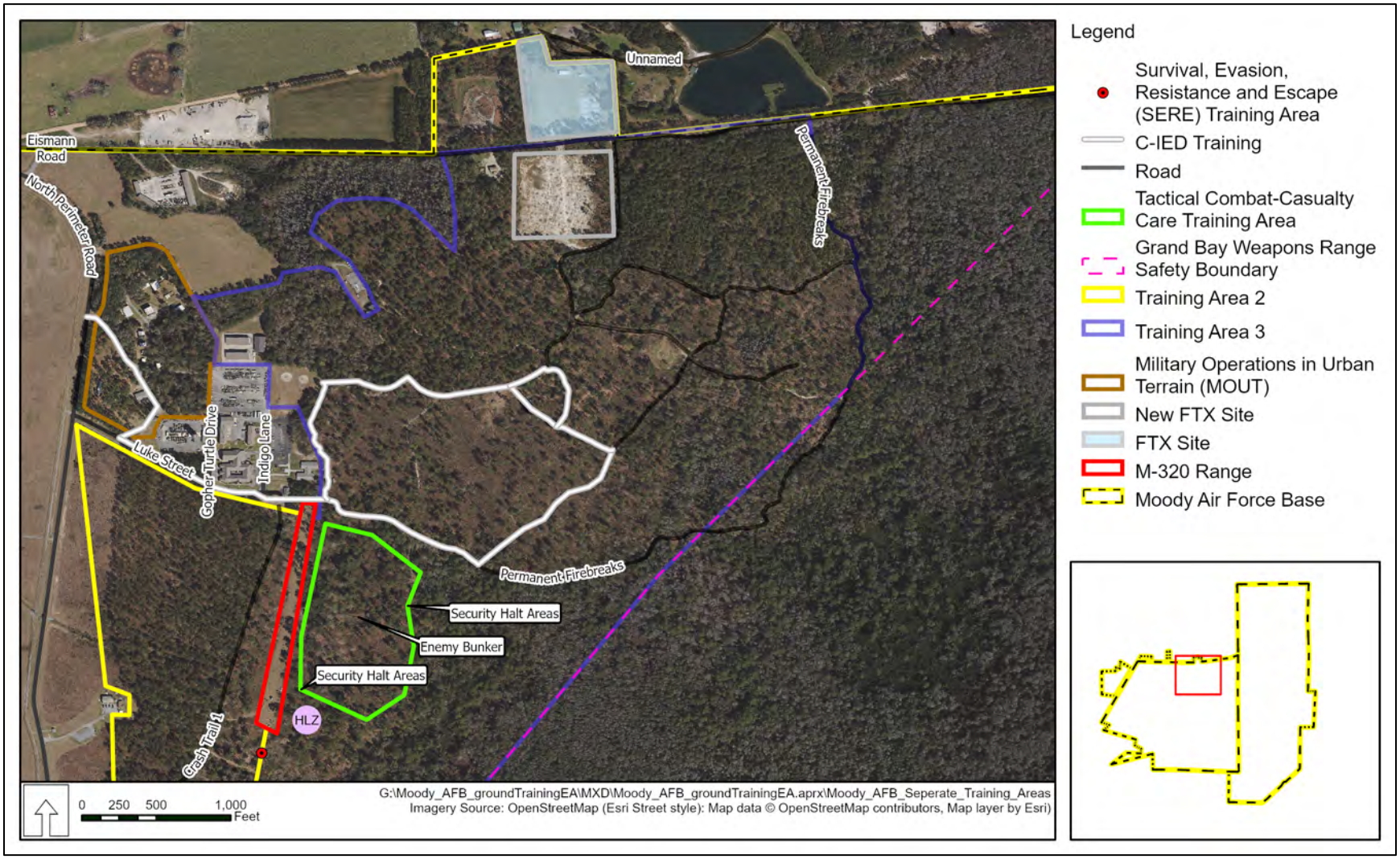


Figure 2-4. Location of the Proposed Tactical Combat Casualty Care Training Area in Training Area 3

Figure 2-5. New FTX Site

Unimproved Areas on the Main Base and Cantonment. Under Alternative 1, training activities in the unimproved areas on the Main Base and in the cantonment would continue as described in **Section 1.4,** and the current training activities such as the MWD training, 23 CES/CED EOD tools training, and 38 RQS training would increase by 50 percent. This includes the use of an estimated 3,822 explosive devices by 23 CES/CED during training activities in unimproved areas on Main Base and in the cantonment.

Currently, the 38 RQS conducts helicopter water work associated with CSAR training at Lake Eufaula, which is located approximately 150 miles northwest of Moody AFB. Under Alternative 1, the 38 RQS would conduct a portion of this helicopter water work in Mission Lake (see **Figure 1-2**) on the Main Base. This rescue training would include boat and personnel drops, use of chemical lights during nighttime training, and getting in and out of the lake. Training activities in Mission Lake would occur up to twice monthly with 80 personnel during each training event.

Grand Bay WMA. Under Alternative 1, the lease between the state of Georgia and the 38 RQS would be renewed for the continued use of a portion of the Grand Bay WMA for training activities. Following the execution of the lease, training activities would continue in the Grand Bay WMA by the 38 RQS as described in **Section 1.4.**

Training Area 5. Alternative 1 would establish a new training area, Training Area 5, on the Moody AFB Main Base. Training Area 5 would be located south of the airfield along the southern boundary of the Main Base (see **Figure 2-1** and **Figure 2-6**). Training would include squad movement and convoy movement and protection. All convoy movement training would be limited to existing unimproved roads within Training Area 5. No off-road travel with vehicles would be permitted in Training Area 5, and there would be no use of blanks, GBSs, simunitions, smoke grenades, or flares during training activities. Training would involve up to 20 personnel and five vehicles (Humvees and six-pack trucks) during each training event, and training events would occur approximately four times monthly.

MCA/ACE Training Area. The MCA/ACE training at the Hot Cargo Pad would be expanded to include a delineated MCA/ACE Training Area under Alternative 1. Training activities at the designated MCA/ACE Training Area would include the setup of up to 58 single or two-person tents staked to the ground, portable toilets, generator, meals-ready-to-eat consumption and disposal, medical manikin with fake blood, the establishment of aboveground defensive fighting positions, force maneuvers, and the use of blanks, GBSs, and smoke grenades proximate to an aircraft servicing location. Training activities such as refueling would occur with existing A-10, HH-60, and HC-130 aircraft operations. During each training event, four to eight A-10s would be serviced in total; however, only two aircraft can be serviced at a time due to space limitations on the Hot Cargo Pad. The HC-130s are serviced once or twice each training event. Up to two HH-60s are serviced during each training event. Under Alternative 1, the MCA/ACE Training Area would be collocated with the existing Hot Cargo Pad, providing access to aircraft to train during refueling and ordnance-loading activities (see **Figures 2-1** and **Figure 2-7**).

Training would occur approximately twice per month, and each training event would last for five days and include overnight stays by personnel in the training area. Approximately 85 personnel would participate in large-scale events and 28 personnel would participate in small-scale events.

EOD Proficiency Range. The existing EOD Proficiency Range is on the Grand Bay Range and, due to the high demand of the Grand Bay Range for training, scheduling of range time at the EOD Proficiency Range has been difficult, making it challenging for EOD Flight to complete its weekly and monthly training requirements. Therefore, a new EOD Proficiency Range on the Main Base (**Figures 2-1** and **2-8**) that could accommodate explosive detonations with a net explosive weight (NEW) of less than 5 pounds would be established under Alternative 1 to increase training opportunities for EOD Flight and eliminate training scheduling conflicts with the Grand Bay Range. The new EOD Proficiency Range would include two explosive holding structures, a demolition pit, and a covered firing point area. The vegetation in the proposed new EOD Proficiency Range area would be cleared within the 100-foot buffer around the detonation point and along a corridor providing a clear line of sight and transportation corridor from the firing point to the demolition pit. The training area would be gated to ensure the safety of the population around the area. Four Conex containers would be placed behind the south fence line of the EOD compound and would simulate buildings in a small MOUT Training Area to practice EOD operations in buildings.

EOD training involving more than 5 pounds of NEW would continue to occur at the existing EOD Proficiency Range located on the Grand Bay Range. Under Alternative 1, EOD training with explosive detonations of 5 pounds or less of NEW would no longer occur on the Grand Bay Range and would instead occur at the proposed new EOD Proficiency Range on Main Base (**Figure 2-8**). Training with 5 pounds of NEW would occur up to twice monthly, and explosive tool use at less than a 5-pound shot would occur up to four times monthly at the proposed new EOD Proficiency Range. During each training event, there would be five personnel actively involved with the explosive tool use and 10 observers. An estimated 1,780 explosive devices previously used in training at the EOD Proficiency Range on Grand Bay Range would be used annually at the proposed new EOD Proficiency Range on the Main Base during training activities.

2.4.2 *Alternative 2: No Action Alternative*

Analysis of the No Action Alternative provides a benchmark, enabling decision makers to compare the magnitude of the environmental effects of the Proposed Action. NEPA requires an EA to analyze the No Action Alternative. For this EA, the no action means that an action would not take place, and the resulting environmental effects from taking no action would be compared with the effects of allowing the proposed activity to go forward. Therefore, no action for this EA reflects the status quo, where the current ground training activities as described in **Section 1.4** would continue. Under the No Action Alternative, Moody AFB would not establish any new ground training areas on the Main Base, and training activities in existing training areas would not be expanded.

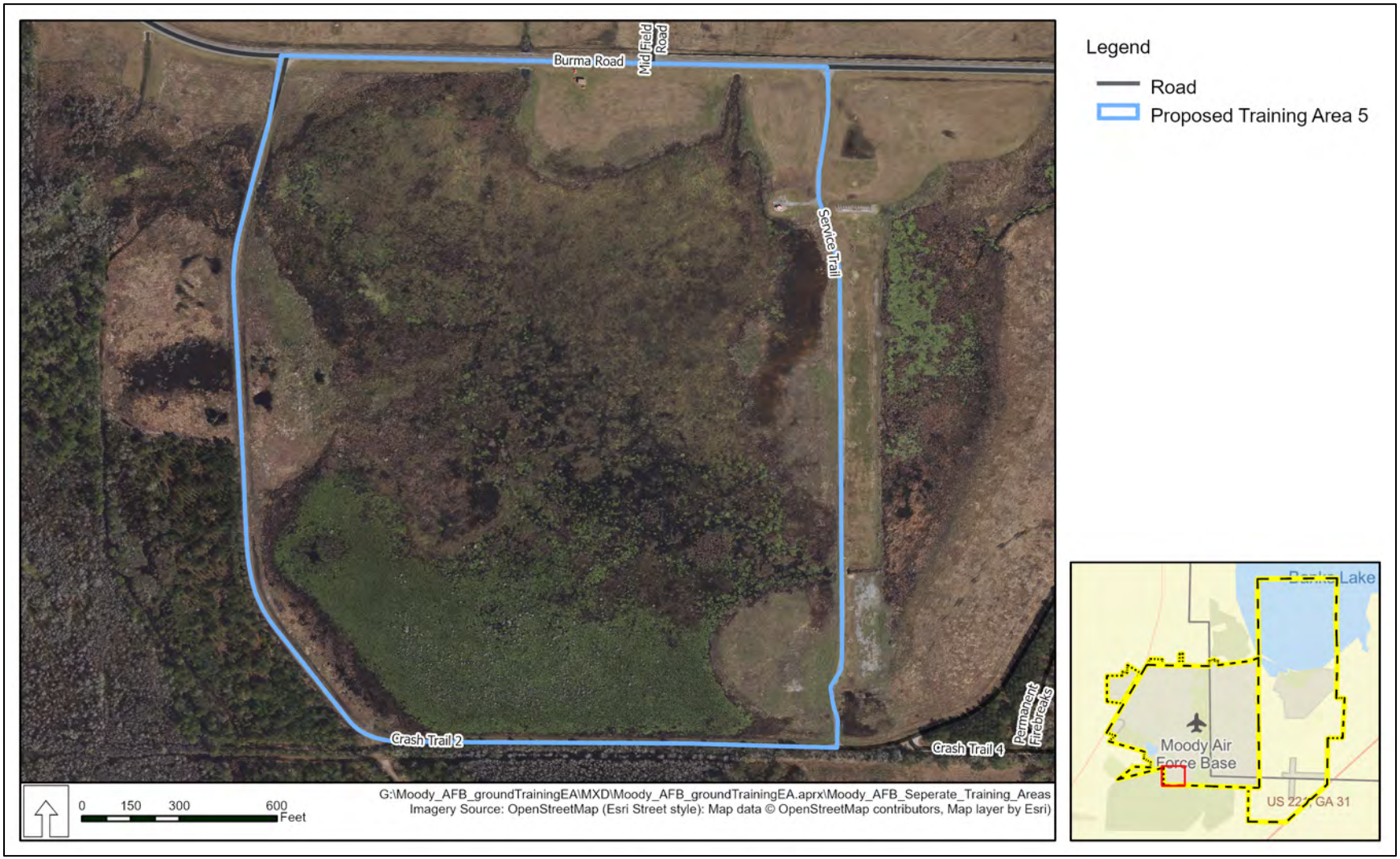


Figure 2-6. Proposed Training Area 5 Location

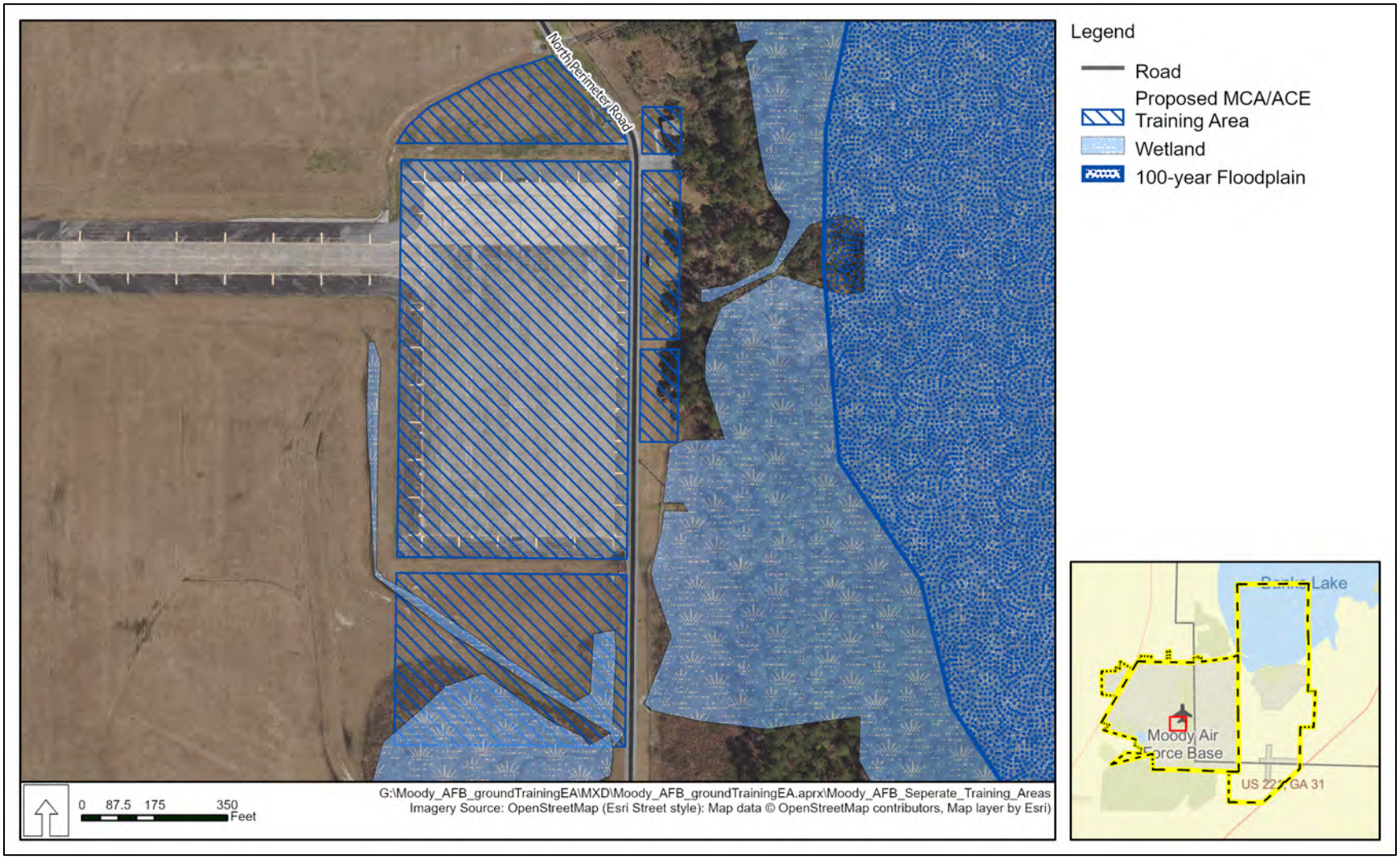


Figure 2-7. Proposed MCA/ACE Training Area Location

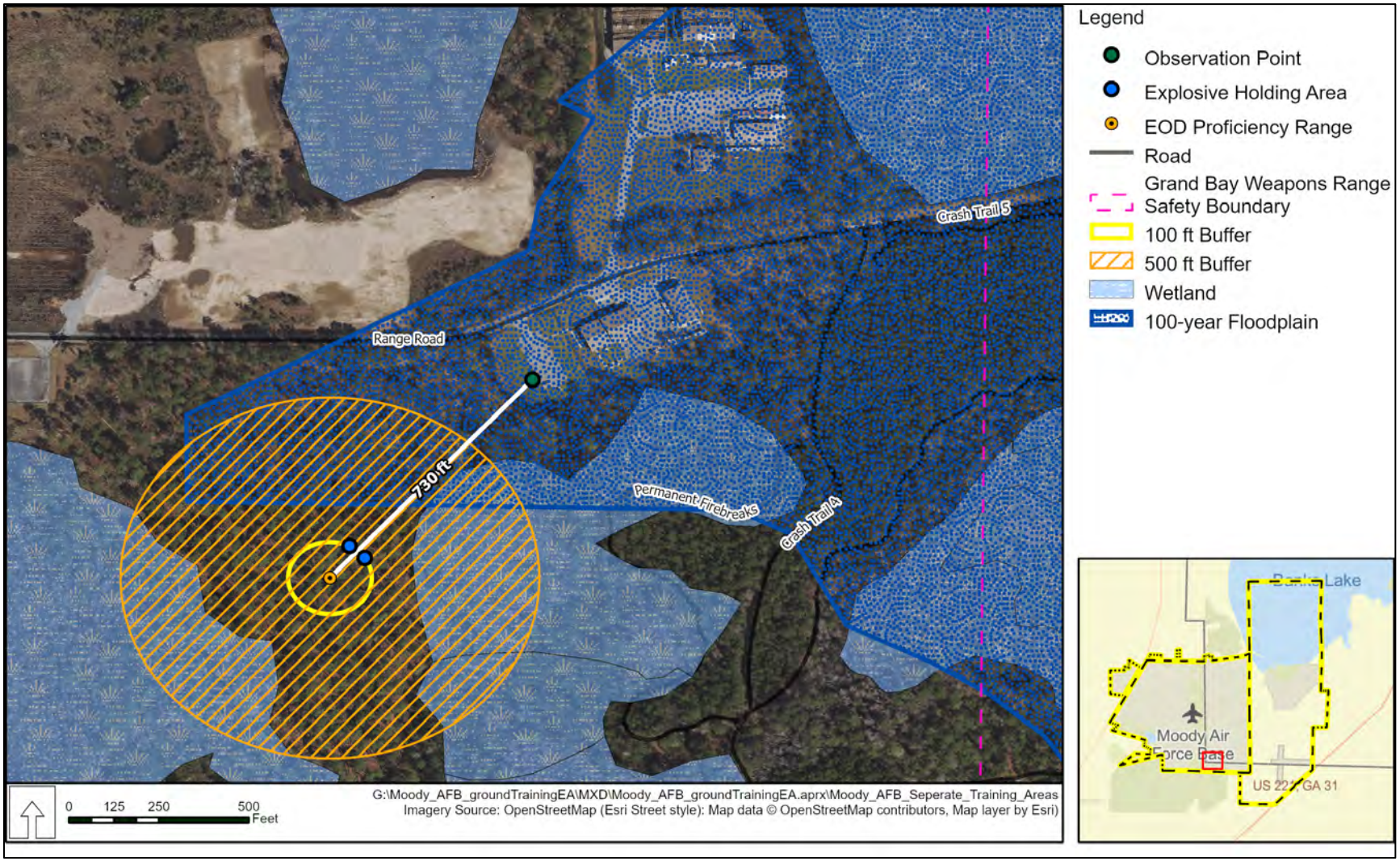


Figure 2-8. Proposed EOD Proficiency Range

2.5 Summary of Potential Environmental Consequences

The potential impacts associated with Alternative 1 and the No Action Alternative are summarized in **Table 2-6.** The information is based on Chapter 3 (Environmental Consequences) of this EA and includes a concise definition of the issues addressed and the potential environmental impacts associated with each alternative.

Table 2-6. Summary of Environmental Consequences

Resource	Alternative 1: Expanded Ground Training on Main Base	Alternative 2: No Action Alternative
Land Use	No adverse impacts on land use would occur from the continuation of current ground training activities. All training activities, including the maintenance and use of existing training areas, occur on Main Base and the primary purpose of Moody AFB is for military training and support activities.	There would be no impacts on land use from the continuation of existing ground training activities on Main Base.
Noise	There would be long-term minor adverse effects on noise. Effects would be from increases in small-arms noise from ground training activities on Main Base. However, increases in noise would not substantially increase the number of individuals within areas normally not recommended for noise-sensitive land uses; or generate individual acoustic events loud enough to damage hearing or structures.	There would be no impacts on noise from the continuation of existing ground training activities on Main Base.
Air Quality	There would be long-term minor adverse effects on air quality. Effects would be from increases in emissions from ground training activities throughout the installation (i.e., additional heavy vehicle use, personnel, and munitions use). Increases in emissions would not exceed the PSD major source threshold values, and Alternative 1 would not contribute to a violation of any federal, state, or local air regulation.	No impacts on air quality would occur from the continuation of existing ground training activities.
Earth Resources	There would be minor adverse impacts on earth resources from the implementation of Alternative 1. Impacts would primarily be related to the disturbance of soils during current and proposed off-road training activities using vehicles and equipment and from the creation of new training areas.	The continuation of existing ground training activities on Main Base would have a minor adverse impact on soils as off-road training involving vehicles and equipment would continue to disturb soils in established training areas.

Resource	Alternative 1: Expanded Ground Training on Main Base	Alternative 2: No Action Alternative
Water Resources	Under Alternative 1, there would be minor adverse impacts on water resources. Impacts on surface waters would occur from increased stormwater runoff from new training areas and increased sediment transport in stormwater from current and proposed training activities that occur off road, especially those activities off road that use vehicles and equipment. There would be minor adverse impacts on water resources from water training in Mission Lake from boat operations and the use of expendables, such as chem lights, during training. There would be no impacts from dredge or fill activities on jurisdictional waters of the US including wetlands under Alternative 1. Vegetation removal would occur in 0.3 acre of floodplain.	The continuation of existing ground training activities on Main Base would have a minor adverse impact on surface waters as off-road training involving vehicles and equipment would continue to disturb soils, which would be transported by stormwater into surface waters.
Biological Resources	The construction, maintenance, and use of proposed new training areas on Main Base would have minor adverse impacts on biological resources under Alternative 1. Direct impacts on vegetation and wildlife would occur from the conversion of forested habitat to military training areas. Long-term impacts on wildlife would occur from ground training activities in these newly established training areas that would disturb relatively common breeding and foraging wildlife species. The implementation, maintenance, and use of new FTX Site and TCCC Training Areas may affect but is not likely to adversely affect the gopher tortoise (*Gopherus polyphemus*), a federally listed candidate species.	There would be no impacts on biological resources from the continuation of existing ground training activities on Main Base. Established procedures for the protection of gopher tortoises within Training Area 2, Training Area 3, and the FTX Site would continue.
Cultural Resources	There would be no impacts on cultural resources under Alternative 1. No building demolition or modification would occur within the expanded training areas or within the cantonment. The proposed increase in personnel training, including the use of equipment and vehicles, would have no effect on the two NRHP eligible buildings.	No impacts on cultural resources would occur from the continuation of existing ground training activities.
Socioeconomics	There would be no impacts on socioeconomics from the continuation of current training activities at established training areas on Main Base. No change in employment or housing would occur.	No impacts on socioeconomics would occur from the continuation of existing ground training activities on Main Base.

Resource	Alternative 1: Expanded Ground Training on Main Base	Alternative 2: No Action Alternative
Environmental Justice	There would be no disproportionate impacts on minority populations, low-income communities, or children from the continuation and expansion of ground training activities and the establishment of new ground training areas at Moody AFB.	There would be no disproportionate impacts on minority populations, low-income communities, or children from the continuation of existing ground training activities on Main Base.
Infrastructure, Transportation, and Utilities	There would be no modification or change in use of Moody AFB's electric, natural gas, or communication distribution systems. The Moody AFB water and wastewater systems are adequate to support the increased demands by more personnel training operations. The Advanced Disposal E. S. Evergreen Municipal Solid Waste Landfill has adequate capacity to accept the additional solid waste generated from expanded ground training activities. Alternative 1 would have short- and long-term minor adverse effects on traffic and transportation. Only small, barely noticeable changes to traffic would be expected with the implementation of this alternative.	No impacts on infrastructure, transportation, or utilities would occur from the continuation of existing training activities on Main Base.
Hazardous Materials and Wastes, ERP, and Toxic Substances	Current and proposed training activities including the expansion of ground training into new training areas would continue to use very small amounts of hazardous materials. With compliance with DOD and Air Force requirements, minor adverse impacts from the increased use of hazardous materials and increased generation of hazardous waste are expected from the implementation of Alternative 1. No impacts on active ERP sites that overlap existing and proposed training areas are anticipated under Alternative 1.	There would be no increase in hazardous materials use or hazardous waste generation from the continuation of existing ground training activities at Main Base. There would be no impacts on active ERP sites under the No Action Alternative.
Health and Safety	Alternative 1 would have minor adverse impacts on health and safety as a result of increased training activities and the expansion of ground training into new training areas. However, training activities would adhere to established procedures and all personnel would follow DOD and OSHA standards, reducing the risk of potential injuries and accidents during ground training.	There would be no increased health and safety risks from the continuation of existing ground training activities at Main Base.

AFB – Air Force Base; **PSD** – Prevention of Significant Deterioration; **FTX** – Field Training Exercise; **TCCC** – tactical combat-causality care; **NRHP** – National Register of Historic Places; **ERP** – Environmental Restoration Program; **DOD** – Department of Defense; **OSHA** – Occupational Safety and Health Administration

FORMAT PAGE

3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

This chapter describes the environment potentially affected by the Proposed Action at Moody AFB. NEPA requires that the analysis address those areas and the components of the environment with the potential to be affected; locations and resources with no potential to be affected need not be analyzed. The existing conditions of each relevant environmental resource are described to give the public and agency decision makers a meaningful point from which to compare potential future environmental, social, and economic effects.

Sections 3.1 through **3.12** provide the baseline environment potentially affected by the Proposed Action at Moody AFB and the environmental consequences. The expected geographic scope of any potential consequences is identified as the ROI. For most resources in this chapter, the ROI is defined as the boundaries of Moody AFB Main Base. For some resources, such as socioeconomics and air quality, the ROI extends over a larger area.

The only resource area not carried forward for detailed analysis is airspace. There would be no substantial interactions between airspace and the current and proposed ground training at Moody AFB Main Base. No airspace modification would occur and no additional air operations from the Moody AFB airfield are proposed. All additional operations by SUAS would be coordinated with Air Traffic Control.

Reasonably foreseeable direct and indirect effects associated with other proposed projects at Moody AFB Main Base (**Appendix C**) are also analyzed for each resource. Proposed projects on Main Base include the conversion of Training Area 2 into a campus for the 820 BDG and the facility construction, infrastructure construction, facility and infrastructure renovation and repair, and facility demolition projects included in the Moody AFB IDP (Moody AFB 2015a) and analyzed in the EA for Installation Development at Moody AFB, Georgia (Moody AFB 2018a).

3.1 Land Use

For the definition of the resource, see **Appendix D-1**. The ROI for this land use is Moody AFB Main Base.

3.1.1 *Existing Conditions*

Moody AFB includes the Main Base Administrative Area (Main Base), the Grand Bay Range, and the Grassy Pond Recreational Annex. Except for the proposed training in the Grand Bay WMA, the existing and proposed training areas are all located in the Main Base Administrative Area. Land uses for each of the existing and proposed training areas are provided in **Table 3-1.** The Grand Bay WMA includes 2,623 acres of state-owned land and 5,874 acres of land owned by and under license from the Air Force. The Grand Bay WMA is used for recreational purposes and is undeveloped open space (Georgia DNR, Wildlife Resources Division 2021).

Table 3-1. Land Use Categories for Existing and Proposed Training Areas at Main Base

Land Use Category	Training Areas	Area (acres)
Administration	M-320 Range	0.29
	MOUT	4.84
	TCCC Training Area	0.03
	Training Area 2	7.51
	Training Area 3	11.56
	M-320 Range	0.29
Aircraft Operations and Maintenance	M-320 Range	3.30
	MCA/ACE Training Area	7.31
	SERE Training Area	2.50
	TCCC Training Area	15.31
	Training Area 2	47.41
	Training Area 3	78.04
	Training Area 4	29.50
	Training Area 5	71.32
Airfield	Hot Cargo Pad	0.10
	MCA/ACE Training Area	9.31
Community-Service	CATM Range	2.50
	M-320 Range	3.30
	MOUT	11.44
	MCA/ACE Training Area	0.83
	SERE Training Area	2.50
	TCCC Training Area	15.31
	Training Area 2	49.01
	Training Area 3	268.28
	Training Area 4	0.76
Industrial	CATM Range	2.50
	EOD Proficiency Range	2.50
	FTX Site	7.41
	M-320 Range	0.29
	MOUT	16.28
	MCA/ACE Training Area	1.57
	TCCC Training Area	0.03
	Training Area 2	9.25
	Training Area 3	83.01
	Training Area 4	122.29
Open Space	EOD Proficiency Range	2.50
	Obstacle Course	5.00
	Rapid Runway Repair Pad	0.10

Land Use Category	Training Areas	Area (acres)
	Training Area 1	19.68
	Training Area 3	123.58
	Training Area 4	134.45

MOUT – Military Operations in Urban Terrain; **TCCC** – Tactical Combat-Casualty Care; **MCA/ACE** – Multi-Capable Airmen/Agile Combat Employment; **SERE** –Survival, Evasion, Resistance and Escape; **CATM** – Combat Arms Training and Maintenance; **EOD** – Explosive Ordnance Disposal; **FTX** – Field Training Exercise

3.1.2 *Environmental Consequences*

Potential impacts on land use are based on the level of land use sensitivity in areas potentially affected by the Proposed Action as well as compatibility of those actions with existing conditions. In general, a land use impact would be adverse if it met one of the following criteria:

- Is inconsistent or noncompliant with existing land use plans or policies.
- Precludes the viability of existing land use.
- Precludes continued use or occupation of an area.
- Is incompatible with adjacent land use to the extent that public health or safety is threatened.
- Conflicts with planning criteria established to ensure the safety and protection of human life and property.

Under the Alternative 1, there would be no change in land ownership or the overall use of Main Base for military training and support activities.

Alternative 1. Expanded Ground Training on Main Base

There would be no adverse impacts on land use from the continuation of current ground training activities. All training activities, including the maintenance and use of existing training areas, occur on Main Base and the primary purpose of Moody AFB is for military training and support activities. Nearly all training activities would be confined to existing training areas that are designated specifically for military training, including the use of small arms. None of the existing training areas occur in a land use, such as outdoor recreation, which would be incompatible with military training activities.

There would be minor adverse impacts on land use from the proposed increased ground training activities and expansion of training areas. The proposed expansion of training activities in existing training areas would have no impacts on land use at Moody AFB. Increased training activities would occur entirely on Moody AFB, which provides support primarily for military training activities, and no land use designations would change. The proposed new training areas are located within land designated for various military support activities and the use of these areas for training activities would not change these land use designations. Training activities proposed in the Grand Bay WMA would not change the designated land use of the WMA. All training activities would be limited to the state-owned portion of Grand Bay WMA south of Main Base and in accordance with the lease agreement between the Air Force and the state of Georgia DNR. However, the use of the WMA for training activities would limit other uses by the public for short periods while training activities are occurring. Therefore, training activities in the state-owned portion of the Grand Bay WMA would have minor adverse impacts on land use at the Grand Bay WMA.

All reasonably foreseeable actions proposed at Moody AFB involve facility construction, renovation, demolition, and continued facility maintenance and upgrades. All reasonably foreseeable actions are related to military training activities and would occur within land uses designated for military activities. The proposed construction of the 820 BDG campus in Training Area 2 would eliminate current and proposed training activities in most of Training Area 2. However, the proposed 820 BDG campus is compatible with existing land uses in Training Area 2. Therefore, there are no reasonably foreseeable direct or indirect impacts on land use anticipated from Alternative 1.

3.1.2.2 Alternative 2. No Action Alternative

There would be no change in the existing training activities or designated training areas under the No Action Alternative. Therefore, there would be no impacts on land use under the No Action Alternative.

3.2 Noise

For the definition of the resource, an overview of noise metrics, and thresholds for noise-sensitive land uses, noise modeling, and noise modeling results, see **Appendix D-2**. The ROI for this resource is Moody AFB Main Base and areas off base where noise impacts could occur.

3.2.1 *Existing Conditions*

This section provides an overview of aircraft noise, small arms, and maneuver vehicle noise on Moody AFB Main Base.

Aircraft Noise. The noise associated with Moody AFB is dominated by aircraft operations, which include the A-29, A-10C, and HC-130 fixed-wing aircraft and HH-60 helicopters. Transient aircraft that use the airfield include aircraft such as C-17, KC-10, F-22, F-16, executive jets, helicopters, and various other military aircraft.

NOISEMAP version 7.3 was used to calculate the existing day-night average sound level (DNL) noise contours at Moody AFB and the Grand Bay Range. NOISEMAP accounts for all aircraft activities, including landings, take-offs, in-flight operations, maintenance activities, and engine run-ups. **Figure 3-1** shows the baseline DNL noise contours for Moody AFB and the Grand Bay Range plotted in 5 decibel (dB) increments, ranging from 65 to 85 A-weighted decibels (dBA) DNL. The noise contours depict operational conditions as outlined in the 2015 Air Installation Compatible Use Zone Study for Moody AFB (Moody AFB 2015b), and there have been no substantial changes in operations or mission at the base since they were developed. The existing 65 dBA DNL noise contour extends approximately 2 miles from both ends of the primary runways at Moody AFB, and 1 mile both north and south of the Grand Bay Range. There are no schools or churches within the 65 dBA DNL contour for either Moody AFB or the Grand Bay Range. There are approximately three residences within the 65 dBA DNL contour for Moody AFB, and none within the 65 dBA DNL contour for the range.

Small-Arms Noise on Moody AFB Main Base. The Small-Arms Range Noise Assessment Model (SARNAM2) was used to predict the noise conditions associated with the training activities. SARNAM2 accounts for spectrum and directivity of both muzzle blast and projectile bow shock, which facilitates accurate calculation of propagation and of sound attenuation by barriers. Training areas in which firing occurs from any location and in any direction (i.e., all

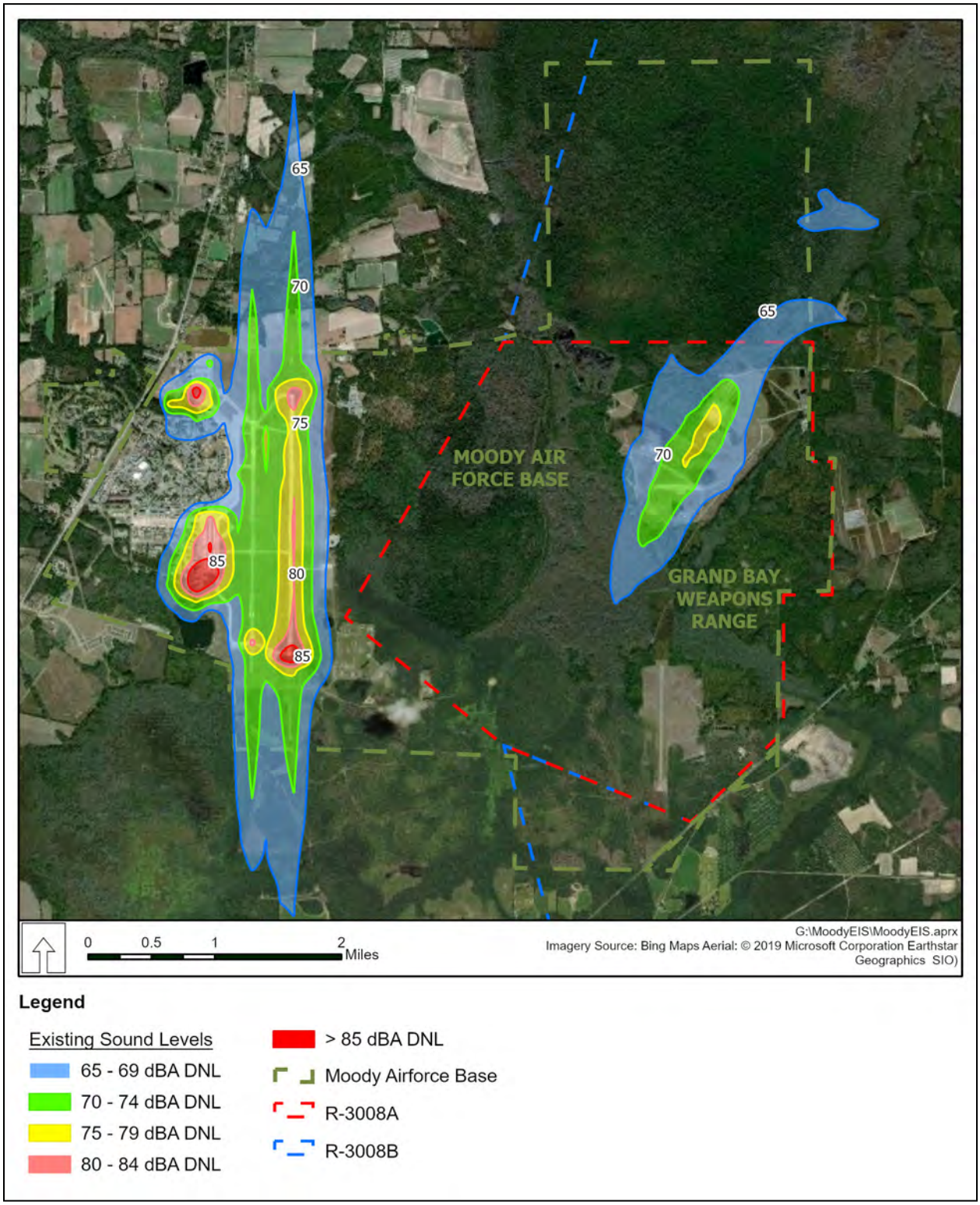
areas except the CATM) are not specifically addressed in written policies of either the Air Force or the Army. A commonly used approach to communicating noise generated in these areas is to calculate the distance at which the sound level of a round fired at the area boundary decreases to below threshold values. This method returns a maximum peak noise level buffer around each training area. The buffer reflects the loudest round type fired from the closest position possible (i.e., at the training area boundary), a confluence of factors that does not happen frequently. Therefore, the maximum peak level buffers do not imply the same frequency of occurrence of events that is implied by peak noise level contours surrounding a regularly used firing range with established firing points. The commonly used approach for this type of analysis assumes that rounds would not be fired outwards from the training area boundary.

Figure 3-2 shows the existing 87 and 104 dBP peak noise contours for ground training activities on Moody AFB Main Base. Noise-sensitive land uses (e.g., residences, hospitals, schools) are normally not recommended in areas exposed to greater than 87 dBP, and strongly discouraged in areas exposed to greater than 104 dBP (US Army 2007 and Hede 1982). The existing 87 dBP noise contour (buffer zone) extends approximately 3,400 feet beyond the northern installation boundary, encompassing approximately 400 acres including approximately 12 residences.

The existing 104 dBP noise contour extends approximately 1,600 feet beyond the northern installation boundary, encompassing approximately 130 acres and no residences. There are no schools, hospitals, or churches within the existing 87 dBP or the 104 dBP noise contours.

Training Vehicle Noise on Moody AFB Main Base. Military vehicle maneuvers occur along unpaved roads and various off-road areas within the ground training areas. Vehicle maneuvers occur during both daytime and nighttime hours, making vehicle noise an issue of concern for maneuver training close to the installation boundaries. Military vehicles, dominated by Humvees, light trucks, and medium trucks, produce noise levels comparable to construction equipment and heavy trucks, and are less noisy than other sources of military noise such as aircraft, small arms, and heavy artillery.

Maximum sound levels for tactical vehicles range from 85 to 92 dBA at a distance of 100 feet (Army National Guard 2000). Because vehicle speeds are low during most maneuver activities and vehicles tend to be relatively dispersed during off-road maneuvers, maneuver activities produce hourly average noise levels of less than 55 dBA at a distance of about 500 feet, with brief peaks of 65 to 70 dBA when an individual vehicle is driven nearby. These noise levels would be more intrusive during nighttime hours. There are very few (if any) residences or other noise-sensitive areas within 500 feet of the installation boundary near the maneuvers training areas. As such, noise from vehicles does not cause appreciable effects off base.



Source: Air Force 2016

Figure 3-1. Aircraft Noise Contours for Moody AFB and the Grand Bay Range

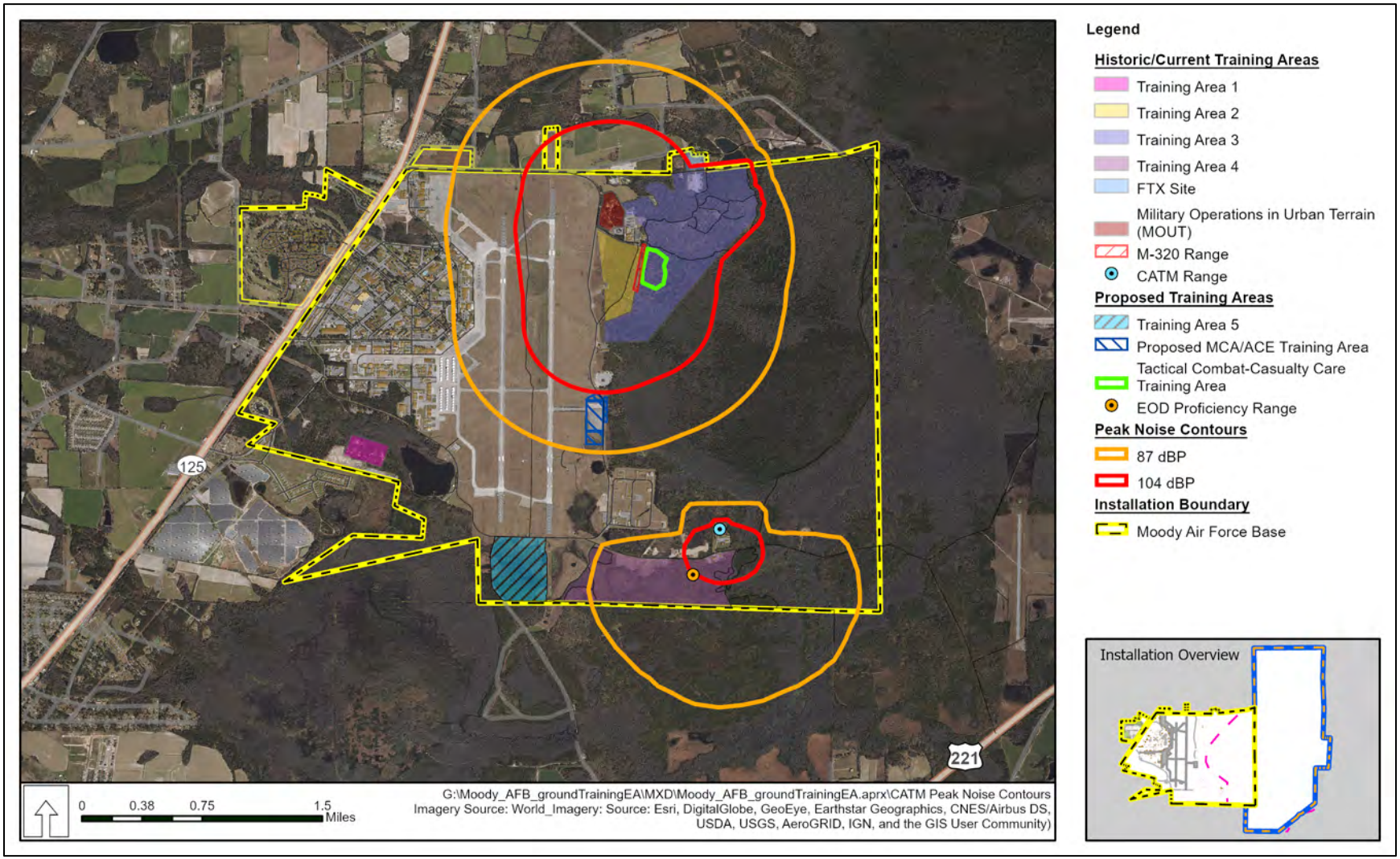


Figure 3-2. Existing Small-Arms Noise Contours for Moody Air Force Base Main Base

3.2.2 *Environmental Consequences*

This section provides an assessment of the environmental consequences of Alternatives 1 and 2 on the noise environment. Effects on noise would be considered significant if the proposed action would (1) substantially increase the number of individuals within areas normally not recommended for noise-sensitive land uses; or (2) generate individual acoustic events loud enough to damage hearing or structures.

Alternative 1. Expanded Ground Training on Main Base

There would be long-term minor adverse effects on noise. Effects would be from increases in small arms noise from ground training activities on the Main Base. Increases in noise would not (1) substantially increase the number of individuals within areas normally not recommended for noise-sensitive land uses; or (2) generate individual acoustic events loud enough to damage hearing or structures.

Aircraft Noise. Overall, aircraft operations at Moody AFB and the DNL noise contours shown in **Figure 3-1** would remain unchanged when compared to existing conditions. There would be no changes in fixed-wing training, or associated noise with the implementation of Alternative 1; therefore, noise from fixed-wing aircraft activities, the primary source of noise at Moody AFB, would be similar to existing conditions. Although the total number of helicopter and SUAS operations would increase at the MOUT Facility and Training Area 3, aircraft noise at these locations would continue to be relatively low and would continue to be only an incremental component accounted for in determining the effects on communities and individuals living adjacent to the base. The SUAS at Moody AFB would continue to be quieter and would be used less frequently than helicopters. Overall noise associated with the changes in operations of helicopters and SUAS would not be perceptibly different from existing conditions under Alternative 1.

The number of distinct acoustical events from individual overflights at the MOUT Facility and Training Area 3 would continue to be within the installation boundaries where there are few nearby noise receptors and collocated with frequent and louder aircraft and munitions training activities. Given the limited amount of noise that the changes in helicopter and SUAS operations would generate within the existing noise environment, which is dominated by louder aircraft and other training activities, these effects would be minor.

Small-Arms Noise on Moody AFB Main Base. Figure 3-3 shows the 87 and 104 dBP peak noise contours for ground training activities on Moody AFB Main Base with the implementation of Alternative 1. Noise-sensitive land uses such as residences, hospitals, and schools are normally not recommended in areas exposed to greater than 87 dBP, and strongly discouraged in areas exposed to greater than 104 dBP (US Army 2007 and Hede 1982).

With the implementation of Alternative 1, the 87 dBP noise contour (buffer zone) would extend approximately 3,400 feet beyond the northern installation boundary. The 87 dBP noise contour would encompass approximately 88 additional acres under Alternative 1, including one residence not currently exposed to the 87 dBP noise contour. The 104 dBP noise contour would extend approximately 1,600 feet beyond the northern installation boundary. The 104 dBP noise contour would encompass an additional 26 acres; however, no residences would be exposed to

the 104 dBP noise contour under Alternative 1. There would be no schools, hospitals, or churches within the 87 or 104 dBP noise contours.

The implementation of Alternative 1 would expose one additional residence to noise that is normally not recommended for this use. The implementation of Alternative 1 would expose approximately 852 additional acres of land to noise that is normally not recommended or highly discouraged for noise-sensitive uses such as residences, hospitals, and schools. Notably, 765 acres of this land are south of the installation adjacent to Training Area 4, primarily in the Grand Bay WMA. These effects would be minor.

Training Vehicle Noise on Moody AFB Main Base. There would be an increase in military vehicle maneuvers and associated noise with implementation of Alternative 1. These activities would continue to occur along unpaved roads and various off-road areas within the training areas on Moody AFB Main Base. Vehicle maneuvers would continue to occur during both daytime and nighttime hours, and with the increase in activities, vehicle noise would increase for maneuver training close to the installation's boundaries. The areas where this training would take place and the level of noise for individual vehicles would remain unchanged when compared to existing conditions. With a 50 percent increase in maneuver activities, the overall noise would increase by approximately 1 to 2 dBA in areas where these activities are conducted. Vehicle speeds would continue to be low during most maneuver activities, and vehicles would continue to be relatively dispersed during off-road maneuvers; therefore, these activities would be expected to continue to produce hourly average noise levels of less than 55 dBA at a distance of about 500 feet, with brief peaks of 65 to 70 dBA. These changes in noise would be less than 3 dBA and would be barely perceptible when compared to existing conditions (Federal Highways Administration 2011). Given that only a few residences or other noise-sensitive areas are present within 500 feet of the installation boundary near existing and proposed training areas, noise from additional maneuver activities would not cause appreciable effects off base because the vast majority of these areas are undeveloped or agricultural land.

Reasonably foreseeable projects proposed at Moody AFB are primarily limited to facility construction, maintenance, and demolition activities and the construction and use of the 820 BDG Campus. None of the reasonably foreseeable projects would substantially change the noise environment on or proximate to Moody AFB Main Base; therefore, there would be no reasonably foreseeable direct or indirect impacts from expanded training activities on Main Base.

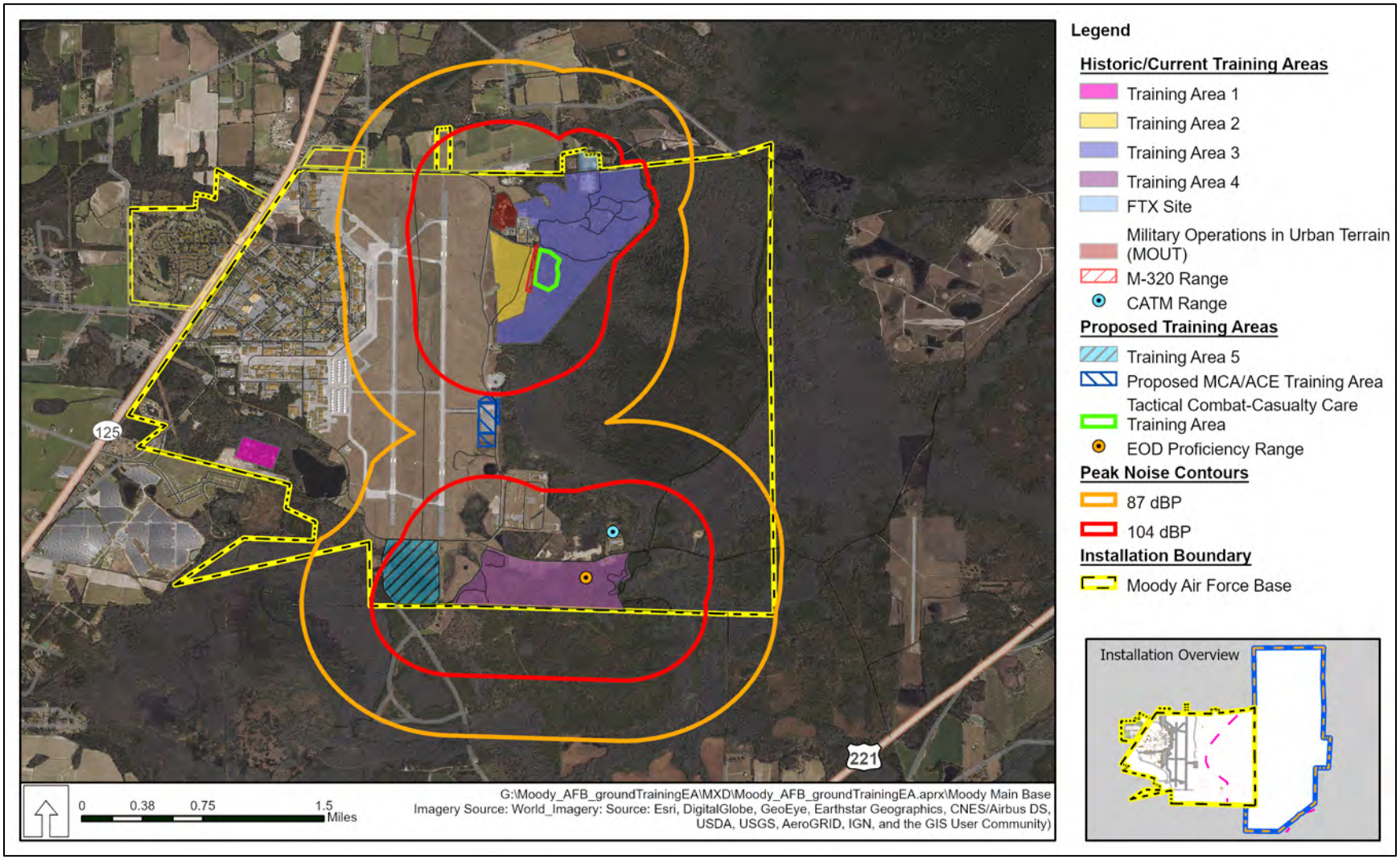


Figure 3-3. Proposed Small-Arms Noise Contours for Moody Air Force Base Main Base

3.2.3 *Alternative 2. No Action Alternative*

Selecting the No Action Alternative would result in no adverse effects on the noise environment. There would be no short- or long-term changes in ground training activities due to the action. The noise environment would remain unchanged when compared to existing conditions and peak noise levels from small arms use at Training Area 3, the FTX sites, and the CATM Range would continue to extend beyond the northern base boundaries.

3.3 Air Quality

This section discusses the existing conditions and the environmental consequences of Alternatives 1 and 2 on air quality. For the definition of the resource, an overview of criteria pollutants, an overview of greenhouse gases, and air emissions calculations, see **Appendix D-3**. The ROI for air quality is Lanier and Lowndes counties.

3.3.1 *Existing Conditions*

This section provides an overview of the attainment status for the region, existing emissions from ground-based training and climate.

National Ambient Air Quality Standards (NAAQS). Federal regulations designate Air Quality Control Regions (AQCRs) in violation of the NAAQS as *nonattainment* areas. Federal regulations designate AQCRs with levels below the NAAQS as *attainment* areas. Both Lowndes and Lanier counties (and therefore all areas associated with the action) are within the Mansfield-Marion Intrastate AQCR (AQCR 175) (40 CFR § 81). The US Environmental Protection Agency (USEPA) has designated both Lowndes and Lanier counties, and therefore all areas associated with the Proposed Action, as in attainment for all criteria pollutants (USEPA 2021). Because the Proposed Action Is entirely within an area that is designated as being in attainment for all criteria pollutants, the general conformity rules do not apply.

Existing Emissions. The Air Force's Air Conformity Applicability Model (ACAM) and USEPA AP-42, *Compilation of Air Emissions Factors,* Chapter 15: Ordnance Detonation were used to estimate the existing emissions from ground training activities at training areas identified in Chapter 2 (**Table 3-2**). Detailed emissions calculations are provided in **Appendix E-1.**

Table 3-2. Emissions from Ground Training Activities - Existing

Existing	NO_x	CO	SO_2	Pb	VOC	PM_{10}	$PM_{2.5}$	CO_2e
Munitions	0.0	0.2	0.0	0.0	0.0	0.3	0.1	0
Heavy Vehicles	5.2	12.8	0.0	0.0	1.7	0.2	0.2	2,628
Aircraft	3.5	1.0	0.4	0.0	0.1	0.0	0.0	0
Total	**8.7**	**13.9**	**0.4**	**0.0**	**1.8**	**0.5**	**0.3**	**2,628**

Sources: USEPA 2008, Air Force 2020a, and Air Force 2020b
NO_x – nitrogen oxides; **CO** – carbon monoxide; **SO_2** – sulfur dioxide; **Pb** – lead; **VOC** – volatile organic compound**;** **PM_{10}** – particulates ≤10 micrometers; **$PM_{2.5}$** – particulates ≤2.5 micrometers; **CO_{2e}** – carbon dioxide equivalent

Climate. Valdosta, Georgia, located less than 15 miles southwest of Moody AFB, has a regional climate that is classified as a humid subtropical climate which is characterized by cool to mild winters and hot, humid summers. The warmest months are July and August, with average high

and low temperatures of 91 degrees Fahrenheit and 71 degrees Fahrenheit, respectively. January is the coldest month with an average high temperature of 62 degrees Fahrenheit and average low temperature of 39 degrees Fahrenheit. The wettest month by average precipitation is June with an average of 8.0 inches of rain. The driest month is January, with an average of 2.7 inches of precipitation. Valdosta has an annual average of 0.1 inch of snow, and accumulating snow is uncommon (Weatherbase 2021).

3.3.2 *Environmental Consequences*

This section provides an assessment of the environmental consequences of Alternatives 1 and 2 on air quality. Effects on air quality would be considered significant if (1) the total emissions would exceed the Prevention of Significant Deterioration (PSD) major source thresholds, or (2) would contribute to a violation of any federal, state, or local air regulation.

Alternative 1. Expanded Ground Training on Main Base

Long-term, minor adverse effects on air quality would result from increases in emissions from ground training activities throughout the installation (i.e., additional heavy vehicle use, personnel, and munitions use). Increases in emissions would not exceed the PSD major source threshold values, and Alternative 1 would not contribute to a violation of any federal, state, or local air regulation.

The Air Force's ACAM and USEPA AP-42, *Compilation of Air Emissions Factors,* Chapter 15: Ordnance Detonation were used to estimate both the overall and the net increase in emissions from ground training activities at training areas identified in Chapter 2 (**Table 3-3**). Both the overall and the net increase in emissions from the proposed training activities would be below the PSD Major source thresholds; therefore, the level of effects would be less than significant. Detailed emissions calculations are provided in **Appendix E.**

Table 3-3. Emissions from Ground Training Activities – Proposed

Existing	NO_x	CO	SO_2	Pb	VOC	PM_{10}	$PM_{2.5}$	CO_2e
Munitions	0.0	0.2	0.0	0.0	0.0	0.3	0.1	0
Heavy Vehicles	5.2	12.8	0.0	0.0	1.7	0.2	0.2	2,628
Aircraft	3.5	1.0	0.4	0.0	0.1	0.0	0.0	0
Total	**8.7**	**13.9**	**0.4**	**0.0**	**1.8**	**0.5**	**0.3**	**2,628**
Proposed	**NO_x**	**CO**	**SO_2**	**Pb**	**VOC**	**PM_{10}**	**$PM_{2.5}$**	**CO_2e**
Munitions	0.0	0.3	0.0	0.0	0.0	0.5	0.2	0
Heavy Vehicles	9.9	24.6	0.0	0.0	3.2	0.3	0.3	5,019
Aircraft	5.3	1.5	0.6	0.0	0.2	0.1	0.1	0
Total	**15.3**	**26.4**	**0.7**	**0.0**	**3.4**	**0.8**	**0.5**	**5,020**
Net Increase	**NO_x**	**CO**	**SO_2**	**Pb**	**VOC**	**PM_{10}**	**$PM_{2.5}$**	**CO_2e**
Munitions	0.0	0.1	0.0	0.0	0.0	0.2	0.1	0
Heavy Vehicles	4.7	11.8	0.0	0.0	1.5	0.2	0.1	2,389
Aircraft	1.8	0.5	0.2	0.0	0.1	0.0	0.0	0
Total	**6.5**	**12.4**	**0.2**	**0.0**	**1.6**	**0.4**	**0.2**	**2,389**

Sources: USEPA 2008, Air Force 2020a, and Air Force 2020b
NO_x – nitrogen oxides; **CO** – carbon monoxide; **SO_2** – sulfur dioxide; **Pb** – lead; **VOC** – volatile organic compound**;** **PM_{10}** – particulates ≤10 micrometers; **$PM_{2.5}$** – particulates ≤2.5 micrometers; **CO_2e** – carbon dioxide equivalent

The Clean Air Act Section 176(c), *General Conformity*, requires federal agencies to demonstrate that their proposed activities would conform to the applicable State Implementation Plans for attainment of the NAAQS. General conformity applies to federal actions within nonattainment areas (40 CFR 93.153). All components of Alternative 1 are entirely within an area that is designated attainment for all criteria pollutants; therefore, the general conformity rules do not apply.

Alternative 1 does not include any new stationary sources of air emissions for addition to the installations air operating permit. There are no air regulations that specifically apply to the activities outlined under Alternative 1, and Alternative 1 would not contribute to a violation of any federal, state, or local air regulation.

Greenhouse Gases and Climate Change. This EA examines greenhouse gases (GHGs) as a category of air emissions. It also looks at future climate scenarios to determine whether the affected environment or the proposed training activities would be affected by climate change. This EA does not attempt to measure the actual incremental effects of GHG emissions from Alternative 1. There is a lack of consensus on how to measure such effects. Existing climate models have substantial variation in output and do not have the ability to measure the actual incremental effects of a project on the environment. There are also no established criteria identifying monetized values that are considered significant for NEPA purposes. **Table 3-4** compares the estimated GHG emissions from Alternative 1 to the global, nationwide, and statewide GHG emissions. The estimated increase would be minute.

Table 3-4. Global, Countrywide, and Statewide GHG Emissions

Scale	$C0_2e$ Emissions (MMT/year)	Change from Alternative 1
Global	43,125	0.00001%
United States	5,249	0.00009%
Georgia	137.1	0.003%
Alternative 1	0.005	-

Sources: Air Force 2020a and USEPA 2016
CO_{2e} – carbon dioxide equivalent; **MMT** – million metric tons

Table 3-5 outlines potential climate stressors and their effects on the proposed training activities. Training activities outlined under Alternative 1 in and of themselves are only indirectly dependent on any of the elements associated with future climate scenarios (e.g., meteorological changes). At this time, no future climate scenario or potential climate stressor would have appreciable effects on any element of the proposed training.

Table 3-5. Effects of Potential Climate Stressors

Potential Climate Stressor	Effects on the Proposed Action
More frequent and intense heat waves	Negligible
Longer fire seasons and more severe wildfires	Negligible
Changes in precipitation patterns	Negligible
Increased drought	Negligible
Harm to water resources, agriculture, wildlife, ecosystems	Negligible

Source: Intergovernmental Panel on Climate Change 2018

Reasonably foreseeable projects proposed at Moody AFB would include facility construction, maintenance, and demolition activities and the construction and use of the 820 BDG Campus. However, Moody AFB is in attainment for all NAAQS. The Net Change Analysis performed using ACAM for criteria pollutants (or their precursors) and GHGs indicated the emissions associated with the Proposed Action are too insignificant to pose a potential impact on air quality; therefore, there are no reasonably foreseeable direct or indirect impacts on air quality under Alternative 1.

Alternative 2. No Action Alternative

Selecting the No Action Alternative would result in no effects on air quality. There would be no short- or long-term emissions changes due to the action. Ambient air quality would remain unchanged when compared to existing conditions.

3.4 Earth Resources

For the definition of the resource, see **Appendix D-4**. The ROI for this resource is Moody AFB Main Base and areas off base where training activities could occur.

3.4.1 *Existing Conditions*

Physiography and Topography. Moody AFB and the Grand Bay WMA are in the Tifton Upland District of the Lower Coastal Plain physiographic province. The area is situated within the Coastal Terraces Region of the Atlantic Coastal Plain. Moody AFB is located on a level plateau between the Withlacoochee River and the Alapaha River. The elevation of the center of Main Base is approximately 240 feet above mean sea level (Moody AFB 2018b).

Geology. Moody AFB and the Grand Bay WMA are located within the Georgia Lower Coastal Plain. The predominant landform in this area consists of moderately dissected, irregular plains of marine origin formed by the deposition of continental sediments onto the submerged, shallow continental shelf, which was later exposed when the sea receded from this area (Moody AFB 2018b). Rock units formed during the Mesozoic and Cenozoic eras consist of Cretaceous marine sediments (sands and clays) and Tertiary marine deposits (siliceous strata with lignitic, sandy, and argillaceous deposits. 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. There is a moderate density of small to medium perennial streams and associated rivers; this dendritic drainage pattern has developed on this moderately dissected plain, largely

without bedrock structural control because of the preponderance of undifferentiated sediments (Moody AFB 2018b).

Moody AFB and the Grand Bay WMA are underlain by sedimentary rocks of pre-Cretaceous through Quaternary age that consist of limestone, dolostone, clay, and sand that extend to a thickness of at least 5,000 feet. From oldest to youngest, the geological units in the site area are the Suwannee limestone of Oligocene age, the Hawthorne Group of Miocene age, the Miccosukee Formation of Pliocene age, and the undifferentiated sediments of Quaternary age. Unconsolidated and consolidated sediments are present at the surface in the Moody AFB region (IT Corporation 2000; Moody AFB 2001, 2018b).

Soils

Soil units on the Moody AFB Main Base are shown on **Figure 3-4.** A total of 17 soil units underlies the existing and proposed training areas on Main Base (**Table 3-5**). No training activities are proposed at the Grand Bay WMA that would disturb soils or remove them from productivity.

Leefield loamy sand, 0 to 2 percent slopes; Mascotte sand, Olustee sand; Stilson loamy sand, 0 to 2 percent slopes; and Stilson loamy sand, 0 to 4 percent slopes are farmland of statewide importance map units. Tifton loamy sand, 0 to 2 percent slopes and Tifton loamy sand, 2 to 5 percent slopes are prime farmland map units (Natural Resources Conservation Service 2021).

3.4.2 *Environmental Consequences*

Protection of unique geological features, minimization of soil erosion, and the siting of facilities in relation to potential geologic hazards are considered when evaluating potential impacts of the Proposed Action on geological resources. Generally, impacts can be avoided or minimized if proper construction techniques, erosion control measures, and structural engineering design are incorporated into project development.

Effects on geology and soils would be adverse if they would alter the lithology, stratigraphy, or geological structure that control groundwater quality, distribution of aquifers and confining beds, and groundwater availability or change the soil composition, structure, or function within the environment.

Adverse impacts would result if the following occur:

- Regional geology is affected.
- Soils classified as prime and unique farmland are affected.
- Affected soils are considered unsuitable for development.
- Road and parking lot construction are incompatible with the seismic risk status of the project area.

Alternative 1. Expanded Ground Training on Main Base

Minor, adverse impacts on earth resources would result from the implementation of Alternative 1. Impacts would primarily be related to the disturbance of soils during current and proposed off-road training activities using vehicles and equipment and from the creation of new training areas.

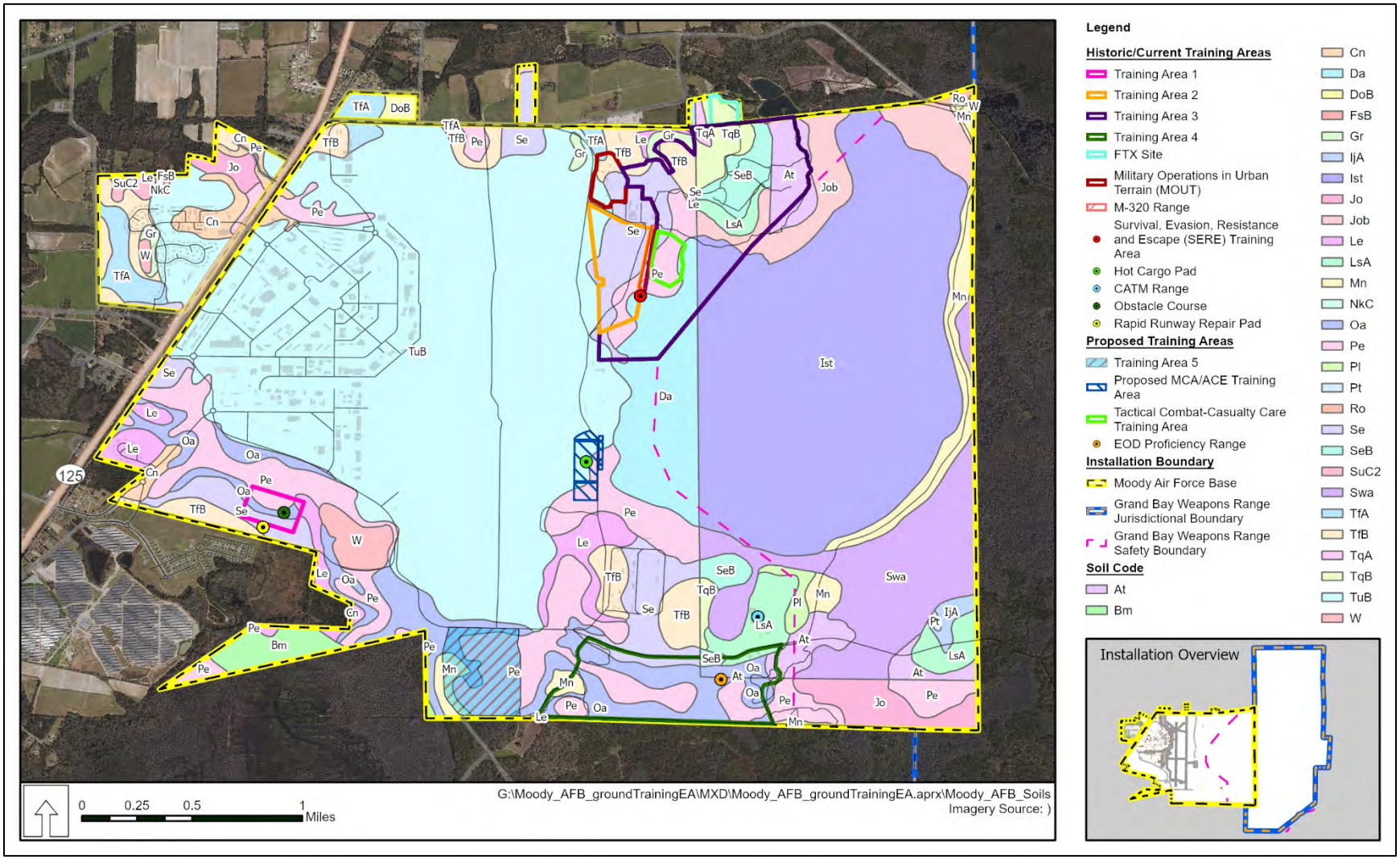


Figure 3-4. Soil Units on Moody Air Force Base Main Base

1 **Table 3-5. Soil Units at the Training Areas on Moody Air Force Base Main Base**

Soil Unit	Soil Unit Code	Training Area	Area (acres)
Alapaha loamy sand	At	Training Area 3	33.93
		Training Area 4	0.34
		Training Area 4	3.16
Dasher muck	Da	SERE Training Area	5.00
		TCCC Training Area	1.33
		Training Area 2	3.02
		Training Area 2	0.01
		Training Area 3	46.25
		Training Area 3	0.01
		Training Area 3	1.33
Grady sandy loam, 0 to 2 percent slopes, frequently ponded	Gr	Training Area 3	0.82
Istokpoga complex	Ist	Training Area 3	21.93
Johnston-Osier-Bibb association	Job	Training Area 3	17.39
Leefield loamy sand, 0 to 2 percent slopes	Le	Training Area 1	0.80
		Training Area 3	0.59
		Training Area 4	0.05
Leefield loamy sand, 0 to 3 percent slopes	LsA	CATM Range	5.00
		Training Area 3	14.72
		Training Area 4	4.94
Mascotte sand	Mn	Training Area 4	0.00
		Training Area 4	4.84
		Training Area 5	9.99
Olustee sand	Oa	EOD Proficiency Range	5.00
		Obstacle Course	5.00
		Training Area 1	5.29
		Training Area 4	10.49
		Training Area 4	69.61
		Training Area 4	6.99
		Training Area 5	13.26
Pelham loamy sand, 0 to 2 percent slopes, frequently flooded	Pe	M-320 Range	1.68
		MCA/ACE Training Area	7.15
		TCCC Training Area	12.48
		Training Area 1	6.88
		Training Area 2	8.52
		Training Area 2	0.00
		Training Area 3	24.13

Soil Unit	Soil Unit Code	Training Area	Area (acres)
		Training Area 3	0.00
		Training Area 3	12.48
		Training Area 4	13.59
		Training Area 4	26.89
		Training Area 4	6.46
		Training Area 5	49.63
Stilson loamy sand, 0 to 2 percent slopes	Se	M-320 Range	1.92
		MOUT	6.34
		Rapid Runway Repair Pad	0.10
		TCCC Training Area	1.53
		Training Area 1	6.72
		Training Area 2	38.32
		Training Area 3	22.53
		Training Area 3	0.85
		Training Area 3	1.53
		Training Area 4	11.14
Stilson loamy sand, 0 to 4 percent slopes	SeB	FTX Site	0.76
		Training Area 3	38.03
		Training Area 4	2.26
Tifton loamy sand, 0 to 2 percent slopes	TfA	MOUT	0.60
		Training Area 3	0.14
Tifton loamy sand, 2 to 5 percent slopes	TfB	MOUT	4.86
		Training Area 3	3.17
		Training Area 3	14.49
Tifton loamy sand, 0 to 2 percent slopes	TqA	Training Area 3	2.64
Tifton loamy sand, 2 to 5 percent slopes	TqB	FTX Site	6.66
		Training Area 3	26.18
Tifton-Urban land complex, 0 to 5 percent slopes	TuB	Hot Cargo Pad	0.10
		MOUT	4.47
		Proposed MCA/ACE Training Area	10.50
		Training Area 2	6.79
		Training Area 3	2.01

Source: Natural Resources Conservation Service 2021
SERE - Survival, Evasion, Resistance and Escape; **TCCC** – tactical combat-casualty care; **CATM** – Combat Arms Training and Maintenance; **EOD** – Explosive Ordnance Disposal; **MCA/ACE** - Multi-Capable Airmen/Agile Combat Employment; **MOUT** – Military Operations in Urban Terrain; **FTX** – Field Training Exercise

Current training and training area maintenance activities would have no adverse impacts on the local or regional geology at Moody AFB. No construction or subsurface activities are proposed,

and no training activities would be affected by geologic processes such as seismicity. Current training activities would have a long-term minor adverse impact on soils as continued vehicle and equipment movement on unimproved roads and in specified unimproved portions of training areas would cause continued soil disturbance and minor soil erosion.

Increasing training activities in existing training areas would not impact the local or regional geology but would have long-term minor adverse impacts on soils. The increased training activities would not expand the area where soils could be disturbed by vehicle and equipment movement. However, increased vehicle and equipment movement associated with more frequent training events could cause additional soil disturbance and erosion.

The creation, maintenance, and use of new training areas on Main Base would have short-term and long-term minor adverse impacts on soils. However, no impacts on soils would occur from troop movement in new training areas or in the Grand Bay WMA, as these activities would not disturb soils. No impacts on local or regional geology would occur from establishment and use of new training areas.

Impacts on soils from the construction of the new FTX Site were described in the 2018 EA for Installation Development at Moody Air Force Base, Georgia (Moody AFB 2018a) and are incorporated herein by reference. Approximately 4.3 acres of soil disturbance would occur with the creation of the new FTX Site. The FTX Site would be located on Tifton loamy sand, 2 to 5 percent slopes, which is a prime farmland soil; however, the area is not currently used for agriculture, and there are no plans to utilize the land for agricultural activities in the future.

The construction of the EOD Proficiency Range would disturb approximately 5 acres of mostly forested lands, which would directly impact soils during the range development. Minor long-term adverse impacts on soils would occur from off-road vehicle and equipment movement in the EOD Proficiency Range, as these activities would periodically disturb soils. The EOD Proficiency Range would disturb Olustee sand, which is a farmland of statewide importance soil type. However, the area proposed for the EOD Proficiency Range is not currently used for agricultural purposes, and there are no future plans for the land to be utilized for agriculture.

Approximately 5.6 acres of potential ground disturbance would occur with the construction of the TCCC Training Area. The removal of woody vegetation and clearing of land for the TCCC Training Area would implement best management practices (BMPs) associated with a Stormwater Pollution Prevention Plan (SWPPP), ensuring that there would be no adverse impacts on soils from construction activities. The movement of vehicles and equipment in the TCCC Training Area could periodically disturb soils and lead to small amounts of soil erosion.

Training activities at Training Area 5 and C-IED training in Training Area 3 would be limited to existing unimproved roads, and no new off-road travel with vehicles or equipment would be permitted. Therefore, there would be no new ground disturbance and long-term minor adverse impacts on soils from increased soil disturbance along the existing unimproved roads from increased use. Further, the designation and use of the MCA/ACE Training Area would cause minor soil disturbance in approximately 8 acres of these training activities from increased off-road travel by vehicles and equipment.

The removal of woody vegetation and clearing of land for the establishment of new training areas would implement BMPs associated with each project's SWPPP and General Construction Permits. The implementation of BMPs during training area construction would minimize impacts on soils during and immediately following construction activities.

The construction and demolition of facilities and infrastructure and development of the 820 BDG campus would temporarily disturb soils during construction activities and would cause the permanent loss of some soil productivity when covered with new development. The area proposed to be used for new construction would be small and within areas of Moody AFB currently used for military training activities. Therefore, the implementation of these future projects would have reasonably foreseeable minor direct adverse impacts on soils. No reasonably foreseeable direct or indirect impacts on geology would occur.

Alternative 2. No Action Alternative

Under the No Action Alternative, there would be no increase in ground training in existing training areas at Moody AFB, and no new training areas on Main Base would be established. Therefore, there would be no impacts on geology or soils from vegetation removal and training area establishment, maintenance, and use.

3.5 Water Resources

For the definition of the resource, see **Appendix D-5.** The ROI for this resource is Moody AFB Main Base and areas off base where training activities could occur.

3.5.1 *Existing Conditions*

Surface Waters

Moody AFB and the Grand Bay WMA are within the Suwannee River Basin, which discharges to the northeastern Gulf of Mexico (Moody AFB 2018b). Major drainages in this basin that affect Moody AFB include the Withlacoochee River to the west and the Alapaha River to the east. A major feature of this basin is the 13,000-acre Grand Bay Banks Lake wetland complex, which is partially within the installation's boundary. The 1,255-acre Banks Lake is the only major body of water within this wetland complex. A smaller open water area in this wetland complex is the 65-acre Shiner Pond, which is along the central-northern boundary of Moody AFB. The wetland system is recharged primarily by precipitation falling within the catchment basin, although the bays may receive a portion of their recharge water from adjacent shallow groundwater sources. Recharge by precipitation occurs mainly from December through March, when rainfall is typically heavy, and evapotranspiration is low. Water flow through the Grand Bay Banks Lake wetland complex is generally southeastern and southward although the northern portions drain to the northeast (Moody AFB 2018b).

Stormwater from the Main Base area is discharged by a series of drainage ditches. Stormwater from the northwest portion of the airfield forms the headwaters of Beatty Creek, eventually draining through Cat Creek to the Withlacoochee River. Overall, there are approximately 5,500 acres of wetlands within the boundary of Moody AFB, with the majority of these within the Grand Bay Banks Lake wetland complex (Moody AFB 2018b). In 2007, a wetland delineation was completed on the Main Base that identified approximately 1,819 acres of wetlands (Moody AFB

2007). Moody AFB conducted another wetland delineation to identify wetlands associated with the Moody AFB IDP's proposed project sites. The US Army Corps of Engineers concurred on the wetland delineation on 7 June 2017 (Moody AFB 2018b). Wetlands are present in existing and proposed training areas including Training Area 1, Training Area 3, Training Area 4, Training Area 5, and EOD Proficiency Range (**Figure 3-5**). There are 5,438 acres of wetland habitat on the Grand Bay WMA (Georgia DNR, Wildlife Resources Division 2021), most of which are likely jurisdictional wetlands.

Mission Lake is an approximately 27-acre man-made lake located on Main Base that is primarily used for recreational activities, such as boating and fishing. Mission Lake is a component of the stormwater system at Moody AFB and in part, receives water from a network of drop inlets, underground storm sewers, and aboveground ditches and swales. Drainage from Mission Lake flows to the Grand Bay Watershed (Moody AFB 2018b).

Groundwater. Groundwater near Moody AFB occurs within two major water-bearing zones, the surficial aquifer system and the Floridan aquifer system. The surficial aquifer is generally 10 to 20 feet below the ground surface. Water quality is generally good, and yields are usually less than 50 gallons per minute. The Floridan aquifer is the primary water-bearing system in the area. The Floridan aquifer provides a generally good quality and quantity of water for almost all local commercial, industrial, domestic, irrigation, and municipal use. The aquifer is typically encountered at a depth of 150 feet and is usually under artesian conditions (Moody AFB 2018b).

Floodplains. There is one area designated as a 100-year floodplain at Moody AFB Main Base. The 100-year floodplain on Main Base is located east of the airfield and extends into the Grand Bay Range and Grand Bay WMA (**Figure 3-6**). Portions of Training Area 3, Training Area 4, and the proposed EOD Proficiency Range are in the 100-year floodplain.

3.5.2 *Environmental Consequences*

Evaluation criteria for potential impacts on water resources are based on water availability, quality, and use; existence of floodplains; and associated regulations. Adverse impacts on water resources would occur if the Proposed Action were to do any of the following:

- Reduce water availability or supply to existing users.
- Cause overdrafts of groundwater basins.
- Exceed safe annual yield of water supply sources.
- Affect water quality adversely.
- Endanger public health by creating or worsening health hazard conditions.
- Violate established laws or regulations adopted to protect water resources.

Potential impacts related to flood hazards can be significant if such actions are proposed in areas with high probabilities of flooding; however, all impacts can be mitigated through the use of design features to minimize the effects of flooding.

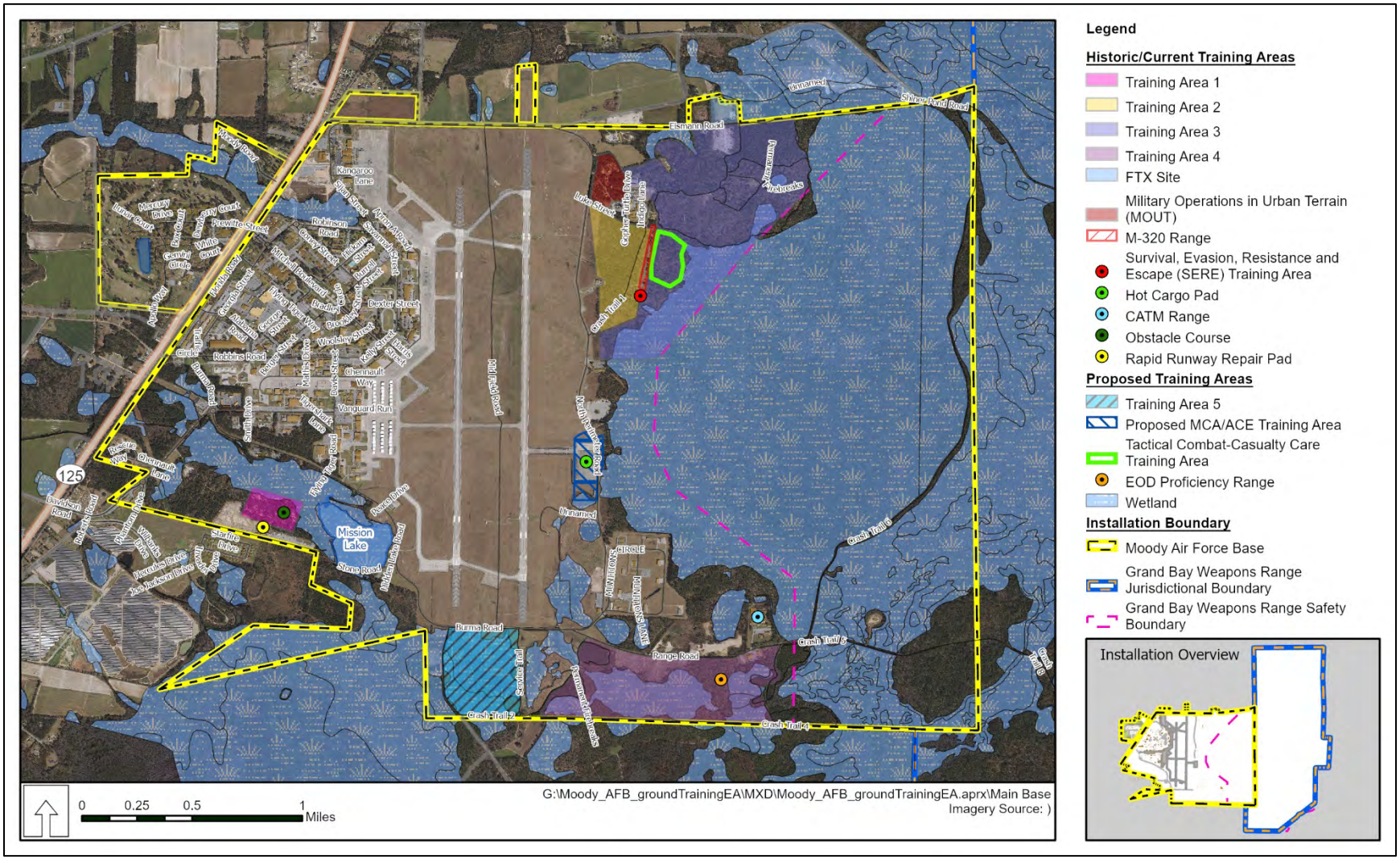


Figure 3-5. Wetlands at Moody Air Force Base Main Base

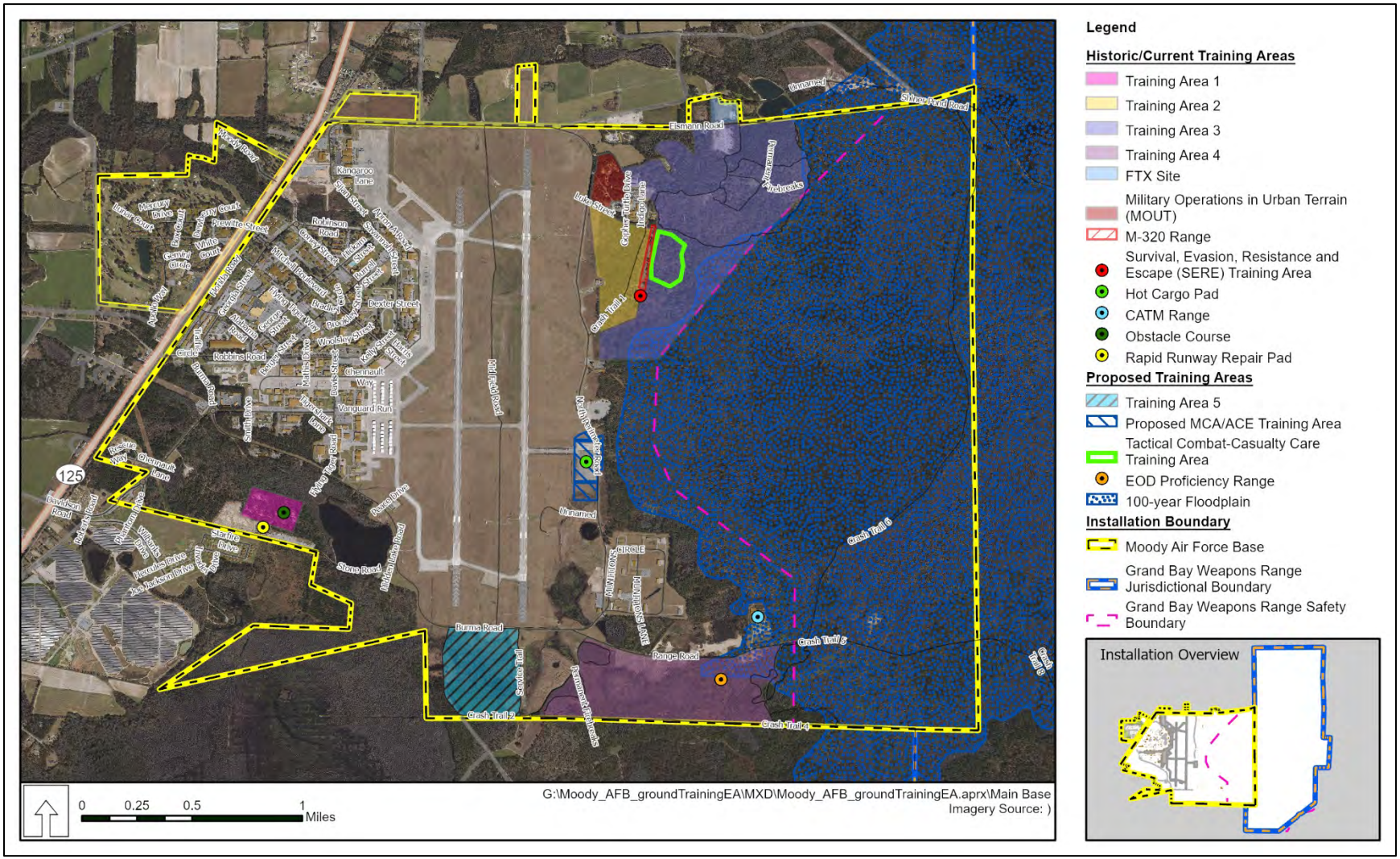


Figure 3-6. 100-Year Floodplains at Moody Air Force Base Main Base

Alternative 1. Expanded Ground Training on Main Base

Under Alternative 1, there would be minor adverse impacts on water resources. Impacts on surface waters would occur from increased stormwater runoff from new training areas and increased sediment transport in stormwater from current and proposed training activities that occur off road, especially those activities off road that use vehicles and equipment.

Current training activities in the existing training areas would result in no impacts on water resources. Training and maintenance activities in Training Area 1, Training Area 3, and Training Area 4 are not ground disturbing and would therefore have no adverse impacts on wetlands or floodplains. The use of vehicles and equipment would be limited to existing roads and would not increase the area of impermeable surfaces on Main Base. Portable latrines used during training activities would be anchored to avoid toppling. Therefore, there would be no adverse impacts on surface waters as a result of current training activities.

Increasing training activities in existing training areas by 50 percent, including an increase in the number of personnel, vehicles, equipment, and munitions would have no adverse impacts on wetlands or floodplains as no fill activities would be associated with this increased training. The use of vehicles and equipment during training activities would continue to be limited to existing roads and developed areas and would not increase the area of impermeable surfaces; therefore, there would be no adverse impacts on surface or groundwater as a result of an increase in training activities in existing training areas.

The use of Mission Lake for water training would increase boat operations, which would increase the potential for petroleum, oil, and lubricant spills into the lake as well as more water turbidity from motorboat operations. Further, water training activities would involve the use of expendables such as chem lights, which could impact water quality. However, Air Force boats are well maintained, and boats are used by properly trained military personnel and contractors. Therefore, there is a low likelihood for petroleum, oil, and lubricant spills into Mission Lake during water training. Further, expendables would be removed from Mission Lake and along the Mission Lake shoreline immediately following each water training event. Therefore, water training in Mission Lake would have a minor adverse impact on water quality.

Impacts on water resources from the construction of the new FTX Site were described in the 2018 *EA for Installation Development at Moody Air Force Base, Georgia* (Moody AFB 2018a) and are incorporated herein by reference. No long-term adverse impacts on water resources would occur from the construction activities. Impacts on surface and groundwater from training activities would be minimized by use of BMPs such as the use of drip pans beneath parked vehicles and equipment to catch and collection petroleum, oils, and lubricants that could otherwise leak on to the soil surface, and anchoring portable latrines.

There are 6.6 acres of jurisdictional wetlands within the 500-foot buffer area of the proposed EOD Proficiency Range; however, there are no wetlands located within the areas where vegetation clearing is proposed, which includes the 100-foot buffer area and the sightline corridor to the detonation point (see **Figure 2-8**). Further, 4.2 acres of the 500-foot buffer area, and 0.3 acre of the sightline vegetation clearance area are located within the 100-year floodplain (see **Figure 2-8**). The construction of the EOD Proficiency Range would disturb approximately 5 acres of mostly forested lands. Mechanical removal of vegetation could

increase sediment dispersal into stormwater and surface waters. However, the removal of woody vegetation and clearing of land for the EOD Proficiency Range would implement BMPs associated with a SWPPP ensuring that there would be no adverse impacts on surface waters from construction activities. All disturbed soils would be revegetated with grasses or other herbaceous plant species following construction, ensuring that there would be no long-term impacts on surface waters. Mechanical removal of vegetation to develop the sight line for the EOD Proficiency Range is not proposed to occur within wetlands. The removal of trees within the 100-year floodplain would not alter floodplain hydrology or cause induced flooding in areas not currently located within the floodplain. Future EOD training activities at the new EOD Proficiency Range would be similar to current training activities except that the location would change; therefore, EOD training activities would have no impact on water resources.

Approximately 5.6 acres of potential ground disturbance would occur with the construction of the TCCC Training Area, causing minor, long-term impacts on surface water. The removal of woody vegetation and clearing of land for the TCCC Training Area would trigger the implementation of BMPs associated with a SWPPP, ensuring that there would be no adverse impacts on surface waters from construction activities. All disturbed soils would be revegetated with grasses and herbaceous species to ensure there would be no long-term erosion and sediment transport in stormwater. The movement of vehicles and equipment in the TCCC Training Area could periodically disturb soils, causing some sediment to be transported in stormwater.

The designation and use of the MCA/ACE Training Area would disturb approximately 8 acres of vegetation areas adjacent to the Hot Cargo Pad, including approximately 2 acres of jurisdictional wetlands (see **Figure 2-7**) from personnel maneuvers in these areas, which would have a minor long-term adverse impact on surface water. No fill of the jurisdictional wetlands at the southern end of the MCA/ACE Training Area is proposed, and there would be no impacts on jurisdictional wetlands; however, personnel could enter these wetlands during training activities, which would have a minor long-term adverse impact on wildlife use of these wetlands (see **Section 3.6.2**). Some minor soil disturbance and sediment transport in stormwater could occur periodically from off-road personnel training activities.

Training activities at Training Area 5 and C-IED training in Training Area 3 would be limited to existing unimproved roads, and no off-road travel with vehicles or equipment would be permitted. Therefore, there would be no new ground disturbance and no impacts on water resources.

There would be no reasonably foreseeable direct or indirect impacts on groundwater from proposed future construction, renovation, or demolition projects at Moody AFB, including the proposed 820 BDG Campus. However, these future proposed projects would have reasonably foreseeable minor short-term direct and minor long-term indirect impacts on surface water from increased impermeable surfaces leading to additional stormwater runoff, increased pollutants from parked and stored vehicles and equipment, and periodic soil disturbance.

Alternative 2. No Action Alternative

The No Action Alternative would not expand training activities in existing training areas on Main Base and would not expand training activities into newly established training areas on Main

Base. Under the No Action Alternative, there would be no impacts on surface waters, including wetlands, groundwater, or floodplains from the continuation of existing training activities.

3.6 Biological Resources

For the definition of the resource, see **Appendix D-6.** The ROI for this resource is Moody AFB Main Base and areas off base where training activities could occur.

3.6.1 *Existing Conditions*

The existing conditions for vegetation, wildlife, and threatened and endangered species for the Moody AFB Main Base are summarized here. More detailed information on existing biological resources is provided in **Appendix D-6.**

Vegetation. Moody AFB and the Grand Bay WMA are located within the Outer Coastal Plain Mixed Province of the lowland ecoregion (Bailey 1995). This province is dominated by temperate evergreen forest and laurel forest. The historic vegetation of Moody AFB consisted of upland areas dominated by longleaf pine forests, with mesic longleaf pine savannas on the Main Base and wet-mesic longleaf pine savannas and wet mixed-pine savannas in the Grand Bay Weapons Range. The current vegetation composition on Moody AFB is primarily a result of land management practices and actions undertaken during the 1940s during the construction of the installation. Currently, the unimproved areas of Moody AFB feature several distinct natural communities or ecosystems that have been shaped or modified primarily through human actions. Natural communities on Moody AFB as well as on Grand Bay WMA include upland pine forests, pine flatwoods, and extensive areas composed of various wetland communities. A vast proportion of the upland habitat at Moody AFB has been converted to the Loblolly Pine Plantations community type (Moody AFB 2018b). Traditionally, these areas were characterized as either longleaf or longleaf/slash pine flatwoods forest types but were converted to pine plantations. As described in **Section 3.5,** nearly half of Moody AFB is wetland habitat and over 60 percent of the Grand Bay WMA is wetland habitat. In the existing and proposed training areas, undeveloped and unmaintained areas are primarily pine forest or transitional areas between black gum-cypress swamp wetlands and uplands.

Wildlife. Moody AFB and the Grand Bay WMA are within the lower coastal plains and flatwoods section of the Southern Coastal Plain ecoregion (Bailey 1995), which supports a diverse complex of habitat which in turn supports a high diversity of faunal species. These habitats can be simplified and grouped into two main habitat types: Loblolly Pine Plantations community type and the Carolina Bay Swamp Complex.

The wetland areas within the Carolina Bay Swamp Complex offer habitat to semiaquatic mammals as well as those for the forest habitat. The wetland areas also provide habitat for aquatic and semiaquatic species of reptiles and amphibians.

Common bird species are similar between the two main habitat types, with slight variations occurring with habitat-specific species. The cumulative list of common bird species on Moody AFB consists of several species of both resident and migratory songbirds, raptors, marsh birds, and waterfowl (Moody AFB 2018b). Some shorebirds utilize the area during migration.

Threatened and Endangered Species. The Moody AFB Integrated Natural Resources Management Plan (INRMP), USFWS Information for Planning and Consultation System, and the Georgia Rare Element Natural Data Portal were reviewed for the most up-to-date information concerning federally and state threatened and endangered species on Moody AFB Main Base. Currently, Moody AFB has 14 federally and/or state listed species that have the potential to occur on Main Base; 3 are federally listed and 11 are state listed (**Appendix D-6**).

The gopher tortoise (*Gopherus polyphemus*), federally listed as a candidate species in Georgia, is the only listed species known to be present in the existing and proposed training areas (**Figure 3-7**). The gopher tortoise is present and is managed through surveys and avoidance in MOUT, FTX Site, proposed new FTX Site, Training Area 2, and Training Area 3. The federally threatened eastern indigo snake (*Drymarchon couperi*) has the potential to occur in these same training areas as their habitat is associated with gopher tortoise burrows; however, no eastern indigo snakes have been observed on Main Base during recent focused surveys. A more detailed discussion of listed species is in **Appendix D-6.**

3.6.2 *Environmental Consequences*

To evaluate the potential impacts on the biological resources, the level of impact on biological resources is based on the following:

- Importance (i.e., legal, commercial, recreational, ecological, or scientific) of the resource
- Proportion of the resource that would be affected relative to its occurrence in the region
- Sensitivity of the resource to the proposed activities
- Duration of potential ecological ramifications

The impacts on biological resources are adverse if species or habitats of high concern are negatively affected over relatively large areas. Impacts are also considered adverse if disturbances cause reductions in population size or distribution of a species of high concern.

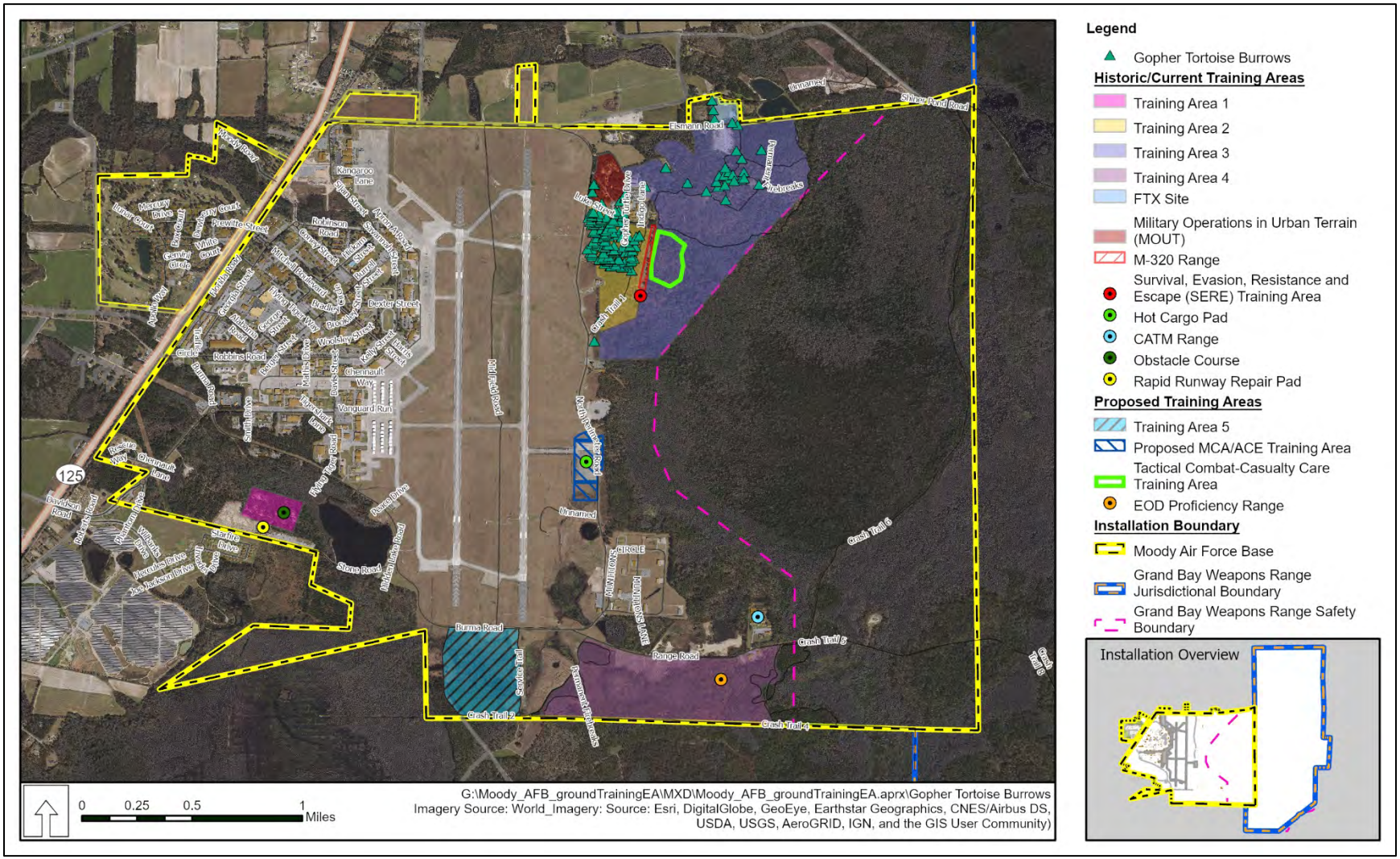


Figure 3-7. Gopher Tortoise Active and Inactive Burrow Locations in Training Areas at Moody Air Force Base Main Base

As a requirement under the Endangered Species Act, federal agencies must provide documentation that ensures that agency actions do not adversely affect the existence of any threatened or endangered species. The Endangered Species Act requires that all federal agencies avoid "taking" threatened or endangered species (which includes jeopardizing threatened or endangered species habitat). Section 7 of the Endangered Species Act establishes a consultation process with USFWS that ends with USFWS concurrence or a determination of the risk of jeopardy from a federal agency project.

Alternative 1. Expanded Ground Training on Main Base

The construction, maintenance, and use of proposed new training areas on Main Base would have minor adverse impacts on biological resources under Alternative 1. Direct impacts on vegetation and wildlife would occur from the conversion of forested habitat to military training areas. Long-term impacts on wildlife would occur from ground training activities in these newly established training areas that would disturb relatively common breeding and foraging wildlife species.

Continued training activities would have no impact on biological resources on Main Base. No additional vegetation disturbance would occur. Training activities in established training areas have been occurring for decades; species present within these training areas have habituated to the noise associated with vehicles, equipment, and use of training ordnance and would not be impacted by the continued training activities. Gopher tortoise and eastern indigo snake surveys are conducted annually on Main Base, including in the existing training areas where suitable habitat is present. The activity status of each burrow is recorded, and burrows are marked in the field. No vehicles or equipment are permitted to travel off road in training areas with high densities of active gopher tortoise burrows, which includes Training Area 2. Training activities are monitored and controlled in MOUT, Training Area 2, Training Area 3, and the FTX Site to minimize impacts on gopher tortoise habitat and avoid damage to active burrows.

Proposed increased training activities in existing training areas would not impact biological resources. The increased use of existing training areas would not cause additional vegetation disturbance, would not increase the peak noise levels in training areas, and would not substantially increase off-road vehicle and equipment use. Therefore, wildlife species would not be impacted by these training activities. Further, gopher tortoise and eastern indigo snake habitat management would continue, and increased training would have no effect on these species.

Impacts on biological resources from the construction of the new FTX Site were described in the 2018 *EA for Installation Development at Moody Air Force Base, Georgia* (Moody AFB 2018a) and are incorporated herein by reference. A total of 4.3 acres of pine habitat would be permanently cleared from the construction of the new FTX Site. This would reduce forested habitat that supports foraging, nesting, and resting habitat for mammals, birds, amphibians, and reptiles. Suitable habitat for the gopher tortoise and eastern indigo snake is present at the new FTX Site. Surveys for tortoise burrows would be conducted prior to the activities, and protection controls for tortoises (and eastern indigo snakes, if warranted) would be implemented as appropriate. These controls could include a combination of flagging burrows, installing temporary protective covers, relocating individual tortoises, and providing contractor education regarding protection measures. Also, heavy equipment would be staged in areas free of tortoise

burrows. The construction, use, and maintenance of the new FTX Site would also follow these control measures. The construction, use, and maintenance of the new FTX Site may affect but is not likely to adversely affect the gopher tortoise.

The construction, maintenance, and use of the new EOD Proficiency Range would have a minor adverse impact on biological resources. The construction of the EOD Proficiency Range would permanently remove approximately 5 acres of pine forest habitat. This would reduce forested habitat on Main Base that supports foraging, nesting, and resting habitat for mammals, birds, amphibians, and reptiles. However, most of these wildlife species are relatively common locally and regionally, and similar pine forest habitat is prevalent in the area. There is no habitat for federally or state listed species in the EOD Proficiency Range project area; therefore, the construction of the EOD Proficiency Range would have no effect on listed species. The use and maintenance of the EOD Proficiency Range would increase personnel movement and vehicle and equipment movement proximate to forested areas around the range. Although most wildlife species habituate to noise and human movement, this disturbance could reduce the area of suitable habitat proximate to the range that would be used by wildlife for breeding, foraging, and nesting.

There would be no impact on biological resources from the establishment and use of Training Area 5. Training activities at Training Area 5 would be limited to existing unimproved roads, and no off-road travel with vehicles or equipment would be permitted. The proposed Training Area 5 is currently beneath a flight path with military aircraft taking off and landing at the Moody AFB airfield. Wildlife utilizing the mostly wetland habitats in Training Area 5 would be habituated to noise and aircraft movement.

The establishment of the TCCC Training Area and use of existing roads for C-IED training in Training Area 3 would have a minor adverse impact on biological resources. Approximately 5.6 acres of pine forest habitat would be removed with the construction of the TCCC Training Area. This would reduce forested habitat that supports foraging, nesting, and resting habitat for mammals, birds, amphibians, and reptiles. The use and maintenance of the TCCC Training Area and crash trails and fire breaks for C-IED training would increase the presence of personnel, vehicles, and equipment, including helicopters, in Training Area 3; however, Training Area 3 is currently an active training area, and it is unlikely that an increase in the training activities would adversely impact wildlife that currently utilize this training area for breeding and foraging.

Suitable habitat for the gopher tortoise and eastern indigo snake is present in the proposed TCCC Training Area. Surveys for tortoise burrows would be conducted prior to the ground disturbing and vegetation clearance activities, and protection controls for tortoises (and eastern indigo snakes, if warranted) would be implemented as appropriate. These controls could include a combination of flagging burrows, installing temporary protective covers, relocating individual tortoises, and providing contractor education regarding protection measures. Also, heavy equipment would be staged in areas free of tortoise burrows. The use and maintenance of the proposed TCCC Training Area would also follow these control measures if annual tortoise surveys observe and mark burrows in the training area. Therefore, the construction, use, and maintenance of the proposed TCCC Training Area may affect but is not likely to adversely affect the gopher tortoise.

There would be a minor adverse impact on biological resources from the designation and use of the MCA/ACE Training Area. The new MCA/ACE Training Area would disturb approximately 8 acres of herbaceous and wetland vegetation near the Hot Cargo Pad; however, no wetland fill would occur and no loss of wetland habitat is anticipated. Disturbance to wildlife would occur with each use of the training area; however, being located next to the Hot Cargo Pad and adjacent to the active Moody AFB airfield, species present in this area would be habituated to noise, aircraft and vehicle movement, and the presence of personnel.

The use of the Grand Bay WMA for training activities would have a minor adverse impact on wildlife. Additional movement of people and noise associated with human activities during training would disturb wildlife species breeding and foraging in areas proximate to active training activities. However, the Grand Bay WMA is actively used for recreational purposes, including hunting of deer, turkey, and small mammals with small arms (Georgia DNR, Wildlife Resources Division 2021); therefore, wildlife species present are habituated to the presence of humans and noise.

The proposed construction, demolition, and maintenance of facilities would have reasonably foreseeable minor long-term adverse impacts on biological resources. Construction activities within or adjacent to pine forests and wetland area could disturb and displace wildlife species and the movement of vehicles and equipment could cause the mortality of wildlife species. However, impacted species would primarily be common wildlife species and the area of natural habitats to be impacted would be small and confined to portions of Moody AFB.

The proposed conversion of Training Area 2 to a campus for the 820 BDG would have reasonably foreseeable minor long-term adverse impacts on biological resources. Portions of the proposed project area provide suitable habitat for the gopher tortoise and eastern indigo snake. The conversion of pine forest to developed areas would permanently remove this habitat. Further, increased human activity adjacent to suitable gopher tortoise and eastern indigo snake habitat would increase the risk of vehicles or equipment striking individual gopher tortoises or leading to collapse of active tortoise burrows. However, Moody AFB would complete Endangered Species Act Section 7 consultation with the USFWS for the gopher tortoise and eastern indigo snake and implement necessary protection and conservation measures to ensure that there would be no reasonably foreseeable adverse effects on these two species.

Alternative 2. No Action Alternative

Under the No Action Alternative, no additional training activities would occur within existing training areas on Main Base and the establishment, maintenance, and use of new training areas would not occur. The continuation of active ground training on Main Base would also include annual gopher tortoise surveys and management practices to manage active gopher tortoise burrows and protect gopher tortoises and eastern indigo snakes (if encountered). Therefore, there would be no impacts on biological resources under the No Action Alternative.

3.7 Cultural Resources

For the definition of the resource, see **Appendix D-7.** The ROI for cultural resources is Moody AFB Main Base and areas off base where cultural resources could be impacted by training activities.

3.7.1 *Existing Conditions*

Moody AFB was established in early 1942 as the wartime Moody Field Advanced Pilot Training School. Archaeological investigations at Moody AFB have located 27 archaeological sites and 43 isolated finds (Air Force 2018; **Table 3-6**; see **Appendix D** for detailed discussion). The physical areas included within the expanded ground training areas were all investigated under the installation's comprehensive 1996 archaeological survey (Grover et al. 1996). Six archaeological sites were recorded within existing Training Area 3; one site was recorded adjacent to the existing Hot Cargo Pad and proposed MCA/ACE Training Area; and one site was recorded within existing Training Area 4. None of these sites were determined eligible for the National Register of Historic Places (NRHP). In addition, no archaeological sites were recorded within other areas proposed for expanded training, including the proposed new Training Area 5, south of Burma Road. Sites determined to be not eligible for the NRHP require no further management.

Moody AFB has two NRHP-eligible archaeological sites. Sites 9LW63 and 9LW71 are both prehistoric artifact scatters located on the Main Base east of the runway (Moody AFB 2018b) and outside of the footprint of the Proposed Action areas. Numerous surveys of World War II and Cold War-era buildings and structures at Moody AFB have been undertaken since 1997 (**Table 3-6**; see **Appendix D**). Only two structures have been determined to be eligible for inclusion in the NRHP. Facility 618, constructed in 1941, is a steel water tower with a 200,000-gallon capacity. It was determined to be eligible for inclusion in the NRHP in 1999 (Moody AFB 2018b). Building 110 is a chapel built in 1971. Significant for its midcentury modern architectural design, the chapel was determined to be eligible for inclusion in the NRHP in May 2017. Both structures are more than 0.5 mile from the Proposed Action areas.

No traditional cultural properties have been identified on Moody AFB through previous consultation efforts. No federally recognized tribes have identified traditional cultural properties (**Appendix B**).

Moody AFB initiated government-to-government consultation regarding the Proposed Action with Native American tribes on 28 January 2021 (**Appendix A**). Letters were sent to the Muscogee (Creek) Nation, the Muscogee Nation of Florida, the Poarch Band of Creeks, the Seminole Nation of Oklahoma, the Thlopthlocco Tribal Town, the Kialagee Tribal Town, and the Coushatta Tribe of Louisiana. These seven tribes were also invited to comment on potential impacts on cultural resources as a result of the Proposed Action. To date, none of the tribes have expressed any concerns related to the project (**Appendix B**).

Based on the location of the training sites, the coverage of previous archaeological surveys, and lack of issues raised by tribes, the Air Force has determined that the proposed comprehensive training Area of Potential Effects (APE) contains no identified archaeological sites eligible for listing on the NRHP, historic districts, cemeteries, sacred sites, traditional cultural properties, or other tribal resources. The nearest recorded archaeological resources eligible for listing on the NRHP are sites 9LW71 and 9LW63.

1 **Table 3-6. Summary of Cultural Resource Investigations on Moody Air Force Base**

Reference	Investigation	Results
Archaeological Surveys		
Wright 1985	350 acres of Grand Bay Range focused on high-probability areas	Four sites identified; one site (9LN4) recommended for testing.
National Park Service 1986	Preliminary cultural resource reconnaissance of Moody AFB and Grassy Pond Recreation Area	One site recorded and determined not eligible for the NRHP.
Grover et al. 1996	Survey of Grand Bay Ordnance Range and Moody AFB, total 3,600 acres	21 sites and 39 isolated finds recorded. Five sites considered potentially eligible (9LW62, 9LW52, 9LW67, 9LN17, and 9LW71); remainder determined not eligible.
Morgan 1998	Survey of Southwest Land Gift (49.5 acres)	Two sites recorded and determined not eligible for NRHP.
Jones et al. 1999	Phase II Testing of Site 9LW71	Sites 9LW70 and 9LW71 determined to be one consolidated site (9LW71); site 9LW71 determined eligible for NRHP.
Warhop et al. 2007	Phase II Testing of 9LN17	Site determined not eligible for NRHP.
Warhop et al. 2010	Phase II Testing of 9LW63	Site 9LW63 determined eligible for NRHP.
Warhop and Raymer 2010	Testing of Site 9LW67	Inconclusive; additional testing recommended.
Lindemuth and Somers 2011	Survey of Personnel Recovery Campus	No sites identified.
Schneider et al. 2013	Phase II Testing of Sites 9LW52 and 9LW67	Sites determined not eligible for NRHP.
Lowrey 2017	Survey of 106.1 acres of new southwest land purchase	Two isolated finds identified; not eligible for the NRHP.
Architectural Surveys		
Patterson et al. 1997	Context of Cold War Material Culture; baseline inventory of 137 buildings	No buildings eligible for NRHP for Cold War significance.
Moody AFB 1996-1997 (see ICRMP, Air Force 2018)	Consultation for buildings 701, 609, and 621	Buildings determined not eligible for the NRHP.
Messick et al. 1999	Evaluation of 223 buildings, including Cold War assets	Water Tower (Facility 618) eligible for NRHP; remaining buildings not eligible.
Hersch 2011	Evaluation of 42 Cold War-era resources	Resources not eligible for the NRHP.
Scherer 2015	Evaluation of Buildings 1500 and 1501	Buildings not eligible for NRHP.
Amec Foster Wheeler Environment & Infrastructure, Inc. 2016	Evaluation of Buildings 325, 328, 621, 658, 704, 753, 785, and 901.	Buildings not eligible for NRHP.

Reference	Investigation	Results
Reed et al. 2017	Reevaluation of 210 Cold War-era facilities 45 years or older, including cantonment, Grand Bay Weapons Range, Grassy Pond Annex, and NEXRAD Radar Site.	Base Chapel (Building 110) eligible for NRHP; no intact districts present; all other buildings not eligible.

AFB – Air Force Base; **NRHP** – National Register of Historic Places; **ICRMP** – Integrated Cultural Resources Management Plan

3.7.2 *Environmental Consequences*

Section 106 of the NHPA requires all federal agencies to assess the effects of their undertakings on historic properties and seek to avoid, minimize, or mitigate adverse effects on those properties [36 CFR 800.1(a)]. For cultural resource analysis, the APE is used as the ROI. APE is defined as the "geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist" (36 CFR 800.16[d]), and thereby diminish their historic integrity.

Direct effects include alteration or damage during construction activities. Indirect effects include the introduction of visual, audible, or atmospheric elements that are out of character with a property or that alter its historic setting. Direct and indirect effects are considered adverse if a project would cause a change in the quality of a property that qualifies it for inclusion in the NRHP. The APE for direct effects includes the footprints of the training areas where potential ground disturbance may occur. The APE for indirect effects includes a 1,000-foot buffer surrounding the training areas to account for audio or visual impacts.

Alternative 1. Expanded Ground Training on Main Base

Under Alternative 1, there would be no adverse effects on, and no impacts to, cultural resources. The expanded training areas have been previously surveyed for archaeological resources, and no NRHP-eligible sites were identified (Grover et al. 1996). The installation currently includes two NRHP-eligible archaeological sites (Sites 9LW63 and 9LW71). Site 9LW63 is outside of existing training areas and all existing and proposed training activities would not physically impact the site. Site 9LW71 is not located within any existing or proposed training area, and no current or proposed training activities would occur proximate to the eligible archaeological site. Therefore, Alternative 1 will not physically affect any archaeological sites that have been determined eligible for the NRHP.

Architectural surveys have been completed for World War II and Cold War-era buildings and structures at Moody AFB (**Figure 3-8**). All buildings at least 50 years of age through 2018 have been evaluated. Two architectural resources have been determined to be NRHP eligible, and both are located within the main cantonment area. Facility 618, constructed in 1941, is a steel water tower determined to be eligible for the NRHP in 1999, and Building 110 is a chapel built in 1971 and determined to be eligible for the NRHP in 2017.

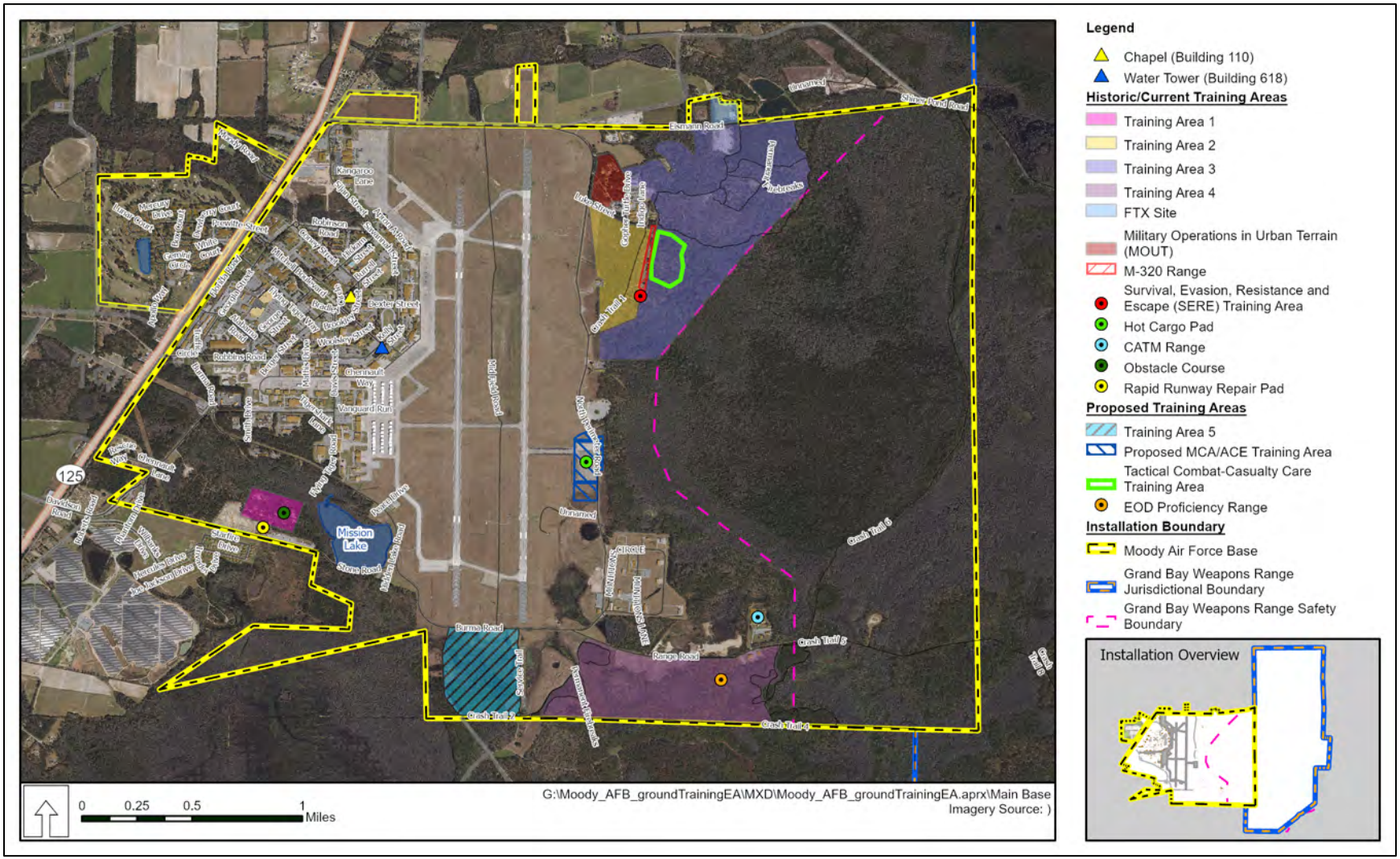


Figure 3-8. Architectural Resources at Moody Air Force Base Main Base

Under Alternative 1, no building demolition or modification would occur within the expanded training areas or within the cantonment. Within the cantonment, where the two NRHP-eligible buildings are located, buildings have historically been and are currently used for training activities such as MWD and EOD training. Boxes and equipment may be temporarily placed adjacent to or within the buildings for specific training activities and then removed upon completion. However, the chapel and water tower are currently excluded from MWD and EOD training activities and would not be part of those activities moving forward. Therefore, under Alternative 1, proposed actions within the main cantonment, which include an increase in personnel training, including the use of equipment and vehicles, would have no effect on the two NRHP-eligible buildings.

There are no reasonably foreseeable impacts on cultural resources from the proposed construction, renovation, and demolition of facilities and infrastructure and the construction of the 820 BDG campus. All of these activities are proposed on Moody AFB by the Air Force. As such, they are subject to Section 106 of the NHPA, and each proposed project would be evaluated to ensure no adverse effects occurred to historic properties.

Alternative 2. No Action Alternative

Under the No Action Alternative there would be no effect on any cultural resource because there would be no construction, ground-disturbing activities, or increased training actions.

3.8 Socioeconomics

For the definition of the resource, see **Appendix D-8.** Lowndes and Lanier counties, Georgia, along with the city of Valdosta, Georgia, make up the ROI for this resource.

3.8.1 *Existing Conditions*

The populations of Lowndes and Lanier counties were 117,406 and 10,423, respectively, in the 2019 US census. These were a 7.5 and 3.4 percent increase, respectively from the 2010 US census population estimated for Lowndes and Lanier counties (US Census Bureau 2021). Further, the city of Valdosta increased in population by 3.1 percent during that same period. The state of Georgia's population totaled 10,617,423 in 2017, which was a 9.6 percent increase over the 2010 US census population of the state. Although the population growth rates of Lowndes and Lanier counties were less than the growth rate for the state of Georgia, the rate of growth for these two counties was similar to that of the United States (**Table 3-7**).

Table 3-7. Population in the Moody Region of Influence as Compared to Georgia and the United States (2010 – 2019)

Location	2010	2019	Percent Change
United States	308,758,105	328,239,523	6.3
Georgia	9,688,680	10,617,423	9.6
Valdosta	54,518	56,457	3.1
Lowndes County	109,233	117,406	7.5
Lanier County	10,074	10,423	3.4

Source: US Census Bureau 2021

The median income of Lowndes and Lanier counties in 2019 was $42,441 and $40,986, respectively. The median income of the city of Valdosta was $32,595 in 2019. The median incomes of Lowndes and Lanier counties and the city of Valdosta were lower than the state of Georgia at $58,700 and the United States at $62,843 (US Census Bureau 2021). The unemployment rates for Lowndes and Lanier counties were 4.5 percent and 3.8 percent in February 2021. This was similar to the unemployment rate of 4.4 percent for Georgia (Georgia Department of Labor 2021).

In 2019, there were a total of 49,490 housing units in Lowndes County, with 25,883 of those being owner-occupied units. In Lanier County, there were a total of 4,458 housing units, with 2,871 of those being owner-occupied (US Census Bureau 2021). Dormitories at Moody AFB are in 15 buildings with a total of 758 rooms. Military family housing is privatized at Moody AFB, with two projects (Hunt Military Communities and Balfour Beaty Communities) that own the family housing and are responsible for maintaining, repairing, constructing, and managing the communities. Moody AFB has 388 homes divided into two on-base and two off-base neighborhoods with adequate capacity for additional residents (Moody AFB 2015a). The Lowndes County School District has 11 schools, with 7 elementary schools, 3 middle schools, and 1 high school. The total enrollment in the Lowndes County School District is 10,557 students (Lowndes County Schools 2019). The Valdosta City School District has 8,390 students enrolled in five elementary schools, two middle schools, two high schools, and at the Horne Learning Center (Valdosta City Schools 2019).

A total of 5,230 active and reserve duty military personnel are stationed at Moody AFB and another 836 civilian personnel work there. The total annual payroll is estimated to be $300 million, and the total economic impact to the state of Georgia is estimated to be $448 million (Moody AFB 2015a).

3.8.2 *Environmental Consequences*

Consequences to socioeconomic resources were assessed in terms of the potential impacts on the local economy from the Proposed Action. The level of impacts associated with construction expenditure is assessed in terms of direct effects on the local economy and related effects on other socioeconomic resources (e.g., housing, employment, and community resources). The magnitude of potential impacts can vary greatly, depending on the location of an action. For example, implementation of an action that creates 10 employment positions might be unnoticed in an urban area, but might have significant impacts in a rural region.

In addition, if potential socioeconomic changes resulting from other factors were to result in substantial shifts in population trends or in adverse effects on regional spending and earning patterns, they may be considered adverse.

Alternative 1. Expanded Ground Training on Main Base

There would be no impacts on socioeconomics from the continuation of current training activities at established training areas on Main Base. No change in employment or housing would occur.

The proposed increase in training activities at the established training areas on Main Base would have a minor beneficial impact on socioeconomics. The additional personnel involved in

training activities along with the additional expenditures for fuel and materials to support increased training would benefit the local economies of Lowndes and Lanier counties.

The construction, establishment, maintenance, and use of the proposed EOD Proficiency Range, Training Area 5, TCCC Training Area, and MCA/ACE Training Area, as well as proposed training in the Grand Bay WMA would have short- and long-term minor beneficial impacts on socioeconomics. The establishment of the new training areas would require construction workers, equipment, and materials during the construction activities; this would have a minor increase in employment and expenditures in the local area during the construction. Timber removal from the proposed training areas during construction could result in timber sales. Maintenance and use of the proposed training areas would require the purchase of small amounts of goods and materials in the area. Additional personnel training in the proposed training areas would contribute to additional expenditures in the regional economy.

The construction, demolition, and renovation of additional facilities as described by the 2018 IDP EA as well as the proposed 820 BDG Campus at Training Area 2 would have reasonably foreseeable short-term and long-term beneficial impacts. During construction, demolition, and renovation activities there would be direct short-term benefits through local spending to purchase equipment and materials and spending on labor. In the long-term, beneficial impacts would occur from increased personnel being supported by the new facilities and their local expenditures on items such as fuel, food, and housing as well as expenditures by the Air Force for maintenance of the new facilities.

Alternative 2. No Action Alternative

There would be no impacts on socioeconomics of the region under the No Action Alternative as no change in ground training on Main Base would occur.

3.9 Environmental Justice and Protection of Children

For the definition of the resource, see **Appendix D-9.** Lowndes and Lanier counties, Georgia, along with the city of Valdosta, Georgia, make up the ROI for this resource.

3.9.1 *Existing Conditions*

In 2019, the state of Georgia, Lowndes County, and the city of Valdosta had a higher percentage of population that identified as minorities than in the US as a whole (**Table 3-8**). However, the state of Georgia, Lowndes and Lanier counties, and the city of Valdosta had substantially lower percentage of population that identified as of Hispanic or Latino origin compared to the US (US Census Bureau 2021). Of the minority population in the ROI and in the state of Georgia, a higher percentage identified as Black or African American than in the US.

Lowndes and Lanier counties and the city of Valdosta had a higher rate of poverty than Georgia and the US (**Table 3-8**). Further, a similar percentage of the population are children in the ROI as in Georgia and the US as a whole (**Table 3-8**) (US Census Bureau 2021).

Table 3-8. Total 2019 Population and Populations of Concern for Moody Air Force Base

Location	Total Population	Percent Minority*	Percent Hispanic or Latino	Percent below Poverty	Percent Youth
United States	328,239,523	39.9	18.5	10.5	22.3
Georgia	10,617,423	48.0	9.9	13.3	23.6
Valdosta	56,457	61.3	5.3	32.2	22.9
Lowndes County	117,406	47.0	6.0	20.4	24.1
Lanier County	10,423	31.9	6.4	18.5	23.9

Source: US Census Bureau 2021
Note: Hispanic and Latino denote a place of origin and may be of any race, and percent youth are all persons under the age of 18.
* Not White or representing more than one race and Hispanic or Latino in origin.

3.9.2 *Environmental Consequences*

Environmental justice analysis applies to potential disproportionate effects on minority, low-income, and youth populations. Environmental justice issues could occur if an adverse environmental or socioeconomic consequence to the human population fell disproportionately upon minority, low-income, or youth populations. Ethnicity and poverty status were examined and compared to state and national data to determine if these populations could be disproportionately affected by the Proposed Action.

Alternative 1. Expanded Ground Training on Main Base

There would be no disproportionate impacts on minority populations, low-income communities, or children from the continuation of current ground training activities at Moody AFB. No change in the off-base natural or human environment would occur from the continuation of training activities. Similarly, the expansion of ground training activities in existing training areas would not have adverse impacts on the natural or human environment off base and would therefore not disproportionately impact minority populations, low-income communities, or children.

The expansion of training areas on Moody AFB Main Base would increase peak noise levels off base; the areas within the increased peak noise contours include residential areas as described in **Section 3.2.** Where peak noise levels increase off base, there is the potential for disproportionate impacts on minority populations, low-income communities, and children. To assess the potential for disproportionate impacts, the 2019 US Census Block Group estimated data for Block Groups that overlap the noise contours were collected and evaluated. There are three Block Groups (**Table 3-9**) that overlap the Alternative 1 noise contours (see **Section 3.2**). All three of these Block Groups have minority populations that are similar to or less than the minority populations of Lowndes and Lanier counties and the state of Georgia. The rate of poverty in all but one Block Group is similar to or lower than Lowndes and Lanier counties and the state of Georgia; however, 36 percent of the population of Block Group 4, Census Tract 101.02, Lowndes County live below poverty. This is higher than the overall county poverty rate but not dissimilar to the poverty rate in the city of Valdosta to the south of this Block Group. The percent youth population was not substantially different in these Block Groups in 2019.

Table 3-9. 2019 Off-Base Census Block Group Data

Block Group	Percent Minority*	Percent Hispanic or Latino	Percent below Poverty	Percent Youth
Block Group 4, Census Tract 101.02, Lowndes County, Georgia	38	5	36	15
Block Group 4, Census Tract 9502, Lanier County, Georgia	23	3	16	28
Block Group 5, Census Tract 9502, Lanier County, Georgia	31	10	7	26

Source: US Census Bureau 2021
Note: Hispanic and Latino denote a place of origin and may be of any race, and percent youth are all persons under the age of 18.
* Not White or representing more than one race and Hispanic or Latino in origin

Because the 2019 estimated minority population, low-income communities, and percent youth are similar in the three US Census Block Groups as those same populations at the city, county, and state levels, there would be no disproportionate impacts on these populations due to the increased peak noise from proposed small arms use in existing and new training areas under Alternative 1.

Alternative 2. No Action Alternative

Under the No Action Alternative, there would be no change in the ground training activities at Moody AFB Main Base. Therefore, there would be no disproportionate impacts on minority or low-income communities or on children.

3.10 Infrastructure, Transportation, and Utilities

For the definition of the resource, see **Appendix D-10.** The ROI for this resource is Moody AFB and the nearby transportation and utility network.

3.10.1 *Existing Conditions*

Unless otherwise noted, the existing conditions for infrastructure at Moody AFB were derived from the IDP for Moody AFB (Moody AFB 2015a). The existing conditions for infrastructure and utilities are described in detail in **Appendix D-10.** The existing Moody AFB and regional transportation network is provided below.

Transportation. The area surrounding Moody AFB is rural. The primary access road to Moody AFB is Georgia State Route 125, which runs south to the city of Valdosta and connects to Interstate 75 (**Figure 3-9**). There are approximately 39 miles of roads on Moody AFB laid out in a wagon wheel design bounded by Robbins Road, Savannah Street, and Georgia Street. The existing training areas are serviced by secondary and tertiary roadways within the installation. These access roads have limited use and are free from congestion. There are no major road capacity issues on roadways on or adjacent to Moody AFB (Moody AFB 2015a).

There are four operational entry control facilities at Moody AFB (**Figure 3-9**). The Davidson Road Gate, which is located at the south end of the base, is accessible by Davidson Road from State Route 125 and is used by base personnel, visitors, and commercial vehicles. The

Davidson Road Gate receives the majority of noncommercial and nonvisitor traffic, as most personnel live south of Moody AFB. The secondary public point of entry is the Mitchell Boulevard Gate, located to the north at the intersection of Mitchell Boulevard and State Route 125. The Robbins Road Gate is only open from 4:00 p.m. to 6:00 p.m. weekdays, and the Cemetery Gate is used only for special events, such as the air show. A fifth gate, the Contractor's Gate, is east on Hightower Road, and is used on a limited basis to allow contractor vehicles access to the east side of the airfield. Traffic flow at the gates is adequate, with some congestion during the a.m. and p.m. peak traffic periods (Moody AFB 2015a).

3.10.2 *Environmental Consequences*

Impacts on infrastructure from the Proposed Action are evaluated for their potential to disrupt or improve existing levels of service in the ROI, as well as generate additional requirements for energy or water consumption, and for impacts on resources such as sanitary sewer systems. The Proposed Action would result in an adverse impact to utilities or services if the project required more than the existing infrastructure could provide or required services in conflict with adopted plans and policies for the area. The effects to transportation and traffic would be considered significant if an alternative resulted in (1) a substantial increase in on- or off-base traffic or (2) substantial congestion on or around Moody AFB.

Alternative 1. Expanded Ground Training on Main Base

Under Alternative 1 there would be no modification or change in use of Moody AFB's electric, natural gas, communication distribution, or water and wastewater systems. Current and proposed ground training activities would not modify these systems or place additional strain on their capacity.

The continuation of current training activities would have no impacts on transportation, utilities, or infrastructure at Moody AFB. There would be no additional personnel operations, equipment, materials, or training areas that could impact these resources with continued ground training. Moody AFB roadways are used to travel to and from training areas and can be temporarily closed or cause temporary reduced traffic flow during convoy movement; however, these activities do not occur during peak travel times.

The proposed increase in training activities in existing training areas would increase the use of potable water and generate additional wastewater to support the increased personnel training operations. However, the Moody AFB water and wastewater systems are adequate to support the increased demands by more personnel training operations. Additional solid waste would be generated by these training activities; however, the Advanced Disposal E. S. Evergreen Municipal Solid Waste Landfill in Lowndes County has adequate capacity to accept the additional solid waste.

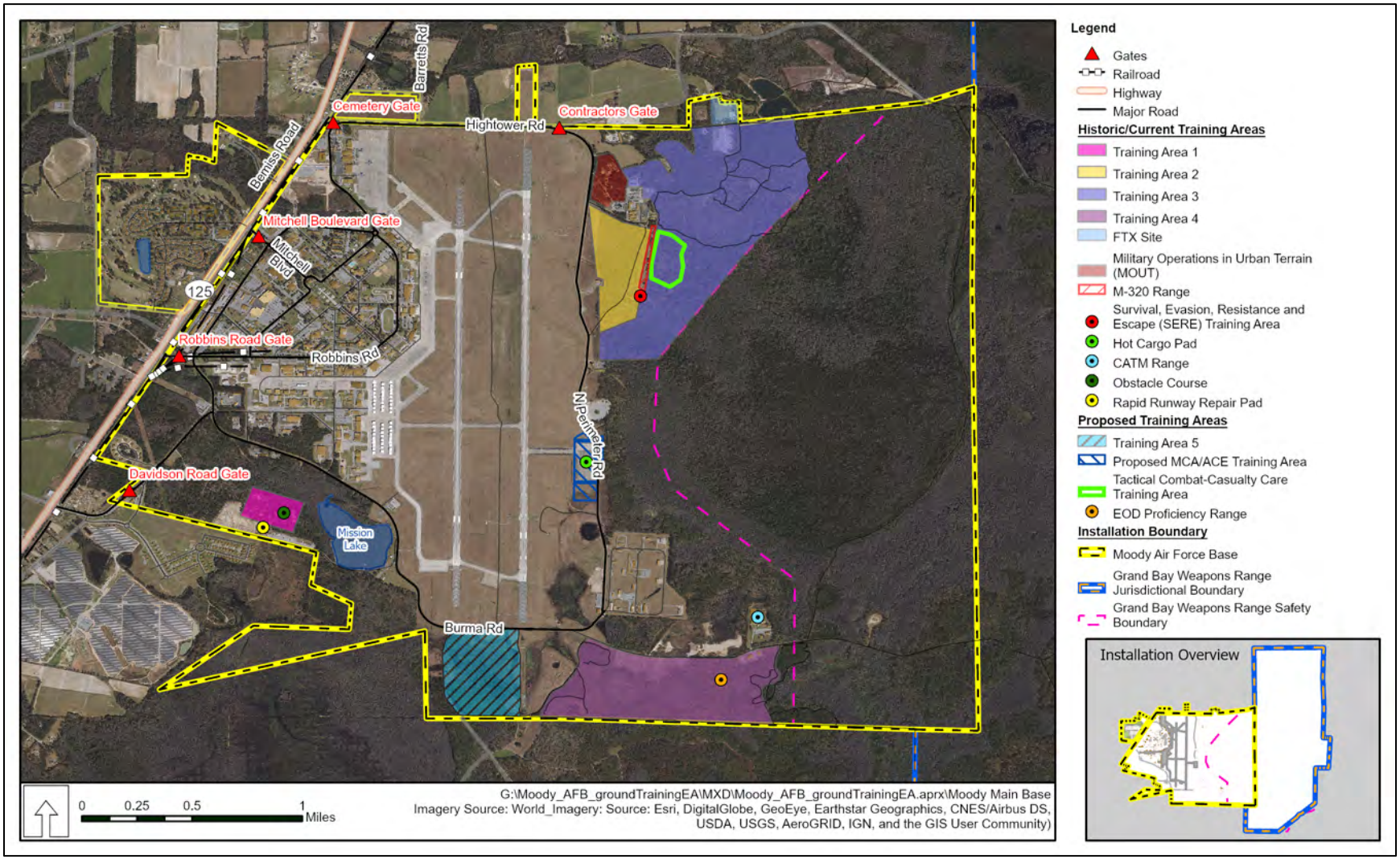


Figure 3-9. Transportation Network for Moody Air Force Base, Georgia

Alternative 1 would have short- and long-term minor adverse effects on traffic and transportation. Only small barely noticeable changes to traffic would be expected with the implementation of this alternative. The changes would be primarily attributable to construction vehicles and small changes in localized traffic patterns due to the additional personnel utilizing the training areas. Alternative 1 would not result in (1) a substantial increase in on- or off-base traffic or (2) substantial congestion on or around Moody AFB.

Traffic would increase due to additional construction vehicles and traffic delays near active construction at the FTX Site and the additional squad movement training area. These effects would be temporary in nature and would end with the construction phase. The local roadway infrastructure would be sufficient to support any increase in construction vehicle traffic. In addition, road closures or detours to accommodate utility system work would be expected, creating short-term traffic delays. All construction vehicles would be equipped with backing alarms, two-way radios, and slow-moving-vehicle signs when appropriate. Although the effects would be minor, Moody AFB would route and schedule construction vehicle traffic to minimize conflicts with other traffic and would strategically locate construction material staging areas to minimize impacts.

There would be an increase in approximately 17,651 operations within the existing and proposed training areas. Although the exact number of individual personnel is unknown at this time, it is expected that individuals would use at least two training areas per week. This would be equivalent to approximately 169 additional full-time personnel at Moody AFB if all operations were conducted by individuals not already stationed at Moody AFB. This would constitute a 1 to 2 percent increase in gate and on-base traffic, and a minute increase in traffic on roadways approaching the base. This incremental change would not be perceptible when compared to existing conditions. These effects would on traffic and transportation would be minor.

Construction, demolition, and maintenance of facilities as described by the Moody AFB IDP EA as well as the proposed 820 BDG campus would have reasonably foreseeable minor impacts on utilities, infrastructure, and transportation. Construction and demolition would yield construction waste that would be transported to nearby landfills. Additional utility demands, including water and wastewater would occur with the new facilities. An increase in personnel traveling to the new 820 BDG campus and other new facilities would increase traffic during peak commute times at the base gates as well as on surface roads.

Alternative 2. No Action Alternative

Selecting the No Action Alternative would result in no effects on utilities, transportation, or infrastructure. There would be no short- or long-term changes in ground training activities and no changes in personnel due to the action. Transportation infrastructure, traffic conditions, utility demands, and communication systems would remain unchanged when compared to existing conditions.

3.11 Hazardous Materials and Wastes, Environmental Restoration Program, and Toxic Substances

For the definition of the resource, see **Appendix D-11.** The ROI for this resource is Moody AFB.

3.11.1 *Existing Conditions*

The information below was summarized from several documents, including management plans, material surveys by the Georgia Environmental Protection Division, other state of Georgia records, and related documentation.

Hazardous Materials. Hazardous and toxic material procurements at Moody AFB are approved and tracked by the Moody AFB 23d CES, Installation Management Flight, Environmental Management Element (CES/CEIE), which has overall management responsibility of the installation environmental program. The Bioenvironmental Engineering Flight/Preventative Medicine supports and monitors environmental permits, hazardous materials, and hazardous waste storage, spill prevention and response, and participation in the Environmental Safety and Occupational Health Council (ESOHC) (Air Force 2016).

The ESOHC is a network of safety, environmental, and logistics experts who work with hazardous materials managers, unit environmental coordinators, and other hazardous materials users to ensure safe and compliant hazardous materials management throughout the base. A privately contracted hazardous material pharmacy (HAZMART) ensures that only the smallest quantities of hazardous materials necessary to accomplish the mission are purchased and used. HAZMART is located at 4380B Alabama Road.

The 23d CES/CEIE maintains the Hazardous Waste Management Plan (Air Force 2016) as directed by AFMAN 32-7002, *Environmental Compliance and Pollution Prevention,* and complies with 40 CFR 260 to 272. This plan prescribes the roles and responsibilities of all members of the ESOHC with respect to the waste stream inventory, Waste Analysis Plan, hazardous waste management procedures, training, emergency response, and pollution prevention. The Hazardous Waste Management Plan establishes the procedures to comply with applicable federal, state, and local standards for solid waste and hazardous waste management. The plan outlines procedures for transport, storage, and disposal of hazardous wastes.

Hazardous materials and petroleum products such as fuels, flammable solvents, paints, corrosives, pesticides, deicing fluid, refrigerants, and cleaners are used throughout Moody AFB for various functions, including aircraft maintenance; aircraft ground equipment maintenance; and ground vehicle, communications infrastructure, and facilities maintenance. Hazardous materials at Moody AFB are managed by the HAZMART. The Enterprise Environmental, Safety, and Occupational Health Management Information System tracks acquisition and inventory control of hazardous materials for units based at Moody AFB. Temporary duty (TDY) units bringing hazardous materials onto Moody AFB must notify the 23 CES/CEIE Hazardous Material Program Team by submitting a completed Deployment Hazardous Material Worksheet and a list of all materials along with their associated Safety Data Sheets.

Hazardous Waste. Hazardous wastes generated at Moody AFB include flammable solvents, contaminated fuels and lubricants, paint/coating, stripping chemicals, oils, paint-related materials, mixed-solid waste, and other miscellaneous wastes. Certain types of hazardous wastes are subject to special management provisions intended to ease the management burden and facilitate the recycling of such materials. These are called “universal wastes,” and their associated regulatory requirements are specified in 40 CFR 273. Types of waste currently

covered under the universal waste regulations include fluorescent light tubes, hazardous waste batteries, hazardous waste thermostats, and hazardous waste lamps.

Facilities at Moody AFB generate varying amounts of hazardous waste as a large-quantity generator as defined by the USEPA (40 CFR 260.10). Moody AFB operates 49 satellite accumulation points on the west side of the airfield and 2 satellite accumulation points at the CATM Range, where up to 55 gallons of "total regulated hazardous wastes" or up to 1 quart of "acutely hazardous wastes" are accumulated. The installation operates one 90-day Central Accumulation Point, where hazardous waste accumulates before being transported off-installation for ultimate disposal (Air Force 2016). None of the facilities in the ROI contain satellite accumulation points.

An inventory of aboveground storage tanks and underground storage tanks is maintained at Moody AFB and includes the location, contents, capacity, containment measures, status, and installation dates (Air Force 2016).

Environmental Restoration Program (ERP) / Military Munitions Response Program. Moody AFB began its ERP in 1982 with environmental assessment and restoration activities and has 31 closed ERP sites and one closed Military Munitions Response Program site, none of which required remediation. An additional 11 ERP sites have ongoing corrective action and have Land Use Controls associated with them (**Figure 3-10**).

Three ERP sites overlap with existing and proposed training areas on Main Base. FT-07, Former Fire Training Area, overlaps the Hot Cargo Pad and proposed MCA /ACE Training Area; LF-03, Southwest Landfill, overlaps with Training Area 1; and LF-04, Northeast Landfill, overlaps the MOUT Facility and Training Area 3.

FT-07, Former Fire Training Area

This site covers approximately 10 acres north of the munitions storage area, in the eastern portion of Moody AFB, between the runway and Grand Bay Range. FT-07 groundwater is divided into two areas, designated as Areas 1 and 2. Area 2 includes two treatment locations, A and B. The primary contaminants in Area 1 are benzene and trichloroethene (TCE), and the primary contaminants in Area 2 are TCE, 1,1-dichloroethene (DCE), and associated biodegradation products. Groundwater monitoring at the site is ongoing. Groundwater monitoring and remediation activities are ongoing at this site (Moody AFB 2018b)

LF-03, Southwest Landfill

Site LF-03 is in the southwest portion of Moody AFB. The site comprises a rectangular area of approximately 35 acres. The primary contaminants in groundwater are volatile organic compounds (VOCs), primarily DCE. Groundwater monitoring and remediation activities are ongoing at this site (Moody AFB 2018b).

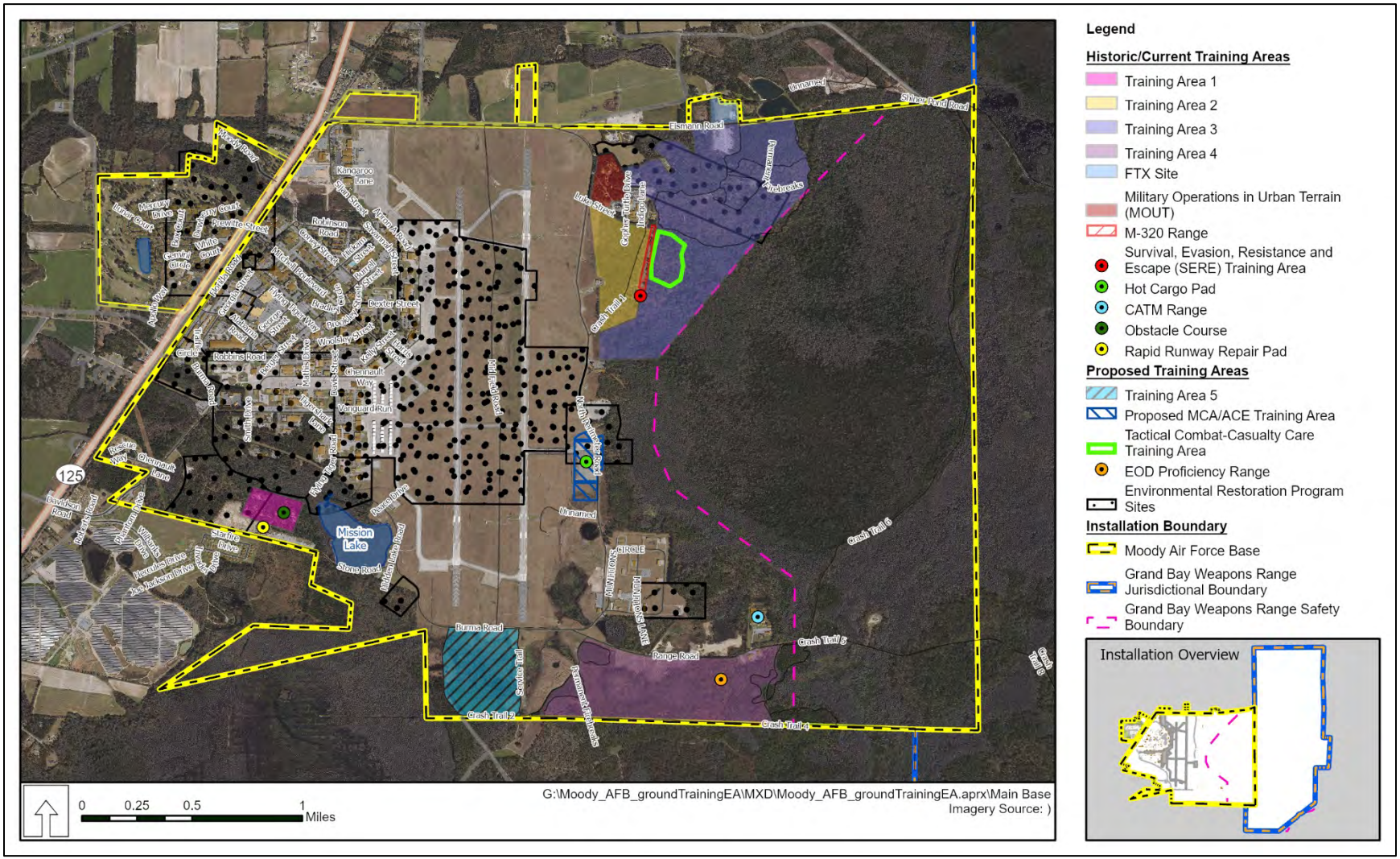


Figure 3-10. Environmental Restoration Program Sites at Moody Air Force Base Main Base

LF-04, Northeast Landfill

Site LF-04 encompasses approximately 108 acres in the northeast quarter of the developed portion of Moody AFB. The site includes a former landfill, which occupies approximately 8 acres within the northwest corner of the site. The remaining 100 acres encompass the groundwater contaminant plume. Investigations have identified VOCs, primarily TCE and associated biodegradation products, in groundwater. Groundwater monitoring and remediation activities are ongoing at this site (Moody AFB 2018b).

Toxic Substances. Toxic substances might pose a risk to human health but are not regulated as contaminants under the hazardous waste statutes. Included in this category are asbestos-containing materials, lead-based paint, radon, and polychlorinated biphenyls (PCBs).

Asbestos

The 23d CES/CEIE has developed an Asbestos Management and Operating Plan for Moody AFB, which includes program administration, organizational roles and responsibilities, standard work practices, and documentation. There are no structures proposed for modification or demolition; therefore, asbestos-containing material surveys are not pertinent.

Lead-Based Paint

AFMAN 32-7002 requires installations to ensure that construction, renovation, or demolition involving lead-based materials are manage in accordance with applicable federal, state, and local transportation, occupational health treatment, storage, and disposal requirements. No buildings are proposed to be modified or demolished; therefore, lead-based paint surveys are not pertinent.

Radon

The USEPA radon zone for Lowndes County, Georgia, is Zone 3 (low potential), with a predicted indoor average level less than 2 picocuries per liter (USEPA 2017).

Polychlorinated Biphenyls

Moody AFB has been considered PCB free since 1991 (Air Force 1991). All transformers with PCB concentrations over 500 parts per million (ppm) were removed, replaced, or refilled to below 50 ppm. The facility's Hazardous Waste Management Plan indicates that there are no known PCB materials at the installation but notes that ballasts and starters from light fixtures could contain PCB-containing material. The disposal of these materials is regulated. If the ballasts are not plainly marked as "non-PCB," the material must be treated as PCB containing (or be tested and proven to be non-PCB containing). As facility repairs and demolition occur, the suspected ballasts are removed and disposed of properly. No PCB spills have been identified within the installation. No buildings are proposed for modification or demolition; therefore, PCBs are not of concern.

3.11.2 *Environmental Consequences*

Impacts on hazardous materials management would be considered adverse if the federal action resulted in noncompliance with applicable federal and state regulations, or increased the

amounts generated or procured beyond current waste management procedures and capacities at the installation. Impacts on the ERP would be considered adverse if the federal action disturbed (or created) contaminated sites, resulting in negative effects on human health or the environment.

Alternative 1. Expanded Ground Training on Main Base

Current and proposed training activities including the expansion of ground training into new training areas would continue to use very small amounts of hazardous materials. With compliance with DOD and Air Force requirements, minor adverse impacts from the increased use of hazardous materials and increased generation of hazardous waste are expected from the implementation of Alternative 1.

Hazardous Materials and Wastes. Current and proposed expanded training activities and maintenance in existing training areas would have a minor impact on hazardous material and waste. No petroleum wastes would be generated at any of the training areas. All personnel utilizing or maintaining the training areas, including incoming TDY units, would be made aware of the Moody AFB hazardous waste management program. Training and maintenance activities conducted by units based at Moody AFB that require hazardous materials are obtained through the HAZMART. TDY units or contractors must notify 23d CES/CEIE of all materials being brought onto Moody AFB along with their associated safety data sheets. At the conclusion of each training event, organizations are required to report munitions expenditures on a usage log to 23d CES/CEIE. All units practice a pack-in/pack-out maintenance procedure for all wastes. Chem lights used during night-time training activities are considered a hazardous waste and collected and properly disposed of at the conclusion of each training event. Continued implementation of the processes established for the Environmental Management System, hazardous materials, and hazardous wastes would reduce any impact that would result from training activities at Moody AFB.

ERP. Land disturbance is restricted, and groundwater use is prohibited at ERP sites FT-07, LF-03, and LF-04. However, no ground disturbance or use of groundwater is proposed at the existing Hot Cargo Pad, proposed MCA/ACE Training Area, existing Training Area 1, or existing Training Area 3. Current and proposed future ground training activities would not expose personnel to potentially contaminated soil or groundwater at these locations and would therefore not result in adverse human health effects.

Toxic Substances. No renovation or demolition of buildings or facilities is proposed; therefore, no adverse impacts from asbestos-containing materials, lead-based paint, radon, or PCBs would occur.

Proposed future construction, demolition, and renovation of facilities and infrastructure as well as the proposed 820 BDG campus would have reasonably foreseeable adverse impacts on hazardous materials generation and hazardous waste disposal at Moody AFB. The addition of these facilities would include increased use of hazardous materials such as petroleum, oil, and lubricants as well as the generation of hazardous waste. The increases would require additional coordination with Moody AFB 23 CES/CEIE personnel, tracking, and compliance activities.

Alternative 2. No Action Alternative

Under the No Action Alternative there would be no change in training activities, and no new training areas would be established. As such, there would be no additional use of hazardous materials or the production of additional hazardous waste that would require disposal. Therefore, there would be no impacts on hazardous materials, hazardous waste, the ERP, or toxic substances under the No Action Alternative.

3.12 Health and Safety

For the definition of the resource, see **Appendix D-12.** The ROI for this resource is Moody AFB and surrounding environments.

3.12.1 *Existing Conditions*

Daily training activities and maintenance operations conducted on Moody AFB are performed in accordance with applicable Air Force safety regulations, Air Force technical guidance, and the standards stipulated in Air Force Occupational Safety and Health requirements. Construction and demolition activities are common on Moody AFB and have associated inherent risks such as chemical (e.g., asbestos, lead, hazardous materials) and physical (e.g., noise propagation, falling, electrocution, collisions with equipment) sources. Companies and individuals contracted to perform construction activities on Air Force installations are responsible for adhering to Occupational Safety and Health Administration (OSHA) requirements to mitigate these hazards. Industrial hygiene programs address exposure to hazardous materials, use of personal protective equipment, and the availability and use of safety data sheets, the latter of which are also the responsibility of construction contractors to provide to workers. Federal civilian and military personnel that have a need to enter areas under construction should be familiar with and adhere to OSHA and Air Force Occupational Safety and Health requirements, as well as applicable industrial hygiene programs. Individuals tasked to operate and maintain equipment, such as power generators, are responsible for following all applicable technical guidance, as well as adhering to established OSHA and Air Force safety guidelines.

Health and safety hazards can be identified and subsequently reduced or eliminated before an activity begins. Necessary elements for an accident-prone situation or environment include the presence of the hazard itself, together with the exposed population. The degree of exposure to hazards depends primarily on the proximity of the hazard to the population. Hazards include transportation, maintenance and repair activities, noise, and fire. The proper operation, maintenance, and repair of vehicles and equipment are important for reducing safety risks. Any facility or human-use area with potential explosive or other rapid oxidation process creates unsafe environments due to noise and fire hazards for nearby populations. Noise environments can also mask verbal or mechanical warning signals such as horns and sirens.

3.12.2 *Environmental Consequences*

Impacts that pose a long-term risk to human health or safety are evaluated. Impacts would be considered significant if federal civilian, military, or contractor personnel did not comply with established OSHA and Air Force safety guidelines. There are potential health and safety concerns with current and increased ground training activities at Moody AFB Main Base. The health and safety of on-site military and civilian workers are safeguarded by numerous DOD and military branch-specific requirements designed to comply with standards issued by federal

OSHA, USEPA, and state occupational safety and health agencies. These standards specify health and safety requirements, the amount and type of training required for workers, the use of personal protective equipment (PPE), administrative controls, engineering controls, and permissible exposure limits for workplace stressors.

Alternative 1. Expanded Ground Training on Main Base

Alternative 1 would have minor adverse impacts on health and safety as a result of increased training activities and the expansion of ground training into new training areas. However, training activities would adhere to established procedures and all personnel would follow DOD and OSHA standards, reducing the risk of potential injuries and accidents during ground training.

The continuation of current training activities and maintenance at established training areas on Main Base would result in minor adverse impacts on safety. All personnel conducting maintenance activities in the training areas where ground disturbance could occur are required to take Unexploded Ordnance Awareness training. Training activities would continue to be coordinated to ensure activities do not conflict with those being conducted in an adjacent training area or those that might require helicopter support. Adherence to established procedures, including Operating Instructions and Risk Assessments; use of PPE; and compliance with the Explosive Site Plans and DOD and OSHA standards would reduce the potential for injuries, accidents, or other impacts on safety.

Increased training activities in existing training areas would have a minor adverse impact on safety. Additional personnel operations, equipment, and vehicles, and the use of more GBSs, flares, smokes, blanks, and simunitions increase risks to human health and safety. However, compliance with established safety plans and procedures and DOD and OSHA safety standards would reduce the potential for injuries and accidents during increased ground training activities.

There would be minor adverse impacts on health and safety from the construction and use of the new FTX Site. Although some training activities that would otherwise occur at the existing FTX Site would be transferred to the new FTX Site, an increase in overall ground training activities at the FTX Site increases the inherent safety risks. However, all training activities would comply with established safety plans and procedures as previously described minimizing the risk for potential injuries and accidents.

The construction of the EOD Proficiency Range would have short-term and long-term minor impacts on safety. All construction personnel would be responsible for following federal and state safety regulations and DOD and OSHA safety standards and would be required to conduct construction activities in a manner that does not increase risk to workers, military personnel, and the public.

Explosive materials use and handling at the proposed EOD Proficiency Range would be performed in the same manner as the existing EOD Proficiency Range located on the Grand Bay Range. Use and handling of explosive materials would be in accordance with the Explosive Site Plan and DOD and OSHA standards (29 CFR § 1910.109) and would be monitored by EOD Flight. No explosives would be permanently stored at the EOD Proficiency Range; explosives would be brought in advance of each training event, and only in the quantities necessary to support the training. Adherence to established procedures, including Operating

Instructions and Risk Assessments, along with the proper use of PPEs and compliance with the Explosive Site Plans and DOD and OSHA standards, would reduce the potential for injuries, accidents, or other impacts on safety.

Training activities at Training Area 5 would have a minor adverse impact on safety. Personnel and equipment would be restricted to existing unimproved roads during training activities in Training Area 5, would adhere to established procedures such as Operating Instructions and Risk Assessments, and would utilize PPEs when required. Training activities would be properly scheduled to ensure that activities in Training Area 5 would not conflict with aircraft flight operations at the Moody AFB airfield.

Construction, use, and maintenance of the proposed TCCC Training Area, including the approximately 5.6 acres of ground disturbance that would occur with the training area construction would have minor adverse impacts on safety. All construction personnel would be responsible for following federal and state safety regulations and required to conduct construction activities in a manner that does not increase risk to workers, military personnel, and the public. Occupational safety and health regulations would be implemented during construction. Proposed training activities at the TCCC Training Area and C-IED training along established crash trails and fire breaks would be coordinated to ensure activities do not conflict with those being conducted in adjacent training areas or with helicopter support requirements. Adherence to established procedures, including Operating Instructions and Risk Assessments as well as the proper use of PPEs and compliance with the Explosive Site Plans and DOD and OSHA standards would reduce the potential for injuries, accidents, or other impacts on safety.

The impacts on safety from the designation, use, and maintenance of the proposed MCA/ACE Training Area are the same as described for the TCCC Training Area. Additionally, given the proximity of the proposed MCA/ACE Training Area and Hot Cargo Pad to the Moody AFB airfield, coordination with air traffic control and airfield operations would occur for all training activities in this training area.

There would be a minor impact on safety from proposed training activities in the Grand Bay WMA. To reduce risks to civilian personnel using the Grand Bay WMA, all training activities would follow the restrictions in the lease agreement between the 820 BDG and Georgia DNR, which provides guidelines for the limited training activities permitted in the Grand Bay WMA. All military personnel would follow DOD and OSHA standards during training activities and use the same level of safety precautions for off-base training activities as employed for on-base training activities.

Proposed future construction, demolition, and renovation of facilities as well as the construction of the proposed 820 BDG campus would have a minor impact on safety. There are inherent safety issues associated with construction, demolition, and renovation activities. However, the construction personnel and contractors would be required to follow all federal and state safety regulations during construction activities, wear appropriate PPEs, and required to conduct construction activities in a manner that does not increase risk to workers or the public. It is anticipated that training activities currently occurring in Training Area 2 would be redistributed to other training areas with the construction of the proposed 820 BDG campus. However, proper scheduling and maintenance of Main Base training areas would ensure that the redistribution of training activities would not have increased health and safety risks.

Alternative 2. No Action Alternative

Under the No Action Alternative, there would be no increased training activities in existing training areas, and no new ground training areas would be established at Moody AFB. Therefore, the No Action Alternative would not result in any new or additional impacts on safety.

4.0 LIST OF PREPARERS

Table 4-1 provides the list of preparers primarily responsible for the preparation of this EA.

Table 4-1. List of Preparers

Name	Affiliation	Role	Education	Years of Experience	Contribution
Dean Alford, PG	Vernadero Group Inc.	Professional Geologist	MS, Geology/ Geochemistry BS, Geology	34	Hazardous Materials and Wastes, Earth Resources, Water Resources
Maggie Fulton	Vernadero Group Inc.	Technical Editor	BS, English	32	Technical Editing, Formatting, Production
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Carey Lynn Perry	Vernadero Group Inc.	NEPA Specialist	MS, Oceanography and Coastal Sciences BS, Marine Biology	15	Quality Control Review
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Eric Webb, PhD	Vernadero Group Inc.	Project Manager	PhD, Oceanography and Coastal Sciences MS, Biology BS, Biology	26	Project Management, Biological Resources, Socioeconomics, Environmental Justice,
Travis Gaussoin	Vernadero Group Inc.	GIS	Graduate Studies in Community and Regional Planning BA, Anthropology and Political Science	8	GIS and Cartography

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APPENDIX A. INTERAGENCY AND INTERGOVERNMENTAL COORDINATION FOR ENVIRONMENTAL PLANNING AND GOVERNMENT-TO-GOVERNMENT LETTERS

1

2 FORMAT PAGE

APPENDIX A-1. MAILING LIST

Agency Mailing List

Department of Community Affairs
60 Executive Park South, NE
Atlanta, GA 30329

Georgia Environmental Protection Division
2 Martin Luther King Jr. Drive
Suite 1152, East Tower
Atlanta, GA 30334

Katrina Morris
Georgia Wildlife Resources Division
2070 U.S. Hwy. 278, S.E.
Social Circle, GA 30025

Jennifer Dixon
Historic Preservation Division
Environmental Review
60 Executive Park South, NE
Atlanta, GA 30329

Chairman Bill Slaughter
Lowndes County Commission
327 N. Ashley St
Valdosta, GA 31601

Megan Parker
Environmental Project Manager
Southern Georgia Regional Commission
327 West Savannah Ave
Valdosta, GA 31601

Joseph Pritchard
County Manager
Lowndes County Commission
327 N. Ashley St - 2nd Floor
Valdosta, GA 31601

Lanier County Commission
Courthouse, 100 Main St
Lakeland, GA 31635

John Doresky
U. S. Fish and Wildlife Service
Georgia Ecological Services
Highway 27 at 1st Division Road
Fort Benning, GA 31905

Jason Davenport
Lowndes County Planner
327 N. Ashley St - 2nd Floor
Valdosta, GA 31601

Carol Comer
Georgia Department of Transportation –
Intermodal Division
One Georgia Center
600 West Peachtree NW – 25th Floor
Atlanta, GA 30308

Tribal Mailing List

James Floyd, Principal Chief
Muscogee (Creek) Nation
The Muscogee (Creek) Nation
PO Box 580
Okmulgee, OK 74447

Stephanie Bryan, Tribal Chair
Poarch Band of Creeks
5811 Jack Springs Rd
Altmore, AL 36502

Lovelin Poncho, Chairman
Coushatta Tribe of Louisiana
P.O. Box 10
lton, LA 70532

Ryan Morrow, Town King (Mekko)
Thlopthlocco Tribal Town
PO Box 188
Wetumka, OK 74883

Jeremiah Hobia, Chief
Kialegee Tribal Town
PO Box 332
Wetumka, OK 74883

Ann Denson Tucker, Chairwoman
Muscogee Nation of Florida (State Recognized)
278 Church Road
Ponce de Leon, FL 32455

Leonard Harjo, Principal Chief
Seminole Nation of Oklahoma
PO Box 1498
Wewoka, OK 74884

APPENDIX A-2. INTERAGENCY AND INTERGOVERNMENTAL COORDINATION FOR ENVIRONMENTAL PLANNING LETTER EXAMPLE

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2 FORMAT PAGE

DEPARTMENT OF THE AIR FORCE
23D CIVIL ENGINEER SQUADRON (ACC)
MOODY AIR FORCE BASE GEORGIA

27 JAN 2021

23 CES/CD

3485 Georgia Street
Moody AFB, GA 31699-1707

Georgia Department of Transportation — Intermodal Division
Attn: Ms. Carol Comer
One Georgia Center
600 West Peachtree NW – 25th Floor
Atlanta, GA 30308

Dear Ms. Comer:

The United States Air Force is preparing an Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA) to assess the potential environmental consequences associated with comprehensive ground training on the Main Base at Moody Air Force Base (AFB), Georgia.

Moody AFB is located on approximately 10,843 acres in south-central Georgia, northeast of the city of Valdosta in Lowndes and Lanier counties (Figure 1). The 23d Wing and 93d Air Ground Operations Wing at Moody AFB conduct comprehensive ground training within both designated training areas and across the airfield and cantonment at Moody AFB. The types of military ground training historically and currently conducted, as well as proposed to be conducted in the future, are common military activities that include: the use of a small arms firing range for live weapons training and qualification; the use of designated training areas for maneuvers, force-on-force rescue, real-world deployment, land navigation, convoy movement and protection, and counter-improvised explosive devices training; explosives training; Mission Capable Airmen/Agile Combat Employment training; the use of helicopter landing zones for jump operations, personnel insertion/extraction, and crash rescue field training exercises; military working dog training; M-320 grenade launcher training and qualification; and integrated base defense training. Training activities can include the use of simunitions, Multiple Integrated Laser Engagement System, pyrotechnics, ground burst simulators, blanks, smokes, and flares. Equipment used during training activities include vehicles such as MRAP/MATV, HMMWV, 6x6 cargo truck, SXV/ITV, Polaris MRZR, Polaris Ranger, and generator ECU trailer; Small Unmanned Aircraft Systems; and HH-60G helicopters.

The Proposed Action would continue these military ground training activities at Moody AFB and would provide additional designated training areas and training opportunities on Main Base to better support Department of Defense ground training requirements. It is anticipated that military activities would continue to grow, and additional ground training areas would be needed

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used for ground training activities and proposed new designated training areas are shown in Figure 2.

If you have additional information regarding impacts of the Proposed Action or of the environmental aspects of the project area of which we are unaware, we would appreciate receiving such information for inclusion and consideration during the development of the EA. Please submit your written response within 30 days of receipt of this letter to ensure your concerns are adequately addressed in the EA. Written responses can be sent to Mr. Lorence Busker at 23 CES/CEIE, 3485 Georgia Street, Moody AFB, Georgia 31699 or via email at lorence.busker@us.af.mil. Thank you in advance for your assistance in this effort.

Sincerely

JOHN L. EUNICE, III
Deputy Base Civil Engineer

Attachments:

1. Figure 1. Location of Moody Air Force Base, Georgia
2. Figure 2. Location of Current and Proposed Designated Ground Training Areas on Moody Air Force Base, Georgia

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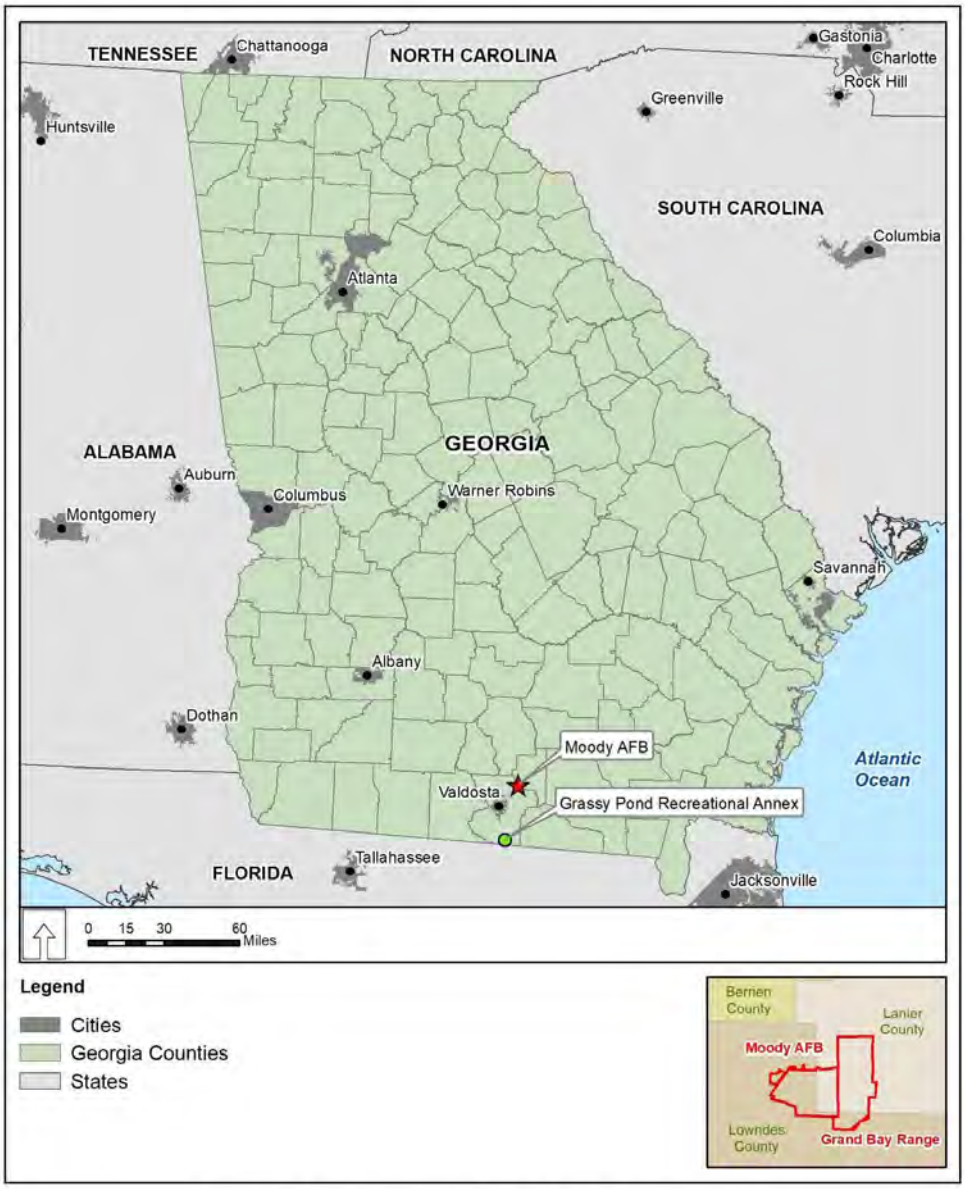

Figure 1. Location of Moody Air Force Base, Georgia

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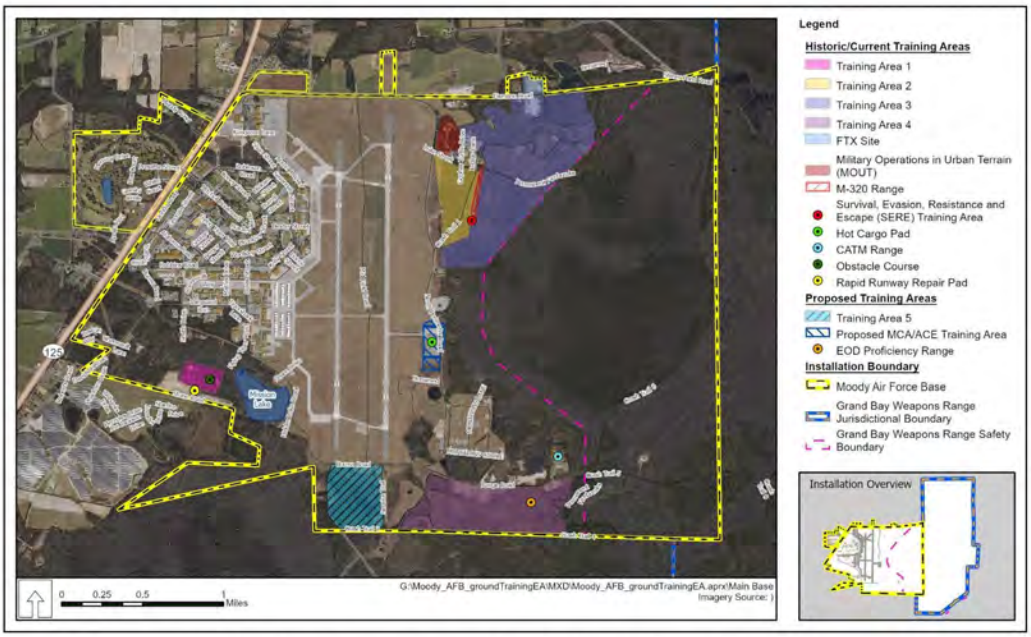

Figure 2. Location of Current and Proposed Designated Ground Training Areas on Moody Air Force Base, Georgia

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APPENDIX A-3. TRIBAL COORDINATION LETTER EXAMPLE

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2 FORMAT PAGE

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 23D WING (ACC)
MOODY AIR FORCE BASE GEORGIA

January 29, 2021

Colonel Daniel P. Walls
23d Wing Commander
23 Flying Tiger Way
Bldg 105 Suite 1
Moody AFB GA 31699

Lovelin Poncho, Chairman
Coushatta Tribe of Louisiana
P.O. Box 10
Lton LA 70532

Dear Chairman Poncho

The United States Air Force (USAF) is preparing an Environmental Assessment in accordance with the National Environmental Policy Act to assess the potential environmental consequences associated with comprehensive ground training on the Main Base at Moody Air Force Base (AFB), Georgia. We would like to initiate government-to-government consultation regarding the proposed action and invite the Muscogee (Creek) Nation to review and comment on the proposed action pursuant to Section 106 of the National Historic Preservation Act (NHPA).

Moody AFB is located on approximately 10,843 acres in south-central Georgia, northeast of the city of Valdosta in Lowndes and Lanier counties (Figure 1). The 23d Wing and 93d Air Ground Operations Wing at Moody AFB conduct comprehensive ground training within both designated training areas and across the airfield and cantonment at Moody AFB. The types of military ground training historically and currently conducted, as well as proposed to be conducted in the future, are common military activities that include: the use of a small arms firing range for live weapons training and qualification; the use of designated training areas for maneuvers, force-on-force rescue, real-world deployment, land navigation, convoy movement and protection, and counter-improvised explosive devices training; explosives training; Multi-Capable Airmen/Agile Combat Employment training; the use of landing zones for jump operations, personnel insertion/extraction, and crash rescue field training exercises; military working dog training; M-320 grenade launcher training and qualification; and integrated base defense training. Training activities can include the use of simunitions, Multiple Integrated Laser Engagement System, pyrotechnics, ground burst simulators, blanks, smokes, and flares. Equipment used during training activities include vehicles such as MRAP/MATV, HMMWV, 6x6 cargo truck, SXV/ITV, Polaris MRZR, Polaris Ranger, and generator ECU trailer; Small Unmanned Aircraft Systems; and HH-60G helicopters.

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The Proposed Action would continue these military ground training activities at Moody AFB and would provide additional designated training areas and training opportunities on Main Base to better support Department of Defense ground training requirements. It is anticipated that military activities would continue to grow, and additional ground training areas would be needed to accommodate the training requirements.

Pursuant to Section 106 of the NHPA, and consistent with Air Force Instruction 90-2002, *Air Force Interactions with Federally Recognized Tribes*, we request a response regarding your desire for potential further engagement in government-to-government consultation on this Proposed Action. We also ask your assistance in identifying whether there are areas of historic, religious, or cultural significance within the area of potential effects for this proposed undertaking, which includes all of Moody AFB Main Base (Figure 2). Additionally, the USAF requests your input in identifying any issues or areas of concern you feel should be addressed in the environmental analysis.

Regardless of whether the Tribe chooses to consult on this proposed project, the USAF will comply with applicable laws and regulations in the event of an inadvertent discovery of archaeological or human remains. Specifically, work on site would cease and the discovery immediately reported to the installation cultural resources manager, who would initiate the Section 106 process and notify tribes with interests in the area.

Please forward any written comments to Mr. Lorence Busker, 23 CES/CEIE, 3485 Georgia Street, Moody AFB, GA 31699 or email to lorence.busker@us.af.mil within 30 days of receipt of this letter to ensure the USAF has sufficient time to fully consider them when preparing the Draft Environmental Assessment. If you need more than 30 days to review this letter and provide comments, or if you have any questions or concerns pertaining to this correspondence, Mr. Busker can be reached at (229) 257-2396. Thank you in advance for your assistance in this effort.

Sincerely

DANIEL P. WALLS, Colonel, USAF
Commander

Attachments
1. Figure 1 – Project Area Location
2. Figure 2 – Area of Potential Effects

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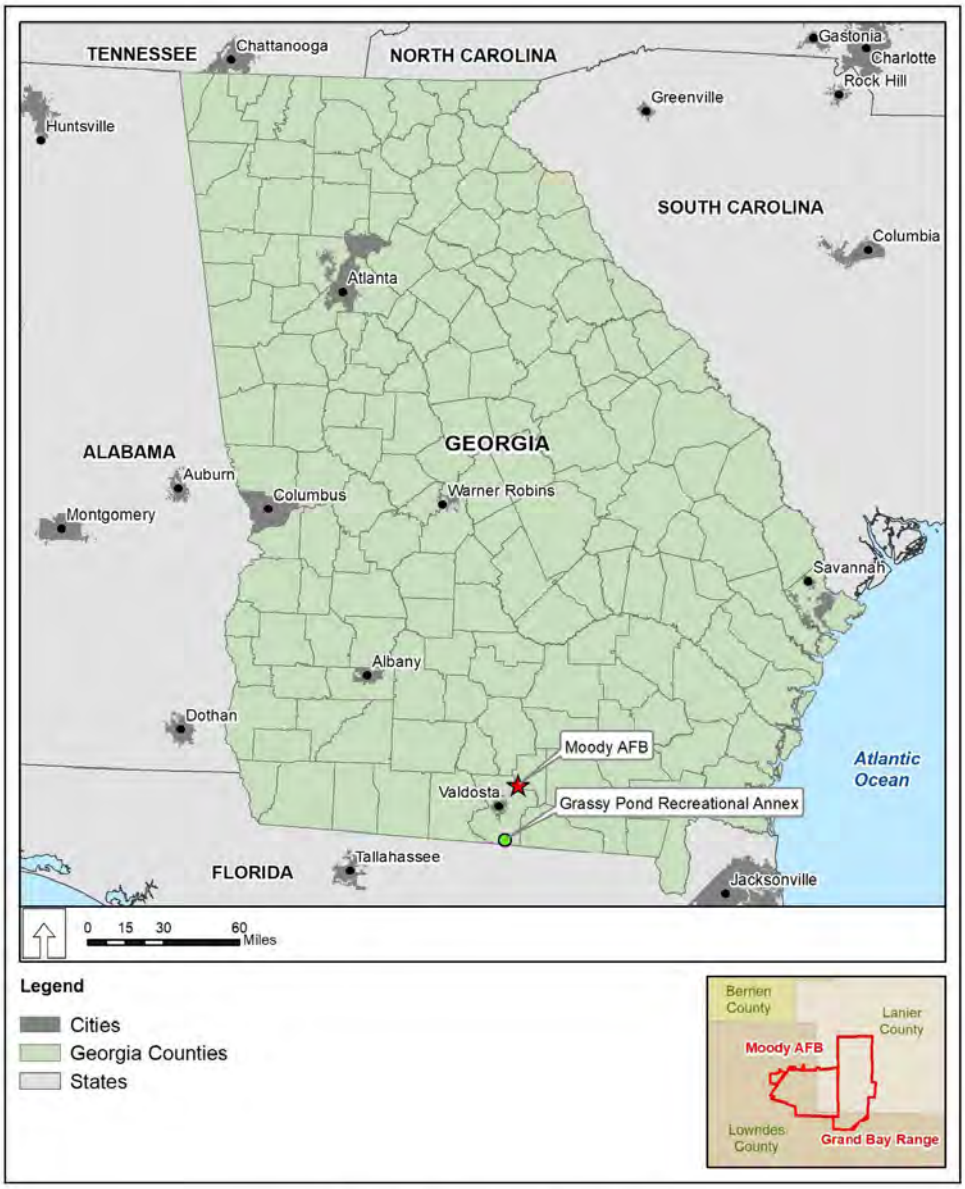

Figure 1. Project Area Location

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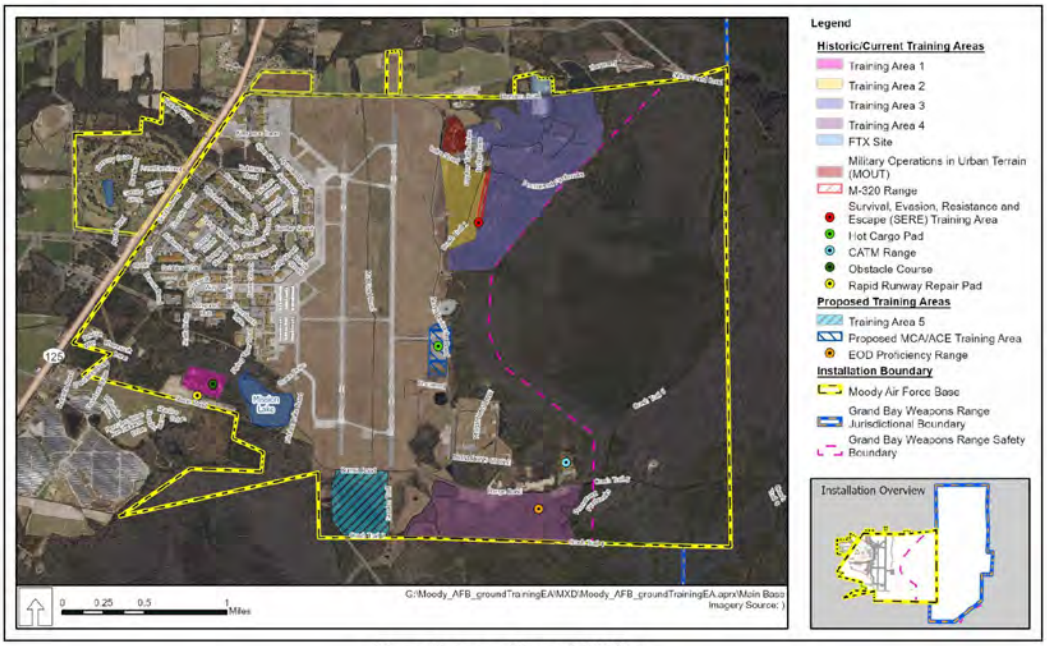

Figure 2. Area of Potential Effects

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APPENDIX A-4. ENDANGERED SPECIES ACT SECTION 7 CONSULTATION LETTER

FORMAT PAGE

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DEPARTMENT OF THE AIR FORCE
23D CIVIL ENGINEER SQUADRON (ACC)
MOODY AIR FORCE BASE GEORGIA

14 JUL 2021

Mr. Gregory Lee
23 CES/CEIE
3485 Georgia Street
Moody AFB GA 31699-1707

US Fish and Wildlife Service
Georgia Ecological Services
Attn: John Doresky
Highway 27 at 1st Division Road
Fort Benning GA 31905

Dear Mr. Doresky:

The US Air Force (Air Force) requests informal Section 7 consultation under the Endangered Species Act for the proposed comprehensive ground training activities at Moody Air Force Base (AFB), Georgia (Figure 1).

Moody AFB proposes to continue current military ground training activities on Main Base, support future ground training activities, including an increase in training activities within existing training areas, and to establish new training areas on Main Base. The 23d Wing and 93d Air Ground Operations Wing at Moody AFB conduct comprehensive ground training within designated training areas and across the airfield and cantonment at Moody AFB. The types of military ground training historically and currently conducted, as well as proposed to be conducted in the future, are common military activities that include the use of a small-arms firing range for live weapons training and qualification; the use of designated training areas for maneuvers, force-on-force rescue, real-world deployment, land navigation, convoy movement and protection, and counter-improvised explosive devices training; explosives training; Multi-Capable Airmen (MCA)/Agile Combat Employment (ACE) training; the use of helicopter landing zones for jump operations, personnel insertion/extraction, and crash rescue field training exercises; military working dog training; M-320 grenade launcher training and qualification; and integrated base defense training. Training activities can include the use of Explosive Ordnance Disposal (EOD) tools and equipment, demolition explosives, simunitions, Multiple Integrated Laser Engagement System, pyrotechnics, ground burst simulators, blanks, smokes, and flares. Equipment used during training activities include vehicles such as Mine-Resistant Ambush-Protected vehicle, HMMWV (Humvee), 6x6 cargo truck, utility terrain vehicle, all-terrain vehicle, and generator Environmental Control Unit trailer; Small Unmanned Aircraft Systems; and HH-60W helicopters.

Two alternatives were analyzed: Alternative 1, Expanded Ground Training on Main Base, and Alternative 2, No Action Alternative. Alternative 1 would continue military ground

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training activities, including training area maintenance activities, at Moody AFB Main Base; would increase the training activities in established training areas on Main Base by 50 percent to accommodate future growth in training; would create the Tactical Combat-Casualty Care Training (TCCC) Area and implement counter-improvised explosive device training on existing firebreaks and crash trails in Training Area 3; would construct, use, and maintain a new Field Training Exercise (FTX) site; establish two additional helicopter landing zones (HLZs) at the Military Operations in Urban Terrain (MOUT) Facility; renew the lease between the 38th Rescue Squadron and the State of Georgia for the continued use of the Grand Bay Wildlife Management Area (WMA) for land navigation training; establish, use, and maintain Training Area 5; establish, use, and maintain an MCA/ACE Training Area; and establish a new EOD Proficiency Range on Main Base (Figure 2).

Threatened, Endangered, and Candidate Species and Designated Critical Habitat

A review of the US Fish and Wildlife Service (USFWS) Information for Planning and Conservation System (USFWS 2021) and the Moody AFB Integrated Natural Resources Management Plan (INRMP; Moody AFB 2018) identified three federally protected species with the potential to occur on Moody AFB Main Base and the Grand Bay WMA:

- Eastern indigo snake (*Drymarchon couperi*) - Threatened
- Gopher tortoise (*Gopherus polyphemus*) – Candidate
- Wood stork (*Mycteria americana*) – Threatened

There is no designated critical habitat on Moody AFB Main Base or on the Grand Bay WMA.

The gopher tortoise is present and managed through surveys and avoidance in MOUT, FTX Site, proposed new FTX Site, Training Area 2, and Training Area 3. Gopher tortoise management is completed through projects identified in the Moody AFB INRMP (Moody AFB 2018) with concurrence by the Georgia Department of Natural Resources and USFWS. Eastern indigo snakes typically use gopher tortoise burrows for nesting and as refuge from cold in the winter and from intense heat in the summer. Management efforts for the eastern indigo snake include surveys concurrent with gopher tortoise surveys of burrows with burrow entrance cameras and searches of burrow entrances for eastern indigo snakeskin sheds. However, no eastern indigo snakes have been observed on Main Base during recent focused surveys, and no eastern indigo snakes have been observed in the Grand Bay Weapons Range or Grand Bay WMA since 1996 (Moody AFB 2018).

No other federally listed species are known to occur at Moody AFB. Wood storks have been documented to occasionally forage in the Carolina Bays of the Grand Bay – Banks Lake ecosystem seasonally, but no colonies or roosting sites occur on Moody AFB. The closest known wood stork rookery occurs approximately 10 miles northwest of Moody AFB (Moody AFB 2018).

Determination of the Effects of the Proposed Action

There would be no effect on any federally listed species from the continued and increased ground training in established training areas on Main Base or from land navigation training in the Grand Bay WMA. Training activities in established training areas have been occurring for decades; species present within these training areas have habituated to the noise associated with vehicles, equipment, and use of training ordnance and would not be impacted by the continued

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training activities. Gopher tortoise and eastern indigo snake surveys are conducted annually on Main Base, including in the existing training areas where suitable habitat is present. The activity status of each burrow is recorded, and burrows are marked in the field. No vehicles or equipment are permitted to travel off road in training areas with high densities of active gopher tortoise burrows, which includes Training Area 2. Training activities are monitored and controlled in MOUT, Training Area 2, Training Area 3, and the existing and new FTX Sites to minimize impacts on gopher tortoise habitat and avoid damage to active burrows.

Vegetation would be removed for the construction of the new EOD Proficiency Range. However, there is no suitable habitat for the gopher tortoise and eastern indigo snake at the proposed location for the EOD Proficiency Range. Approximately 5.6 acres of pine forest habitat would be removed with the construction of the TCCC Training Area within Training Area 3. Suitable habitat for the gopher tortoise and eastern indigo snake is present at the proposed TCCC Training Area; however, no gopher tortoise burrows have been documented in the proposed TCCC Training Area during previous gopher tortoise surveys (Figure 3). Surveys for gopher tortoise burrows would be conducted prior to the activities, and protection controls for tortoises (and eastern indigo snakes, if warranted) would be implemented as appropriate. These controls could include a combination of flagging burrows, installing temporary protective covers, relocating individual tortoises, and providing contractor education regarding protection measures. Also, heavy equipment would be staged in areas free of tortoise burrows. Therefore, the construction, use, and maintenance of the TCCC Training Area may affect but is not likely to adversely affect the gopher tortoise. Because the eastern indigo snake has never been observed on Main Base at Moody AFB even though frequent surveys for the species are conducted in suitable habitat, the construction, use, and maintenance of the TCCC Training Area would have no effect on the eastern indigo snake due to its absence from the project area. Similarly, because no colonies or roosting sites for wood storks occur on Moody AFB, and the closest known wood stork rookery occurs approximately 10 miles to the northwest, the current and proposed ground training on Moody AFB would have no effect on the wood stork due to its absence from the project area.

I am requesting written concurrence with a no effect determination for the eastern indigo snake and wood stork, and a may affect but not likely to adversely affect determination for the gopher tortoise. If you have any comments or need additional information concerning the Proposed Action, please contact Mr. Lorence Busker at 23 CES/CEIE, 3485 Georgia Street, Moody AFB, Georgia 31699 or via email at lorence.busker@us.af.mil. Thank you in advance for your assistance in this effort.

Sincerely

Gregg W. Lee

GREGORY W. LEE
Environment Element Chief

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References

Moody Air Force Base (AFB). 2018. Integrated Natural Resources Management Plan, Plan Years FY2018 – FY2023, Moody AFB, Georgia. July.

US Fish and Wildlife Service (USFWS). 2021. Information for Planning and Consultation. <https://ecos.fws.gov/ipac>. Accessed April 2021.

Attachments:

1. Figure 1. Location of Moody Air Force Base, Georgia
2. Figure 2. Location of Current and Proposed Ground Training Areas on Moody Air Force Base, Georgia
3. Figure 3. Location of Gopher Tortoises on Main Base, Moody Air Force Base, Georgia

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Figure 1. Location of Moody Air Force Base, Georgia

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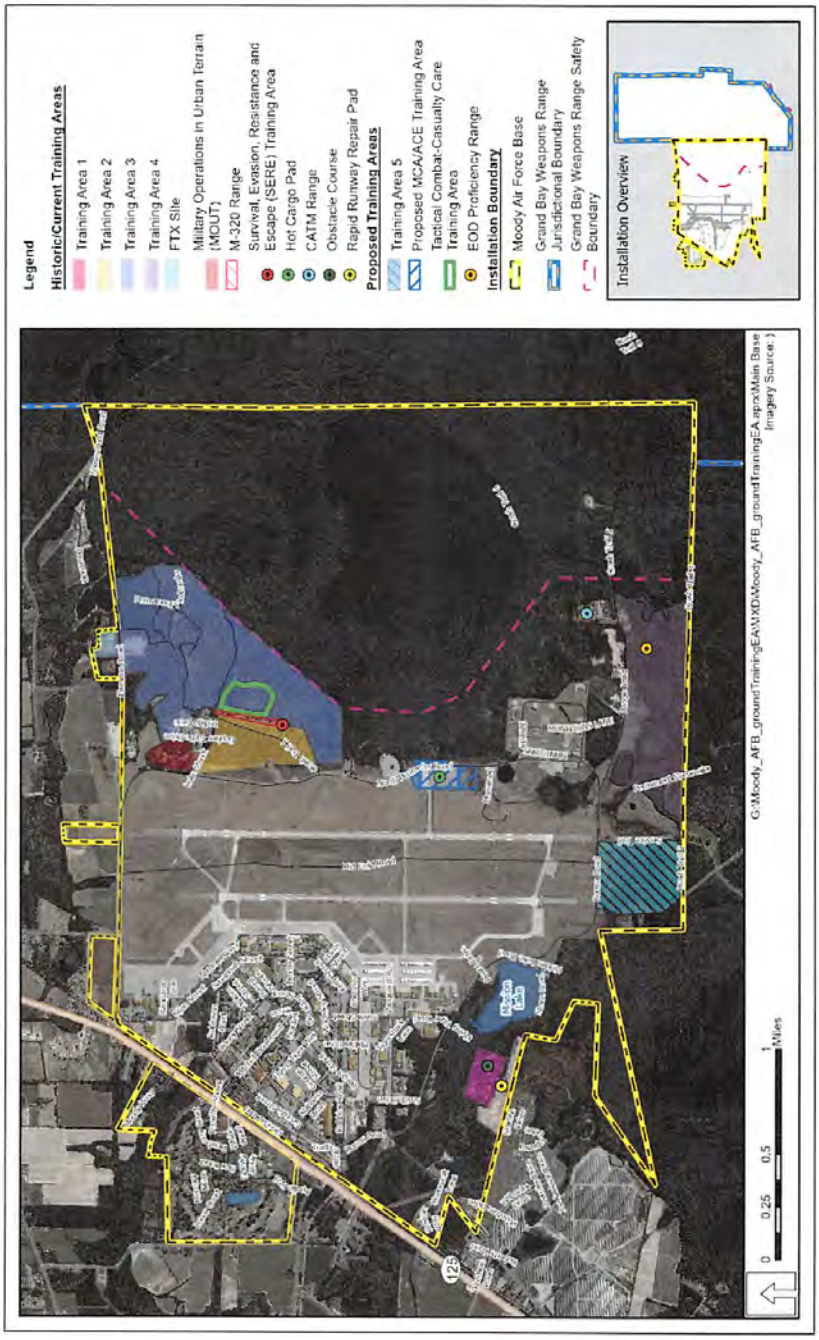

Figure 2. Location of Current and Proposed Ground Training Areas on Moody Air Force Base, Georgia

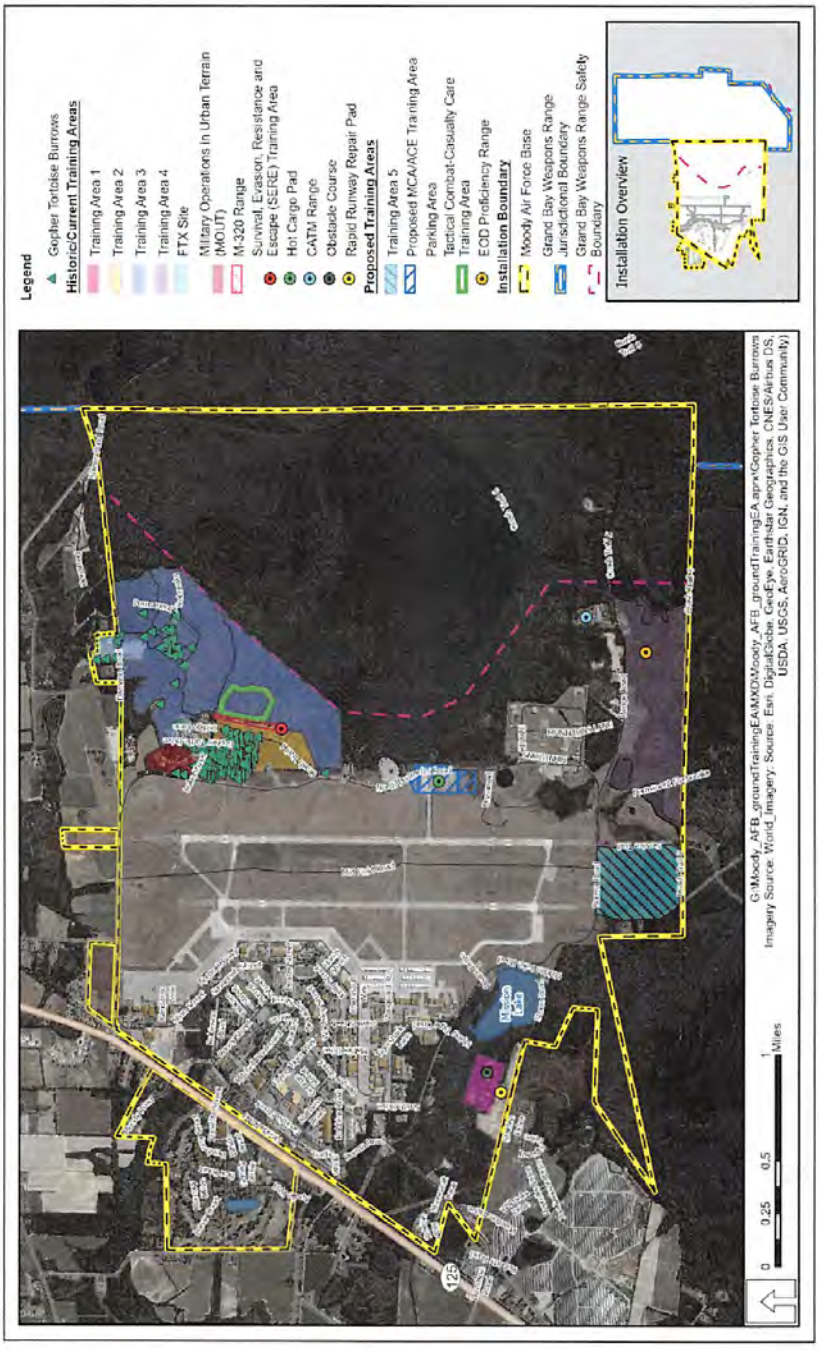

Figure 3. Location of Gopher Tortoises on Main Base, Moody Air Force Base, Georgia

FORMAT PAGE

APPENDIX A-5. NATIONAL HISTORIC PRESERVATION ACT SECTION 106 CONSULTATION LETTER

FORMAT PAGE

DEPARTMENT OF THE AIR FORCE
23D CIVIL ENGINEER SQUADRON (ACC)
MOODY AIR FORCE BASE GEORGIA

Mr. Gregory Lee
23 CES/CEIE
3485 Georgia Street
Moody AFB GA 31699-1707

14 JUL 2021

Georgia Historic Preservation Division
Attn: Jennifer Dixon
Jewitt Center for Historic Preservation
2610 GA Hwy 155, SW
Stockbridge GA 30281

Dear Ms. Dixon:

In accordance with Section 106 of the National Historic Preservation Act and its implementing regulations, 36 Code of Federal Regulations (CFR) Part 800, The US Air Force (Air Force) is submitting the following information for your review and concurrence regarding the proposed comprehensive ground training activities at Moody Air Force Base (AFB), Georgia (Figure 1).

Description of the Undertaking

Moody AFB proposes to continue current military ground training activities on Main Base, support future ground training activities, including an increase in training activities within existing training areas, and to establish new training areas on Main Base. The 23d Wing and 93d Air Ground Operations Wing at Moody AFB conduct comprehensive ground training within designated training areas and across the airfield and cantonment at Moody AFB. The types of military ground training historically and currently conducted, as well as proposed to be conducted in the future, are common military activities that include the use of a small-arms firing range for live weapons training and qualification; the use of designated training areas for maneuvers, force-on-force rescue, real-world deployment, land navigation, convoy movement and protection, and counter-improvised explosive devices training; explosives training; Multi-Capable Airmen (MCA)/Agile Combat Employment (ACE) training; the use of helicopter landing zones for jump operations, personnel insertion/extraction, and crash rescue field training exercises; military working dog training; M-320 grenade launcher training and qualification; and integrated base defense training. Training activities can include the use of Explosive Ordnance Disposal (EOD) tools and equipment, demolition explosives, simunitions, Multiple Integrated Laser Engagement System, pyrotechnics, ground burst simulators, blanks, smokes, and flares. Equipment used during training activities include vehicles such as Mine-Resistant Ambush-Protected vehicle, HMMWV (Humvee), 6x6 cargo truck, utility terrain vehicle, all-terrain

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vehicle, and generator Environmental Control Unit trailer; Small Unmanned Aircraft Systems; and HH-60W helicopters.

Two alternatives were analyzed: Alternative 1, Expanded Ground Training on Main Base, and Alternative 2, No Action Alternative. Alternative 1 would continue military ground training activities, including training area maintenance activities, at Moody AFB Main Base; would increase the training activities in established training areas on Main Base by 50 percent to accommodate future growth in training; would add force-on-force training exercises in Training Area 1; would create the Tactical Combat-Casualty Care Training Area and implement counter-improvised explosive device training on existing firebreaks and crash trails in Training Area 3; would construct, use, and maintain a new Field Training Exercise (FTX) site; establish two additional helicopter landing zones at the Military Operation in Urban Terrain (MOUT) Facility; renew the lease between the 38th Rescue Squadron and the State of Georgia for the continued use of the Grand Bay Wildlife Management Area for land navigation training; establish, use, and maintain Training Area 5; establish, use, and maintain an MCA/ACE Training Area; and establish a new EOD Proficiency Range on Main Base (Figure 2). Alternative 1 would include no new building construction. In addition, no existing buildings would be modified under the proposed action. Ground disturbances would include increased pedestrian uses within existing and proposed new training areas. The use of all vehicles on Main Base would remain restricted to existing roads, trails, and firebreaks.

Description of the Current Land Use and Condition

Moody AFB includes the Main Base Administrative Area (Main Base), the Grand Bay Range, and the Grassy Pond Recreational Annex. Except for the proposed training in the Grand Bay Wildlife Management Area (WMA), the existing and proposed training areas are all located in the Main Base Administrative Area. Land uses for the Main Base Administrative Area are all associated with military training and readiness activities and include the Moody AFB airfield, support facilities, and ground training areas. The Grand Bay WMA is used for recreational purposes; no ground-disturbing activities or off-road vehicle movement is proposed in the Grand Bay WMA.

Area of Potential Effect

The Area of Potential Effect (APE) for archaeological resources includes all of the Moody AFB Main Base where comprehensive ground training activities could occur (Figure 2). The APE for architectural resources would extend up to 1,000 feet where training activities could result in increased noise.

Identification of Historic Resources

Moody AFB was established in early 1942 as the wartime Moody Field Advanced Pilot Training School. Archaeological investigations at Moody AFB have located 27 archaeological sites and 43 isolated finds (Air Force 2018; Table 1). The physical areas included within the expanded ground training areas were all investigated under the installation's comprehensive 1996 archaeological survey (Grover et al. 1996). Six archaeological sites were recorded within existing Training Area 3. One site (9LW71) was recorded adjacent to the existing Hot Cargo Pad and proposed MCA/ACE Training Area and was determined eligible for the National Register of Historic Places (NRHP). Another site was recorded within existing Training Area 4. Except for

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site 9LW71, none of the sites were determined eligible for the NRHP. In addition, no archaeological sites were recorded within other areas proposed for expanded training, including the proposed new Training Area 5, south of Burma Road. Sites determined not eligible for the NRHP require no further management.

Table 1. Summary of Cultural Resource Investigations on Moody Air Force Base

Reference	Investigation	Results	In the APE?
Archaeological Surveys			
Wright 1985	350 acres of Grand Bay Range focused on high-probability areas	Four sites identified; one site (9LN4) recommended for testing.	No
National Park Service 1986	Preliminary cultural resource reconnaissance of Moody AFB and Grassy Pond Recreation Area	One site recorded and determined not eligible for the NRHP.	Yes
Grover et al. 1996	Survey of Grand Bay Ordnance Range and Moody AFB, total 3,600 acres	21 sites and 39 isolated finds recorded. Five sites considered potentially eligible (9LW63, 9LW52, 9LW67, 9LN17, and 9LW71); remainder determined not eligible.	Yes
Morgan 1998	Survey of Southwest Land Gift (49.5 acres)	Two sites recorded and determined not eligible for NRHP.	No
Jones et al. 1999	Phase II Testing of Site 9LW71	Sites 9LW70 and 9LW71 determined to be one consolidated site (9LW71); site 9LW71 determined eligible for NRHP.	Yes
Warhop et al. 2007	Phase II Testing of 9LN17	Site determined not eligible for NRHP.	Yes
Warhop et al. 2010	Phase II Testing of 9LW63	Site 9LW63 determined eligible for NRHP.	No
Warhop and Raymer 2010	Testing of Site 9LW67	Inconclusive; additional testing recommended.	No
Lindemuth and Somers 2011	Survey of Personnel Recovery Campus	No sites identified.	No
Schneider et al. 2013	Phase II Testing of Sites 9LW52 and 9LW67	Sites determined not eligible for NRHP.	Yes
Lowrey 2017	Survey of 106.1 acres of new southwest land purchase	Two isolated finds identified; not eligible for the NRHP.	No
Architectural Surveys			
Patterson et al. 1997	Context of Cold War Material Culture; baseline inventory of 137 buildings	No buildings eligible for NRHP for Cold War significance.	Yes
Moody AFB 1996-1997 (see ICRMP, US Air Force 2018)	Consultation for buildings 701, 609, and 621	Buildings determined not eligible for the NRHP.	Yes
Messick et al. 1999	Evaluation of 223 buildings, including Cold War assets	Water Tower (Facility 618) eligible for NRHP; remaining buildings not eligible.	Yes
Hersch 2011	Evaluation of 42 Cold War-era resources	Resources not eligible for the NRHP.	Yes

Reference	Investigation	Results	In the APE?
Scherer 2015	Evaluation of Buildings 1500 and 1501	Buildings not eligible for NRHP.	Yes
Amec Foster Wheeler Environment & Infrastructure, Inc. 2016	Evaluation of Buildings 325, 328, 621, 658, 704, 753, 785, and 901	Buildings not eligible for NRHP.	Yes
Reed et al. 2017	Reevaluation of 210 Cold War-era facilities 45 years or older, including cantonment, Grand Bay Weapons Range, Grassy Pond Annex, and NEXRAD Radar Site	Base Chapel (Building 110) eligible for NRHP; no intact districts present; all other buildings not eligible.	Yes

APE – area of potential effect; **AFB** – Air Force Base; **NRHP** – National Register of Historic Places; **ICRMP** – Integrated Cultural Resources Management Plan

Moody AFB has two NRHP-eligible archaeological sites. Sites 9LW63 and 9LW71 (Figure 3) are both prehistoric artifact scatters located on the Main Base east of the runway (US Air Force 2018) and outside of the footprint of the Proposed Action areas. Numerous surveys of World War II and Cold War-era buildings and structures at Moody AFB have been undertaken since 1997 (Table 1). Only two structures have been determined to be eligible for inclusion in the NRHP (Figure 4). Facility 618, constructed in 1941, is a steel water tower with a 200,000-gallon capacity. It was determined eligible for inclusion in the NRHP in 1999 (US Air Force 2018). Building 110 is a chapel built in 1971. Significant for its midcentury modern architectural design, the chapel was determined eligible for inclusion in the NRHP in May 2017. Both structures are more than 0.5 mile from the Proposed Action areas.

No traditional cultural properties have been identified on Moody AFB through previous consultation efforts. No federally recognized tribes have identified traditional cultural properties.

Recommendation

As no NRHP-eligible historic buildings or archaeological sites have been identified within the APE of the new proposed training areas at Moody AFB, the Air Force recommends a Finding of "No Historic Properties Affected" pursuant to 36 CFR 800.4(d)(1). This documentation satisfies the requirements set forth in 36 CFR 800.11(d).

I am requesting written concurrence with our finding. If you have any comments or need additional information concerning the Proposed Action and APE, please contact Mr. Lorence Busker at 23 CES/CEIE, 3485 Georgia Street, Moody AFB, Georgia 31699 or via email at lorence.busker@us.af.mil. Thank you in advance for your assistance in this effort.

Sincerely

Gregory W. Lee

GREGORY W. LEE
Environment Element Chief

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References

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Attachments:

1. Figure 1. Location of Moody Air Force Base, Georgia
2. Figure 2. Location of Current and Proposed Ground Training Areas on Moody Air Force Base, Georgia
3. Figure 3. Archaeological Resources Eligible for Listing on the National Register of Historic Places
4. Figure 4. Structures Eligible for Listing on the National Register of Historic Places

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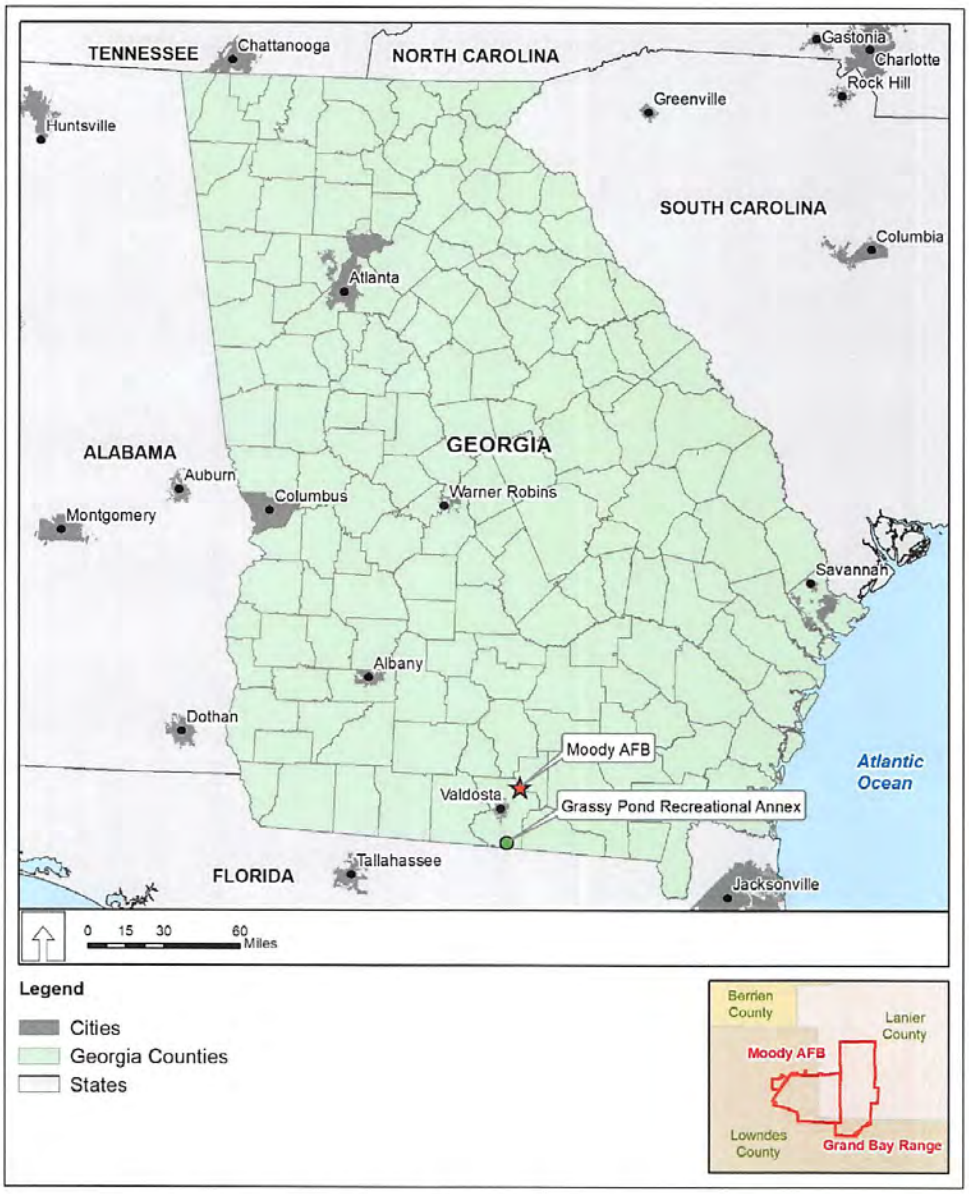

Figure 1. Location of Moody Air Force Base, Georgia

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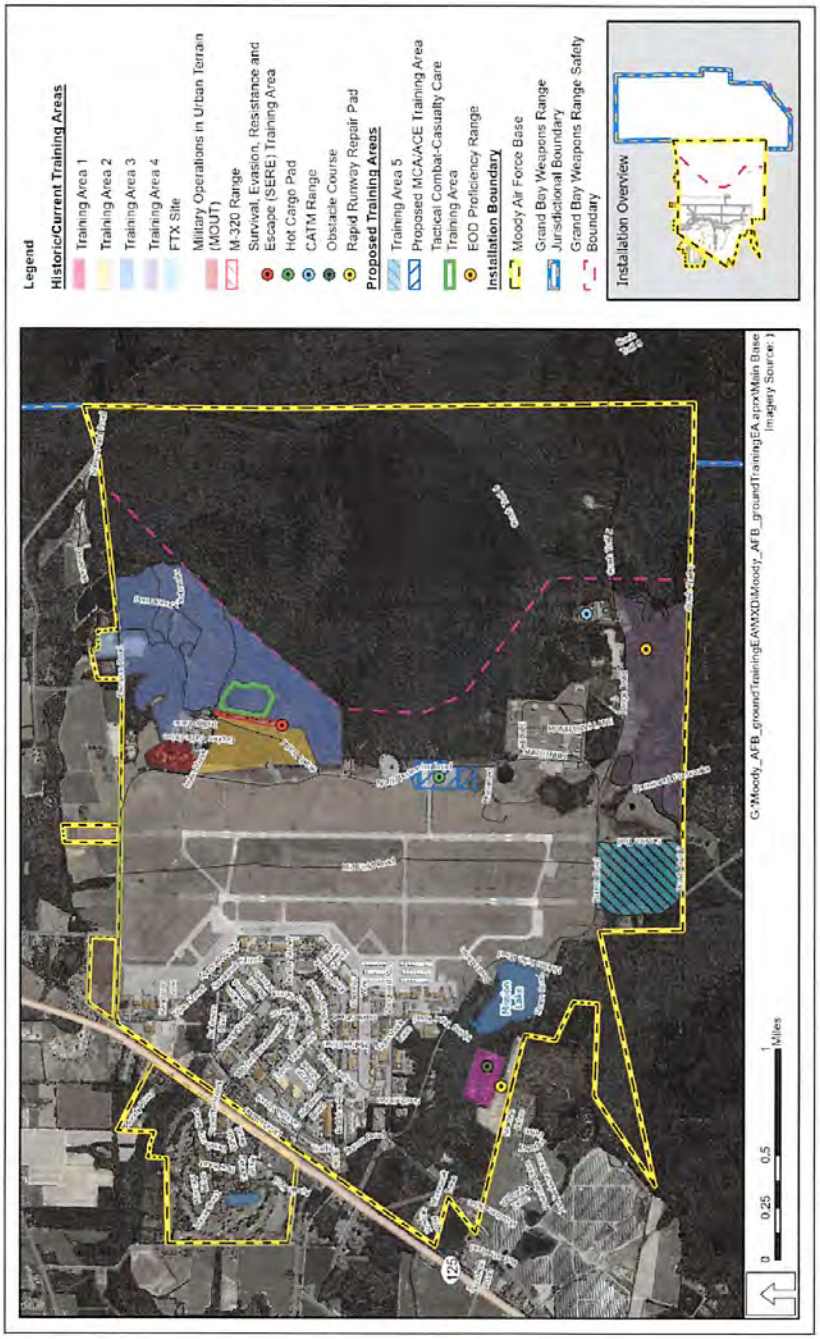

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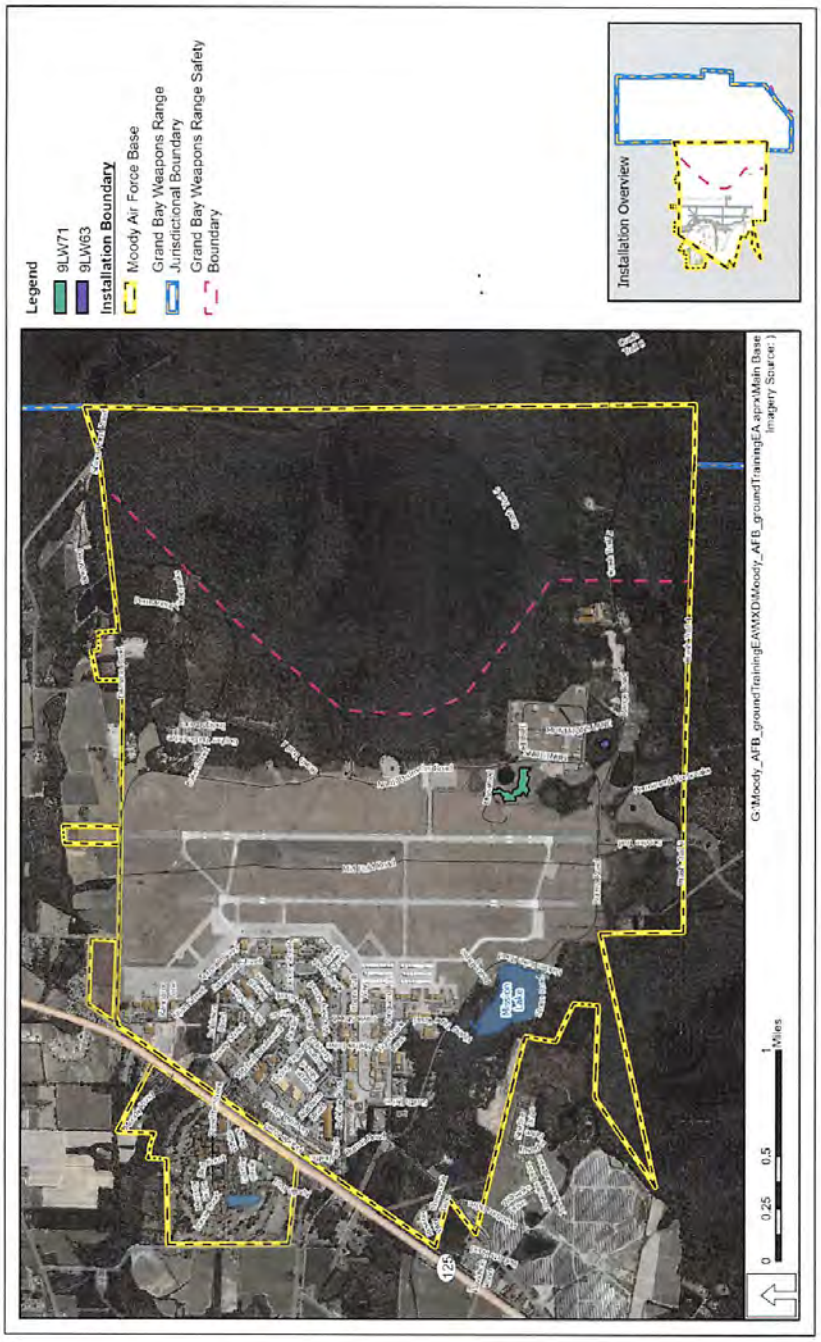

Figure 3. Archaeological Resources Eligible for Listing on the National Register of Historic Places

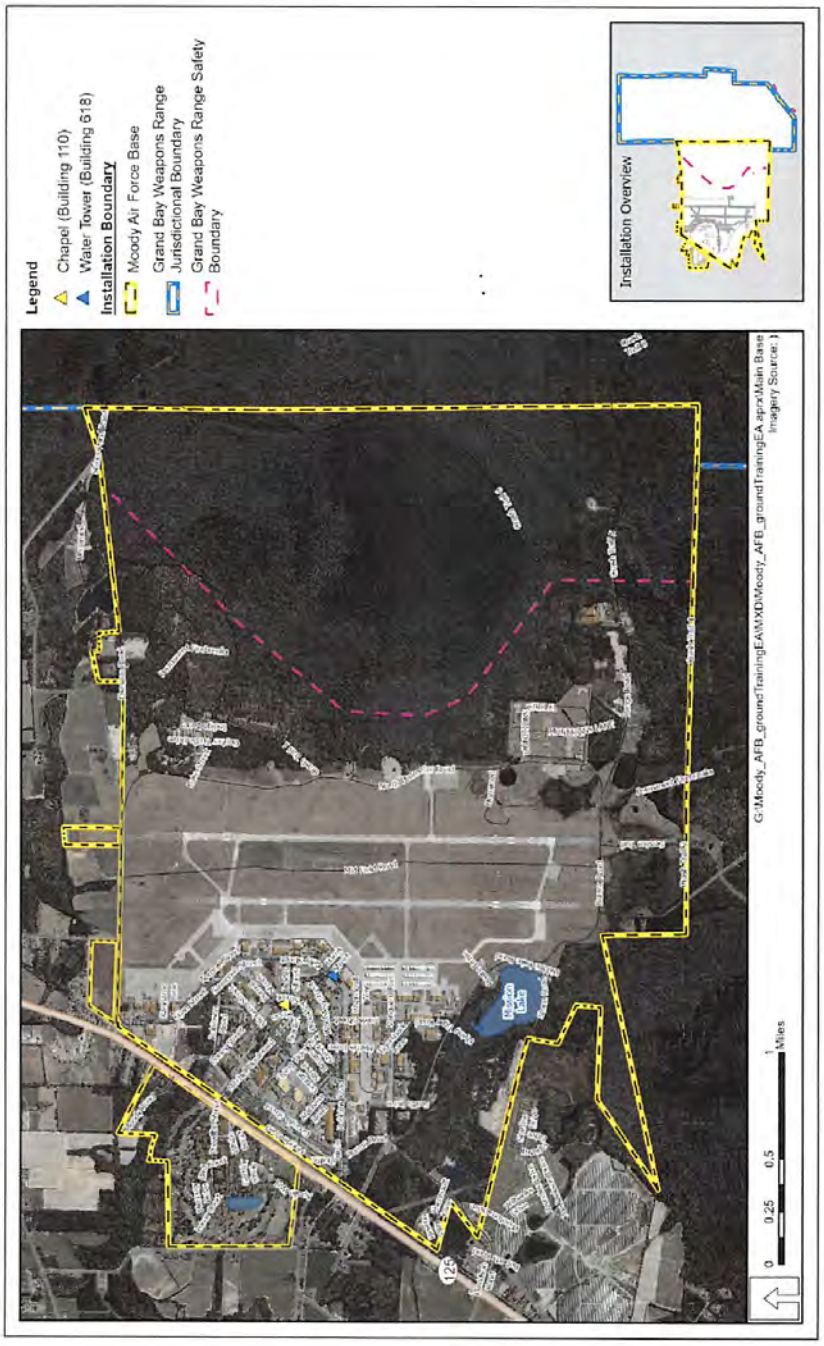

Figure 4. Structures Eligible for Listing on the National Register of Historic Places

APPENDIX A-6. GOVERNMENT-TO-GOVERNMENT CONSULTATION LETTERS

FORMAT PAGE

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 23D WING (ACC)
MOODY AIR FORCE BASE, GEORGIA

23 WG/CC

23 Flying Tiger Way
Bldg 105 Suite 1
Moody AFB GA 31699

Lovelin Poncho, Chairman
Coushatta Tribe of Louisiana
P.O. Box 10
Elton LA 70532

Dear Chair Poncho:

Moody Air Force Base (AFB), Georgia (Figure 1), is proposing to continue the current military ground training activities on Main Base and support future ground training activities, including an increase in training activities within existing training areas and the establishment of new training areas on Main Base. The US Air Force has prepared an Environmental Assessment under the National Environmental Policy Act to evaluate potential environmental impacts associated with the Comprehensive Ground Training on Main Base. In accordance with Section 106 of the National Historic Preservation Act (54 United States Code 306108) and its implementing regulations at 36 Code of Federal Regulations (CFR) Part 800, the US Air Force, Moody AFB, is continuing government-to-government consultation with you regarding an undertaking that has the potential to affect historic properties.

The 23d Wing and 93d Air Ground Operations Wing at Moody AFB conduct comprehensive ground training within designated training areas and across the airfield and cantonment at Moody AFB. The types of military ground training historically and currently conducted, as well as proposed to be conducted in the future, are common military activities that include the use of a small-arms firing range for live weapons training and qualification; the use of designated training areas for maneuvers, force-on-force rescue, real-world deployment, land navigation, convoy movement and protection, and counter-improvised explosive devices training; explosives training; Multi-Capable Airmen/Agile Combat Employment training; the use of helicopter landing zones for jump operations, personnel insertion/extraction, and crash rescue field training exercises; military working dog training; M-320 grenade launcher training and qualification; and integrated base defense training. Training activities can include the use of Explosive Ordnance Disposal tools and equipment, demolition explosives, simunitions, Multiple Integrated Laser Engagement System, pyrotechnics, ground burst simulators, blanks, smokes, and flares. Equipment used during training activities include vehicles such as Mine-Resistant Ambush-Protected vehicle, HMMWV (Humvee), 6x6 cargo truck, utility terrain vehicle, all-

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terrain vehicle, and generator Environmental Control Unit trailer; Small Unmanned Aircraft Systems; and HH-60W helicopters.

Two alternatives were analyzed: Alternative 1, Expanded Ground Training on Main Base, and Alternative 2, No Action Alternative. Alternative 1 would continue these military ground training activities at Moody AFB, would increase the training activities in existing training areas by 50 percent to accommodate future growth in training needs, and would provide additional designated training areas and training opportunities on Main Base to better support Department of Defense ground training requirements (Figure 2). The No Action Alternative would continue existing training activities but would neither expand ground training in existing training area nor designate additional training areas on Main Base.

A scoping letter was sent to you in January 2021 requesting your assistance in identifying any properties of religious and cultural significance to your tribe within the project Area of Potential Effects (APE). Based on the location of the training sites, the coverage of previous archaeological surveys, and lack of issues raised by tribes, the Air Force has determined that the proposed comprehensive training APE contains no identified archaeological sites eligible for listing on the National Register of Historic Places (NRHP), historic districts, cemeteries, sacred sites, traditional cultural properties, or other tribal resources. The nearest recorded archaeological resources eligible for listing on the NRHP are sites 9LW71 and 9LW63 (Figure 3).

No ground-disturbing activities are proposed at or proximate to recorded archaeological sites. Therefore, the establishment of new training areas would not affect archaeological resources.

Pursuant to 36 CFR §800.4(d), the Air Force has determined that the Proposed Action would result in *no historic properties affected* by the Comprehensive Ground Training on Main Base for Moody AFB. We request your comments on the finding of *no historic properties affected* within 30 days. Please contact Mr. Lorence Busker, 23d Civil Engineer Squadron at 23 CES/CEIE, 3485 Georgia Street, Moody AFB, Georgia 31699, via telephone at (229) 257-2396, or via email to lorence.busker@us.af.mil if you have any questions.

Sincerely,

RUSSELL P. COOK, Colonel, USAF
Commander

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2. Figure 2. Current and Proposed Training Areas on Main Base
3. Figure 3. Archaeological Resources Eligible for Listing on the National Register of Historic Places

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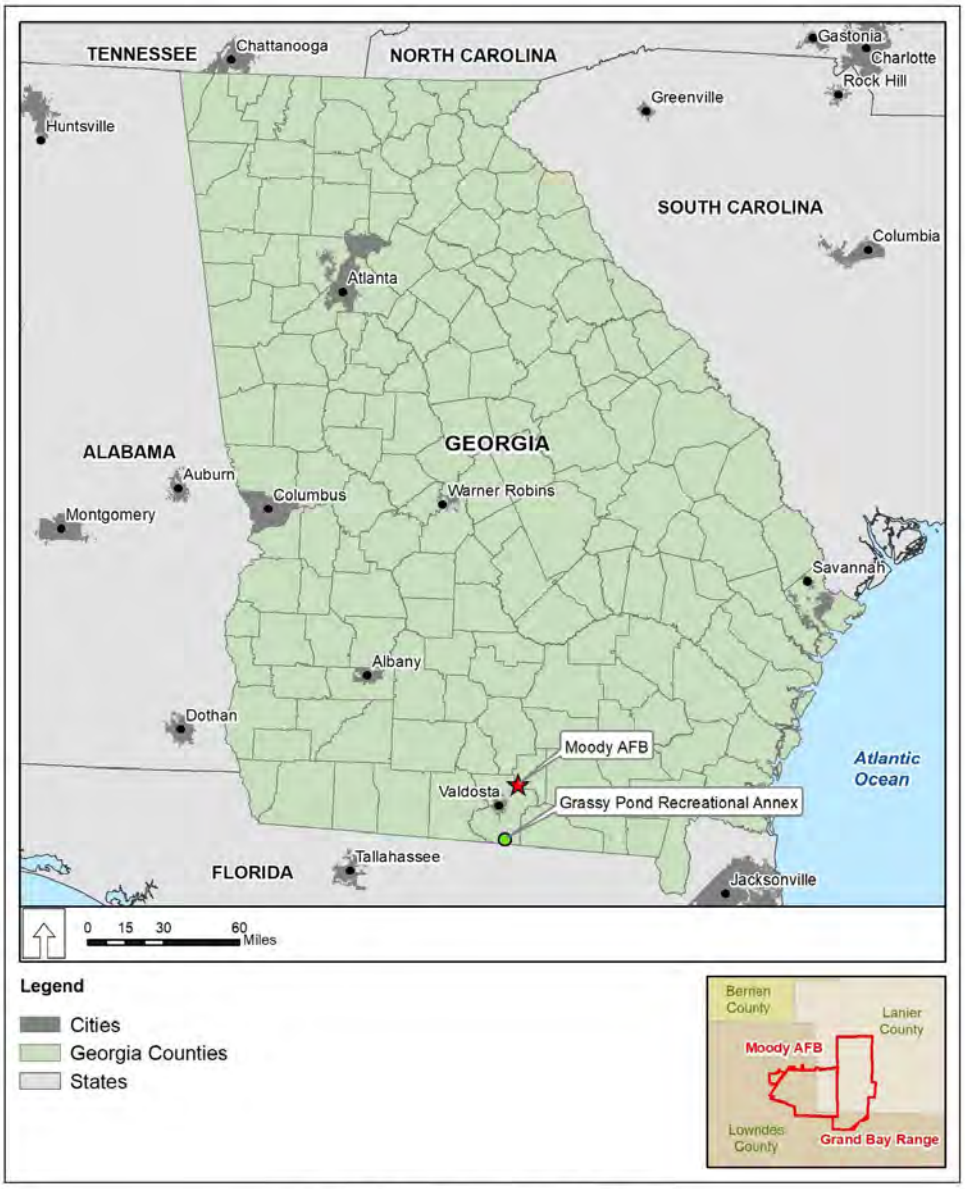

Figure 1. Moody Airspace Complex

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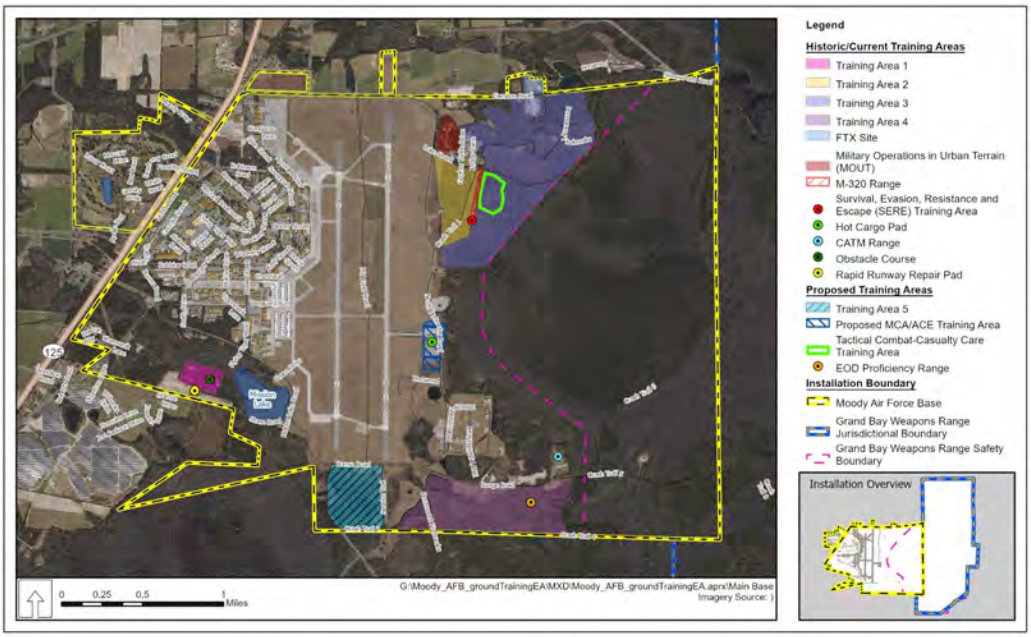

Figure 2. Current and Proposed Training Areas on Main Base

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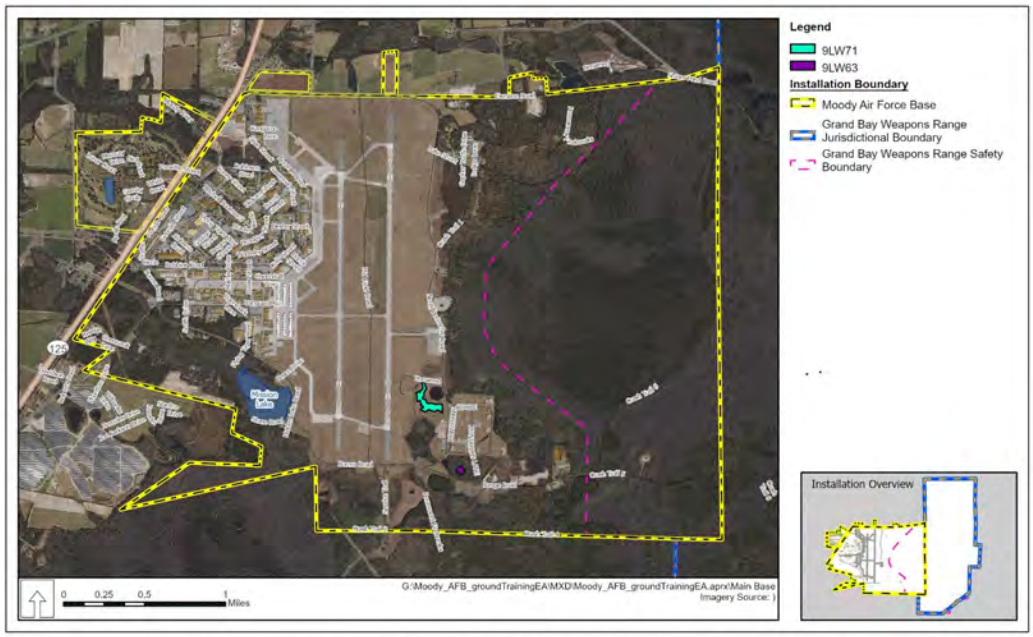

Figure 3. Archaeological Resources Eligible for Listing on the National Register of Historic Places

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DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 23D WING (ACC)
MOODY AIR FORCE BASE, GEORGIA

23 WG/CC

23 Flying Tiger Way
Bldg 105 Suite 1
Moody AFB GA 31699

Jeremiah Hobia, Chief
Kialegee Tribal Town
PO Box 332
Wetumka OK 74883

Dear Chief Hobia:

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terrain vehicle, and generator Environmental Control Unit trailer; Small Unmanned Aircraft Systems; and HH-60W helicopters.

Two alternatives were analyzed: Alternative 1, Expanded Ground Training on Main Base, and Alternative 2, No Action Alternative. Alternative 1 would continue these military ground training activities at Moody AFB, would increase the training activities in existing training areas by 50 percent to accommodate future growth in training needs, and would provide additional designated training areas and training opportunities on Main Base to better support Department of Defense ground training requirements (Figure 2). The No Action Alternative would continue existing training activities but would neither expand ground training in existing training area nor designate additional training areas on Main Base.

A scoping letter was sent to you in January 2021 requesting your assistance in identifying any properties of religious and cultural significance to your tribe within the project Area of Potential Effects (APE). Based on the location of the training sites, the coverage of previous archaeological surveys, and lack of issues raised by tribes, the Air Force has determined that the proposed comprehensive training APE contains no identified archaeological sites eligible for listing on the National Register of Historic Places (NRHP), historic districts, cemeteries, sacred sites, traditional cultural properties, or other tribal resources. The nearest recorded archaeological resources eligible for listing on the NRHP are sites 9LW71 and 9LW63 (Figure 3).

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Sincerely,

RUSSELL P. COOK, Colonel, USAF
Commander

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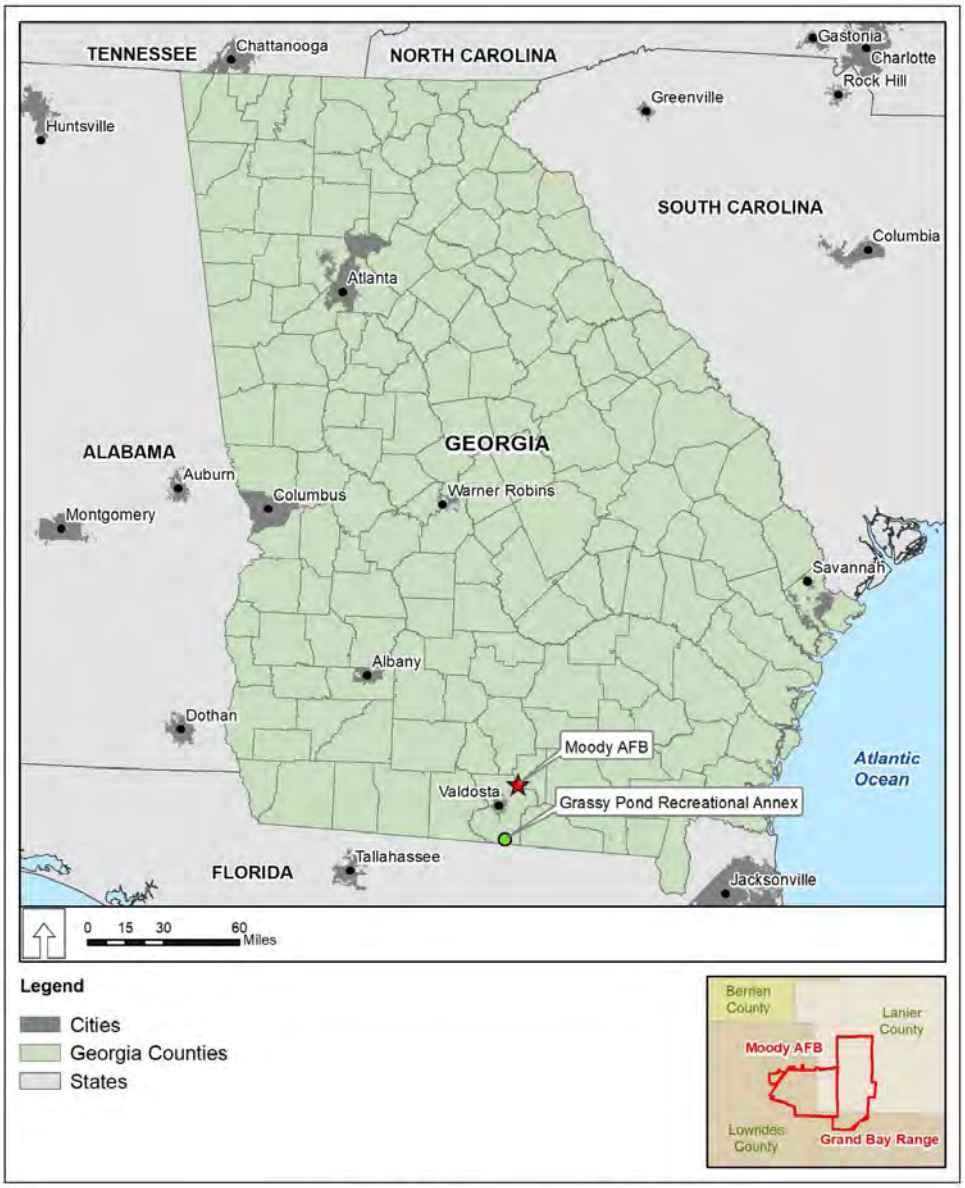

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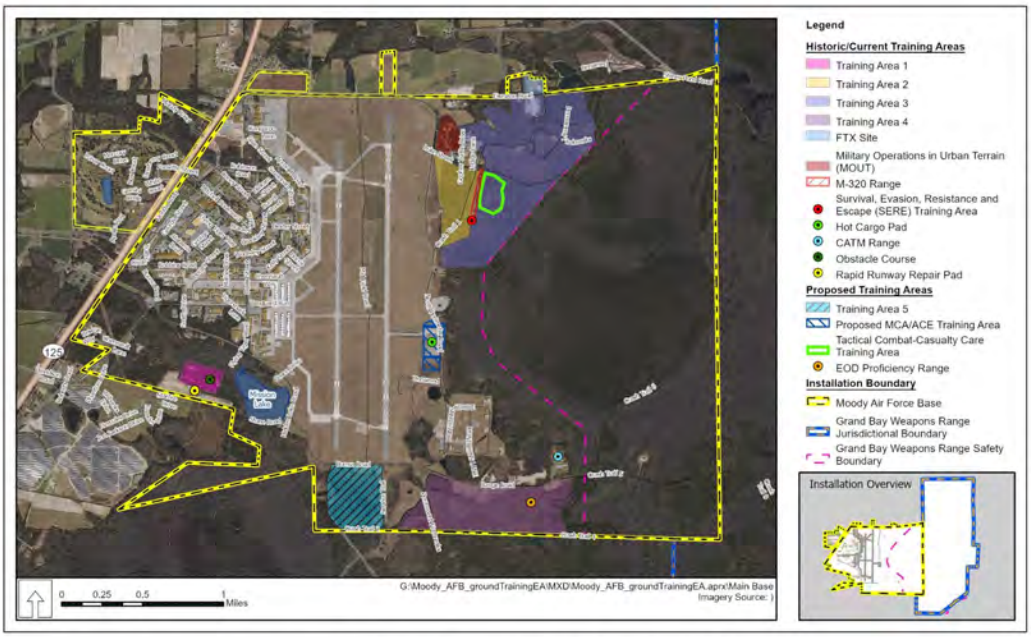

Figure 2. Current and Proposed Training Areas on Main Base

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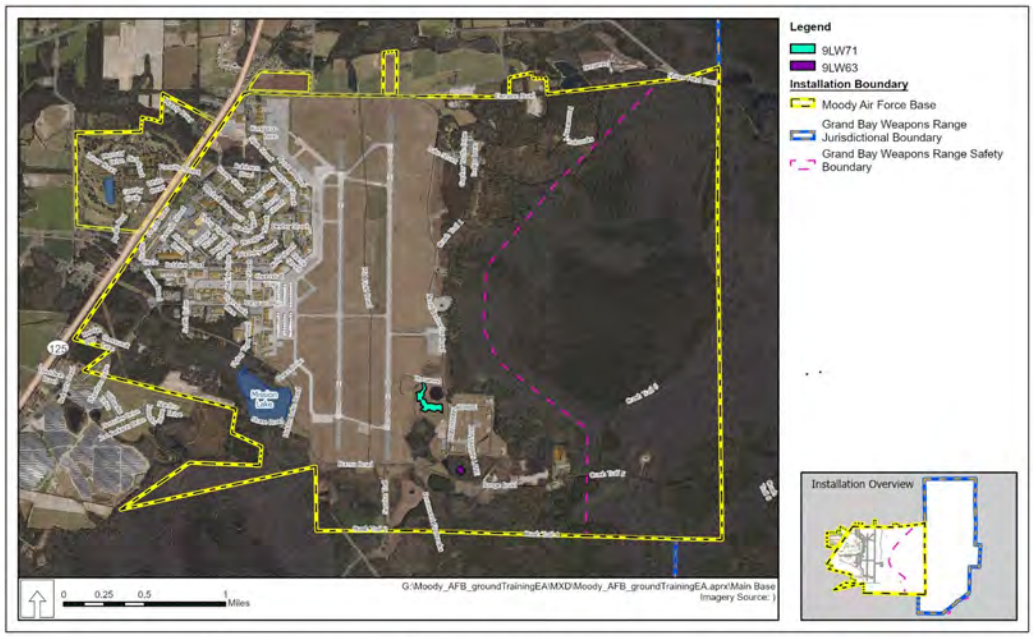

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DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 23D WING (ACC)
MOODY AIR FORCE BASE, GEORGIA

23 WG/CC

23 Flying Tiger Way
Bldg 105 Suite 1
Moody AFB GA 31699

James Floyd, Principal Chief
The Muscogee (Creek) Nation
PO Box 580
Okmulgee OK 74447

Dear Chief Floyd:

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Sincerely,

RUSSELL P. COOK, Colonel, USAF
Commander

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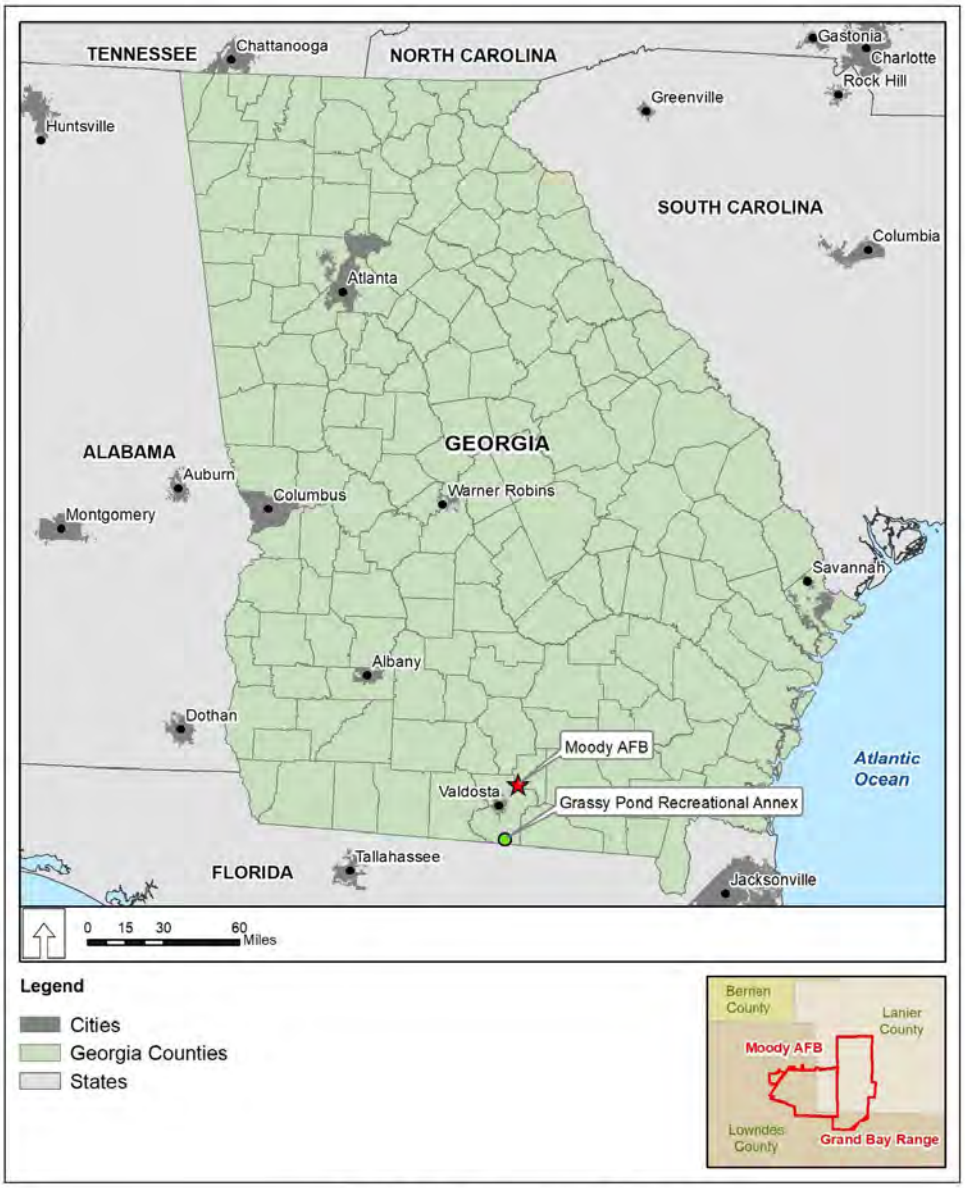

Figure 1. Moody Airspace Complex

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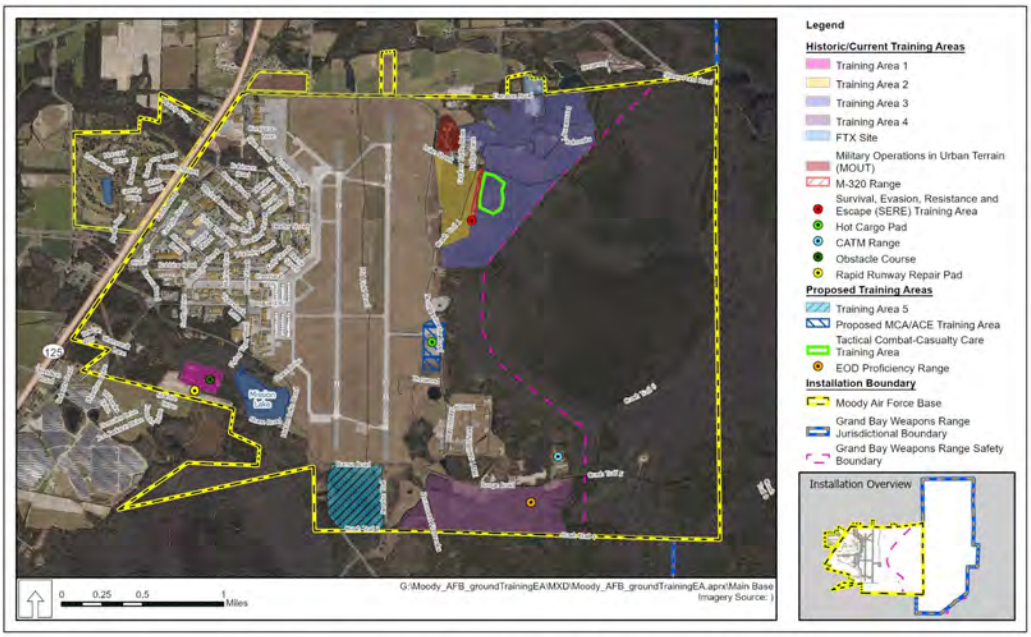

Figure 2. Current and Proposed Training Areas on Main Base

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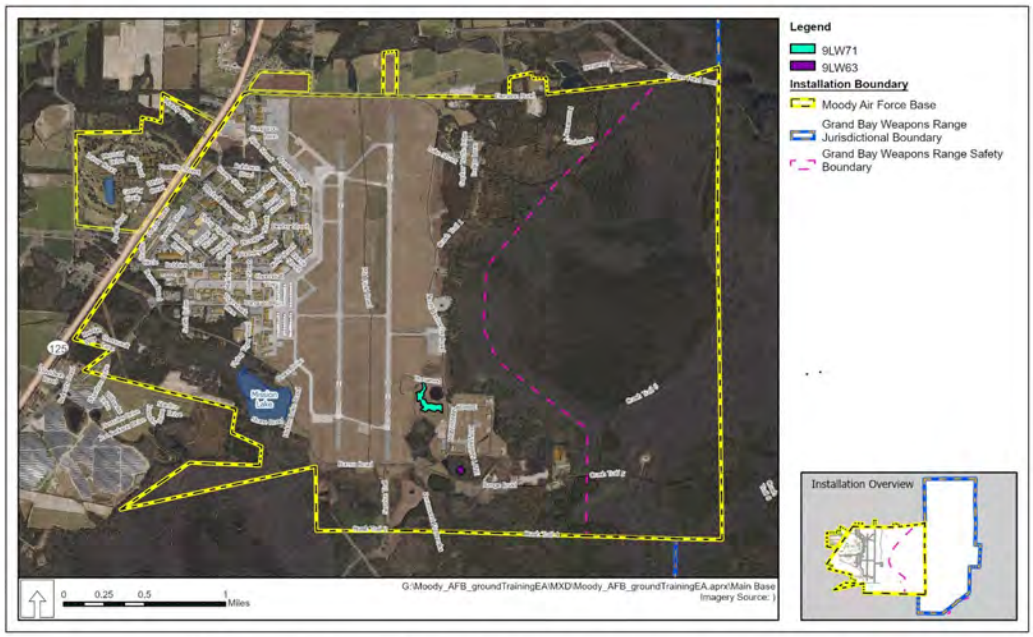

Figure 3. Archaeological Resources Eligible for Listing on the National Register of Historic Places

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DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 23D WING (ACC)
MOODY AIR FORCE BASE, GEORGIA

23 WG/CC

23 Flying Tiger Way
Bldg 105 Suite 1
Moody AFB GA 31699

Ann Denson Tucker, Chairwoman
Muscogee Nation of Florida
278 Church Road
Ponce de Leon FL 32455

Dear Chair Tucker:

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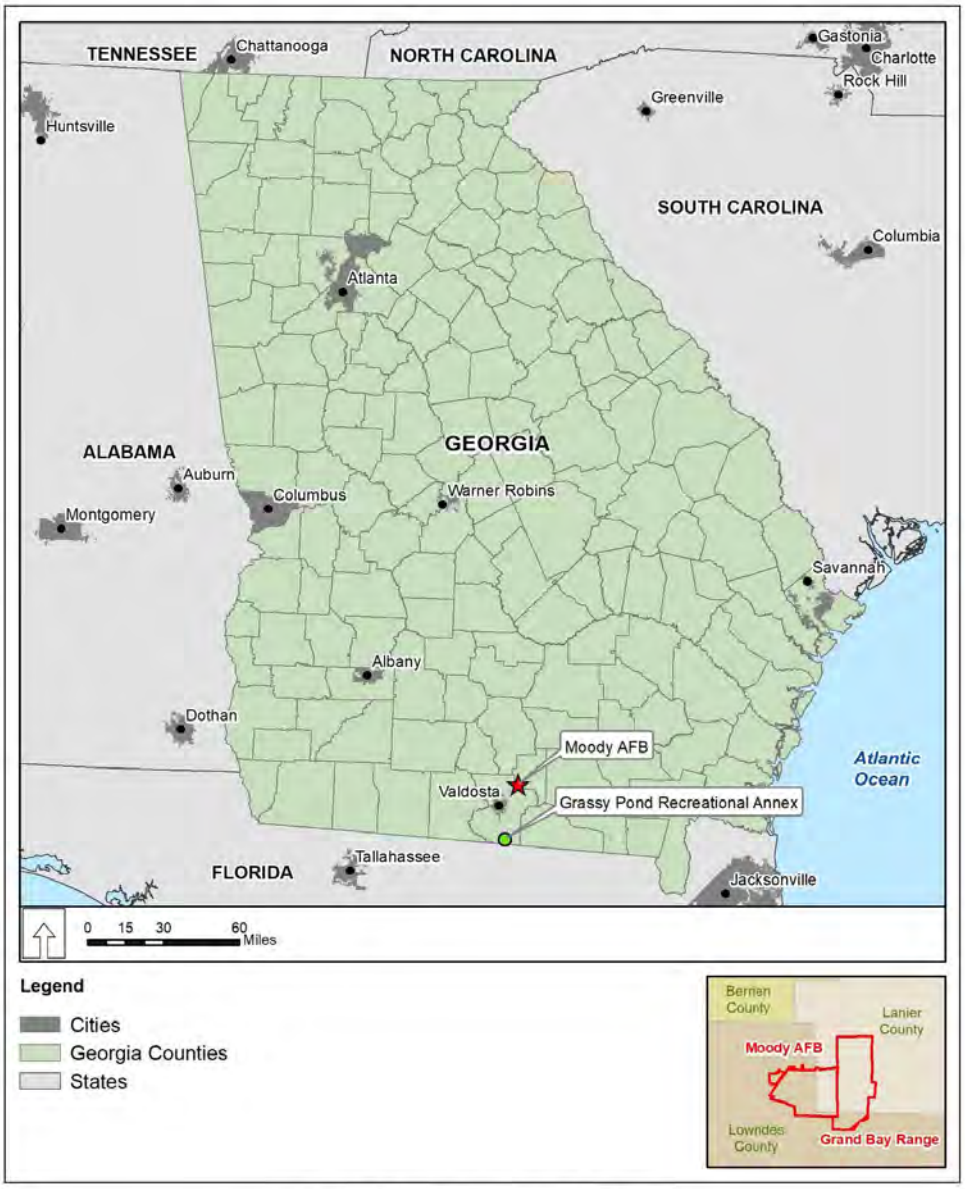

Figure 1. Moody Airspace Complex

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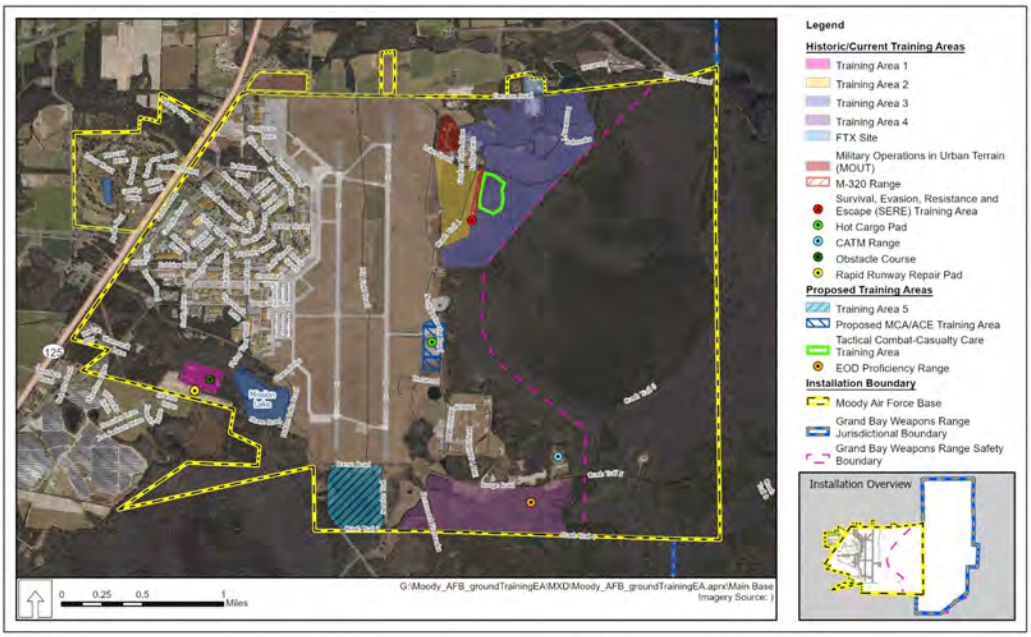

Figure 2. Current and Proposed Training Areas on Main Base

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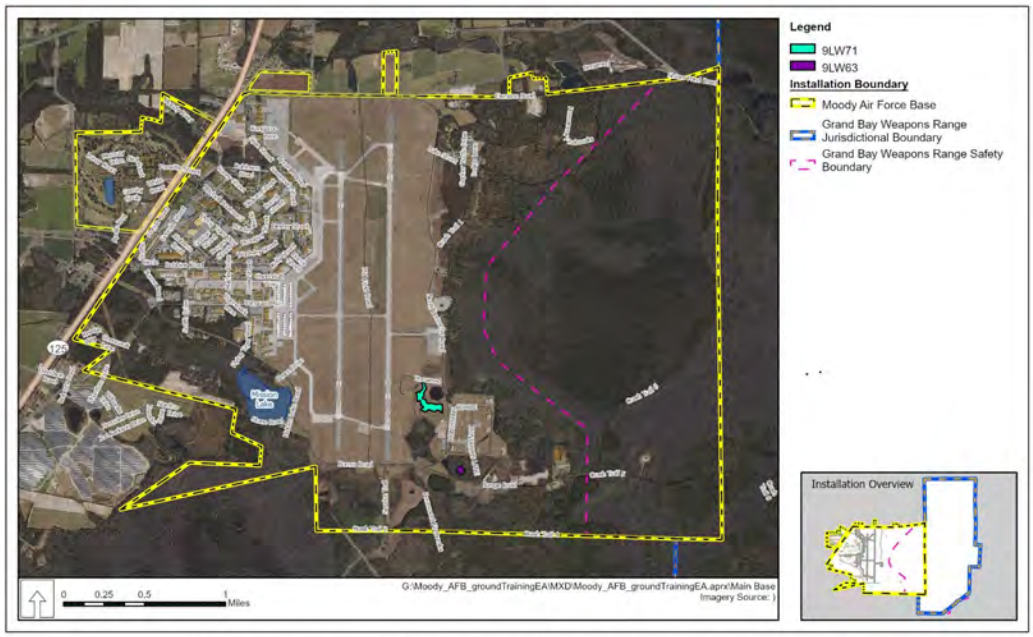

Figure 3. Archaeological Resources Eligible for Listing on the National Register of Historic Places

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DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 23D WING (ACC)
MOODY AIR FORCE BASE, GEORGIA

23 WG/CC

23 Flying Tiger Way
Bldg 105 Suite 1
Moody AFB GA 31699

Stephanie Bryan, Tribal Chair
Poarch Band of Creeks
5811 Jack Springs Rd
Altmore AL 36502

Dear Chair Bryan:

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The 23d Wing and 93d Air Ground Operations Wing at Moody AFB conduct comprehensive ground training within designated training areas and across the airfield and cantonment at Moody AFB. The types of military ground training historically and currently conducted, as well as proposed to be conducted in the future, are common military activities that include the use of a small-arms firing range for live weapons training and qualification; the use of designated training areas for maneuvers, force-on-force rescue, real-world deployment, land navigation, convoy movement and protection, and counter-improvised explosive devices training; explosives training; Multi-Capable Airmen/Agile Combat Employment training; the use of helicopter landing zones for jump operations, personnel insertion/extraction, and crash rescue field training exercises; military working dog training; M-320 grenade launcher training and qualification; and integrated base defense training. Training activities can include the use of Explosive Ordnance Disposal tools and equipment, demolition explosives, simunitions, Multiple Integrated Laser Engagement System, pyrotechnics, ground burst simulators, blanks, smokes, and flares. Equipment used during training activities include vehicles such as Mine-Resistant Ambush-Protected vehicle, HMMWV (Humvee), 6x6 cargo truck, utility terrain vehicle, all-

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terrain vehicle, and generator Environmental Control Unit trailer; Small Unmanned Aircraft Systems; and HH-60W helicopters.

Two alternatives were analyzed: Alternative 1, Expanded Ground Training on Main Base, and Alternative 2, No Action Alternative. Alternative 1 would continue these military ground training activities at Moody AFB, would increase the training activities in existing training areas by 50 percent to accommodate future growth in training needs, and would provide additional designated training areas and training opportunities on Main Base to better support Department of Defense ground training requirements (Figure 2). The No Action Alternative would continue existing training activities but would neither expand ground training in existing training area nor designate additional training areas on Main Base.

A scoping letter was sent to you in January 2021 requesting your assistance in identifying any properties of religious and cultural significance to your tribe within the project Area of Potential Effects (APE). Based on the location of the training sites, the coverage of previous archaeological surveys, and lack of issues raised by tribes, the Air Force has determined that the proposed comprehensive training APE contains no identified archaeological sites eligible for listing on the National Register of Historic Places (NRHP), historic districts, cemeteries, sacred sites, traditional cultural properties, or other tribal resources. The nearest recorded archaeological resources eligible for listing on the NRHP are sites 9LW71 and 9LW63 (Figure 3).

No ground-disturbing activities are proposed at or proximate to recorded archaeological sites. Therefore, the establishment of new training areas would not affect archaeological resources.

Pursuant to 36 CFR §800.4(d), the Air Force has determined that the Proposed Action would result in *no historic properties affected* by the Comprehensive Ground Training on Main Base for Moody AFB. We request your comments on the finding of *no historic properties affected* within 30 days. Please contact Mr. Lorence Busker, 23d Civil Engineer Squadron at 23 CES/CEIE, 3485 Georgia Street, Moody AFB, Georgia 31699, via telephone at (229) 257-2396, or via email to lorence.busker@us.af.mil if you have any questions.

Sincerely,

RUSSELL P. COOK, Colonel, USAF
Commander

Attachments
1. Figure 1. Moody Airspace Complex
2. Figure 2. Current and Proposed Training Areas on Main Base
3. Figure 3. Archaeological Resources Eligible for Listing on the National Register of Historic Places

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Page 3

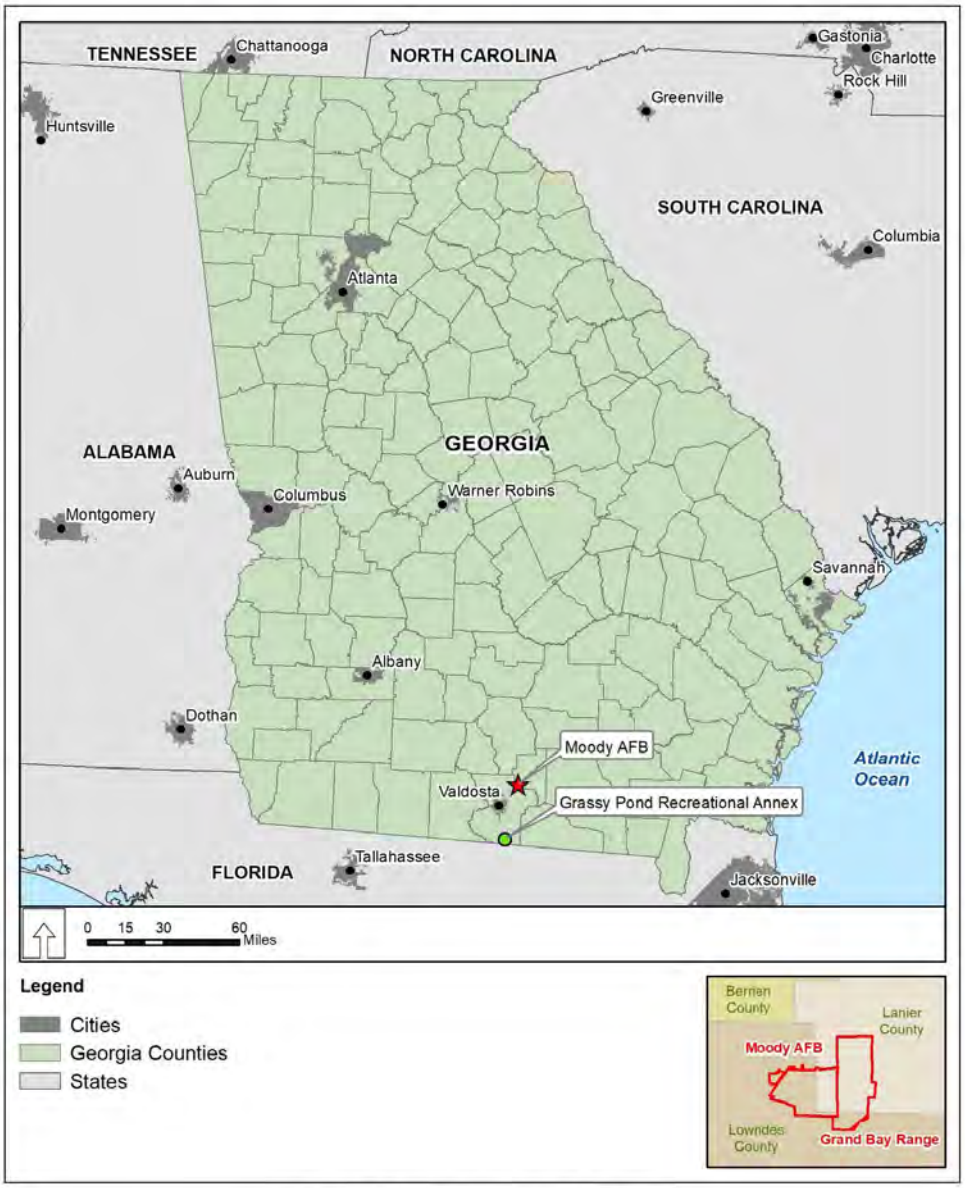

Figure 1. Moody Airspace Complex

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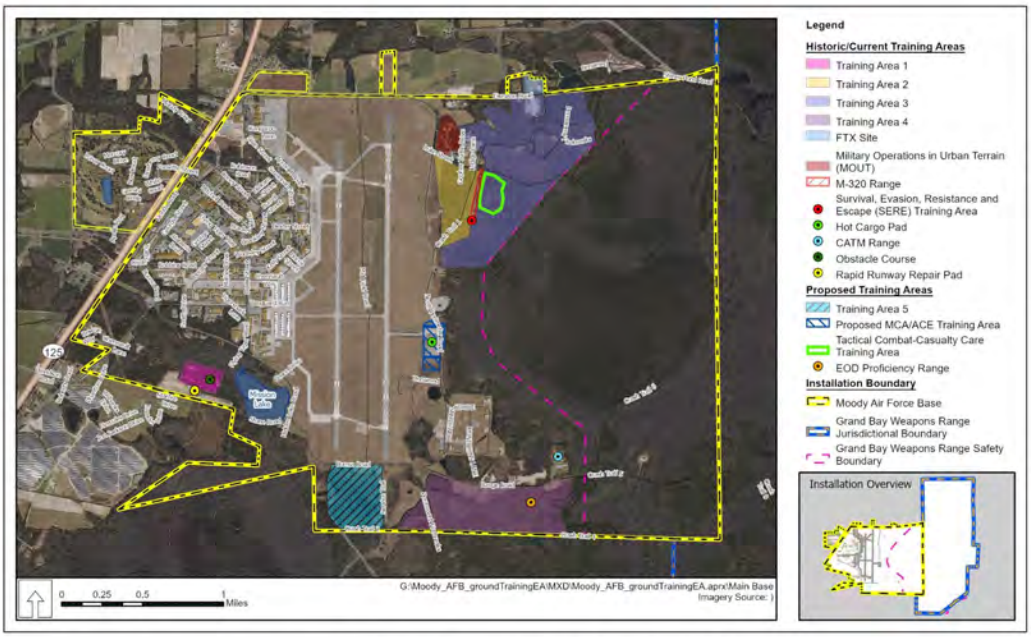

Figure 2. Current and Proposed Training Areas on Main Base

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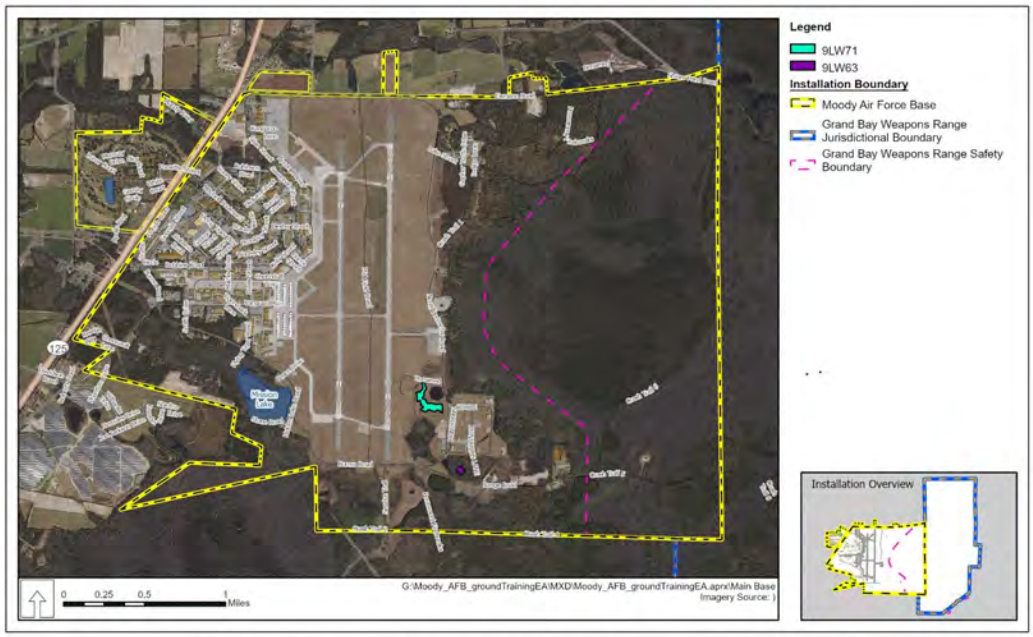

Figure 3. Archaeological Resources Eligible for Listing on the National Register of Historic Places

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DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 23D WING (ACC)
MOODY AIR FORCE BASE, GEORGIA

23 WG/CC

23 Flying Tiger Way
Bldg 105 Suite 1
Moody AFB GA 31699

Leonard Harjo, Principal Chief
Seminole Nation of Oklahoma
PO Box 1498
Wewoka OK 74884

Dear Chief Harjo:

Moody Air Force Base (AFB), Georgia (Figure 1), is proposing to continue the current military ground training activities on Main Base and support future ground training activities, including an increase in training activities within existing training areas, and the establishment of new training areas on Main Base. The US Air Force has prepared an Environmental Assessment under the National Environmental Policy Act to evaluate potential environmental impacts associated with the Comprehensive Ground Training on Main Base. In accordance with Section 106 of the National Historic Preservation Act (54 United States Code 306108) and its implementing regulations at 36 Code of Federal Regulations (CFR) Part 800, the US Air Force, Moody AFB, is continuing government-to-government consultation with you regarding an undertaking that has the potential to affect historic properties.

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terrain vehicle, and generator Environmental Control Unit trailer; Small Unmanned Aircraft Systems; and HH-60W helicopters.

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RUSSELL P. COOK, Colonel, USAF
Commander

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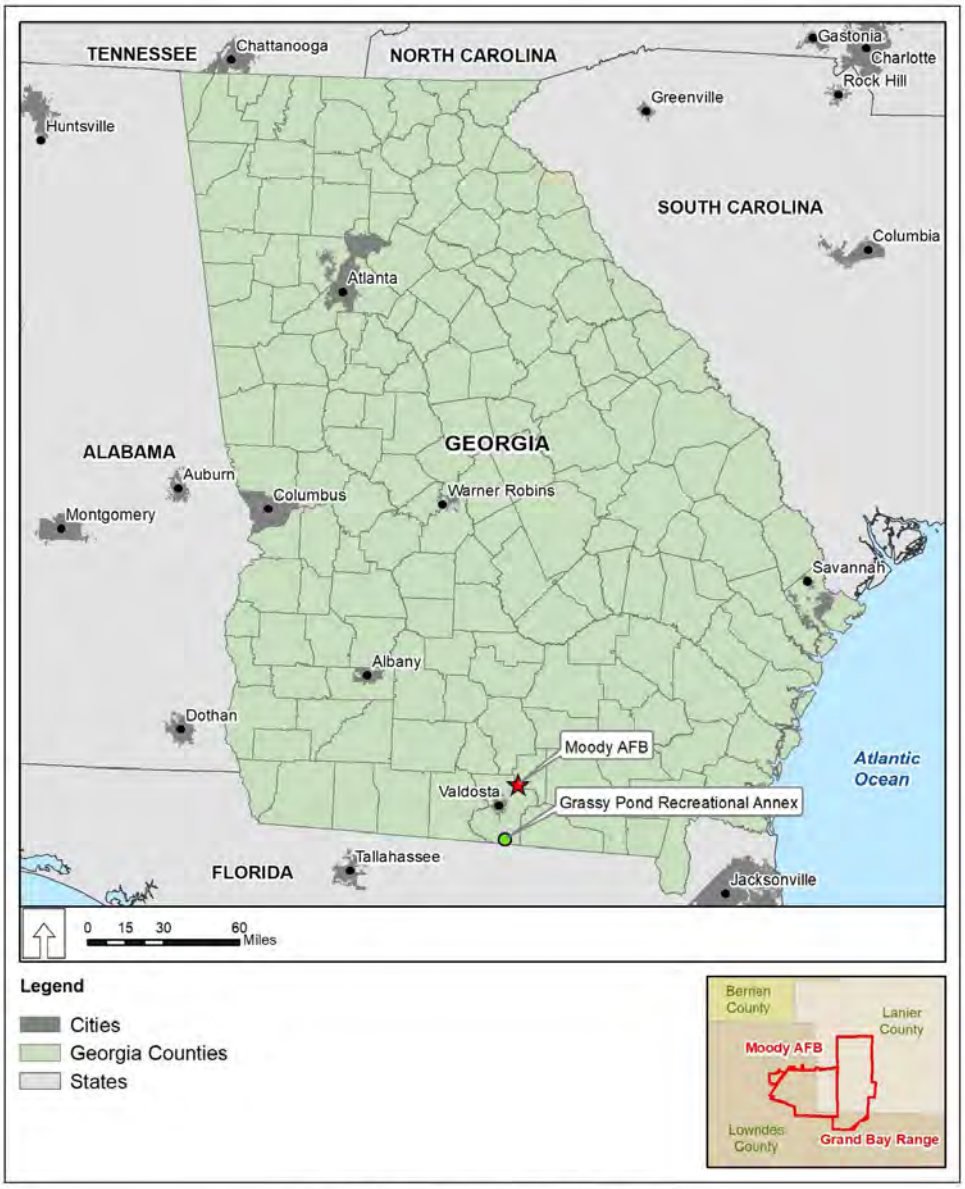

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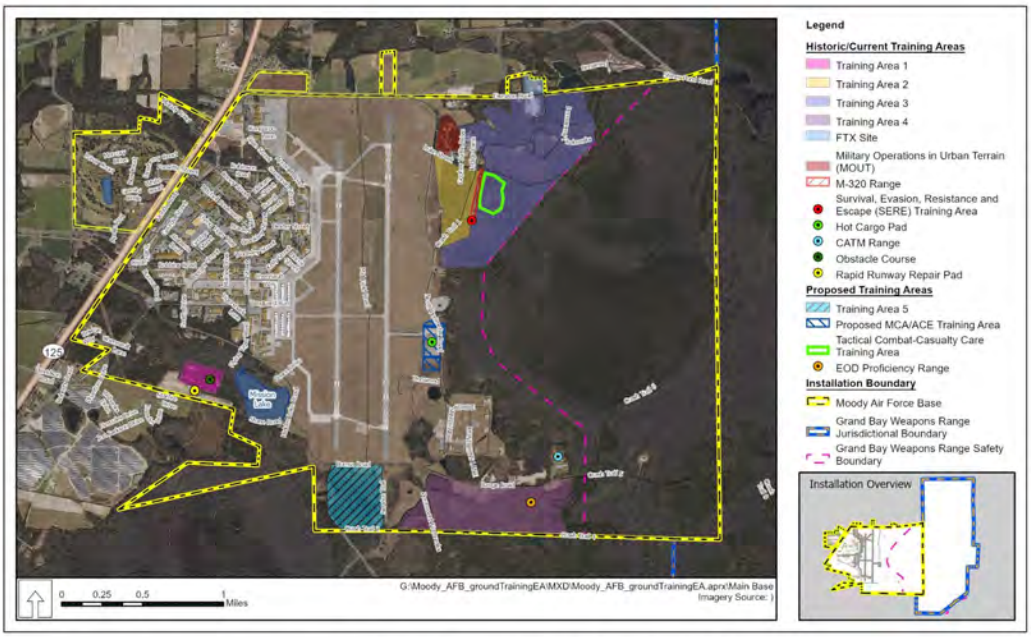

Figure 2. Current and Proposed Training Areas on Main Base

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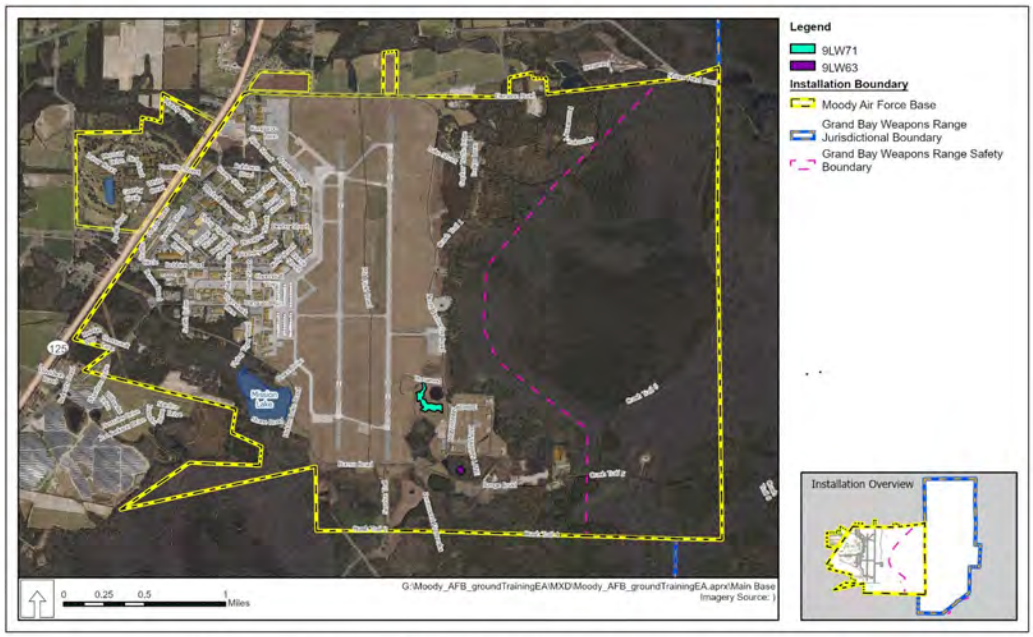

Figure 3. Archaeological Resources Eligible for Listing on the National Register of Historic Places

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DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 23D WING (ACC)
MOODY AIR FORCE BASE, GEORGIA

23 WG/CC

23 Flying Tiger Way
Bldg 105 Suite 1
Moody AFB GA 31699

Ryan Morrow, Town King (Mekko)
Thlopthlocco Tribal Town
PO Box 188
Wetumka OK 74883

Dear Mekko Morrow:

Moody Air Force Base (AFB), Georgia (Figure 1), is proposing to continue the current military ground training activities on Main Base and support future ground training activities, including an increase in training activities within existing training areas, and the establishment of new training areas on Main Base. The US Air Force has prepared an Environmental Assessment under the National Environmental Policy Act to evaluate potential environmental impacts associated with the Comprehensive Ground Training on Main Base. In accordance with Section 106 of the National Historic Preservation Act (54 United States Code 306108) and its implementing regulations at 36 Code of Federal Regulations (CFR) Part 800, the US Air Force, Moody AFB, is continuing government-to-government consultation with you regarding an undertaking that has the potential to affect historic properties.

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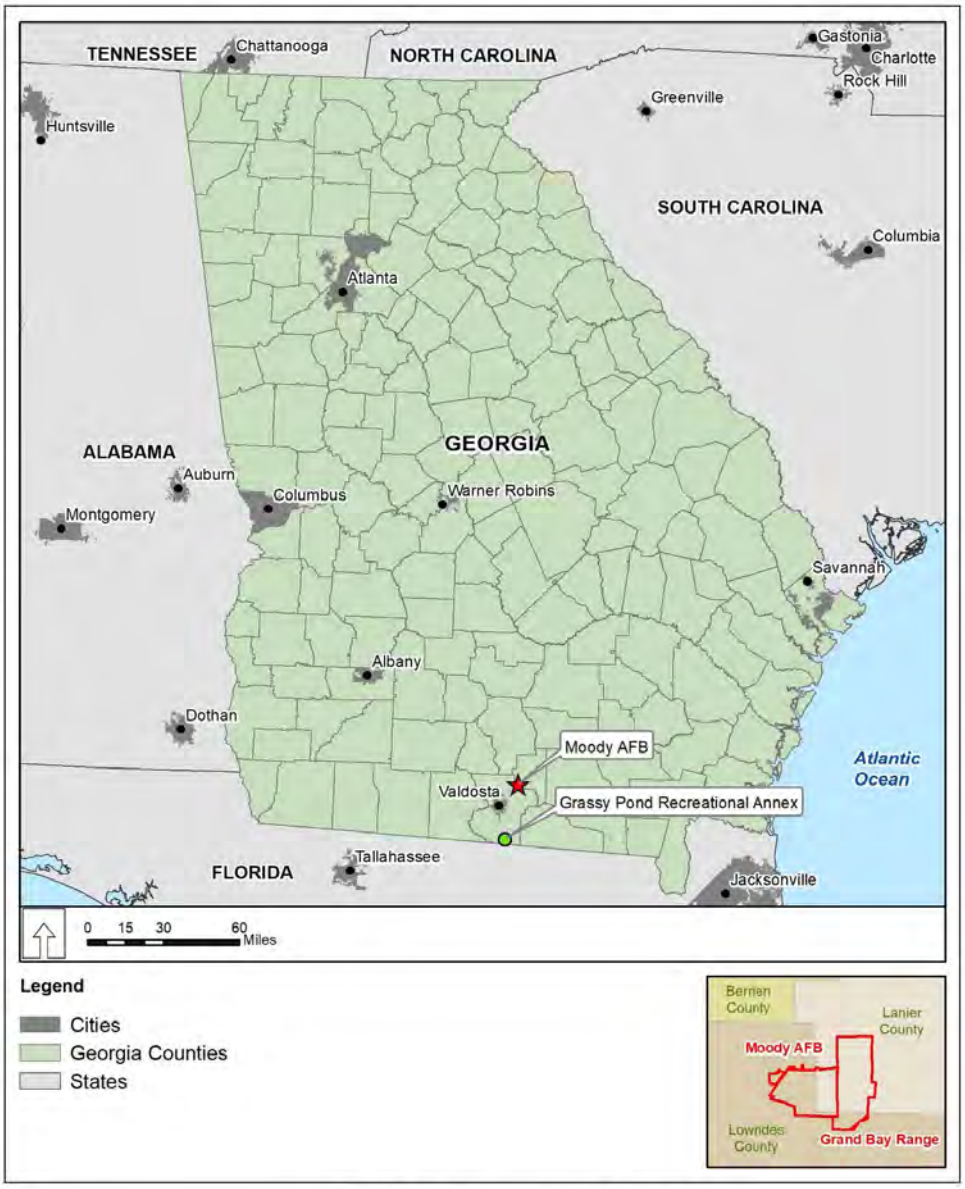

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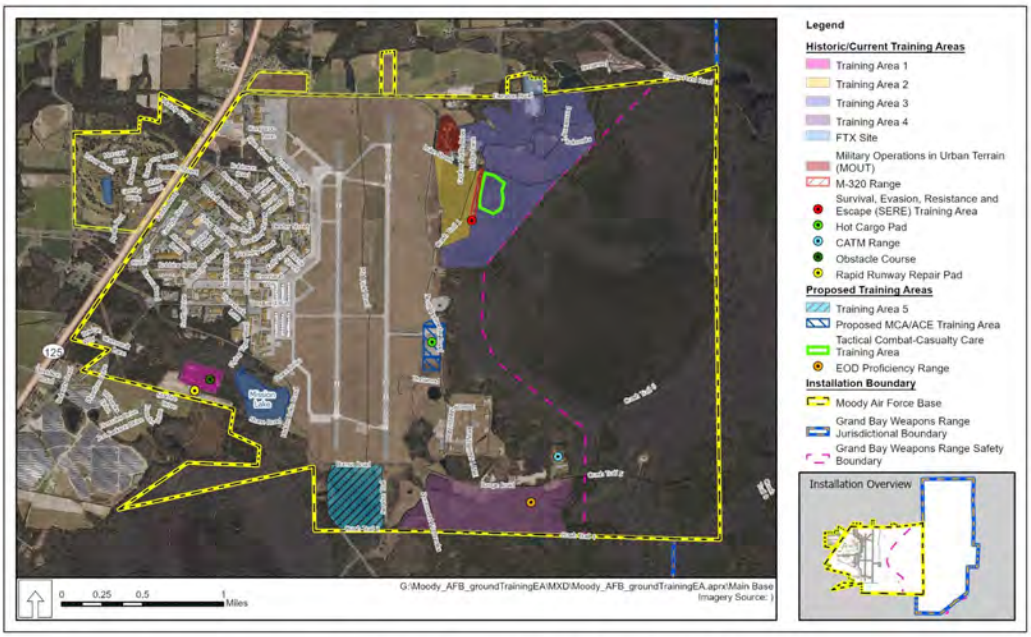

Figure 2. Current and Proposed Training Areas on Main Base

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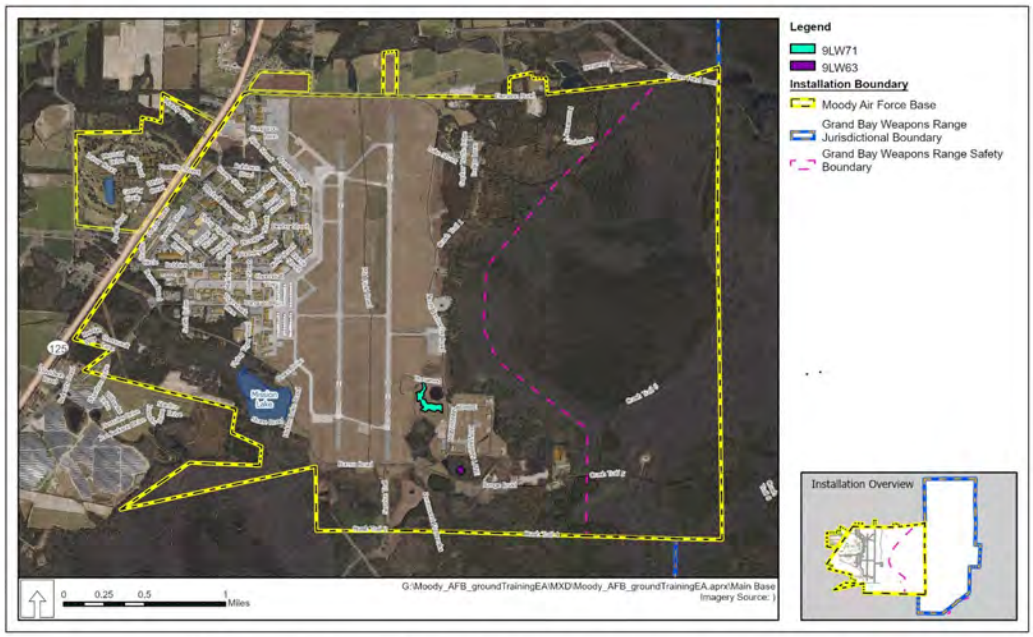

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FORMAT PAGE

APPENDIX B. PUBLIC NOTICES AND AGENCY, GOVERNMENT-TO-GOVERNMENT, AND PUBLIC COMMENT LETTERS

FORMAT PAGE

APPENDIX B-1. PUBLIC NOTICES

FORMAT PAGE

SOUTH GEORGIA MEDIA GROUP

The Valdosta Daily Times
The Moultrie Observer

THOMASVILLE TIMES-ENTERPRISE
The Tifton Gazette

AFFIDAVIT

I, Laurie Gay, Advertising Manager, do hereby certify that the legal Advertisement(s) for

Environmental Assessment

was/were published in Valdosta Daily Times

on 6/13/2021

Subscribed and sworn to me, in the County of Lowndes in the State of Georgia on this

16th day of June 2021

Deborah Rennard
Notary Public Signature

Laurie Gay
Advertising Manager

DEBORAH RENNARD NOTARY PUBLIC Exp. Feb. 18, 2023 LOWNDES COUNTY, GA

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ATTENTION ADVERTISERS *PROOF READ YOUR AD
Any error must be reported the first day of publication. Should the error inhibit response, credit will apply only to the first run date. The South Georgia Media Group is not liable for any loss or expense that results from publication or omission. We reserve the right to edit, reject or refuse any and all advertising submissions.

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Public Notices

PUBLIC NOTICE ENVIRONMENTAL ASSESSMENT PREPARATION FOR COMPREHENSIVE GROUND TRAINING ON MAIN BASE MOODY AIR FORCE BASE, GEORGIA

The US Air Force (Air Force) is preparing a Draft Environmental Assessment (EA) to evaluate current and proposed expanded comprehensive ground training activities and the establishment of new training areas at Moody Air Force Base (AFB) Main Base. The 23d Wing and 93d Air Ground Operations Wing at Moody AFB conduct comprehensive ground training within both designated training areas and across the airfield and cantonment at Moody AFB. The types of military ground training historically and currently conducted, as well as proposed to be conducted in the future, are common military activities that include the use of a small-arms firing range for live weapons training and qualification; the use of designated training areas for maneuvers, force-on-force rescue, real-world deployment, land navigation, convoy movement and protection, and counter-improvised explosive devices training; explosives training; Multi-Capable Airmen/Agile Combat Employment training; the use of helicopter landing zones for jump operations, personnel insertion/extraction, and crash rescue field training exercises; military working dog training; M320 grenade launcher training and qualification; and integrated base defense training. Training activities can include the use of Explosive Ordnance Disposal (EOD) explosive tools and demolition explosives, simunitions, Multiple Integrated Laser Engagement System, pyrotechnics, ground burst simulators, blanks, smokes, and flares. Equipment used during training activities include vehicles such as MRAP/MATV, HMMWV, 6x6 cargo truck, SXV/ITV, utility terrain vehicle, all-terrain vehicle, and generator Environmental Control Unit trailer; Small Unmanned Aircraft Systems; and HH-60W helicopters.

The proposed project is subject to Executive Order 11988, Floodplain Management, and Executive Order 11990, Protection of Wetlands requirements and objectives because the proposed EOD Proficiency Range on Main Base is partially located within a floodplain and a wetland. The Air Force requests advance public comment to determine possible public concerns on potential project impacts. The Air Force also solicits public comments on potential project alternatives. The Air Force will analyze the proposed project in the Draft EA, and the public will have the opportunity to comment on it.

The advance public comment period is 13 June 2021 through 13 July 2021. Please submit comments, or requests for more information to Mr. Lorence Busker, 23rd Civil Engineer Squadron, 3485 Georgia Street, Moody Air Force Base, Georgia 31699-1707 or by email to: lorence.busker@us.af.mil.

STAY INFORMED!
Exercise Your Right To Know!

PUBLIC NOTICE TO THE CITIZENS OF THE CITY OF VALDOSTA

Notice is hereby given that the Greater Lowndes Planning Commission (GLPC) and the Valdosta Mayor-Council will hold public hearings to consider the following Rezoning and Annexation requests. The public hearings are as follows:

Greater Lowndes Planning Commission (recommendation only)
Monday, June 28, 2021 – 5:30 p.m.
325 West Savannah Avenue, Valdosta, Georgia

Valdosta Mayor-Council (official public hearing)
Thursday, July 8, 2021 - 5:30 p.m.
216 East Central Avenue (City Hall), Valdosta, Georgia

FILE NUMBER VA-2021-12. Request by Crown Real Estate Development to rezone 1.00 acres from Office Professional (O-P) to Residential Professional (R-P). The subject property is located at 2008 Baytree Road, in Valdosta GA (all or part of Tax Map 0081D - Parcel 017).

FILE NUMBER VA-2021-13. Request by Dineshkumar Patel to rezone 1.14 acres from Highway Commercial (C-H) (county) to Highway Commercial (C-H) (city). The subject property is located at 1395 North St. Augustine Road, Valdosta GA (all or part of Tax Map 0081D - Parcel 002).

FILE NUMBER VA-2021-14. Request by Dineshkumar Patel to annex approximately 1.14 acres into the City of Valdosta. The subject property is located at 1395 North St. Augustine Road, in Valdosta GA (all or part of Tax Map 0081D - Parcel 002).

** PUBLIC REVIEW of the above application requests is available in the Planning and Zoning office located at 300 North Lee Street, Valdosta, GA. Any comments may be presented at the public hearings, or filed in writing prior to the public hearings. PLEASE NOTE that due to social distancing protocols related to the COVID-19 pandemic, seating and overall attendance may be limited at these public hearings. The public is therefore encouraged to submit their comments in writing, at least one day before the scheduled public hearings.

AS SET FORTH IN THE AMERICANS WITH DISABILITIES ACT OF 1992, THE CITIES OF VALDOSTA AND HAHIRA DO NOT DISCRIMINATE ON THE BASIS OF DISABILITY AND WILL ASSIST CITIZENS WITH SPECIAL NEEDS GIVEN PROPER NOTICE (7 WORKING DAYS). FOR MORE INFORMATION, PLEASE CALL (229) 259-3563.

Lauren Hurley, Planning and Zoning Technician

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Edgar Cornier
3687 Beulah Circle
Valdosta, GA 31605
Offense: Rape of Child with Force

Sex Offender

John Calvin Hawke
6008 Frontage Road
Hahira, GA 31632
Offense: Traveling to Meet A Minor for Sex

Sex Offender

Xavier Lacharles Howard
1606 Northside Drive
Valdosta, GA 31602
Offense: Statutory Rape

South Georgia Scouts complete Youth Leadership Training

The week of May 30th through June 5th, South Georgia Council held its National Youth Leadership Training at Camp Osborn near Sylvester. National Youth Leadership Training provides scouts with leadership skills and experience above and beyond even what they receive in the regular scout program. The additional leadership skills can be used in their home troops and in other situations demanding leadership.

Twenty-Seven scouts completed the course. They are: Jonathan Bevis of Valdosta, Patryk Crumbley of Albany, Lucy Davis of Albany, Reece Ellion of Albany, Wesley Fletcher of Ashburn, Sara Frost of Arabi, Jackson Guest of Albany, Sean Hoover of Leesburg, Adam Kelly of Americus, Grace Mallow of Albany, Carter Mallow of Albany, Marfran Emanuel Mata of Leesburg, Cole McNeal of Ray City, Trey Mitchell of Albany, Ellis Moore of Leesburg, Benjamin Nipper of Cordele, Collin Orme of Albany, Kolby Osha of Valdosta, Alexandra Patton of Albany, Laieton Sharp of Vienna, Wiley Stewart of Americus, Noah Tanner of Albany, Weston Thompson of Valdosta, Aiden Vargovich of Leesburg, Jensen Wade of Cordele, Logan Walsh of Leesburg, and, Korey Watts of Cordele.

South Georgia Council serves thousands of girls and boys in scouting in 28 counties in South Georgia.

For more information on scouting in South Georgia go to https://www.sgcbsa.org/

A group photo of Scouts and staff at Camp Osborn.

Above and below, Scout activities at the camp.

PUBLIC NOTICE

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The advance public comment period is 13 June 2021 through 13 July 2021. Please submit comments, or requests for more information to Mr. Lorence Busker, 23rd Civil Engineer Squadron, 3485 Georgia Street, Moody Air Force Base, Georgia 31699-1707 or by email to lorence.busker@us.af.mil.

Local students receive honors from Wiregrass Georgia Tech

Wiregrass Georgia Technical College Interim President DeAnnia Clements is pleased to announce the Spring Semester President's List and Dean's List. The President's List includes outstanding students who were enrolled full-time for 12 credit hours or more and achieved a grade point average of 3.8 or higher on a 4.0 scale during Spring Semester 2021.

The following students are on the President's List for Spring Semester 2021 and are listed by county:

(Atkinson) Jose Beiza, Jose Castillo, David Gaona, Diego Tinajero-Aguilar, and Estrellita Torres

(Berrien) Melissa Edwards, Andrea Jacobsen, and Miranda Rudeseal

(Brooks) William Exum, Shirley McRae, Paiton O'Neal

(Clinch) Caroline Cummings, and Elijah Ellis

(Cook) Shameria Tucker

(Lanier) Keith Barron, Ramior Miranda Gomez, and Madison Webrand

(Lowndes) Jacqueline Andrews, Violet Avedissian, Chukwufumnanya Azuah, Kaylee Bachtell, Heather Bailey, Brandon Chandler, Zachary Chyzik, Michael Colter, Caleb Condon, Andrew Cooper, Robert Debro, Cynthia Ellis, Stephanie Emmett, Denicia Escareno, Amori Everett, Katrell Foster, Kaysie Goff, Carlton Greenway, Eunji Gulla, Nadia Harris, Melissa Haskins, Kateris Jackson, Ryleigh Jefferson, Courtney Jenkins, Shawn Kelleher, Rebecca Kidd, Kye'Ashia Larkins, Jalen Lee, Heather Lopez, Nena Love, Candice Marberry, Rachelle Marks, Sabrina McCrae, Sherkresha McCrae, Keirra McLeod, Jacob McSpadden, Shamara Melvin, Andrea Oliver, Michelle Peeples, Kara Preston, Hope Rayburn, Kennadi Register, Chloe Schartle, Shannon Spreng, Olliyah Stewart, Michael Szalkay, Amos Terrell, Sasha Thomas, Kathryn Valler, Amber Warren, and Karina Wylie

Wiregrass would like to also recognize our students who made the Dean's List Spring Semester 2021. The list includes outstanding students who were enrolled full-time for 12 credit hours or more and achieved a grade point average of 3.5 to a 3.79 scale during the Spring Semester.

The following students on the Dean's List for Spring Semester 2021 and are listed by county:

(Atkinson) David Abonza, and Juan Elias

(Berrien) Carmelita Garcia, Hannah Hall, Cheryl Peterson, Samuel Postell, Alexandria Short, Candance Warren, and Lexi Williams

(Cook) Heather Duren, Kalei Godwin, James Taylor, Brandon Walker, and Diontae Wright

(Lanier) Brenda Clark, Jacklyn Kenbeek, and Alecia King

(Lowndes) Brianna Boone, Ellis Brown, Destiny Bussone, Madeline Castor, Lee Cooper, Amanda Corey, Jeana Costanzo, Carolina Crapps, Haleigh Crozier, Amber Davis, Juliana Deloach, Joseph Denly, April Donaldson, Lillian Dupree, Aaron Eveland, Mikel Fender, Jordan Green, Karena Green, Payton Hall, Russell Hunter, Lydell Jackson, Shanqase Jackson, KyBreanna Jefferson, MJ Johnson, Dana Kelly, Sean Kopszywa, Hailey Luong, Haley Manac, Crystal Matthews, Darrellnette Mcrae Stibbins, Erma Mitchell, Ryan Reed, Deja Rivers, Willie Robinson, Shantal Rozier, Samuel Sandwell, Kristian Sharp, William Smith, Lavada Spell, Lawrence Tillman, David Travisano, Shelby Trimble, Nathan White, and David Whitwell

Recognize and care for heat-related emergencies

In recent years, excessive heat has caused more deaths than all other weather events, including floods. A heat wave is a prolonged period of excessive heat, often combined with excessive humidity. Generally temperatures are 10 degrees or more above the average high temperature for the region during summer months, last for a long period of time and occur with high humidity as well. For more information on disaster and emergency preparedness, visit RedCross.org.

Amy Griffin
Lanier Family Connection

Heat cramps are muscular pains and spasms that usually occur in the legs or abdomen caused by exposure to high heat and humidity and loss of fluids and electrolytes. Heat cramps are often an early sign that the body is having trouble with the heat.

Heat exhaustion typically involves the loss of body fluids through heavy sweating during strenuous exercise or physical labor in high heat and humidity.

• Signs of heat exhaustion include cool, moist, pale or flushed skin; heavy sweating; headache; nausea; dizziness; weakness; and exhaustion.

• Move the person to a cooler place. Remove or loosen tight clothing and apply cool, wet cloths or towels to the skin. Fan the person. If the person is conscious, give small amounts of cool water to drink. Make sure the person drinks slowly. Watch for changes in condition.

• If the person refuses water, vomits or begins to lose consciousness, call 9-1-1 or the local emergency number. Heat stroke (also known as sunstroke) is a life-threatening condition in which a person's temperature control system stops working and the body is unable to cool itself.

• Signs of heat stroke include hot, red skin which may be dry or moist; changes in consciousness; vomiting; and high body temperature.

• Heat stroke is life-threatening. Call 9-1-1 or the local emergency number immediately.

• Move the person to a cooler place. Quickly cool the person's body by giving care as you would for heat exhaustion. If needed, continue rapid cooling by applying ice or cold packs wrapped in a cloth to the wrists, ankles, groin, neck.

APPENDIX B-2. AGENCY, GOVERNMENT-TO-GOVERNMENT, AND PUBLIC COMMENT LETTERS

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2 FORMAT PAGE

GEORGIA
DEPARTMENT OF NATURAL RESOURCES
WILDLIFE RESOURCES DIVISION

MARK WILLIAMS
COMMISSIONER

TED WILL
DIRECTOR

February 23, 2021

John L. Eunice, III
Deputy Base Civil Engineer
24D Civil Engineer Squadron (ACC)
Moody Air Force Base
3485 Georgia Street
Moody AFB, GA 31699-1707

Subject: Known occurrences of natural communities, plants, and animals of highest priority conservation status on or near Moody Air Force Base (AFB) Main Base Comprehensive Ground Training, Proposed New Training Areas, Lowndes and Lanier Counties, Georgia

Dear John L. Eunice:

This is in response to your request on January 27, 2021. The following Georgia natural heritage database element occurrences (EOs) were selected for the current site using the local Hydrologic Unit Code (HUC) 10 watershed for elements whose range distribution is limited by aquatic systems (AQ) and within 3 miles for all other EOs (TR):

EOD Proficiency Range, Site 1 (Site Center: -83.177326, 30.949857, WGS84)

GA *Clemmys guttata* (Spotted Turtle) at Moody Air Force Base (AQ), approx. 2.9 mi E of site
US *Drymarchon couperi* (Eastern Indigo Snake) (TR), approx. 0.9 mi E of site
US *Drymarchon couperi* (Eastern Indigo Snake) (TR), on or within immediate vicinity of site
US *Drymarchon couperi* (Eastern Indigo Snake) (TR), approx. 0.3 mi NE of site
GA *Epidendrum magnoliae* (Greenfly Orchid) [Historic] (TR), approx. 2.0 mi NE of site
GA *Epidendrum magnoliae* (Greenfly Orchid) (TR), approx. 2.4 mi E of site
US *Gopherus polyphemus* (Gopher Tortoise) (TR), approx. 1.7 mi E of site
Liodytes alleni (Striped Swamp Snake) (TR), approx. 1.0 mi W of site
Liodytes pygaea pygaea (Northern Florida Swamp Snake) (TR), approx. 1.0 mi W of site
Nycticorax nycticorax (Black-crowned Night-heron) (TR), approx. 1.8 mi E of site
GA *Peucaea aestivalis* (Bachman's Sparrow) (TR), approx. 2.5 mi E of site
Pseudobranchus striatus (Dwarf Siren) (TR), approx. 1.7 mi E of site
Pteronotropis metallicus (Metallic Shiner) [Historic] in Grand Bay Creek (AQ), approx. 14.0 mi S of site
GA *Sarracenia minor var. minor* (Hooded Pitcherplant) (TR), approx. 2.6 mi E of site
GA *Sarracenia minor var. minor* (Hooded Pitcherplant) (TR), approx. 2.4 mi SE of site
Sphodros abbotii (Purse-web spider) (TR), approx. 0.7 mi E of site
Triphora trianthophora (Three-birds Orchid) (TR), approx. 1.0 mi E of site

WILDLIFE CONSERVATION SECTION
2065 U.S. HIGHWAY 278 S.E. | SOCIAL CIRCLE, GEORGIA 30025-4743
770.918.6411 | FAX 706.557.3033 | WWW.GEORGIAWILDLIFE.COM

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Ursus americanus floridanus (Florida Black Bear) (TR), non-breeding and breeding territory on or within immediate vicinity of site
Zale perculta (Okefenokee Zale Moth) (TR), approx. 0.7 mi E of site
GRAND BAY WMA [Georgia Department of Natural Resources] (TR), approx. 0.7 mi E of site

Proposed MCA/ACE Training Area, Site 2 (Site Center: -83.186862, 30.963764, WGS84)
US *Ambystoma cingulatum* (Frosted Flatwoods Salamander) [Historic] (TR), approx. 1.7 mi NE of site
GA *Clemmys guttata* (Spotted Turtle) [Historic] in Lakeland (AQ), approx. 5.9 mi NE of site
US *Gopherus polyphemus* (Gopher Tortoise) (TR), approx. 0.5 mi N of site
US *Gopherus polyphemus* (Gopher Tortoise) (TR), approx. 1.1 mi NE of site
Grus canadensis pratensis (Florida Sandhill Crane) (TR), approx. 0.2 mi E of site
Grus canadensis tabida (Greater Sandhill Crane) (TR), approx. 2.0 mi NE of site
Lanius ludovicianus migrans (Migrant Loggerhead Shrike) (TR), approx. 1.4 mi N of site
GA *Notophthalmus perstriatus* (Striped Newt) [Historic] (TR), approx. 2.9 mi NE of site
Nyctanassa violacea (Yellow-crowned Night-heron) (TR), approx. 1.4 mi E of site
Pseudobranchus striatus (Dwarf Siren) (TR), approx. 2.1 mi NE of site
GA *Sarracenia flava* (Yellow Flytrap) (TR), on or within immediate vicinity of site
***Wading Bird Colony* (Wading Bird Colony) (TR), on or within immediate vicinity of site**
Bank's Lake NWR [U.S. Fish and Wildlife Service] (TR), approx. 2.2 mi NE of site

Training Area 5, Site 3 (Site Center: -83.193491, 30.950157, WGS84)
Botaurus lentiginosus (American Bittern) (TR), approx. 0.9 mi SW of site
Botaurus lentiginosus (American Bittern) (TR), approx. 0.3 mi W of site
GA *Clemmys guttata* (Spotted Turtle) in Moody AFB (AQ), approx. 0.2 mi N of site
Lanius ludovicianus migrans (Migrant Loggerhead Shrike) (TR), approx. 0.8 mi NW of site
Liodytes alleni (Striped Swamp Snake) (TR), approx. 0.4 mi NW of site
Liodytes alleni (Striped Swamp Snake) (TR), approx. 0.8 mi S of site
Liodytes pygaea pygaea (Northern Florida Swamp Snake) (TR), approx. 0.3 mi SW of site
Nyctanassa violacea (Yellow-crowned Night-heron) (TR), approx. 0.4 mi W of site
Nyctanassa violacea (Yellow-crowned Night-heron) (TR), approx. 0.9 mi SW of site
Oxypolis ternata (Savanna Cowbane) [Historic?] (TR), approx. 0.3 mi SE of site
Plegadis falcinellus (Glossy Ibis) (TR), approx. 0.9 mi SW of site
Pseudobranchus striatus (Dwarf Siren) (TR), approx. 0.4 mi W of site
Quercus austrina (Bluff White Oak) (TR), approx. 0.3 mi E of site
GA *Sarracenia flava* (Yellow Flytrap) (TR), approx. 0.6 mi N of site
GRAND BAY WMA [Georgia Department of Natural Resources] (TR), on or within immediate vicinity of site
Withlacoochee River 3 (0311020304) [SWAP High Priority Watershed] (TR), approx. 2.5 mi W of site

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Recommendations:

Federally listed species have been documented on site or near the proposed project. To minimize potential impacts to federally listed species, we recommend consultation with the United States Fish and Wildlife Service. Please email GAES_Assistance@fws.gov for project consultation and survey recommendations.

There are records of state protected species on site or within three miles of the proposed project. For information about these species, including survey recommendations, please visit our webpage at http://georgiawildlife.com/conservation/species-of-concern#rare-locations.

The following biologists can provide additional recommendations and assistance regarding the following groups:

Plants: Lisa Kruse (Lisa.Kruse@dnr.ga.gov)
Fish: Paula Marcinek (Paula.Marcinek@dnr.ga.gov)
Crayfish: Brett Albanese (Brett.Albanese@dnr.ga.gov)
Mussels: Matt Rowe (Matt.Rowe@dnr.ga.gov)
Reptiles & Amphibians: Daniel Sollenberger (Daniel.Sollenberger@dnr.ga.gov)
Mammals: Trina Morris (Katrina.Morris@dnr.ga.gov)
Birds: Nathan Klaus (Nathan.Klaus@dnr.ga.gov) or Tim Keyes (Tim.Keyes@dnr.ga.gov)

Species listed above that have no "GA" or "US" status are considered species of concern. Locations of these species are tracked until enough information is gathered to determine if they should be added to the state list or if their populations do not warrant tracking. It is important to consider these species when planning projects. Please let us know if you have any questions regarding Georgia species of concern.

We have a record of the federally threatened flatwoods salamander (*Ambystoma cingulatum*) near the project site. This species is most often found in association with mesic flatwoods in longleaf pine/wiregrass communities in the coastal plain. If there are wetlands located in the project area, we recommend avoiding disturbance of these wetlands. Additionally, we suggest that surveys for the flatwoods salamander be conducted over more than a single season. Surveys over the course of one, two, or even three or more years may be insufficient to detect the flatwoods salamander, especially during and following extended drought conditions. Research suggests that some breeding areas may only contain larvae once in every 8 years. For more information about the flatwoods salamander, please contact Thomas Floyd at Thomas.Floyd@dnr.ga.gov.

The gopher tortoise (*Gopherus polyphemus*) is a candidate for federal listing. Although we have no records of gopher tortoises at the proposed project site, gopher tortoises are in the vicinity and suitable habitat may be present at the project site. If suitable habitat is present, we recommend pre-construction surveys for gopher tortoise burrows and/or individuals are performed. If gopher tortoises are observed on site during pre-construction surveys or construction activities, we request that Marylou Moore (Marylou.Moore@dnr.ga.gov) and the United States Fish and Wildlife Service be contacted to discuss avoidance and mitigation efforts.

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There is a record of a wading bird colony with breeding activity at or within the immediate vicinity of the proposed project site. Disturbance or construction activities near water-bird rookeries should be approached with caution. Disturbance near a colony may lead to nest failure and abandonment. The nesting season extends from mid-February to the end of July. Please avoid activities within 400 meters (1300 feet) of the periphery of rookeries during this time, if possible.

We are concerned about streams, wetlands, and other sensitive habitats that could be impacted by the proposed project. We recommend that stringent erosion control practices be used during any construction activities and that vegetation is re-established on disturbed areas as quickly as possible. Silt fences and other erosion control devices should be inspected and maintained until soil is stabilized by vegetation. Please use natural vegetation and grading techniques (e.g. vegetated swales, turn-offs, vegetated buffer strips) that will ensure that the project site does not serve as a conduit for storm water or pollutants into the watershed during or after construction. These measures will help protect water quality near the project as well as in downstream areas.

Please install temporary erosion control devices, if required, before any other work is performed, and permanent erosion control devices at the earliest possible time during the work. Monitor erosion control devices until disturbed areas have been permanently stabilized and give persons who monitor erosion control devices the authority to halt construction and/or require immediate implementation of corrective measures at a given stream crossing or construction site if they observe failed erosion control measures associated with a visible increase in turbidity downstream of the structure. Monitor erosion control measures left in place after construction is completed (i.e., detention ponds, silt fence, check dams in roadside ditches, etc.) quarterly and clean/replace when no longer effective in containing sediment.

This site has a long history of disturbance, thus the proposed continued training activities and new training areas are not likely to significantly impact rare species or habitats if best management practices (BMPs) are utilized. Please implement BMPs when completing the project to ensure impacts are minimized.

Disclaimer:

Please keep in mind the limitations of our database. The data collected by the Wildlife Conservation Section comes from a variety of sources, including museum and herbarium records, literature, and reports from individuals and organizations, as well as field surveys by our staff biologists. In most cases the information is not the result of a recent on-site survey by our staff. Many areas of Georgia have never been surveyed thoroughly. Therefore, the Wildlife Conservation Section can only occasionally provide definitive information on the presence or absence of rare species on a given site. Our files are updated constantly as new information is received. **Thus, information provided by our program represents the existing data in our files at the time of the request and should not be considered a final statement on the species or area under consideration.**

If you know of populations of highest priority species that are not in our database, please fill out the appropriate data collection form and send it to our office. Forms can be obtained through our

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web site (http://georgiawildlife.com/conservation/species-of-concern#rare-locations) or by contacting our office. If we can be of further assistance, please let us know.

Sincerely,

Maggie Aduddell Hunt, Wildlife Biologist
maggie.hunt@dnr.ga.gov, (706) 557-3228

Data Available on the Wildlife Conservation Section Website

- Georgia protected plant and animal species profiles are available on our website. These profiles cover basics such as species physical descriptions, preferred habitat, and life history, as well as threats, management recommendations, and conservation status. To view these profiles, visit: http://georgiawildlife.com/conservation/species-of-concern#rare-locations
- Rare species and natural community information can be viewed by Quarter Quad, County, and HUC 8 Watershed. To access this information, please visit our GA Rare Species and Natural Community Information page at: http://georgiabiodiversity.org/
- Downloadable files of rare species and natural community data by Quarter Quad and County are also available. These can be downloaded at: http://georgiabiodiversity.org/natels/natural-element-locations.html

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Brian P. Kemp
Governor

Georgia® Department of Community Affairs

Christopher Nunn
Commissioner

February 17, 2021

John L. Eunice, III
Deputy Base Civil Engineer
23D Civil Engineer Squadron/CEIE
3485 Georgia Street
Moody Air Force Base, Georgia 31699
Attn: Lorence Busker

RE: Moody Air Force Base: Comprehensive Ground Training
Lanier and Lowndes Counties, Georgia
HP-210205-006

Dear Mr. Eunice:

The Historic Preservation Division (HPD) has received initial information concerning the above referenced project requesting comments pursuant to the National Environmental Policy Act of 1969 (NEPA). Our comments are offered to assist the Department of the Air Force (AF) in complying with the provisions of Section 106 of the National Historic Preservation Act of 1966, as amended (NHPA).

Thank you for notifying us of this federal undertaking. We look forward to receiving Section 106 compliance documentation, as appropriate. If the federal agency intends to utilize NEPA to comply with Section 106, in lieu of the procedures set forth in 36 CFR Part 800, the AF should notify HPD and the Advisory Council on Historic Preservation of its intent, prior to commencing consultation.

Please note our new department (above) and address (below). Please address submittals Attn: Historic Preservation Division, Environmental Review.

Please refer to project number **HP 210205-006** in future correspondence regarding this project. If we may be of further assistance, please contact me at (404) 486-6376 or Jennifer.dixon@dca.ga.gov.

Sincerely,

Jennifer Dixon, MHP, LEED Green Associate
Program Manager
Environmental Review & Preservation Planning

60 Executive Park South, NE | Atlanta, GA 30329-2231 | 404-679-4940
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United States Department of the Interior

Fish and Wildlife Service
RG Stephens, Jr. Federal Building
355 East Hancock Avenue, Room 320
Athens, Georgia 30601

West Georgia Sub Office
P.O. Box 52560
Ft. Benning, Georgia 31995-2560

February 12, 2021

Coastal Sub Office
4980 Wildlife Drive
Townsend, Georgia 31331

Mr. John L. Eunice, III
Moody Air Force Base Georgia
23D Civil Engineers Squadron (ACC)
3485 Georgia Street
Moody, AFB, GA 31699-1707

Re: FWS Log No. 2021-TA-1155

Dear Mr. Eunice:

The Service has received your January 27, 2021, letter requesting additional information that should be included or considered during the development of an upcoming Environmental Assessment (EA) for the Moody Air Force Base (AFB) in Lowndes County, Georgia. An EA is being prepared to assess the potential environmental consequences associated with comprehensive ground training on the Main Base at Moody AFB, Georgia. There are no known federally-listed species that occur on Moody AFB at this time.

The Service has no additional information to offer regarding the impacts of the proposed action or of the environmental aspects of the project. We recommend using the Service's IPAC system located at https://ecos.fws.gov/ipac to provide you with a list of federally-listed species that could occur within or near the proposed project area. We also recommend you contact the Georgia Department of Natural Resources (GADNR) Natural Heritage Program at (770) 918-6411 concerning known populations of federal and/or state endangered or threatened species, and other sensitive species within Lowndes County. Please notify this office with the results of any surveys conducted for the proposed project.

Your interest in ensuring the protection of endangered and threatened species and our nation's valuable resources is appreciated. If you have further questions or require additional information, please contact Sandy Abbott of the West Georgia Sub Office at (706) 544-7518.

Sincerely,

Donald W.

Donald Imm
Field Supervisor

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Threatened and Endangered Species in Lowndes County, Georgia

Group	Name	Population	Status	Lead Office	Recovery Plan
Birds	Wood Stork (*Mycteria americana*)	Wherever found	Threatened	North Florida Ecological Services Field Office	Revised Recovery Plan for the U.S. Breeding Population of the Wood Stork
Clams	Suwannee Moccasinshell (*Medionidus walkeri*)	Wherever found	Threatened	Panama City Ecological Services Field Office	Recovery Outline for the Suwannee Moccasinshell
Flowering Plants	Boykin's Lobelia (*Lobelia boykinii*)	Wherever found	Under Review	Assistant Regional Director-Ecological Services	
Flowering Plants	Carolina Birds-in-a-nest (*Macbridea caroliniana*)	Wherever found	Under Review	Assistant Regional Director-Ecological Services	
Reptiles	Eastern Indigo Snake (*Drymarchon corais couperi*)	Wherever found	Threatened	Georgia Ecological Services Field Office	Eastern Indigo Snake Revised Recovery Plan
Reptiles	Florida Pine Snake (*Pituophis melanoleucus mugitus*)	Wherever found	Under Review	Assistant Regional Director-Ecological Services	
Reptiles	Gopher Tortoise (*Gopherus polyphemus*)	Eastern U.S.	Candidate	North Florida Ecological Services Field Office	

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Reptiles	Alligator Snapping Turtle (*Macrochelys temminikii*)	Wherever found	Under Review	Assistant Regional Director-Ecological Services	
Reptiles	Eastern Diamondback Rattlesnake (*Crotalus adamanteus)*	Wherever found	Under Review	Panama City Ecological Services Field Office	
Reptiles	Spotted Turtle (*Clemmys guttata*)	Wherever found	Under Review	Assistant Regional Director-Ecological Services	

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SOUTHERN GEORGIA REGIONAL COMMISSION

February 22, 2021

Moody Air Force Base
Attn: Mr. Lorence Busker
23 CES/ CEIE
3485 Georgia Street
Moody AFB, Georgia 31699

Mr. Busker,

I am writing in response to your letter in which you requested assistance regarding the Proposed Designated Ground Training Areas on Moody AFB, Georgia. I have reviewed the letter and attached maps, and completed a brief environmental evaluation for general reference only using the following criteria:

- Watershed Delineation (WATERS GeoViewer- EPA)
  - Additional watershed and/or impairment information provided by How's My Waterway- EPA
- Impaired Waters (303(d)/ 305(b) List of Impaired Sites- Clean Water Act)
- Threatened/ Endangered Species (Department of Natural Resources)
- Wetlands NWI (VALOR GIS-SGRC)
- Groundwater Recharge Area (VALOR GIS- SGRC)

The Proposed Ground Training Areas fall within the Grand Bay Watershed (HUC #031102020902), which has 13 Georgia Environmental Protection Division (EPD) water quality monitoring sites. As of 2020, the reporting of these monitoring sites for the Grand Bay Watershed has been listed as supporting its designated use on the 305(b)/ 303(d) List of Impaired Sites.

I have also included an attached table of possible Threatened or Endangered Species, and maps of Wetlands and Groundwater Recharge Areas in the proposed Ground Training Areas. All of this information is simply for reference and should be followed up with additional study to ensure the information provided by our agency is applicable to your project.
Should you have any questions, please feel free to contact me at any time via email at mparker@sgrc.us or by phone at (229) 333-5277

Respectfully,

Megan L. Parker
Southern Georgia Regional Commission
Environmental Project Manager

An Equal Opportunity Employer / Program

327 W. Savannah Ave., Valdosta, GA 31601 Phone (229) 333-5277 • Fax (229)-333-5312
1725 S. Ga. Parkway, W., Waycross, GA 31503 Phone (912) 285-6097 • Fax (912) 285-6126
www.sgrc.us

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My Map
Regional Groundwater Recharge
SGRC Counties
Barretts
Hightower
Quiet Pines Golf Course
Moody Air Force Base
Beatty Rd
Apron A Rd
Davidson Rd
Stone Rd
Lori St
Lakeland Hwy
Old State Rd
S Highway 221
esri
1 mi
Esri, NASA, NGA, USGS, FEMA | FDEP, Esri, HERE, Garmin, SafeGraph, INCREMENT P, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA

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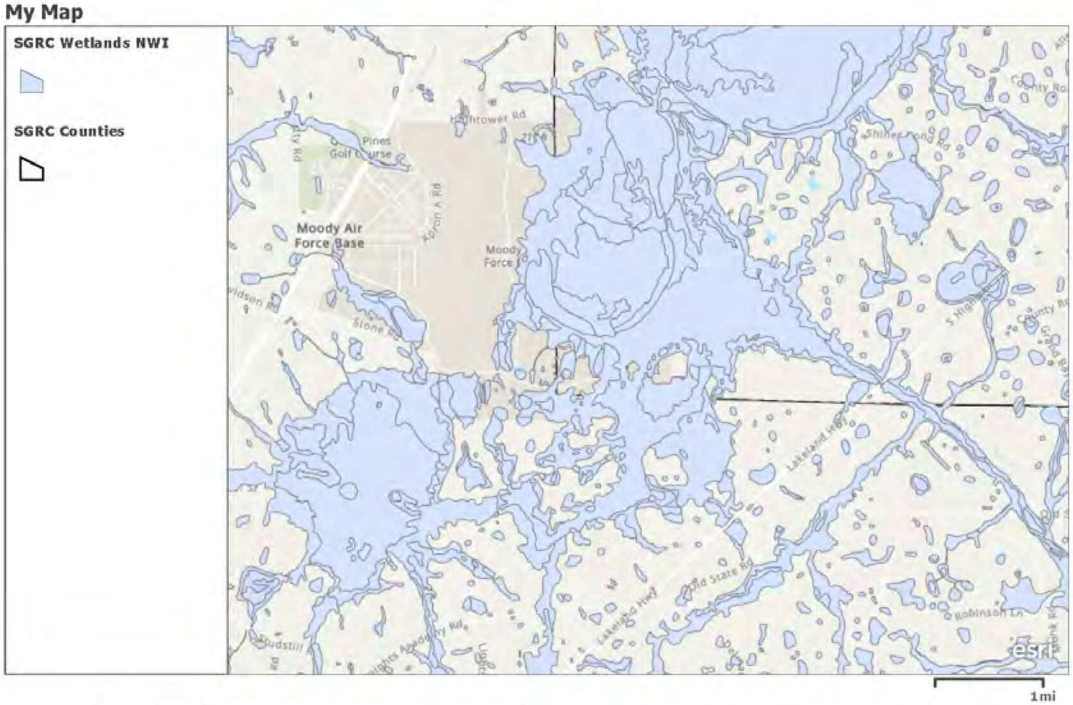
2/9/2021 My Map

My Map



Esri, NASA, NGA, USGS, FEMA | FDEP, Esri, HERE, Garmin, SafeGraph, INCREMENT P, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA

https://sgrc.maps.arcgis.com/home/webmap/print.html 1/1

APPENDIX C. REASONABLY FORESEEABLE FUTURE ACTIONS

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2 FORMAT PAGE

This section identifies reasonably foreseeable future projects that could reasonably affect environmental resources in conjunction with Alternative 1, Expanded Ground Training on Main Base. The Region of Influence for the reasonably foreseeable effects analysis is the same as is defined for each resource in Chapter 3 in the Environmental Assessment. Actions identified in Table C-1 would not interact with all resources; therefore, resources that potentially could result in a reasonably foreseeable future direct or indirect impact with the addition of Alternative 1 are noted in Table C-1.

Table C-1. Reasonably Foreseeable Projects at Moody Air Force Base

Project	Project Summary	Time Frame	Relevance to Proposed Action	Resource Interaction
Bemiss Field Unimproved Landing Zone Project	An EA is being completed for tree clearing around the runways, heavy weight drops, and increased aircraft operations.	Present	Would increase aircraft operations and disturb vegetation and soils on Main Base.	Noise, Air Quality, Earth Resources, Biological Resources
HH-60G to HH-60W	The HH-60G helicopters at Moody AFB would be replaced with the new combat rescue helicopter HH-60W.	Future	Change in aircraft at Moody AFB.	Noise, Air Quality, Safety
Security Enhancements for the C-130 Parking Area	The Main Base perimeter security fence would be realigned to meet the antiterrorism/force protection requirements for the C-130 ramp.	Future	The security fence for Main Base would be realigned and Hightower Road would be moved outside of the Moody AFB boundaries.	Safety, Noise, Biological Resources
Grand Bay Weapons Range Expansion	Land would be acquired for training requirements. Land would most likely be southwest and contiguous to the installation.	Future	Additional land would be incorporated into Moody AFB and used for training activities and buffer area.	Safety, Biological Resources
Installation Development Projects	This would implement facility and infrastructure construction, demolition, and renovation projects at Moody AFB Main Base as described in the 2018 Moody AFB Installation Development Plan Environmental Assessment.	Future	Construction activities would occur on Main Base for new facilities and infrastructure.	Noise, Air Quality, Biological Resources, Cultural Resources, Transportation, Utilities
820 Base Defense Group Campus	A new campus would be constructed for the 820 Base Defense Group in Training Area 2 on Main Base.	Future	Construction activities would occur on Main Base and would reduce the size of Training Area 2.	Noise, Air Quality, Biological Resources, Cultural Resources, Transportation, Utilities

EA – Environmental Assessment; **AFB** – Air Force Base

APPENDIX D. DEFINITION OF RESOURCES, AREAS ANALYZED, AND METHODOLOGIES

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2 FORMAT PAGE

APPENDIX D-1. LAND USE

D-1.1 Definition of the Resource

The term “land use” refers to real property classifications that indicate either natural conditions or the types of human activities occurring on a defined parcel of land. In many cases, land use descriptions are codified in local zoning laws. The following are the land use categories and the typical facilities associated with each category.

- Administrative – headquarters, security operations, offices
- Airfield pavements – runways, taxiways, aprons, overruns
- Airfield operations and maintenance – hangars, aircraft maintenance units, squadron operations
- Community commercial – commissary, base exchange, dining
- Community service – commissary, gym, recreation center, theater
- Housing – accompanied – family housing
- Housing – unaccompanied – airman housing, visitor housing, temporary lodging
- Industrial – base engineering, maintenance shops, warehouses
- Medical/dental – hospital, clinic, pharmacy
- Open space – conservation area, buffer space
- Outdoor recreation – ballfields, outdoor courts, golf course
- Training – classrooms, simulators

Land use planning ensures orderly growth and compatibility between nearby property parcels or land areas. Land use planning in the US Air Force (Air Force) is guided by Air Force Instruction (AFI) 32-7062, *Comprehensive Planning*. This document sets forth the responsibilities and requirements for comprehensive planning and describes procedures for developing, implementing, and integrating an Installation Development Plan with Activity Management Plans. In addition, land use guidelines established by the US Department of Housing and Urban Development and based on findings of the Federal Interagency Committee on Noise are used to recommend acceptable levels of noise exposure for land use.

Recreational resources are often considered as part of land use. Recreational resources include federal, state, and local parks, trails, scenic areas, beaches, indoor and outdoor community recreation centers, and playgrounds. Recreation areas are primarily limited to running and bicycle trails, ballfields, swimming pools, bowling alleys, theatres, playgrounds for children, and gymnasium facilities.

Military airfield, training areas, military facilities, recreation complexes, and open space compose most of the visual environment at Moody AFB. Prominent visual features include aircraft, maintenance and support facilities, hangars, and office buildings.

Moody Air Force Base (AFB) is not located within a designated coastal zone; therefore, the land use regulations associated with the Coastal Zone Management Act do not apply.

APPENDIX D-2. NOISE

D-2.1 Definition of the Resource

Sound is a physical phenomenon consisting of vibrations that travel through a medium, such as air, and are sensed by the human ear. Noise is defined as any sound that is undesirable because it interferes with communication, is intense enough to damage hearing, or is otherwise intrusive. Human response to noise varies depending on the type and characteristics of the noise, distance between the noise source and the receptor, receptor sensitivity, and time of day. Noise is often generated by activities essential to a community's *quality of life*, such as construction or vehicular traffic.

Sound varies by both intensity and frequency. Sound pressure level, described in decibels (dB), is used to quantify sound intensity. The dB is a logarithmic unit that expresses the ratio of a sound pressure level to a standard reference level. Hertz are used to quantify sound frequency. The human ear responds differently to different frequencies. "A-weighing," measured in A-weighted decibels (dBA), approximates a frequency response expressing the perception of sound by humans. Sounds encountered in daily life and their dBA levels are provided in **Table D-2.1**.

Table D-2.1. Common Sounds and Their Levels

Outdoor	Sound Level (dBA)	Indoor
Motorcycle	100	Subway train
Tractor	90	Garbage disposal
Noisy Restaurant	85	Blender
Downtown (large city)	80	Ringing telephone
Freeway Traffic	70	TV audio
Normal Conversation	60	Sewing machine
Rainfall	50	Refrigerator
Quiet Residential Area	40	Library

Source: Harris 1998
dBA – A-weighted decibel

D-2.2 Noise Metrics and Thresholds for Noise-Sensitive Land Uses

The dBA noise metric describes steady noise levels, although very few noises are, in fact, constant. Therefore, other sound metrics have been developed.

- **Day-Night Sound Level (DNL)** is defined as the average sound energy in a 24-hour period with a 10 dB penalty added to the nighttime levels (10:00 p.m. to 7:00 a.m.). DNL is a useful descriptor for noise because: (1) it averages ongoing yet intermittent noise, and (2) it measures total sound energy over a 24-hour period.
- **Equivalent Sound Level (L_{eq})** is often used to describe the overall noise environment. L_{eq} is the average sound level in dB.
- **Peak Level (dBP)** is the maximum instantaneous level that occurs during an acoustic event. For small arms, it is the maximum instantaneous noise level made by a given

weapon, at a given distance. Peak level for small arms weapons is strongly correlated with community annoyance (US Army 2007). **Table D-2.2** outlines noise limits and zones for land use planning for small arms.

Table D-2.2. Noise Thresholds for Noise-Sensitive Land Uses – Small Arms

General Level of Noise	Small Arms	Recommended Uses
Low	< 87 dBP	Noise-sensitive land uses acceptable
Moderate	87–104 dBP	Noise-sensitive land uses normally not recommended
High	> 104 dBP	Noise-sensitive land uses not recommended

Source: US Army 2007
dBP – peak level decibels

D-2.3 Noise Modeling

The Small Arms Range Noise Assessment Model (SARNAM2) was used to predict the noise conditions associated with the training activities. SARNAM2 accounts for spectrum and directivity of both muzzle blast and projectile bow shock, which facilitates accurate calculation of propagation and of sound attenuation by barriers.

Training areas in which firing occurs from any location and in any direction (i.e., all areas except the Combat Arms Training and Maintenance [CATM] Range) are not specifically addressed in written policies of either the Air Force or the US Army. A commonly used approach to communicating noise generated in these areas is to calculate the distance at which the sound level of a round fired at the area boundary decreases to below threshold values. This method returns a maximum peak noise level buffer around each training area. The buffer reflects the loudest round type fired from the closest position possible (i.e., at the training area boundary), a confluence of factors that does not happen frequently. Therefore, the maximum peak level buffers do not imply the same frequency of occurrence of events that is implied by peak noise level contours surrounding a regularly used firing range with established firing points. The commonly used approach for this type of analysis assumes that rounds would not be fired outwards from the training area boundary.

D-2.3 Noise Modeling Results

For each specific round, peak levels depend on two variables, weather condition and azimuth angle. The tables below indicate the predicted peak levels for the 5.56 millimeter (mm) blank, 7.62 mm blank, and .50 caliber blank. In each column, the upper limit levels would occur under weather conditions that enhance sound propagation (unfavorable), such as the wind blowing toward the receiver. The lower limit levels occur under favorable weather conditions, such as the wind blowing away from the receiver. For example, **Table D-2.3** indicates that at 100 meters and 0 degree azimuth the peak levels vary from 87 to 97 dBP. This range of numbers is weather dependent.

The azimuth angle can be defined as the direction of fire, i.e., 0 degree is directly in front of the weapon and 180 degree is directly behind the weapon. Typically, the peak levels decrease as the azimuth angle increases (this does not hold true for the 5.56 mm blank).

When combining these two variables, the highest peak levels occur when rounds are fired in the direction of the receiver (0 degree azimuth) and under unfavorable weather conditions (exception is 5.56 mm blank). For example, **Table D-2.3** indicates that under unfavorable weather conditions, the areas exposed to 87 dBP extend approximately 200 meters for the 5.56 blank rounds at all three given azimuth angles. A 200-meter buffer around the firing location of the 5.56 mm blank would indicate areas exposed to levels normally not recommended for noise sensitive land uses. **Tables D-2.4** and **D-2.5** indicate areas normally not recommended for noise-sensitive land uses levels would extend approximately 800 meters for the 7.62 mm blank round and 1,300 meters for the .50 caliber blank round under adverse conditions.

Table D-2.3. Peak Noise Levels - 5.56 mm Blank

Distance, Meters	Predicted Level, dBP Azimuth		
	0º	90º	180º
100	87-97	86-96	87-97
200	80-90	79-89	80-90
300	72-82	71-81	72-82

Note: the 0º is directly in front of the weapon and the 180º azimuth is directly behind the weapon.
dBP – peak level decibels

Table D-2.4. Peak Noise Levels – 7.62 mm Blank

Distance, Meters	Predicted Level, dBP Azimuth		
	0º	90º	180º
100	109-119	106-116	101-111
200	103-113	100-110	94-104
300	95-105	92-102	88-98
400	92-102	89-99	85-95
500	91-101	88-98	83-93
600	88-98	85-95	81-91
700	86-96	82-92	79-89
800	84-94	81-91	77-87
900	82-92	79-89	76-86

Note: the 0º is directly in front of the weapon and the 180º azimuth is directly behind the weapon.
dBP – peak level decibels

Table D-2.5. Peak Noise Levels – 0.50 Cal Blank

Distance, Meters	Predicted Level, dBP Azimuth		
	0º	90º	180º
100	116-126	110-120	111-121
200	109-119	103-113	104-114
300	101-111	96-106	95-105
400	97-107	92-102	91-101
500	96-106	91-101	91-101
600	93-103	88-98	88-98
700	91-101	86-96	86-96
800	89-99	84-94	84-94
900	88-98	82-92	83-93
1000	87-97	81-91	80-90
1100	85-95	80-90	85-95
1200	84-94	79-89	79-89
1300	83-93	78-88	78-88

Note: the 0º is directly in front of the weapon and the 180º azimuth is directly behind the weapon.
dBP – peak level decibels

APPENDIX D-3. AIR QUALITY

D-3.1 Definition of the Resource

Air pollution is the presence in the outdoor atmosphere of one or more contaminants (e.g., dust, fumes, gas, mist, odor, smoke, or vapor) in quantities and of characteristics and duration such as to be injurious to human, plant, or animal life, or to interfere unreasonably with the comfortable enjoyment of life and property. Air quality as a resource incorporates several components that describe the levels of overall air pollution within a region, sources of air emissions, and regulations governing air emissions. The following sections include a discussion of the existing conditions, a regulatory overview, and a summary of greenhouse gases and global warming.

D-3.2 Criteria Pollutants

The Clean Air Act (42 United States Code [USC] § 7401-7671q), as amended, assigns the US Environmental Protection Agency (USEPA) responsibility to establish the primary and secondary National Ambient Air Quality Standards (NAAQS) (40 Code of Federal Regulations [CFR] Part 50) that specify acceptable concentration levels of six criteria pollutants: particulate matter (measured as both particulate matter less than 10 microns in diameter [PM_{10}] and particulate matter less than 2.5 microns in diameter [$PM_{2.5}$]), sulfur dioxide (SO_2), carbon monoxide (CO), nitrogen dioxide (NO_2), ozone (O_3), and lead. Short-term NAAQS (1-, 8-, and 24-hour periods) have been established for pollutants contributing to acute health effects, while long-term NAAQS (annual averages) have been established for pollutants contributing to chronic health effects. **Table D-3.1** outlines the NAAQS for each criteria pollutant. Both Georgia and Florida have accepted the federal standards.

Table D-3.1. National Ambient Air Quality Standards for Criteria Pollutants

Pollutant	Primary/ Secondary	Averaging Time	Level	Form
Carbon Monoxide (CO)	Primary	8-hour	9 ppm	Not to be exceeded more than once per year
		1-hour	35 ppm	
Lead (Pb)	Primary and Secondary	Rolling 3-month average	0.15 micrograms/m^3	Not to be exceeded
Nitrogen Dioxide (NO_2)	Primary	1-hour	100 ppb	98th percentile of 1-hour daily maximum concentrations, averaged over 3 years
	Primary and Secondary	Annual	53 ppb	Annual mean
Ozone (O_3)	Primary and Secondary	8-hour	0.070 ppm	Annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years
($PM_{2.5}$)	Primary	Annual	12 micrograms/m^3	Annual mean, averaged over 3 years
	Secondary	Annual	15 micrograms/m^3	Annual mean, averaged over 3 years
	Primary and Secondary	24-hour	35 micrograms/m^3	98th percentile, averaged over 3 years
(PM_{10})	Primary and Secondary	24-hour	150 micrograms/m^3	Not to be exceeded more than once per year on average over 3 years
Sulfur Dioxide (SO_2)	Primary	1-hour	75 ppb	99th percentile of 1-hour daily maximum concentrations, averaged over 3 years
	Secondary	3-hour	0.5 ppm	Not to be exceeded more than once per year

Source: USEPA 2019
m^3 – cubic meter; **ppb** – parts per billion; **ppm** – parts per million

D-3.3 Greenhouse Gasses

Greenhouse gases (GHGs) are components of the atmosphere that trap heat relatively near the surface of the earth and therefore contribute to the greenhouse effect and climate change. Most GHGs occur naturally in the atmosphere, but increases in their concentration result from human activities such as the burning of fossil fuels. Global temperatures are expected to continue to rise as human activities continue to add carbon dioxide (CO_2), methane, nitrous oxide, and other greenhouse (or heat-trapping) gases to the atmosphere. Whether or not rainfall would increase or decrease remains difficult to project for specific regions (Intergovernmental Panel on Climate Change 2018).

Executive Order (EO)14008, *Tackling the Climate Crisis at Home and Abroad* (2021) outlines policies to reduce greenhouse gas emissions and to bolster resilience to the impacts of climate change. The EO directs the Council on Environmental Quality (CEQ) to review, revise, and update its 2016 final guidance entitled, *Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews.* When considering GHG emissions and their significance, agencies should use appropriate tools and methodologies for quantifying GHG emissions and

comparing GHG quantities across alternative scenarios. The CEQ guidance specifically requires agencies within the DoD to quantify GHG emissions in NEPA assessments and review federal actions in the context of future climate scenarios and resiliency.

APPENDIX D-4. EARTH RESOURCES

D-4.1 Definition of the Resource

Earth resources are defined as the physiography, topography, geology, and soils of a given area. Physiography and topography pertain to the general shape and arrangement of a land surface, including its height and the position of its natural and human-made features. Geology is the study of the Earth's composition and provides information on the structure and configuration of surface and subsurface features. Such information derives from field analysis based on observations of the surface and borings to identify subsurface composition. Soils are the unconsolidated materials overlying bedrock or other parent material. Soils typically are described in terms of their complex type, slope, and physical characteristics. Differences among soil types in terms of their structure, elasticity, strength, shrink-swell potential, and erosion potential affect their abilities to support certain applications or uses. In appropriate cases, soil properties must be examined for their compatibility with particular construction activities or types of land use.

APPENDIX D-5. WATER RESOURCES

D-5.1 Definition of the Resource

Water resources include surface waters, groundwater, and floodplains. Surface waters include all lakes, ponds, rivers, streams, impoundments, and wetlands within a defined area or watershed. Wetlands are transitional areas between terrestrial and aquatic systems with land covered by shallow surface water. Groundwater resources include water contained in soils, permeable and porous rock, or unconsolidated substrate. Floodplains are areas that are flooded periodically by the lateral overflow of surface water bodies.

Surface waters, as defined in 33 CFR 328.3, are regulated under Sections 401 and 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act. The Clean Water Act (33 USC § 1251 et seq.) regulates discharges of pollutants in surface waters of the US. Section 404 of the Clean Water Act establishes a program to regulate the discharge of dredged and fill material into waters of the US, including wetlands. The US Army Corps of Engineers defines wetlands as "those areas that are inundated or saturated with ground or surface water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted to life in saturated soil conditions" (Environmental Laboratory 1987). Wetlands generally include swamps, marshes, bogs, and similar areas (33 CFR 328). Federal protection of wetlands is also promulgated under EO 11990, *Protection of Wetlands,* the purpose of which is to reduce adverse impacts associated with the destruction or modification of wetlands. This order directs federal agencies to provide leadership in minimizing the destruction, loss, or degradation of wetlands.

The Clean Water Act provides the authority to establish water quality standards, control discharges into surface and subsurface waters (including groundwater), develop waste treatment management plans and practices, and issue permits for discharges. A National Pollutant Discharge Elimination System (NPDES) permit under Section 402 of the Clean Water

Act is required for discharges into surface waters. The USEPA oversees the issuance of NPDES permits at federal facilities as well as water quality regulations (Section 401 of the Clean Water Act) for both surface and groundwater within states.

In Georgia, water resources are protected under Georgia Department of Natural Resources Environmental Protection Division. These programs are administered in accordance with the state's stormwater management program and the state's erosion and sedimentation control program (Georgia Department of Natural Resources 2016; Georgia Soil and Water Commission 2016) under the auspices of the Environmental Protection Division's Watershed Protection Branch. Potential impacts to surface waters may result if a proposed action triggers permitting requirements under Section 401 of the Clean Water Act. The Environmental Protection Division requires a minimum 25-foot buffer on all state waters (intermittent or perennial streams) regardless of whether or not Clean Water Act Sections 404 or 401 are applicable.

Groundwater is water that occurs in the saturated zone beneath the earth's surface and includes underground streams and aquifers. It is an essential resource that functions to recharge surface water and can be used for drinking, irrigation, and industrial processes. Groundwater typically can be described in terms of depth from the surface, aquifer or well capacity, water quality, recharge rate, and surrounding geologic formations. The susceptibility of aquifers to groundwater contamination relates to geology, depth to groundwater, infiltration rates, and solubility of contaminants. Groundwater resources are regulated on the federal level by the USEPA under the Safe Drinking Water Act, 42 USC § 300f et seq. The USEPA's Sole Source Aquifer Program, authorized by the Safe Drinking Water Act, further protects aquifers that are designated as critical to water supply and makes any proposed federal or federal financially assisted project that has the potential to contaminate the aquifer subject to USEPA review.

Floodplains are areas of low-level ground along rivers, stream channels, or coastal waters that provide a broad area to inundate and temporarily store floodwaters. In their natural vegetated state, floodplains slow the rate at which the incoming overland flow reaches the main water body. Floodplains are subject to periodic or infrequent inundation due to rain or melting snow. Risk of flooding typically hinges on local topography, the frequency of precipitation events, and the size of the watershed above the floodplain. Flood potential is evaluated and mapped by the Federal Emergency Management Agency, which defines the 100-year (regulatory) floodplain. The 100-year floodplain is the area that has a 1 percent chance of inundation by a flood event in a given year. Federal, state, and local regulations often limit floodplain development to passive uses, such as recreational and preservation activities, to reduce the risks to human health and safety.

EO 11988, *Floodplain Management*, provides guidelines that agencies should carry out as part of their decision making on projects that have potential impacts to or within the floodplain. This EO requires federal agencies to avoid, to the extent possible, the long- and short-term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct and indirect support of floodplain development wherever there is a practicable alternative.

APPENDIX D-6. BIOLOGICAL RESOURCES

D-6.1 Definition of the Resource

Biological resources include native or invasive plants and animals; sensitive and protected floral and faunal species; and the habitats, such as wetlands, forests, and grasslands, in which they exist. Habitat can be defined as the resources and conditions in an area that support a defined suite of organisms. The following is a description of the primary federal statutes that form the regulatory framework for the evaluation of biological resources.

Endangered Species Act. The Endangered Species Act of 1973 (16 USC § 1531 et seq.) established protection over and conservation of threatened and endangered species and the ecosystems upon which they depend. Sensitive and protected biological resources include plant and animal species listed as threatened, endangered, or special status by the US Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service. Under the Endangered Species Act (16 USC § 1536), an "endangered species" is defined as any species in danger of extinction throughout all, or a large portion, of its range. A "threatened species" is defined as any species likely to become an endangered species in the foreseeable future. The USFWS maintains a list of species considered to be candidates for possible listing under the Endangered Species Act. The Endangered Species Act also allows the designation of geographic areas as critical habitat for threatened or endangered species. Although candidate species receive no statutory protection under the Endangered Species Act, the USFWS has attempted to advise government agencies, industry, and the public that these species are at risk and may warrant protection under the Endangered Species Act.

Migratory Bird Treaty Act. The Migratory Bird Treaty Act of 1918 makes it unlawful for anyone to take migratory birds or their parts, nests, or eggs unless permitted to do so by regulations. Per the Migratory Bird Treaty Act, "take" is defined as "pursue, hunt, shoot, wound, kill, trap, capture, or collect" (50 CFR 10.12). Migratory birds include nearly all species in the US, with the exception of some upland game birds and nonnative species.

EO 13186, *Responsibilities of Federal Agencies to Protect Migratory Birds,* requires all federal agencies undertaking activities that may negatively impact migratory birds to follow a prescribed set of actions to further implement the Migratory Bird Treaty Act. EO 13186 directs federal agencies to develop a Memorandum of Understanding with the USFWS that promotes the conservation of migratory birds.

The National Defense Authorization Act for Fiscal Year 2003 (Public Law 107-314, 116 Stat. 2458) provided the Secretary of the Interior the authority to prescribe regulations to exempt the armed forces from the incidental take of migratory birds during authorized military readiness activities. Congress defined military readiness activities as all training and operations of the US armed forces that relate to combat and the adequate and realistic testing of military equipment, vehicles, weapons, and sensors for proper operation and suitability for combat use.

In December 2017, the US Department of the Interior issued M-Opinion 37050, which concluded that the take of migratory birds from an activity is not prohibited by the Migratory Bird Treaty Act when the underlying purpose of that activity is not the take of a migratory bird. The USFWS interprets the M-Opinion to mean that the Migratory Bird Treaty Act's prohibition on take does not apply when the take of birds, eggs, or nests occurs as a result of an activity, the purpose of which is not to take birds, eggs, or nests.

Bald and Golden Eagle Protection Act. The Bald and Golden Eagle Protection Act of 1940 (16 USC § 668-668c) prohibits the "take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or any manner, any bald eagle [or any golden eagle], alive or dead, or any part, nest, or egg thereof." "Take" is defined as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb," and "disturb" is defined as "to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, injury to an eagle, a decrease in productivity by substantially interfering with the eagle's normal breeding, feeding or sheltering behavior, or nest abandonment by substantially interfering with the eagle's normal breeding, feeding or sheltering behavior." The Bald and Golden Eagle Protection Act also prohibits activities around an active or inactive nest site that could result in an adverse impact on the eagle.

D-6.2. Existing Conditions

The information presented in this section was gathered from Moody AFB's Integrated Natural Resources Management Plan (INRMP) (Moody AFB 2018). The status of federal and state listed species was validated using the USFWS Information for Planning and Consultation system and Georgia Department of Natural Resources, Wildlife Resources Division listings.

Vegetation. Moody AFB is located within the Outer Coastal Plain Mixed Province of the lowland ecoregion (Bailey 1995). This province is dominated by temperate evergreen forest and laurel forest. The historic vegetative composition of Moody AFB consisted of upland areas dominated by longleaf pine forests, with mesic longleaf pine savannas on Main Base and wet-mesic longleaf pine savannas and wet mixed-pine savannas in the Grand Bay Weapons Range. The current vegetation composition on Moody AFB is primarily a result of land management practices and actions undertaken during the 1940s during the construction of the installation. Currently, the unimproved areas of Moody AFB feature several distinct natural communities or ecosystems that have been shaped or modified primarily through human actions. Natural communities on Moody AFB include upland pine forests, pine flatwoods, and extensive areas composed of various wetland communities. A vast proportion of the upland habitat at Moody AFB has been converted to the Loblolly Pine Plantations community type (Moody AFB 2018). Traditionally, these areas were characterized as either longleaf or longleaf/slash pine flatwoods forest types, but were converted to pine plantations.

Wetlands cover approximately 5,500 acres (46 percent) of the Installation within the Grand Bay Banks Lake ecosystem. 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 these species, 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 (*Pinus elliottii*), and dense thickets of evergreen shrubs and palmetto (*Sabal palmetto*) become more predominant as the soils transition from hydric to mesic. The upland areas are composed predominantly of a pine forest type, established either through natural community succession or through artificial regeneration (i.e., pine plantations).

Wildlife. Moody AFB is within the lower coastal plains and flatwoods section of the Southern Coastal Plain ecoregion (Bailey 1995), which supports a diverse complex of habitat which in turn supports a high diversity of faunal species. These habitats can be simplified and grouped into two main habitat types: the Loblolly Pine Plantations community type and the Carolina Bay Swamp Complex.

Faunal communities common to the longleaf pine (*Pinus palustris*) upland forests and longleaf pine/slash pine flatwoods include larger species such as white-tailed deer (*Odocoileus virginianus*), raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*), opossum (*Didelphis virginiana*), bobcat (*Lynx rufus*), and gray fox (*Urocyon cinereoargenteus*). The small-mammal community consists of various small rodents, gray squirrel (*Sciurus carolinensis*), fox squirrel (*Sciurus niger*), and the eastern cottontail (*Sylvilagus floridanus*). Forest habitat intermingled with the wetlands offers habitat for a variety of amphibian species, including little grass frog (*Pseudacris ocularis*), squirrel tree frog (*Hyla squirella*), eastern spadefoot toad (*Scaphiopus holbrooki*). Common reptiles include the eastern box turtle (*Terrapene carolina*), five-lined skink (*Eumeces inexpectatus*), eastern glass lizard (*Ophisaurus ventralis*), eastern cottonmouth (*Agkistrodon piscivorus*), and gopher tortoise (*Gopherus polyphemus*) (Moody AFB 2018).

The wetland areas within the Carolina Bay Swamp Complex offer habitat to other mammal species such as beavers (*Castor canadensis*) and round-tailed muskrats (*Neofiber alleni*) as well as those previously discussed for the forest habitat. Water-dependent amphibians and reptiles in the area include pig frogs (*Rana grylio*), alligators (*Alligator mississippiensis*), snapping turtles (*Chelydra serpentina*), striped newt (*Notophthalmus viridescens*), tiger salamander (*Ambystoma tigrinum*), eastern cottonmouths, southern water snakes (*Nerodia rhombifer*), and southern bullfrogs (*Rana catesbeiana*) (Moody AFB 2018).

Common bird species are similar between the two main habitat types, with slight variations occurring with habitat-specific species. The cumulative list of common bird species on Moody AFB consists of several species of both resident and migratory songbirds, raptors, marsh birds, and waterfowl (Moody AFB 2018). Some shorebirds utilize the area during migration. Grand Bay contains a large rookery of heron, egret, and ibis, as well as a year-round resident population of Florida sandhill cranes (*Grus canadensis pratensis*).

Threatened and Endangered Species. The Moody AFB INRMP, USFWS Information for Planning and Consultation System (USFWS 2021), and the Georgia Rare Element Natural Data Portal (Georgia Department of Natural Resources, Wildlife Resources Division 2021) were reviewed for the most up-to-date information concerning federally and state threatened and endangered species on Moody AFB Main Base. Currently, there are 3 federally listed and 11 state listed species that have the potential to occur on Main Base and within the Grand Bay WMA (**Table D-6.1**).

This list also contains information provided by the USFWS Georgia Ecological Services Field Office and the Georgia Department of Natural Resources, Wildlife Resources Division, for species whose range or foraging areas are located near Moody AFB. No critical habitat is found on Moody AFB. The Eastern indigo snake (*Drymarchon couperi*), wood stork (*Mycteria americana*), gopher tortoise *(Gopherus polyphemus*), and bald eagle (*Haliaeetus leucocephalus*) are the only sensitive species that are actively managed on Moody AFB because these species have the greatest likelihood to be affected by the military mission (Moody AFB 2018). Although the bald eagle was removed from the list of species protected

under the Endangered Species Act in July 2007, it is protected under the Bald and Golden Eagle Protection Act.

Table D-6.1. Federally and State Listed Species with the Potential to Occur on Moody Air Force Base Main Base and the Grand Bay Wildlife Management Area

Common Name	Scientific Name	Legal Status	Potential to Occur in Training Areas
Birds			
Bachman's Sparrow	*Peucaea aestivalis*	SR	None
Bald Eagle	*Haliaeetus leucocephalus*	ST/BGEPA	None
Swallow-Tailed Kite	*Elanoides forficatus*	SR	Foraging only
Wood Stork	*Mycteria americana*	FT, SE	None
Reptiles			
American Alligator	*Alligator mississippiensis*	ST	Low
Eastern Indigo Snake	*Drymarchon couperi*	FT, ST	Low
Gopher Tortoise	*Gopherus polyphemus*	FC, ST	Known to occur in training areas
Southern Hognose Snake	*Heterodon simus*	ST	None
Suwanee Alligator Snapping Turtle	*Macrochelys suwanniensis*	ST	None
Mammals			
Round-Tailed Muskrat	*Neofiber alleni*	ST	None
Fish			
Alabama Shad	*Alosa alabamae*	ST	None
Spotted Bullhead	*Ameiurus serracanthus*	SR	None
Suwanee Bass	*Micropterus notius*	SR	None
Plants			
Pond Spice	*Litsea aestivalis*	SR	None

Source: Georgia Department of Natural Resources, Wildlife Resources Division 2021; Moody AFB 2018; USFWS 2021

SR – state rare; **ST** – state threatened; **BGEPA** – Bald and Golden Eagle Protection Act; **FT** – federally threatened; **SE** – state endangered; **FC** – federal candidate

Gopher Tortoise. The eastern population of the gopher tortoise is federally listed as a Candidate species and the gopher tortoise is also listed as state threatened. There are approximately 1,000 acres of gopher tortoise habitat on the installation. The number of gopher tortoise burrows changes annually. Gopher tortoise management is completed through projects identified in the Moody AFB INRMP with concurrence by Georgia Department of Natural Resources and USFWS. Management activities include seasonal monitoring and surveys of

known gopher tortoise populations, disease surveillance, gopher tortoise movement studies in relation to military activities, a gopher tortoise mark-recapture population demography study, habitat improvement/restoration, and pedestrian surveys of suitable gopher tortoise habitat are conducted annually to identify new gopher tortoise burrows.

Eastern Indigo Snake. The Eastern indigo snake is federally and state listed as threatened. Eastern indigo snakes use a wide habitat range throughout their annual life cycle, utilizing wetland edges in the summer where prey is more abundant and moving to dried upland habitat in the winter. Eastern indigo snakes typically use gopher tortoise burrows for nesting and as refuge in the winter and from intense summer heat. Three eastern indigo snakes were sighted in the Bemiss Field area of the Grand Bay Weapons Range in 1991 (Moody AFB 2018). No Eastern indigo snakes were observed during two species-specific surveys conducted in 1995 and 2002. In an attempt to enhance the small population of Eastern indigo snakes on the Installation, the Georgia Department of Natural Resources introduced two confiscated eastern indigo snakes to Grand Bay Weapons Range in 1995. Additional sightings of one adult and one juvenile occurred in 1996 in the Grand Bay Wildlife Management Area Campground on Grand Bay Weapons Range. Management efforts for the Eastern indigo snake include surveys concurrent with gopher tortoise surveys of burrows with burrow cameras and burrow entrance cameras and searches of burrow entrances for Eastern indigo snakeskin sheds. All potential sightings of Eastern indigo snakes are reported to Civil Engineer Squadron Environmental personnel, and the areas are immediately surveyed.

Wood Stork. Wood storks have been documented to occasionally forage in the Carolina Bays of the Grand Bay-Banks Lake ecosystem seasonally, but no colonies or roosting sites occur on Moody AFB. The closest known wood stork rookery occurs approximately 10 miles northwest of Moody AFB.

Besides those species that are federally listed, the state listed species that have been documented on Moody AFB include the southern hognose snake (*Heterodon simus*), alligator snapping turtle (*Macrochelys suwanniensis*), bald eagle, and round-tailed muskrat (*Neofiber alleni*). Southern hognose snake is typically associated with longleaf pine and/or scrub oak with wire grass as a significant component of the ground cover. Alligator snapping turtles prefer streams and rivers in areas with undercut banks, log jams, and deep holes. Bald eagles use shallow freshwater or salt water for foraging, and nest and roost in forested areas. Round-tailed muskrats typically inhabit areas with grassy shallow ponds, marshes, and bogs, preferably with emergent sedges and floating-leaved vegetation. None of these habitats are present within the 24-acre Air Force-owned property. Further, installation surveys have not documented the presence of any of these species west of Perimeter Road and the airfield.

APPENDIX D-7. CULTURAL RESOURCES

D-7.1 Definition of the Resource

Cultural resources are any prehistoric or historic district, site, building, structure, or object considered important to a culture or community for scientific, traditional, religious, or other purposes. These resources are protected and identified under several federal laws and EOs. Cultural resources include the following subcategories:

- Archaeological (i.e., prehistoric or historic sites where human activity has left physical evidence of that activity but no structures remain standing)

- Architectural (i.e., buildings or other structures or groups of structures, or designed landscapes that are of historic or aesthetic significance)
- Traditional cultural properties (resources of traditional, religious, or cultural significance to Native American tribes)

Significant cultural resources are those that have been listed on the National Register of Historic Places (NRHP), or determined to be eligible for listing. To be eligible for the NRHP, properties must be 50 years old and have national, state, or local significance in American history, architecture, archaeology, engineering, or culture. They must possess sufficient integrity of location, design, setting, materials, workmanship, feeling, and association to convey their historical significance and meet at least one of four criteria:

- Associated with events that have made a significant contribution to the broad patterns of our history (Criterion A)
- Associated with the lives of persons significant in our past (Criterion B)
- Embody distinctive characteristics of a type, period, or method of construction, or represent the work of a master, or possess high artistic values, or represent a significant and distinguishable entity whose components may lack individual distinction (Criterion C)
- Have yielded or be likely to yield information important in prehistory or history (Criterion D)

Properties that are less than 50 years old can be considered eligible for the NRHP under Criterion Consideration G if they possess exceptional historical importance. Those properties must also retain historic integrity and meet at least one of the four NRHP criteria (A, B, C, or D). The term “historic property” refers to national historic landmarks and to NRHP-listed and NRHP-eligible cultural resources.

Federal laws protecting cultural resources include the Archaeological and Historic Preservation Act of 1960 as amended, the American Indian Religious Freedom Act of 1978, the Archaeological Resources Protection Act of 1979, the Native American Graves Protection and Repatriation Act of 1990, and the National Historic Preservation Act (NHPA), as amended through 2016, and associated regulations (36 CFR 800). The NHPA requires federal agencies to consider effects of federal undertakings on historic properties prior to making a decision or taking an action and to integrate historic preservation values into their decision-making process. Federal agencies fulfill this requirement by completing the Section 106 consultation process, as set forth in 36 CFR 800. Section 106 of the NHPA also requires agencies to consult with federally recognized Indian tribes with a vested interest in the undertaking.

Section 106 of the NHPA requires all federal agencies to seek to avoid, minimize, or mitigate adverse effects on these properties (36 CFR 800.1[a]). For cultural resource analysis, the Area of Potential Effect (APE) is used as the Region of Influence. APE is defined as the “geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist” (36 CFR 800.16[d]), and thereby diminish their historic integrity. The APE for direct effects includes the footprint of the proposed training areas (areas of potential direct disturbance). For architectural resources, the APE for indirect effects is a 1,000-foot buffer around the Proposed Action areas.

D-7.2 Previous Cultural Resources Investigations

Archaeological Investigations. Several archaeological surveys have been conducted on Moody AFB and its associated properties. In 1985 an archaeological survey of 350 acres of the Grand Bay Range focused on areas of high probability and four previously recorded sites (Wright 1985). The National Park Service (NPS) conducted archaeological investigations over the entirety of Moody AFB (including the Grassy Pond area) in 1986 and recorded one site (NPS 1986). A cultural resources survey of the Grand Bay Ordnance Range at Moody AFB in 1995 surveyed 5,981 acres; 21 sites and 39 isolated finds were recorded (Wright 1995). In 1998 a Phase I survey of 49.5 acres was located south of the base's south gate, east of Bemiss Road; two sites were recorded during this survey (Morgan 1998).

An archaeological survey of approximately 10 percent (350 acres) of the proposed Winnersville Range at Moody AFB (now Grand Bay Range) focused on areas of high probability, and four sites were located: 9LN2, 9LN3, 9LN4, and 9LN5 (Wright 1985). The NPS performed a preliminary cultural resource reconnaissance of Moody AFB and the associated Grassy Pond Recreation Area in May 1986 and recorded one site (9LN6) that was determined to be ineligible for listing on the NRHP.

Panamerican Consultants Inc. conducted a cultural resources survey of the Grand Bay Ordnance Range and Moody AFB from 1994 to 1995 (Grover et al. 1996). Approximately 3,600 acres were surveyed; 21 sites and 39 isolated finds were recorded. The sites include 9LN4, 9LN12, 9LN13, 9LN14, 9LN15, 9LN16, 9LN17, 9LN18, 9LW51, 9LW52, 9LW62, 9LW63, 9LW64, 9LW65, 9LW66, 9LW67, 9LW68, 9LW69, 9LW70, 9LW71, and 9LW72. Five of these sites were considered potentially eligible for listing on the NRHP (Sites 9LW62, 9LW52, 9LW67, 9LN17, and 9LW71).

In 1998 the Savannah District of the US Army Corps of Engineers contracted a Phase I survey of 49.5 acres of state-owned property given to Moody (Morgan 1998). The property is located south of the base's south gate, east of Bemiss Road. One historic site (Site 9LW73) and one prehistoric isolated find (9LW74) were recorded during this survey. Neither were considered eligible for listing on the NRHP.

In 1998 and 1999 Moody AFB initiated Phase II archaeological testing at Site 9LW71 in Lowndes County, Georgia. Panamerican Consultants Inc. conducted the fieldwork. These Phase II investigations were initiated in response to recommendations from the 1995 cultural resources survey. The results of the investigations determined that Sites 9LW70 and 9LW71 are connected and can be considered one site, identified in future contexts as Site 9LW71. Site 9LW71 was identified as being well stratified and multicomponent. Late Paleoindian, Early Archaic, and Woodland components were identified from these investigations. In addition to the prehistoric components, a historic artifact scatter was identified dating to the late nineteenth and early twentieth centuries associated with navel stores industry. The Phase II investigations determined that Site 9LW71 is recommended eligible for inclusion in the NRHP under Criterion D (Jones et al. 1999).

In 2006, Moody contracted a Phase II investigation of 9LN17 to Geo-Marine and New South Associates through the US Army Corps of Engineers. This investigation determined that Site 9LN17 was ineligible for inclusion in the NRHP (Warhop et al. 2007). Additional Phase II investigations were conducted in 2009 for 9LW63 and 9LW67 through the same contract. Site

9LW63 was determined to be eligible for the NRHP under Criterion D (Warhop et al. 2007 while the results for 9LW67 were inconclusive with additional testing recommended (Warhop and Raymer 2010).

As recommended in the 2006 report conducted by Geo-Marine and New South Associates, additional Phase II testing was conducted in March 2013 to evaluate both 9LW52 and 9LW67 for NRHP eligibility (Schneider et al. 2013). Due to the mixing of components, lack of features, and questionable radiocarbon dates, the contextual integrity at both sites was considered suspect and additional excavations would not reveal any additional research value; therefore, both sites were recommended as not being eligible for listing in the NRHP.

In 2011, an archaeological investigation of a 25-acre parcel immediately north of the C-130 Ramp was completed as part of the preparation of an environmental assessment for the Personnel Recovery Campus Project (Lindemuth and Somers 2011). No archaeological sites were recorded during the survey. One isolated occurrence of a single secondary chert flake was recorded. No additional archaeological work was recommended for the parcel, which has since been purchased by Moody AFB and is part of the installation property.

In 2016, an archaeological investigation of approximately 106 acres of private property southwest of the Moody AFB airfield was completed as part of an Environmental Assessment (EA) for the Southwest Land Purchase project (Lowrey 2017). Two isolated archaeological finds were recorded during this investigation. Neither find was recommended as eligible for listing on the NRHP.

To date, archaeological investigations at Moody have located 27 archaeological sites and 43 isolated finds. Two of the 27 archaeological sites (9LW63 and 9LW71) have been determined eligible for the NRHP (Air Force 2018).

Historic Architecture. Moody AFB has completed multiple historic architectural studies to evaluate base facilities constructed through World War II and the Cold War. All base facilities that were at least 50 years of age as of 2018 have been evaluated. The Base Chapel and the Base Water Tower are the only two structures on Moody AFB that have been determined eligible for inclusion on the NRHP.

The first historic facility inventories were conducted by Mariah Associates Inc. in 1995 and 1997. These inventories documented Cold War-era resources for the installation (Lewis et al. 1995 and Patterson et al. 1997). Lewis et al.'s 1995 report provided a historic context and methodology for assessment of Air Combat Command Cold War material culture.

Patterson et al.'s 1997 report was a baseline inventory of Cold War-era resources at Moody AFB and included an inventory of 137 Cold War-era resources. These selections were inventoried based on the importance of the resource to the base, the base's role in the Cold War, and the importance of the resource within the national context of the Cold War. This inventory revealed that no buildings or structures were determined to be significant to the Cold War era. In addition, two records collections relevant to the Cold War-era history of Moody AFB, including real property records and engineering drawings, were identified as having potential significance.

In 1996 and 1997 Moody AFB consulted with the Georgia Historic Preservation Division (HPD) on the eligibility of several structures where additions and renovations were proposed, including

Buildings 701, 609, and 621. The Georgia HPD determined that none of the buildings met the criteria of eligibility for the NRHP.

Moody AFB conducted a comprehensive survey of historic buildings and structures in 1999. This inventory evaluated the historical significance of the buildings, structures, and landscapes at Moody AFB that were over 50 years of age or were associated with the Cold War era. This survey did not include the Grand Bay Weapons Range or the Grassy Pond Recreational Annex. Messick (1999) evaluated 34 buildings and structures 50 years and older, and 189 buildings and structures constructed during the Cold War era (between 1946 and 1989). The only facility on base considered eligible for the NRHP based on Messick's survey was LW-M-3, Building 618, the base water tower. Built in 1941, this is a 200,000-gallon-capacity steel water tower with elevated tank, and it was considered eligible under Criterion A for its association with World War II mobilization and training activities (Messick 1999). The Georgia HPD concurred with the findings of the report, including the eligibility of the water tower.

In 2011, Hersch (2011) evaluated 42 resources for historical significance. Of the 42 resources inventoried, 26 were constructed between ca. 1940 and 1961, with the remaining 16 resources built between 1961 and 1965. All of these resources were recommended ineligible for the NRHP, and the Georgia HPD concurred with those findings.

As part of the EA for the Northeast Training Campus, Moody AFB consulted with the Georgia HPD in 2016 on the eligibility of two structures (Buildings 1500 and 1501). Although these facilities had previously been determined to not be eligible for listing on the NRHP based on Cold War-era criteria, they were reevaluated for historical significance based on local and state criteria (Scherer 2015). The Georgia State Historic Preservation Officer (SHPO) concurred with the installation's finding that these two facilities were not eligible for listing on the NRHP based on these criteria.

In 2016, Moody AFB consulted with the Georgia HPD on the eligibility of several structures where additions and renovations were proposed. Buildings 325, 328, 621, 658, 704, 753, 785, and 901 were constructed between 1954 and 1970 and were assessed as though over 50 years of age using the four primary NRHP criteria. None of these facilities were recommended as eligible for listing on the NRHP because they lacked a significant and direct association with any of the themes for significance and because several lacked material integrity and integrity of association and feel (Amec Foster Wheeler Environment & Infrastructure Inc. 2016).

In support of the Moody Installation Development Plan EA (Moody AFB 2018), the base conducted an inventory and evaluation of all facilities and structures to consider Cold War-era significance under Criterion G, and reevaluate Cold War-era facilities that had reached 45 years of age for historical significance under Criteria A through D (Reed et al. 2017). This survey included facilities and structures on Moody AFB, Grand Bay Weapons Range, the Grassy Pond Recreational Annex, and the Stockton NEXRAD Radar Site. A total of 210 buildings and structures were proposed for evaluation during this effort, which determined that 25 of the facilities are no longer extant. Of the 185 extant facilities evaluated, only one facility, Building 110, the Base Chapel, was recommended as eligible to the NRHP under Criterion C in the area of architecture. In coordination with the Georgia SHPO, and addendum was executed that evaluated the potential for any historic districts on the installation. Areas studied included the AFB's main cantonment, flight line, munitions storage, CATM/Explosive Ordnance Disposal, 820 Base Defense Group, and Grassy Pond military recreation area. The addendum concluded that

due to the continual pace of construction and refurbishment on the installation that there were no historic districts located at Moody AFB. In addition, consultation with the SHPO concluded that both NRHP-eligible structures (water tower and chapel) had lost integrity of setting due to the "installation's constant pace of repair, demolition, and new construction" (Moody AFB 2018:4-20). Georgia SHPO site forms were completed for all evaluated facilities and were submitted to the SHPO with the final report. The SHPO concurred with the findings by letter on 6 November 2017.

APPENDIX D-8. SOCIOECONOMICS

D-8.1 Definition of the Resource

Socioeconomics is the relationship between economics and social elements, such as population levels and economic activity. Several factors can be used as indicators of economic conditions for a geographic area, such as demographics, median household income, unemployment rates, percentage of families living below the poverty level, employment, and housing data. Data on employment identify gross numbers of employees, employment by industry or trade, and unemployment trends. Data on industrial, commercial, and other sectors of the economy provide baseline information about the economic health of a region.

APPENDIX D-9. ENVIRONMENTAL JUSTICE AND PROTECTION OF CHILDREN

D-9.1 Definition of the Resource

EOs direct federal agencies to address disproportionate environmental and human health effects in minority and low-income communities and to identify and assess environmental health and safety risks to children. EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, pertains to environmental justice issues and relates to various socioeconomic groups and disproportionate impacts that could be imposed on them. This EO requires that federal agencies' actions substantially affecting human health or the environment do not exclude persons, deny persons benefits, or subject persons to discrimination because of their race, color, or national origin. EO 12898 was enacted to ensure the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Consideration of environmental justice concerns includes race, ethnicity, and the poverty status of populations in the vicinity of a proposed action.

EO 13045, *Protection of Children from Environmental Health Risks and Safety Risks*, states that each federal agency "(a) shall make it a high priority to identify and assess environmental health risks and safety risks that may disproportionately affect children; and (b) shall ensure that its policies, programs, activities, and standards address disproportionate risks to children that result from environmental health risks or safety risks."

For the purposes of this EA, minority populations are defined as Alaska Natives and American Indians, Asians, Blacks or African-Americans, Native Hawaiians, and Pacific Islanders or persons of Hispanic origin (of any race); low-income populations include persons living below the poverty threshold as determined by the US Census Bureau; and youth populations are children under the age of 18 years.

APPENDIX D-10. INFRASTRUCTURE, TRANSPORTATION, AND UTILITIES

D-10.1 Definition of the Resource

Infrastructure consists of the systems and structures that enable a population in a specified area to function. Infrastructure is wholly human made, with a high correlation between the type and extent of infrastructure and the degree to which an area is characterized as developed. The availability of infrastructure and its capacity to support more users and residential and commercial expansion are generally regarded as essential to the economic growth of an area. The infrastructure information was primarily obtained from the Moody AFB Installation Development Plan and provides a brief overview of each infrastructure component and comments on its existing general condition.

The infrastructure components include transportation, utilities, and solid waste management. Transportation is defined as the system of roadways, highways, and transit services that are in the vicinity of the Installation and could be reasonably expected to be potentially affected by the Proposed Action. Utilities include electrical, natural gas, liquid fuel, water supply, sanitary sewage/wastewater, and communications systems. Solid waste management primarily relates to the availability of landfills to support a population's residential, commercial, and industrial needs.

D-10.2 Infrastructure and Utilities

Electrical System. Electricity is provided to Moody AFB via two 115-kilovolt feeders that supply power from Georgia Transmission-owned substations located off the base. A single, three-phase, 12-megavolt-ampere transformer steps the voltage down from 115 kilovolts to 12,470 volts for distribution throughout the base via five primary circuits. These circuits are sized so that each can assume at least one additional circuit load. With some load shed, three circuits can assume the load of all five circuits even in the most heavily loaded season (Moody AFB 2015).

Although there are two connections to the grid, the lone transformer acts as a single point of failure for the base. Backup generation capacity is available for mission-critical buildings for three to seven days, and some of the larger buildings utilize generators for load shedding. It is estimated that in case of failure, a backup transformer would be in place in less than six hours.

Overall, the electrical distribution system is in good condition. The airfield lighting system is in excellent condition after recent projects to replace older distribution infrastructure. There is an ongoing project to move overhead lines underground for security, maintenance reduction, and weather mitigation. Distribution is currently estimated at 90 percent underground and 10 percent overhead. Other projects include light-emitting diodes for all exterior lighting, ramp pole lighting replacement, and lowering of light height. Solar shade parking is also being considered (Moody AFB 2015).

Natural Gas. Natural gas at Moody AFB is supplied through a contract managed by the Defense Energy Support Center and is distributed through approximately 10.6 miles of gas line on the Main Base. In addition, when high regional demand reduces the availability of natural gas, a propane-air mix system is utilized to meet the thermal energy demands of the base (Moody AFB 2015).

Family housing gas distribution was privatized in 2004 and has approximately 5 miles of natural gas line. The facilities east of the flight line are currently served by individual propane tanks as there is no natural gas connection.

Gas is supplied to Moody AFB through the utility's regulator and metering station via an 8-inch-diameter buried polyvinyl chloride (PVC) line. System pressure is maintained at about 120 pounds per square inch in winter and summer. The Main Base consumes approximately 27.16 million thousand cubic feet annually, based on average consumption for fiscal years 2012 and 2013. Peak average consumption of approximately 7.98 million thousand cubic feet per month occurs in December, January, and February, and the average base gas demand of approximately 2.23 million thousand cubic feet per month occurs in June through September (Moody AFB 2015).

Approximately 90 percent of the main lines in the Administrative Area are polyethylene plastic and in excellent condition. An engineering condition assessment conducted in the early 2000s verified that the gas mains on the base are in adequate condition. The small remaining sections of steel pipe are planned to be replaced by polyethylene pipe in upcoming projects (Moody AFB 2015).

Liquid Fuel. Moody AFB's existing petroleum distribution system was developed to accommodate multiple flying missions, and since construction it has accommodated a variety of training and combat aircraft. JP-8 fuel storage consists of four steel aboveground storage tanks (ASTs) for jet fuel that total more than 30,000 barrels and were constructed in 1953, then upgraded for operational and environmental needs in 2006. A 5,000-gallon JP-8 tank was also built in 1977. The fill-stand system consists of four 600-gallon-per-minute pumps; four 600-gallon-per-minute filter separators; a combination of aboveground and underground piping; and pantograph issue points with isolation valves and ground prover systems. A JP-8 100 injector system was removed in early 2014.

The military service station was demolished and replaced with a modern four-tank/four-fuel (motor gasoline, E-85, diesel, and biodiesel) facility. The Army/Air Force Exchange Service fueling station has three 12,000-gallon unleaded underground storage tanks (USTs) with six dual dispensing units (Moody AFB 2015).

Water Supply System. The abundant aquifer water supply is available year round and is currently accessed via three main wells operating at less than 50 percent capacity (estimated) and six secondary wells throughout the base. The well water is made safe as a potable source by Moody AFB's nanofiltration plant, which removes organic carbon to eliminate the formation of trihalomethanes. Moody AFB can currently supply a maximum of approximately 750,000 gallons per day from the aquifer to meet peak demands. Moody AFB's estimated peak demand is approximately 230,000 gallons per day, and average demand is 200,000 gallons per day. Nonpotable water byproducts of the filtration process are utilized for site irrigation, lowering the site's demand for potable water.

The water storage capacity of 11.4 million gallons and the main base's distribution network of 10- and 12-inch-diameter pipes are generally considered adequate to meet existing needs and accommodate significant future growth. The original water distribution system was constructed in the 1950s. Throughout the history of the base, portions of the original system have been

replaced; however, some of the water lines still in use were installed in the 1970s or earlier. The distribution pipe is generally in adequate condition (Moody AFB 2015).

Sanitary Sewer/Wastewater System. The wastewater treatment facility and infrastructure were initially installed in the 1940s, and the facility underwent significant upgrades in 1995 and 2012. The upgrades increased the capacity of the system to 750,000 gallons per day, with additional space available in the facility for future capacity expansion if required. A recent project included the addition of a lift station. A NPDES permit was issued for the facility, allowing effluent discharge at an average rate of 0.75 million gallons per day with a maximum of 1.125 million gallons per day, equivalent to the capacity of the plant. Given an N-0 rating, the resource is capable of fully supporting the current mission of assigned units, organizations, and tenants with no workarounds, and offers additional capacity to meet potential future mission requirements (Moody AFB 2015).

There are approximately 131,500 linear feet of sewer lines, composed mostly of cast-iron, PVC, and asbestos cement and supported by 27 lift stations. Wastewater collection infrastructure is in good condition; however, because all collection lines utilize a single lift station in the northwest portion of the base (near Building 207); the system could suffer significant disruption if that station were to go offline. After treatment, the wastewater is discharged into Beatty Creek.

A few facilities on the base are still using on-site wastewater treatment systems. There are two functional septic tanks at Moody AFB located at Building 1720 at the south end of the airfield and at Building 1501, a communications receiver building to the east of the airfield runways. In addition, there are two septic tanks at the Grassy Pond Recreation Area. There are eight wastewater collection tanks at Moody AFB that are associated primarily with industrial facilities.

Moody AFB has a successful ongoing sewer rehabilitation project to repair or replace degraded sections of pipe in addition to recent projects upgrading pump stations to meet Air Combat Command standards (Moody AFB 2015).

Solid Waste Management. The Veolia E. S. Evergreen Municipal Solid Waste Landfill, located in Lowndes County, is utilized by Moody AFB for disposal of municipal solid waste, which includes household refuse. This landfill receives an average of 1,500 tons per day and has a projected life expectancy of 32 years (Georgia Department of Community Affairs 2013). In addition, the Atkinson County Landfill and the Fitzgerald Landfill located in Ben Hill County, Georgia, are permitted to accept construction debris. Construction debris includes waste building materials and rubble resulting from construction activities. These landfills also accept tree trimmings and wood debris. The average daily tonnage and life expectancy for the Atkinson County Landfill is 105 tons per day for 21 years and for the Fitzgerald Landfill is 13 tons per day for 11 years (Georgia Department of Community Affairs 2013).

Communication System. Moody AFB meets all radio frequency requirements for all very-high-frequency and high-frequency bands. Currently, the base's fire alarm radio-controlled reporting system is operating on a temporary band until a permanent band can be assigned. Typically, requests for additional frequencies are approved within 90 days. Tactical land mobile radio, air-to-ground, point-to-point, navigational aid systems, nontactical land mobile radio, and long-haul communications all are capable of supporting the current mission of assigned units, organizations, and tenants with minimal workarounds (Moody AFB 2015).

Moody AFB has expanded the use of fiber-optic cable significantly over the past few years, including a connection to the range. New buildings have voice-over-internet-protocol (or VoIP) systems, nonclassified Internet protocol router networks (known as NIPRNet) for all workstations, and mass notification systems. Bandwidth on the secret internet protocol router network (i.e., SIPRNET) is being expanded, and voice-over-secure-internet-protocol (or VoSIP) systems are being installed. Uptime for the communications systems hovers right around 98 to 99 percent. The Communications Squadron is continually building infrastructure to improve connectivity throughout the installation. There is sufficient capacity in the main communications hub for further expansion of the network, and projects are ongoing to further increase duct capacity.

Beyond the expansion of fiber-optic cable throughout the base, projects focusing on improving network integrity and security have been prioritized and are currently under way. A key ongoing project is the creation of a redundant (secondary) path into the base for outbound communications traffic. Moody AFB is advancing VoIP systems with a target of all communications through Internet protocol network by 2020 (Moody AFB 2015).

APPENDIX D-11. HAZARDOUS MATERIALS AND WASTES, ENVIRONMENTAL RESTORATION PROGRAM, AND TOXIC SUBSTANCES

D-11.1 Definition of the Resource

Hazardous Materials and Wastes. The Comprehensive Environmental Response, Compensation, and Liability Act, as amended by the Superfund Amendments and Reauthorization Act and the Toxic Substances Control Act, defines hazardous materials. Hazardous materials are defined as any substance with physical properties of ignitability, corrosivity, reactivity, or toxicity that might cause an increase in mortality, serious irreversible illness, or incapacitating reversible illness, or that might pose a substantial threat to human health or the environment. The Occupational Safety and Health Administration (OSHA) is responsible for enforcement and implementation of federal laws and regulations pertaining to worker health and safety under 29 CFR 1910. OSHA also includes the regulation of hazardous materials in the workplace and ensures appropriate training in their handling.

The Solid Waste Disposal Act as amended by the Resource Conservation and Recovery Act, which was further amended by the Hazardous and Solid Waste amendments, defines hazardous wastes. Hazardous waste is defined as any solid, liquid, contained gaseous, or semisolid waste, or any combination of wastes, that pose a substantial present or potential hazard to human health or the environment. In general, both hazardous materials and hazardous wastes include substances that, because of their quantity, concentration, physical, chemical, or infectious characteristics, might present substantial danger to public health and welfare or the environment when released or otherwise improperly managed.

Air Force Policy Directive (AFPD) 32-70 establishes the policy that the Air Force is committed to the following:

- Cleaning up environmental damage resulting from its past activities
- Meeting all environmental standards applicable to its present operations
- Planning its future activities to minimize environmental impacts

- Responsibly managing the irreplaceable natural and cultural resources it holds in public trust
- Eliminating pollution from its activities wherever possible

AFI 32-7044, *Storage Tank Compliance*, implements AFPD 32-70 and identifies compliance requirements for USTs, ASTs, and associated piping that store petroleum products and hazardous substances. Evaluation of hazardous materials and hazardous wastes focuses on USTs and ASTs as well as the storage, transport, and use of pesticides, fuels, oils, and lubricants. Evaluation might also extend to generation, storage, transportation, and disposal of hazardous wastes when such activity occurs at or near the project site of a proposed action. In addition to being a threat to humans, the improper release of hazardous materials and hazardous wastes can threaten the health and well-being of wildlife species, botanical habitats, soil systems, and water resources. In the event of release of hazardous materials or hazardous wastes, the extent of contamination varies based on type of soil, topography, weather conditions, and water resources.

AFI 32-7086, *Hazardous Materials Management*, establishes procedures and standards that govern management of hazardous materials throughout the Air Force. It applies to all Air Force personnel who authorize, procure, issue, use, or dispose of hazardous materials, and to those who manage, monitor, or track any of those activities.

Through the Environmental Restoration Program (ERP) initiated in 1980, a subcomponent of the Defense ERP that became law under Superfund Amendments and Reauthorization Act (formerly the Installation Restoration Program), each Department of Defense installation is required to identify, investigate, and clean up hazardous waste disposal or release sites. Remedial activities for ERP sites follow the Hazardous and Solid Waste Amendment of 1984 under the Resource Conservation and Recovery Act Corrective Action Program. The ERP provides a uniform, thorough methodology to evaluate past disposal sites, control the migration of contaminants, minimize potential hazards to human health and the environment, and clean up contamination through a series of stages until it is decided that no further remedial action is warranted.

Description of ERP activities provides a useful gauge of the condition of soils, water resources, and other resources that might be affected by contaminants. It also aids in identification of properties and their usefulness for given purposes (e.g., to complete remediation, activities that are dependent on groundwater usage might be foreclosed where a groundwater contaminant plume remains).

Toxic substances might pose a risk to human health but are not regulated as contaminants under the hazardous waste statutes. Included in this category are asbestos-containing materials, lead-based paint, radon, and polychlorinated biphenyls (PCBs). The presence of special hazards or controls over them might affect, or be affected by, a proposed action. Information on special hazards describing their locations, quantities, and condition assists in determining the significance of a proposed action.

Asbestos. AFI 32-1052, *Facility Asbestos Management*, provides the direction for asbestos management at Air Force installations. This instruction incorporates by reference applicable requirements of 29 CFR 669 et seq., 29 CFR 1910.1025, 29 CFR 1926.58, 40 CFR 61.3.80, Section 112 of the Clean Air Act, and other applicable AFIs and Department of Defense

directives. AFI 32-1052 requires bases to develop an Asbestos Management Plan to maintain a permanent record of the status and condition of asbestos-containing materials in installation facilities, as well as documenting asbestos management efforts. In addition, the instruction requires installations to develop an Asbestos Operating Plan detailing how the installation accomplishes asbestos-related projects. Asbestos is regulated by the USEPA with the authority promulgated under OSHA, 29 USC § 669 et seq. Section 112 of the Clean Air Act regulates emissions of asbestos fibers to ambient air. USEPA policy is to leave asbestos in place if disturbance or removal could pose a health threat.

Lead-Based Paint. Human exposure to lead has been determined to be an adverse health risk by agencies such as OSHA and the USEPA. Sources of exposure to lead are dust, soils, and paint. In 1973, the Consumer Product Safety Commission established a maximum lead content in paint of 0.5 percent by weight in a dry film of newly applied paint. In 1978, under the Consumer Product Safety Act (Public Law 101-608, as implemented by 16 CFR 1303), the Consumer Product Safety Commission lowered the allowable lead level in paint to 0.06 percent (600 parts per million [ppm]). The Act also restricted the use of lead-based paint in nonindustrial facilities. The Department of Defense implemented a ban of lead-based paint use in 1978; therefore, it is possible that facilities constructed prior to or during 1978 may contain lead-based paint.

Radon. The US Surgeon General defines radon as an invisible, odorless, and tasteless gas, with no immediate health symptoms, that comes from the breakdown of naturally occurring uranium inside the earth (US Surgeon General 2005). Radon that is present in soil can enter a building through small spaces and openings, accumulating in enclosed areas such as basements. No federal or state standards are in place to regulate residential radon exposure at the present time, but guidelines were developed. Although 4.0 picocuries per liter (pCi/L) is considered an “action” limit, any reading over 2 pCi/L qualifies as a “consider action” limit. The USEPA and the US Surgeon General have evaluated the radon potential around the country to organize and assist building code officials in deciding whether radon-resistant features are applicable in new construction. Radon zones can range from 1 (high) to 3 (low).

Polychlorinated Biphenyls. PCBs are a group of chemical mixtures used as insulators in electrical equipment, such as transformers and fluorescent light ballasts. Chemicals classified as PCBs were widely manufactured and used in the US until they were banned in 1979. The disposal of PCBs is regulated under the federal Toxic Substances Control Act (15 USC § 2601, et seq., as implemented by 40 CFR 761), which banned the manufacture and distribution of PCBs, with the exception of PCBs used in enclosed systems. Per Air Force policy, all installations should have been PCB free as of 21 December 1998. In accordance with 40 CFR 761 and Air Force policy, both of which regulate all PCB articles, PCBs are regulated as follows:

- Less than 50 ppm – non-PCB (or PCB free)
- 50 ppm to 499 ppm – PCB contaminated
- 500 ppm and greater – PCB equipment (USEPA 2008)

The Toxic Substances Control Act regulates and the USEPA enforces the removal and disposal of all sources of PCBs containing 50 ppm or more; the regulations are more stringent for PCB equipment than for PCB-contaminated equipment.

APPENDIX D-12. HEALTH AND SAFETY

D-12.1 Definition of the Resource

A safe environment is necessary to prevent or reduce the potential for death, serious injury and illness, or property damage. Safety and human health issues address workers safety and health during construction, as well as employee safety during the daily operations of the facilities. Human health and safety for the purposes of this analysis are defined as occupational hazards associated with the construction and use of a new overflow parking lot, the realigned Hightower Road, the base boundary fence, and the base boundary road.

OSHA's program purpose is to protect personnel from occupational deaths, injuries, or illnesses; OSHA safety guidance published in the Department of Labor 29 series CFR governs general safety requirements relating to general industry practices (Section 1910), construction (Section 1926) and elements for federal employees (Section 1960). These standards include guidance for entry into areas in which a hazard may exist.

AFI 91-202, *Air Force Mishap Prevention Program*, and AFI 91-203, *Air Force Consolidated Occupational Safety Instruction*, implement AFPD 91-2, *Safety Programs.* AFI 91-202 establishes mishap prevention program requirements, assigns responsibilities for program elements, and contains program management information. The purpose of the Air Force Mishap Prevention Program is to minimize loss of Air Force resources and to protect Air Force personnel from occupational deaths, injuries, or occupational illnesses by managing risks on and off duty. AFI 91-203 consolidates all Air Force Occupational Safety and Health standards and defines the Air Force's minimum safety, fire protection, and occupational health standards, and assigns responsibilities to individuals or functions to help Commanders manage their safety and health programs to ensure they comply with OSHA and Air Force guidance. These instructions apply to all Air Force activities.

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APPENDIX E. AIR QUALITY MODELING RESULTS

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E-1 EMISSIONS FACTORS

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2 FORMAT PAGE

Emission Factors (lbs/item)

Item	Units	NOx	CO	SO2	Pb	VOC	PM10	PM2.5	CO2e
Smoke Hand Grenade	lb/item	4.20E-04	5.80E-03	4.30E-04	1.90E-05	5.10E-04	1.40E-01	1.20E-01	7.70E-02
Ground Burst Simulator	lb/item	6.50E-03	2.10E-03	1.50E-04	4.10E-06	1.30E-04	1.90E-01	0.00E+00	3.40E-03
Hand Grenade Simulator	lb/item	5.50E-03	3.70E-04	4.70E-04	1.40E-06	4.20E-05	1.20E-01	0.00E+00	4.10E-03
5.56mm Blank Cartridge	lb/item	2.00E-05	2.80E-04	9.80E-08	9.70E-07	0.00E+00	6.90E-06	6.00E-06	2.30E-04
7.62mm Blank Cartridge	lb/item	4.40E-05	6.80E-04	3.50E-07	2.60E-06	0.00E+00	1.70E-05	1.50E-05	9.50E-04
.50 Caliber Small Cartridge	lb/item	8.50E-05	9.60E-03	0.00E+00	2.00E-05	0.00E+00	2.10E-04	1.80E-04	7.30E-03

Source: USEPA 2008. AP 42, Fifth Edition, Volume I - Chapter 15: Ordnance Detonation and USAF 2014 Air Emissions Guide for Air Force Stationary Sources

Emissions from Munitions - Existing (tpy)

	Existing	Proposed	Change	NOx	CO	SO2	Pb	VOC	PM10	PM2.5	CO2e
Smoke Hand Grenade	1,318	2,429	1,111	0.0003	0.0038	0.0003	0.0000	0.0003	0.0923	0.0791	0.0507
Ground Burst Simulator	1,194	1,892	698	0.0033	0.0013	0.0001	0.0000	0.0001	0.1134	0.0000	0.0020
Hand Grenade Simulator	1,195	1,840	644	0.0033	0.0002	0.0003	0.0000	0.0000	0.0718	0.0000	0.0025
5.56mm Blank Cartridge	58,049	88,524	30,475	0.0006	0.0051	0.0000	0.0000	0.0000	0.0002	0.0002	0.0067
7.62mm Blank Cartridge	15,100	24,800	9,700	0.0003	0.0051	0.0000	0.0000	0.0000	0.0001	0.0001	0.0072
.50 Caliber Small Cartridge	33,524	51,146	17,622	0.0014	0.1609	0.0000	0.0003	0.0000	0.0035	0.0030	0.1224
			Total	0.0	0.2	0.0	0.0	0.0	0.3	0.1	0.2

Source: USEPA 2008. AP 42, Fifth Edition, Volume I - Chapter 15: Ordnance Detonation and USAF 2014 Air Emissions Guide for Air Force Stationary Sources

Emissions from Munitions - Proposed (tpy)

	Existing	Proposed	Change	NOx	CO	SO2	Pb	VOC	PM10	PM2.5	CO2e
Smoke Hand Grenade	1,318	2,429	1,111	0.0005	0.0070	0.0005	0.0000	0.0005	0.1700	0.1457	0.0935
Ground Burst Simulator	1,194	1,892	698	0.0052	0.0020	0.0001	0.0000	0.0001	0.1797	0.0000	0.0032
Hand Grenade Simulator	1,195	1,840	644	0.0052	0.0003	0.0004	0.0000	0.0000	0.1104	0.0000	0.0038
5.56mm Blank Cartridge	58,049	137,703	79,654	0.0014	0.0193	0.0000	0.0001	0.0000	0.0005	0.0004	0.0156
7.62mm Blank Cartridge	15,100	31,052	15,952	0.0007	0.0106	0.0000	0.0000	0.0000	0.0003	0.0002	0.0147
.50 Caliber Small Cartridge	33,534	51,161	17,627	0.0022	0.2456	0.0000	0.0005	0.0000	0.0054	0.0046	0.1867
			Total	0.0000	0.3	0.0	0.0	0.0	0.5	0.2	0.3

Source: USEPA 2008. AP 42, Fifth Edition, Volume I - Chapter 15: Ordnance Detonation and USAF 2014 Air Emissions Guide for Air Force Stationary Sources

Emissions from Munitions - Net Increase (tpy)

	Existing	Proposed	Change	NOx	CO	SO2	Pb	VOC	PM10	PM2.5	CO2e
Smoke Hand Grenade	1,318	2,429	1,111	0.0002	0.0032	0.0002	0.0000	0.0003	0.0776	0.0667	0.0428
Ground Burst Simulator	1,194	1,892	698	0.0019	0.0007	0.0001	0.0000	0.0000	0.0663	0.0000	0.0012
Hand Grenade Simulator	1,195	1,840	644	0.0018	0.0001	0.0002	0.0000	0.0000	0.0386	0.0000	0.0013
5.56mm Blank Cartridge	58,049	137,703	79,654	0.0008	0.0112	0.0000	0.0000	0.0000	0.0003	0.0002	0.0092
7.62mm Blank Cartridge	15,100	31,052	15,952	0.0004	0.0054	0.0000	0.0000	0.0000	0.0001	0.0001	0.0076
.50 Caliber Small Cartridge	33,534	51,161	17,627	0.0007	0.0846	0.0000	0.0002	0.0000	0.0019	0.0016	0.0643
			Total	0.0	0.1	0.0	0.0	0.0	0.2	0.1	0.1

Source: USEPA 2008. AP 42, Fifth Edition, Volume I - Chapter 15: Ordnance Detonation and USAF 2014 Air Emissions Guide for Air Force Stationary Sources

Emissions - Personnel and Heavy Vehicles (tpy)

	Existing	Proposed	Change
Personnel	19,841	38,487	18,646
Humvee and Six-Pack Truck	5,720	10,670	4,950
MRAP Vehicle	480	1,340	860
Military ATV/UTV	712	1,288	576
Total Vehicle Operations	6,912	13,298	6,386

	NOx	CO	SOx	Pb	VOC	PM 10	PM 2.5	CO2e
Existing	5.2	12.8	0.0	0.0	1.7	0.2	0.2	2628.3
Proposed	9.9	24.6	0.0	0.0	3.2	0.3	0.3	5019.4
Net Increase	4.7	11.8	0.0	0.0	1.5	0.2	0.1	2388.8

Source: Air Force 2020

Emissions - Aircraft (tpy)

HH-60	304	466	162
RQ-11B	166	249	83

		NOx	CO	SOx	Pb	VOC	PM10	PM2.5
LTO Emission Factors (kg/operation)		3.334	0.508	0.78	0	0.11	0.066	0.066
LTO Emission (tons)		0.0037	0.0006	0.0009	0	0.0001	0.0001	0.0001
Flight Emission Factors (kg/operation)		3.45	1.35	0.00	0	0.15	0.000	0.000
Flight Emissions (tons)		0.003795	0.001485	0	0	0.000165	0	0
Total		0.0075	0.0020	0.0009	0	0.0003	0.0001	0.0001
Existing	470	3.5	1.0	0.4	0.0	0.1	0.0	0.0
Proposed	715	5.3	1.5	0.5	0.0	0.2	0.1	0.1
Net Increase	245	1.8	0.5	0.2	0.0	0.1	0.0	0.0

Source: Air Force 2020

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Emissions - Breakdown (tpy)

Existing	NOx	CO	SO2	Pb	VOC	PM10	PM2.5	CO2e
Munitions	0.0	0.2	0.0	0.0	0.0	0.3	0.1	0
Heavy Vehicles	5.2	12.8	0.0	0.0	1.7	0.2	0.2	2,628
Aircraft	3.5	1.0	0.4	0.0	0.1	0.0	0.0	0
Total	**8.7**	**13.9**	**0.4**	**0.0**	**1.8**	**0.5**	**0.3**	**2,628**
Proposed	**NOx**	**CO**	**SO2**	**Pb**	**VOC**	**PM10**	**PM2.5**	**CO2e**
Munitions	0.0	0.3	0.0	0.0	0.0	0.5	0.2	0
Heavy Vehicles	9.9	24.6	0.0	0.0	3.2	0.3	0.3	5,019
Aircraft	5.3	1.5	0.6	0.0	0.2	0.1	0.1	0
Total	**15.3**	**26.4**	**0.7**	**0.0**	**3.4**	**0.8**	**0.5**	**5,020**
Net Increase	**NOx**	**CO**	**SO2**	**Pb**	**VOC**	**PM10**	**PM2.5**	**CO2e**
Munitions	0.0	0.1	0.0	0.0	0.0	0.2	0.1	0
Heavy Vehicles	4.7	11.8	0.0	0.0	1.5	0.2	0.1	2,389
Aircraft	1.8	0.5	0.2	0.0	0.1	0.0	0.0	0
Total	**6.5**	**12.4**	**0.2**	**0.0**	**1.6**	**0.4**	**0.2**	**2,389**

Emissions - Roll-Up (tpy)

	NOx	CO	SO2	Pb	VOC	PM10	PM2.5	CO2e
Existing	8.7	13.9	0.4	0.0	1.8	0.5	0.3	2,628
Proposed	15.3	26.4	0.7	0.0	3.4	0.8	0.5	5,020
Net Increase	6.5	12.4	0.2	0.0	1.6	0.4	0.2	2,389

Sources: USEPA 2008, EDMS 2007, and Air Force 2020

CO2e	1,167.30	Tons

Global	43,125	0.000011%
United States	5,249	0.000087%
Georgia	137.1	0.003329%
Alternative 1	0.005	

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E-2 MODELING RESULTS

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AIR CONFORMITY APPLICABILITY MODEL REPORT
RECORD OF AIR ANALYSIS (ROAA)

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform an analysis to assess the potential air quality impact/s associated with the action in accordance with the Air Force Manual 32-7002, Environmental Compliance and Pollution Prevention; the Environmental Impact Analysis Process (EIAP, 32 CFR 989); and the General Conformity Rule (GCR, 40 CFR 93 Subpart B). This report provides a summary of the ACAM analysis.

a. Action Location:

Base: MOODY AFB
State: Georgia
County(s): Lowndes
Regulatory Area(s): NOT IN A REGULATORY AREA

b. Action Title: Moody Ground Based Training

c. Project Number/s (if applicable): Moody Ground Based Training

d. Projected Action Start Date: 1 / 2022

e. Action Description:

The Air Force is proposing to continue current ground training activities on Moody AFB Main Base as described in Section 1.4, increase some ground training activities described in Section 1.4 within existing training areas, and establish additional suitable ground training areas on the Main Base, where possible, to better support DOD training requirements and reduce conflicts in scheduling training activities between user groups.

Under the Proposed Action, a new FTX Site, EOD Proficiency Range, Training Area 5, tactical combat-casualty care (TCCC) training area, and MCA/ACE Training Area would be established (Figure 2-1). Under the Proposed Action, training events would increase by 50 percent in the existing training areas, increasing the number of personnel, vehicles, equipment, and munitions used in training at Moody AFB. Overall, the Proposed Action would increase the number of personnel conducting ground training activities on Main Base by approximately 60 percent with the creation of additional training areas (Table 2-1). The type of equipment and training munitions proposed to be used during ground training activities would not change, but the amount of equipment and munitions used for training would increase under the Proposed Action (Tables 2-2 and 2-3). Additionally, the number of live munitions expended at the CATM Range during small-arms qualification and maintenance training would also increase under the Proposed Action (Table 2-4).

f. Point of Contact:

Name: TLL
Title: -
Organization: -
Email: -
Phone Number: -

2. Air Impact Analysis: Based on the attainment status at the action location, the requirements of the General Conformity Rule are:

_____ applicable
__X__ not applicable

Total net direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the start of the action through achieving "steady state" (i.e., net gain/loss upon action fully implemented) emissions. The ACAM analysis used the latest and most accurate emission estimation techniques available; all algorithms, emission factors, and methodologies used are described in detail in the USAF Air Emissions Guide for Air Force Stationary Sources, the USAF Air Emissions Guide for Air Force Mobile Sources, and the USAF Air Emissions Guide for Air Force Transitory Sources.

"Insignificance Indicators" were used in the analysis to provide an indication of the significance of potential impacts to air quality based on current ambient air quality relative to the National Ambient Air Quality Standards (NAAQSs). These insignificance indicators are the 250 ton/yr Prevention of Significant Deterioration (PSD) major source threshold for actions occurring in areas that are "Clearly Attainment" (i.e., not within 5% of any NAAQS) and the GCR de minimis values (25 ton/yr for lead and 100 ton/yr for all other criteria pollutants) for actions occurring in areas that are "Near Nonattainment" (i.e., within 5% of any NAAQS). These indicators do not define a significant impact; however, they do provide a threshold to identify actions that are insignificant. Any action with net emissions below the insignificance indicators for all criteria pollutant is considered so insignificant that the action will not cause or contribute to an exceedance on one or more NAAQSs. For further detail on insignificance indicators see chapter 4 of the Air Force Air Quality Environmental Impact Analysis Process (EIAP) Guide, Volume II - Advanced Assessments.

The action's net emissions for every year through achieving steady state were compared against the Insignificance Indicator and are summarized below.

Analysis Summary:

2022

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	1.546	250	No
NOx	4.710	250	No
CO	11.839	250	No
SOx	0.021	250	No
PM 10	0.151	250	No
PM 2.5	0.149	250	No
Pb	0.000	25	No
NH3	0.050	250	No
CO2e	2388.8		

2023 - (Steady State)

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.000	250	No
NOx	0.000	250	No
CO	0.000	250	No
SOx	0.000	250	No
PM 10	0.000	250	No
PM 2.5	0.000	250	No
Pb	0.000	25	No
NH3	0.000	250	No
CO2e	0.0		

None of estimated annual net emissions associated with this action are above the insignificance indicators, indicating no significant impact to air quality. Therefore, the action will not cause or contribute to an exceedance on one or more NAAQSs. No further air assessment is needed.

TLL, - DATE

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

1. General Information

- Action Location
Base: MOODY AFB
State: Georgia
County(s): Lowndes
Regulatory Area(s): NOT IN A REGULATORY AREA

- Action Title: Moody Ground Based Training

- Project Number/s (if applicable): Moody Ground Based Training

- Projected Action Start Date: 1 / 2022

- Action Purpose and Need:
The Proposed Action is needed to train and qualify both Moody AFB personnel and non-Moody AFB personnel in small unit tactics; personnel extrication; land navigation; force-on-force; shoot, move, communicate; Multi-Capable Airmen (MCA)/Agile Combat Employment (ACE); use of Explosive Ordnance Disposal (EOD) tools and equipment; Joint Terminal Attack Controller (JTAC), Ranger Assessment Course, and weapons use to prepare for deployment overseas and future missions. It is anticipated that mission requirements will continue to grow, and new military training areas and activities would be needed for conventional tactical training. The shortage of available on-installation ground training areas has created scheduling conflicts and has forced Air Force personnel to travel to other Department of Defense (DOD) installations, including those outside of the state of Georgia, for training activities. Increasing training opportunities within the boundaries of Moody AFB would reduce travel time and associated costs and improve safety by limiting transportation of weapons and possible interactions with the public while conducting training activities on other DOD installations. The purpose of the Proposed Action is to continue the current military ground training activities at Moody AFB and to support future ground training activities on the Main Base to better support DOD training requirements.

- Action Description:
The Air Force is proposing to continue current ground training activities on Moody AFB Main Base as described in Section 1.4, increase some ground training activities described in Section 1.4 within existing training areas, and establish additional suitable ground training areas on the Main Base, where possible, to better support DOD training requirements and reduce conflicts in scheduling training activities between user groups.
Under the Proposed Action, a new FTX Site, EOD Proficiency Range, Training Area 5, tactical combat-casualty care (TCCC) training area, and MCA/ACE Training Area would be established (Figure 2-1). Under the Proposed Action, training events would increase by 50 percent in the existing training areas, increasing the number of personnel, vehicles, equipment, and munitions used in training at Moody AFB. Overall, the Proposed Action would increase the number of personnel conducting ground training activities on Main Base by approximately 60 percent with the creation of additional training areas (Table 2-1). The type of equipment and training munitions proposed to be used during ground training activities would not change, but the amount of equipment and munitions used for training would increase under the Proposed Action (Tables 2-2 and 2-3). Additionally, the number of live munitions expended at the CATM Range during small-arms qualification and maintenance training would also increase under the Proposed Action (Table 2-4).

- Point of Contact
Name: TLL
Title: -
Organization: -
Email: -
Phone Number: -

- Activity List:

Activity Type		Activity Title
2.	Personnel	Additional Personnel
3.	Construction / Demolition	Maneuver Training

Emission factors and air emission estimating methods come from the United States Air Force's Air Emissions Guide for Air Force Stationary Sources, Air Emissions Guide for Air Force Mobile Sources, and Air Emissions Guide for Air Force Transitory Sources.

2. Personnel

2.1 General Information & Timeline Assumptions

- Add or Remove Activity from Baseline? Add

- Activity Location
County: Lowndes
Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: Additional Personnel

- Activity Description:
Additional Personnel - 18,646 Personnel*1 week/training/52 weeks per year = 358 full time folks

- Activity Start Date
Start Month: 1
Start Year: 2022

- Activity End Date
Indefinite: Yes
End Month: N/A
End Year: N/A

- Activity Emissions:

Pollutant	Emissions Per Year (TONs)
VOC	0.739481
SO_x	0.005391
NO_x	0.642472
CO	8.469263
PM 10	0.017621

Pollutant	Emissions Per Year (TONs)
PM 2.5	0.015491
Pb	0.000000
NH_3	0.049582
CO_2e	777.7

2.2 Personnel Assumptions

- Number of Personnel
Active Duty Personnel: 358

Civilian Personnel: 0
Support Contractor Personnel: 0
Air National Guard (ANG) Personnel: 0
Reserve Personnel: 0

- Default Settings Used: Yes

- Average Personnel Round Trip Commute (mile): 20 (default)

- Personnel Work Schedule
Active Duty Personnel: 5 Days Per Week (default)
Civilian Personnel: 5 Days Per Week (default)
Support Contractor Personnel: 5 Days Per Week (default)
Air National Guard (ANG) Personnel: 4 Days Per Week (default)
Reserve Personnel: 4 Days Per Month (default)

2.3 Personnel On Road Vehicle Mixture

- On Road Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	37.55	60.32	0	0.03	0.2	0	1.9
GOVs	54.49	37.73	4.67	0	0	3.11	0

2.4 Personnel Emission Factor(s)

- On Road Vehicle Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	Pb	NH_3	CO_2e
LDGV	000.273	000.002	000.207	003.148	000.007	000.006		000.023	00320.956
LDGT	000.345	000.003	000.366	004.453	000.009	000.008		000.024	00414.257
HDGV	000.716	000.005	000.988	014.742	000.020	000.017		000.044	00766.469
LDDV	000.103	000.003	000.133	002.604	000.004	000.004		000.008	00312.295
LDDT	000.240	000.004	000.378	004.437	000.007	000.006		000.008	00443.620
HDDV	000.494	000.013	004.839	001.748	000.167	000.153		000.028	01500.756
MC	002.588	000.003	000.723	013.090	000.027	000.024		000.054	00395.915

2.5 Personnel Formula(s)

- Personnel Vehicle Miles Travel for Work Days per Year
$VMT_P = NP * WD * AC$

VMT_P: Personnel Vehicle Miles Travel (miles/year)
NP: Number of Personnel
WD: Work Days per Year
AC: Average Commute (miles)

- Total Vehicle Miles Travel per Year
$VMT_{Total} = VMT_{AD} + VMT_C + VMT_{SC} + VMT_{ANG} + VMT_{AFRC}$

VMT_{Total}: Total Vehicle Miles Travel (miles)
VMT_{AD}: Active Duty Personnel Vehicle Miles Travel (miles)
VMT_C: Civilian Personnel Vehicle Miles Travel (miles)
VMT_{SC}: Support Contractor Personnel Vehicle Miles Travel (miles)
VMT_{ANG}: Air National Guard Personnel Vehicle Miles Travel (miles)
VMT_{AFRC}: Reserve Personnel Vehicle Miles Travel (miles)

- Vehicle Emissions per Year

$V_{POL} = (VMT_{Total} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{Total}: Total Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Personnel On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

3. Construction / Demolition

3.1 General Information & Timeline Assumptions

- Activity Location
County: Lowndes
Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: Maneuver Training

- Activity Description:
6,386 operations * 2 hours/operation = 12,722 hours = 35 hours/day
17.5 - 2-hour operations per day

- Activity Start Date
Start Month: 1
Start Month: 2022

- Activity End Date
Indefinite: False
End Month: 12
End Month: 2022

- Activity Emissions:

Pollutant	Total Emissions (TONs)
VOC	0.806296
SO_x	0.016089
NO_x	4.067372
CO	3.369985
PM 10	0.133042

Pollutant	Total Emissions (TONs)
PM 2.5	0.133042
Pb	0.000000
NH_3	0.000000
CO_2e	1611.2

3.1 Building Construction Phase

3.1.1 Building Construction Phase Timeline Assumptions

- Phase Start Date
Start Month: 1
Start Quarter: 1
Start Year: 2022

- Phase Duration
Number of Month: 12
Number of Days: 0

3.1.2 Building Construction Phase Assumptions

- General Building Construction Information

Building Category: Commercial or Retail
Area of Building (ft^2): 1
Height of Building (ft): 1
Number of Units: N/A

- Building Construction Default Settings

Default Settings Used: No
Average Day(s) worked per week: 7

- Construction Exhaust

Equipment Name	Number Of Equipment	Hours Per Day
Off-Highway Trucks Composite	17	2

- Vehicle Exhaust

Average Hauling Truck Round Trip Commute (mile): 0

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips

Average Worker Round Trip Commute (mile): 0

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

- Vendor Trips

Average Vendor Round Trip Commute (mile): 0

- Vendor Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

3.1.3 Building Construction Phase Emission Factor(s)

- Construction Exhaust Emission Factors (lb/hour)

Off-Highway Trucks Composite								
	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	CH_4	CO_2e
Emission Factors	0.1303	0.0026	0.6573	0.5446	0.0215	0.0215	0.0117	260.37

- Vehicle Exhaust & Worker Trips Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	Pb	NH_3	CO_2e
LDGV	000.273	000.002	000.207	003.148	000.007	000.006		000.023	00320.956
LDGT	000.345	000.003	000.366	004.453	000.009	000.008		000.024	00414.257
HDGV	000.716	000.005	000.988	014.742	000.020	000.017		000.044	00766.469
LDDV	000.103	000.003	000.133	002.604	000.004	000.004		000.008	00312.295
LDDT	000.240	000.004	000.378	004.437	000.007	000.006		000.008	00443.620
HDDV	000.494	000.013	004.839	001.748	000.167	000.153		000.028	01500.756
MC	002.588	000.003	000.723	013.090	000.027	000.024		000.054	00395.915

3.1.4 Building Construction Phase Formula(s)

- Construction Exhaust Emissions per Phase

$CEE_{POL} = (NE * WD * H * EF_{POL}) / 2000$

CEE_{POL}: Construction Exhaust Emissions (TONs)
NE: Number of Equipment
WD: Number of Total Work Days (days)
H: Hours Worked per Day (hours)
EF_{POL}: Emission Factor for Pollutant (lb/hour)
2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

$VMT_{VE} = BA * BH * (0.32 / 1000) * HT$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
BA: Area of Building (ft^2)
BH: Height of Building (ft)
(0.32 / 1000): Conversion Factor ft^3 to trips (0.32 trip / 1000 ft^3)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase

$VMT_{WT} = WD * WT * 1.25 * NE$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)
1.25: Conversion Factor Number of Construction Equipment to Number of Works
NE: Number of Construction Equipment

$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Vender Trips Emissions per Phase

$VMT_{VT} = BA * BH * (0.05 / 1000) * HT$

VMT_{VT}: Vender Trips Vehicle Miles Travel (miles)
BA: Area of Building (ft^2)
BH: Height of Building (ft)
(0.05 / 1000): Conversion Factor ft^3 to trips (0.05 trip / 1000 ft^3)

HT: Average Hauling Truck Round Trip Commute (mile/trip)

$V_{POL} = (VMT_{VT} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VT}: Vender Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

AIR CONFORMITY APPLICABILITY MODEL REPORT
RECORD OF AIR ANALYSIS (ROAA)

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform an analysis to assess the potential air quality impact/s associated with the action in accordance with the Air Force Manual 32-7002, Environmental Compliance and Pollution Prevention; the Environmental Impact Analysis Process (EIAP, 32 CFR 989); and the General Conformity Rule (GCR, 40 CFR 93 Subpart B). This report provides a summary of the ACAM analysis.

a. Action Location:

Base: MOODY AFB
State: Georgia
County(s): Lowndes
Regulatory Area(s): NOT IN A REGULATORY AREA

b. Action Title: Moody Ground Based Training

c. Project Number/s (if applicable): Moody Ground Based Training

d. Projected Action Start Date: 1 / 2022

e. Action Description:

The Air Force is proposing to continue current ground training activities on Moody AFB Main Base as described in Section 1.4, increase some ground training activities described in Section 1.4 within existing training areas, and establish additional suitable ground training areas on the Main Base, where possible, to better support DOD training requirements and reduce conflicts in scheduling training activities between user groups.

Under the Proposed Action, a new FTX Site, EOD Proficiency Range, Training Area 5, tactical combat-casualty care (TCCC) training area, and MCA/ACE Training Area would be established (Figure 2-1). Under the Proposed Action, training events would increase by 50 percent in the existing training areas, increasing the number of personnel, vehicles, equipment, and munitions used in training at Moody AFB. Overall, the Proposed Action would increase the number of personnel conducting ground training activities on Main Base by approximately 60 percent with the creation of additional training areas (Table 2-1). The type of equipment and training munitions proposed to be used during ground training activities would not change, but the amount of equipment and munitions used for training would increase under the Proposed Action (Tables 2-2 and 2-3). Additionally, the number of live munitions expended at the CATM Range during small-arms qualification and maintenance training would also increase under the Proposed Action (Table 2-4).

f. Point of Contact:

Name: TLL
Title: -
Organization: -
Email: -
Phone Number: -

2. Air Impact Analysis: Based on the attainment status at the action location, the requirements of the General Conformity Rule are:

_____ applicable
__X__ not applicable

Total net direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the start of the action through achieving "steady state" (i.e., net gain/loss upon action fully implemented) emissions. The ACAM analysis used the latest and most accurate emission estimation techniques available; all algorithms, emission factors, and methodologies used are described in detail in the USAF Air Emissions Guide for Air Force Stationary Sources, the USAF Air Emissions Guide for Air Force Mobile Sources, and the USAF Air Emissions Guide for Air Force Transitory Sources.

"Insignificance Indicators" were used in the analysis to provide an indication of the significance of potential impacts to air quality based on current ambient air quality relative to the National Ambient Air Quality Standards (NAAQSs). These insignificance indicators are the 250 ton/yr Prevention of Significant Deterioration (PSD) major source threshold for actions occurring in areas that are "Clearly Attainment" (i.e., not within 5% of any NAAQS) and the GCR de minimis values (25 ton/yr for lead and 100 ton/yr for all other criteria pollutants) for actions occurring in areas that are "Near Nonattainment" (i.e., within 5% of any NAAQS). These indicators do not define a significant impact; however, they do provide a threshold to identify actions that are insignificant. Any action with net emissions below the insignificance indicators for all criteria pollutant is considered so insignificant that the action will not cause or contribute to an exceedance on one or more NAAQSs. For further detail on insignificance indicators see chapter 4 of the Air Force Air Quality Environmental Impact Analysis Process (EIAP) Guide, Volume II - Advanced Assessments.

The action's net emissions for every year through achieving steady state were compared against the Insignificance Indicator and are summarized below.

Analysis Summary:

2022

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	1.688	250	No
NOx	5.230	250	No
CO	12.780	250	No
SOx	0.024	250	No
PM 10	0.167	250	No
PM 2.5	0.165	250	No
Pb	0.000	25	No
NH3	0.053	250	No
CO2e	2628.3		

2023 - (Steady State)

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.000	250	No
NOx	0.000	250	No
CO	0.000	250	No
SOx	0.000	250	No
PM 10	0.000	250	No
PM 2.5	0.000	250	No
Pb	0.000	25	No
NH3	0.000	250	No
CO2e	0.0		

None of estimated annual net emissions associated with this action are above the insignificance indicators, indicating no significant impact to air quality. Therefore, the action will not cause or contribute to an exceedance on one or more NAAQSs. No further air assessment is needed.

_____ _____

TLL, - Date

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

1. General Information

- Action Location

Base: MOODY AFB
State: Georgia
County(s): Lowndes
Regulatory Area(s): NOT IN A REGULATORY AREA

- Action Title: Moody Ground Based Training

- Project Number/s (if applicable): Moody Ground Based Training

- Projected Action Start Date: 1 / 2022

- Action Purpose and Need:

The Proposed Action is needed to train and qualify both Moody AFB personnel and non-Moody AFB personnel in small unit tactics; personnel extrication; land navigation; force-on-force; shoot, move, communicate; Multi-Capable Airmen (MCA)/Agile Combat Employment (ACE); use of Explosive Ordnance Disposal (EOD) tools and equipment; Joint Terminal Attack Controller (JTAC), Ranger Assessment Course, and weapons use to prepare for deployment overseas and future missions. It is anticipated that mission requirements will continue to grow, and new military training areas and activities would be needed for conventional tactical training. The shortage of available on-installation ground training areas has created scheduling conflicts and has forced Air Force personnel to travel to other Department of Defense (DOD) installations, including those outside of the state of Georgia, for training activities. Increasing training opportunities within the boundaries of Moody AFB would reduce travel time and associated costs and improve safety by limiting transportation of weapons and possible interactions with the public while conducting training activities on other DOD installations. The purpose of the Proposed Action is to continue the current military ground training activities at Moody AFB and to support future ground training activities on the Main Base to better support DOD training requirements.

- Action Description:

The Air Force is proposing to continue current ground training activities on Moody AFB Main Base as described in Section 1.4, increase some ground training activities described in Section 1.4 within existing training areas, and establish additional suitable ground training areas on the Main Base, where possible, to better support DOD training requirements and reduce conflicts in scheduling training activities between user groups.

Under the Proposed Action, a new FTX Site, EOD Proficiency Range, Training Area 5, tactical combat-casualty care (TCCC) training area, and MCA/ACE Training Area would be established (Figure 2-1). Under the Proposed Action, training events would increase by 50 percent in the existing training areas, increasing the number of personnel, vehicles, equipment, and munitions used in training at Moody AFB. Overall, the Proposed Action would increase the number of personnel conducting ground training activities on Main Base by approximately 60 percent with the creation of additional training areas (Table 2-1). The type of equipment and training munitions proposed to be used during ground training activities would not change, but the amount of equipment and munitions used for training would increase under the Proposed Action (Tables 2-2 and 2-3). Additionally, the number of live munitions expended at the CATM Range during small-arms qualification and maintenance training would also increase under the Proposed Action (Table 2-4).

- Point of Contact
Name: TLL
Title: -
Organization: -
Email: -
Phone Number: -

- Activity List:

Activity Type		Activity Title
2.	Personnel	Additional Personnel
3.	Construction / Demolition	Maneuver Training

Emission factors and air emission estimating methods come from the United States Air Force's Air Emissions Guide for Air Force Stationary Sources, Air Emissions Guide for Air Force Mobile Sources, and Air Emissions Guide for Air Force Transitory Sources.

2. Personnel

2.1 General Information & Timeline Assumptions

- Add or Remove Activity from Baseline? Add

- Activity Location
County: Lowndes
Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: Additional Personnel

- Activity Description:
Additional Personnel - 19,841 Personnel*1 week/training/52 weeks per year = 381 full time folks

- Activity Start Date
Start Month: 1
Start Year: 2022

- Activity End Date
Indefinite: No
End Month: 12
End Year: 2022

- Activity Emissions:

Pollutant	Total Emissions (TONs)
VOC	0.786990
SO_x	0.005737
NO_x	0.683749
CO	9.013378
PM 10	0.018753

Pollutant	Total Emissions (TONs)
PM 2.5	0.016486
Pb	0.000000
NH_3	0.052767
CO_2e	827.6

2.2 Personnel Assumptions

- Number of Personnel
Active Duty Personnel: 381

Civilian Personnel: 0
Support Contractor Personnel: 0
Air National Guard (ANG) Personnel: 0
Reserve Personnel: 0

- Default Settings Used: Yes

- Average Personnel Round Trip Commute (mile): 20 (default)

- Personnel Work Schedule
Active Duty Personnel: 5 Days Per Week (default)
Civilian Personnel: 5 Days Per Week (default)
Support Contractor Personnel: 5 Days Per Week (default)
Air National Guard (ANG) Personnel: 4 Days Per Week (default)
Reserve Personnel: 4 Days Per Month (default)

2.3 Personnel On Road Vehicle Mixture

- On Road Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	37.55	60.32	0	0.03	0.2	0	1.9
GOVs	54.49	37.73	4.67	0	0	3.11	0

2.4 Personnel Emission Factor(s)

- On Road Vehicle Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	Pb	NH_3	CO_2e
LDGV	000.273	000.002	000.207	003.148	000.007	000.006		000.023	00320.956
LDGT	000.345	000.003	000.366	004.453	000.009	000.008		000.024	00414.257
HDGV	000.716	000.005	000.988	014.742	000.020	000.017		000.044	00766.469
LDDV	000.103	000.003	000.133	002.604	000.004	000.004		000.008	00312.295
LDDT	000.240	000.004	000.378	004.437	000.007	000.006		000.008	00443.620
HDDV	000.494	000.013	004.839	001.748	000.167	000.153		000.028	01500.756
MC	002.588	000.003	000.723	013.090	000.027	000.024		000.054	00395.915

2.5 Personnel Formula(s)

- Personnel Vehicle Miles Travel for Work Days per Year
$VMT_P = NP * WD * AC$

VMT_P: Personnel Vehicle Miles Travel (miles/year)
NP: Number of Personnel
WD: Work Days per Year
AC: Average Commute (miles)

- Total Vehicle Miles Travel per Year
$VMT_{Total} = VMT_{AD} + VMT_C + VMT_{SC} + VMT_{ANG} + VMT_{AFRC}$

VMT_{Total}: Total Vehicle Miles Travel (miles)
VMT_{AD}: Active Duty Personnel Vehicle Miles Travel (miles)
VMT_C: Civilian Personnel Vehicle Miles Travel (miles)
VMT_{SC}: Support Contractor Personnel Vehicle Miles Travel (miles)
VMT_{ANG}: Air National Guard Personnel Vehicle Miles Travel (miles)
VMT_{AFRC}: Reserve Personnel Vehicle Miles Travel (miles)

- Vehicle Emissions per Year

$V_{POL} = (VMT_{Total} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{Total}: Total Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Personnel On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

3. Construction / Demolition

3.1 General Information & Timeline Assumptions

- Activity Location
County: Lowndes
Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: Maneuver Training

- Activity Description:
6,912 operations / 365 days per year = 18.9 - 2-hour operations per day

- Activity Start Date
Start Month: 1
Start Month: 2022

- Activity End Date
Indefinite: False
End Month: 12
End Month: 2022

- Activity Emissions:

Pollutant	Total Emissions (TONs)
VOC	0.901155
SO_x	0.017982
NO_x	4.545887
CO	3.766454
PM 10	0.148694

Pollutant	Total Emissions (TONs)
PM 2.5	0.148694
Pb	0.000000
NH_3	0.000000
CO_2e	1800.7

3.1 Building Construction Phase

3.1.1 Building Construction Phase Timeline Assumptions

- Phase Start Date
Start Month: 1
Start Quarter: 1
Start Year: 2022

- Phase Duration
Number of Month: 12
Number of Days: 0

3.1.2 Building Construction Phase Assumptions

- General Building Construction Information

Building Category: Commercial or Retail
Area of Building (ft^2): 1
Height of Building (ft): 1
Number of Units: N/A

- Building Construction Default Settings

Default Settings Used: No
Average Day(s) worked per week: 7

- Construction Exhaust

Equipment Name	Number Of Equipment	Hours Per Day
Off-Highway Trucks Composite	19	2

- Vehicle Exhaust

Average Hauling Truck Round Trip Commute (mile): 0

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips

Average Worker Round Trip Commute (mile): 0

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

- Vendor Trips

Average Vendor Round Trip Commute (mile): 0

- Vendor Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

3.1.3 Building Construction Phase Emission Factor(s)

- Construction Exhaust Emission Factors (lb/hour)

Off-Highway Trucks Composite								
	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	CH_4	CO_2e
Emission Factors	0.1303	0.0026	0.6573	0.5446	0.0215	0.0215	0.0117	260.37

- Vehicle Exhaust & Worker Trips Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	Pb	NH_3	CO_2e
LDGV	000.273	000.002	000.207	003.148	000.007	000.006		000.023	00320.956
LDGT	000.345	000.003	000.366	004.453	000.009	000.008		000.024	00414.257
HDGV	000.716	000.005	000.988	014.742	000.020	000.017		000.044	00766.469
LDDV	000.103	000.003	000.133	002.604	000.004	000.004		000.008	00312.295
LDDT	000.240	000.004	000.378	004.437	000.007	000.006		000.008	00443.620
HDDV	000.494	000.013	004.839	001.748	000.167	000.153		000.028	01500.756
MC	002.588	000.003	000.723	013.090	000.027	000.024		000.054	00395.915

3.1.4 Building Construction Phase Formula(s)

- Construction Exhaust Emissions per Phase

$CEE_{POL} = (NE * WD * H * EF_{POL}) / 2000$

CEE_{POL}: Construction Exhaust Emissions (TONs)
NE: Number of Equipment
WD: Number of Total Work Days (days)
H: Hours Worked per Day (hours)
EF_{POL}: Emission Factor for Pollutant (lb/hour)
2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

$VMT_{VE} = BA * BH * (0.32 / 1000) * HT$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
BA: Area of Building (ft^2)
BH: Height of Building (ft)
(0.32 / 1000): Conversion Factor ft^3 to trips (0.32 trip / 1000 ft^3)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase

$VMT_{WT} = WD * WT * 1.25 * NE$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)
1.25: Conversion Factor Number of Construction Equipment to Number of Works
NE: Number of Construction Equipment

$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Vender Trips Emissions per Phase

$VMT_{VT} = BA * BH * (0.05 / 1000) * HT$

VMT_{VT}: Vender Trips Vehicle Miles Travel (miles)
BA: Area of Building (ft^2)
BH: Height of Building (ft)
(0.05 / 1000): Conversion Factor ft^3 to trips (0.05 trip / 1000 ft^3)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

$V_{POL} = (VMT_{VT} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VT}: Vender Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

AIR CONFORMITY APPLICABILITY MODEL REPORT
RECORD OF AIR ANALYSIS (ROAA)

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform an analysis to assess the potential air quality impact/s associated with the action in accordance with the Air Force Manual 32-7002, Environmental Compliance and Pollution Prevention; the Environmental Impact Analysis Process (EIAP, 32 CFR 989); and the General Conformity Rule (GCR, 40 CFR 93 Subpart B). This report provides a summary of the ACAM analysis.

a. Action Location:

Base: MOODY AFB
State: Georgia
County(s): Lowndes
Regulatory Area(s): NOT IN A REGULATORY AREA

b. Action Title: Moody Ground Based Training

c. Project Number/s (if applicable): Moody Ground Based Training

d. Projected Action Start Date: 1 / 2022

e. Action Description:

The Air Force is proposing to continue current ground training activities on Moody AFB Main Base as described in Section 1.4, increase some ground training activities described in Section 1.4 within existing training areas, and establish additional suitable ground training areas on the Main Base, where possible, to better support DOD training requirements and reduce conflicts in scheduling training activities between user groups.

Under the Proposed Action, a new FTX Site, EOD Proficiency Range, Training Area 5, tactical combat-casualty care (TCCC) training area, and MCA/ACE Training Area would be established (Figure 2-1). Under the Proposed Action, training events would increase by 50 percent in the existing training areas, increasing the number of personnel, vehicles, equipment, and munitions used in training at Moody AFB. Overall, the Proposed Action would increase the number of personnel conducting ground training activities on Main Base by approximately 60 percent with the creation of additional training areas (Table 2-1). The type of equipment and training munitions proposed to be used during ground training activities would not change, but the amount of equipment and munitions used for training would increase under the Proposed Action (Tables 2-2 and 2-3). Additionally, the number of live munitions expended at the CATM Range during small-arms qualification and maintenance training would also increase under the Proposed Action (Table 2-4).

f. Point of Contact:

Name: TLL
Title: -
Organization: -
Email: -
Phone Number: -

2. Air Impact Analysis: Based on the attainment status at the action location, the requirements of the General Conformity Rule are:

_____ applicable
__X__ not applicable

Total net direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the start of the action through achieving "steady state" (i.e., net gain/loss upon action fully implemented) emissions. The ACAM analysis used the latest and most accurate emission estimation techniques available; all algorithms, emission factors, and methodologies used are described in detail in the USAF Air Emissions Guide for Air Force Stationary Sources, the USAF Air Emissions Guide for Air Force Mobile Sources, and the USAF Air Emissions Guide for Air Force Transitory Sources.

"Insignificance Indicators" were used in the analysis to provide an indication of the significance of potential impacts to air quality based on current ambient air quality relative to the National Ambient Air Quality Standards (NAAQSs). These insignificance indicators are the 250 ton/yr Prevention of Significant Deterioration (PSD) major source threshold for actions occurring in areas that are "Clearly Attainment" (i.e., not within 5% of any NAAQS) and the GCR de minimis values (25 ton/yr for lead and 100 ton/yr for all other criteria pollutants) for actions occurring in areas that are "Near Nonattainment" (i.e., within 5% of any NAAQS). These indicators do not define a significant impact; however, they do provide a threshold to identify actions that are insignificant. Any action with net emissions below the insignificance indicators for all criteria pollutant is considered so insignificant that the action will not cause or contribute to an exceedance on one or more NAAQSs. For further detail on insignificance indicators see chapter 4 of the Air Force Air Quality Environmental Impact Analysis Process (EIAP) Guide, Volume II - Advanced Assessments.

The action's net emissions for every year through achieving steady state were compared against the Insignificance Indicator and are summarized below.

Analysis Summary:

2022

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	3.236	250	No
NOx	9.941	250	No
CO	24.643	250	No
SOx	0.045	250	No
PM 10	0.318	250	No
PM 2.5	0.314	250	No
Pb	0.000	25	No
NH3	0.102	250	No
CO2e	5019.4		

2023 - (Steady State)

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.000	250	No
NOx	0.000	250	No
CO	0.000	250	No
SOx	0.000	250	No
PM 10	0.000	250	No
PM 2.5	0.000	250	No
Pb	0.000	25	No
NH3	0.000	250	No
CO2e	0.0		

None of estimated annual net emissions associated with this action are above the insignificance indicators, indicating no significant impact to air quality. Therefore, the action will not cause or contribute to an exceedance on one or more NAAQSs. No further air assessment is needed.

_____ _____

TLL, - Date

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

1. General Information

- Action Location

Base: MOODY AFB
State: Georgia
County(s): Lowndes
Regulatory Area(s): NOT IN A REGULATORY AREA

- Action Title: Moody Ground Based Training

- Project Number/s (if applicable): Moody Ground Based Training

- Projected Action Start Date: 1 / 2022

- Action Purpose and Need:

The Proposed Action is needed to train and qualify both Moody AFB personnel and non-Moody AFB personnel in small unit tactics; personnel extrication; land navigation; force-on-force; shoot, move, communicate; Multi-Capable Airmen (MCA)/Agile Combat Employment (ACE); use of Explosive Ordnance Disposal (EOD) tools and equipment; Joint Terminal Attack Controller (JTAC), Ranger Assessment Course, and weapons use to prepare for deployment overseas and future missions. It is anticipated that mission requirements will continue to grow, and new military training areas and activities would be needed for conventional tactical training. The shortage of available on-installation ground training areas has created scheduling conflicts and has forced Air Force personnel to travel to other Department of Defense (DOD) installations, including those outside of the state of Georgia, for training activities. Increasing training opportunities within the boundaries of Moody AFB would reduce travel time and associated costs and improve safety by limiting transportation of weapons and possible interactions with the public while conducting training activities on other DOD installations. The purpose of the Proposed Action is to continue the current military ground training activities at Moody AFB and to support future ground training activities on the Main Base to better support DOD training requirements.

- Action Description:

The Air Force is proposing to continue current ground training activities on Moody AFB Main Base as described in Section 1.4, increase some ground training activities described in Section 1.4 within existing training areas, and establish additional suitable ground training areas on the Main Base, where possible, to better support DOD training requirements and reduce conflicts in scheduling training activities between user groups.

Under the Proposed Action, a new FTX Site, EOD Proficiency Range, Training Area 5, tactical combat-casualty care (TCCC) training area, and MCA/ACE Training Area would be established (Figure 2-1). Under the Proposed Action, training events would increase by 50 percent in the existing training areas, increasing the number of personnel, vehicles, equipment, and munitions used in training at Moody AFB. Overall, the Proposed Action would increase the number of personnel conducting ground training activities on Main Base by approximately 60 percent with the creation of additional training areas (Table 2-1). The type of equipment and

training munitions proposed to be used during ground training activities would not change, but the amount of equipment and munitions used for training would increase under the Proposed Action (Tables 2-2 and 2-3). Additionally, the number of live munitions expended at the CATM Range during small-arms qualification and maintenance training would also increase under the Proposed Action (Table 2-4).

- Point of Contact
Name: TLL
Title: -
Organization: -
Email: -
Phone Number: -

- Activity List:

Activity Type		Activity Title
2.	Personnel	Additional Personnel
3.	Construction / Demolition	Maneuver Training

Emission factors and air emission estimating methods come from the United States Air Force's Air Emissions Guide for Air Force Stationary Sources, Air Emissions Guide for Air Force Mobile Sources, and Air Emissions Guide for Air Force Transitory Sources.

2. Personnel

2.1 General Information & Timeline Assumptions

- Add or Remove Activity from Baseline? Add

- Activity Location
County: Lowndes
Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: Additional Personnel

- Activity Description:
Additional Personnel - 38,487 Personnel*1 week/training/52 weeks per year = 740 full time folks

- Activity Start Date
Start Month: 1
Start Year: 2022

- Activity End Date
Indefinite: No
End Month: 12
End Year: 2022

- Activity Emissions:

Pollutant	Total Emissions (TONs)
VOC	1.528537
SO_x	0.011143
NO_x	1.328016
CO	17.506299
PM 10	0.036423

Pollutant	Total Emissions (TONs)
PM 2.5	0.032021
Pb	0.000000
NH_3	0.102487
CO_2e	1607.5

2.2 Personnel Assumptions

- Number of Personnel

Active Duty Personnel:	740
Civilian Personnel:	0
Support Contractor Personnel:	0
Air National Guard (ANG) Personnel:	0
Reserve Personnel:	0

- Default Settings Used: Yes

- Average Personnel Round Trip Commute (mile): 20 (default)

- Personnel Work Schedule

Active Duty Personnel:	5 Days Per Week (default)
Civilian Personnel:	5 Days Per Week (default)
Support Contractor Personnel:	5 Days Per Week (default)
Air National Guard (ANG) Personnel:	4 Days Per Week (default)
Reserve Personnel:	4 Days Per Month (default)

2.3 Personnel On Road Vehicle Mixture

- On Road Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	37.55	60.32	0	0.03	0.2	0	1.9
GOVs	54.49	37.73	4.67	0	0	3.11	0

2.4 Personnel Emission Factor(s)

- On Road Vehicle Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	Pb	NH_3	CO_2e
LDGV	000.273	000.002	000.207	003.148	000.007	000.006		000.023	00320.956
LDGT	000.345	000.003	000.366	004.453	000.009	000.008		000.024	00414.257
HDGV	000.716	000.005	000.988	014.742	000.020	000.017		000.044	00766.469
LDDV	000.103	000.003	000.133	002.604	000.004	000.004		000.008	00312.295
LDDT	000.240	000.004	000.378	004.437	000.007	000.006		000.008	00443.620
HDDV	000.494	000.013	004.839	001.748	000.167	000.153		000.028	01500.756
MC	002.588	000.003	000.723	013.090	000.027	000.024		000.054	00395.915

2.5 Personnel Formula(s)

- Personnel Vehicle Miles Travel for Work Days per Year

$VMT_P = NP * WD * AC$

VMT_P: Personnel Vehicle Miles Travel (miles/year)
NP: Number of Personnel
WD: Work Days per Year
AC: Average Commute (miles)

- Total Vehicle Miles Travel per Year

$VMT_{Total} = VMT_{AD} + VMT_C + VMT_{SC} + VMT_{ANG} + VMT_{AFRC}$

VMT_{Total}: Total Vehicle Miles Travel (miles)
VMT_{AD}: Active Duty Personnel Vehicle Miles Travel (miles)
VMT_C: Civilian Personnel Vehicle Miles Travel (miles)

VMT_{SC}: Support Contractor Personnel Vehicle Miles Travel (miles)
VMT_{ANG}: Air National Guard Personnel Vehicle Miles Travel (miles)
VMT_{AFRC}: Reserve Personnel Vehicle Miles Travel (miles)

- Vehicle Emissions per Year

$V_{POL} = (VMT_{Total} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{Total}: Total Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Personnel On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

3. Construction / Demolition

3.1 General Information & Timeline Assumptions

- Activity Location
County: Lowndes
Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: Maneuver Training

- Activity Description:
13,298 operations / 365 days per year =
36.4 - 2-hour operations per day

- Activity Start Date
Start Month: 1
Start Month: 2022

- Activity End Date
Indefinite: False
End Month: 12
End Month: 2022

- Activity Emissions:

Pollutant	Total Emissions (TONs)
VOC	1.707451
SO_x	0.034070
NO_x	8.613259
CO	7.136438
PM 10	0.281736

Pollutant	Total Emissions (TONs)
PM 2.5	0.281736
Pb	0.000000
NH_3	0.000000
CO_2e	3411.9

3.1 Building Construction Phase

3.1.1 Building Construction Phase Timeline Assumptions

- Phase Start Date
Start Month: 1
Start Quarter: 1
Start Year: 2022

- Phase Duration
Number of Month: 12
Number of Days: 0

3.1.2 Building Construction Phase Assumptions

- General Building Construction Information
Building Category: Commercial or Retail
Area of Building (ft^2): 1
Height of Building (ft): 1
Number of Units: N/A

- Building Construction Default Settings
Default Settings Used: No
Average Day(s) worked per week: 7

- Construction Exhaust

Equipment Name	Number Of Equipment	Hours Per Day
Off-Highway Trucks Composite	36	2

- Vehicle Exhaust
Average Hauling Truck Round Trip Commute (mile): 0

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips
Average Worker Round Trip Commute (mile): 0

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

- Vendor Trips
Average Vendor Round Trip Commute (mile): 0

- Vendor Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

3.1.3 Building Construction Phase Emission Factor(s)

- Construction Exhaust Emission Factors (lb/hour)

Off-Highway Trucks Composite								
	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	CH_4	CO_2e
Emission Factors	0.1303	0.0026	0.6573	0.5446	0.0215	0.0215	0.0117	260.37

- Vehicle Exhaust & Worker Trips Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	Pb	NH_3	CO_2e
LDGV	000.273	000.002	000.207	003.148	000.007	000.006		000.023	00320.956
LDGT	000.345	000.003	000.366	004.453	000.009	000.008		000.024	00414.257
HDGV	000.716	000.005	000.988	014.742	000.020	000.017		000.044	00766.469
LDDV	000.103	000.003	000.133	002.604	000.004	000.004		000.008	00312.295

LDDT	000.240	000.004	000.378	004.437	000.007	000.006		000.008	00443.620
HDDV	000.494	000.013	004.839	001.748	000.167	000.153		000.028	01500.756
MC	002.588	000.003	000.723	013.090	000.027	000.024		000.054	00395.915

3.1.4 Building Construction Phase Formula(s)

- Construction Exhaust Emissions per Phase

$CEE_{POL} = (NE * WD * H * EF_{POL}) / 2000$

CEE_{POL}: Construction Exhaust Emissions (TONs)
NE: Number of Equipment
WD: Number of Total Work Days (days)
H: Hours Worked per Day (hours)
EF_{POL}: Emission Factor for Pollutant (lb/hour)
2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

$VMT_{VE} = BA * BH * (0.32 / 1000) * HT$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
BA: Area of Building (ft^2)
BH: Height of Building (ft)
(0.32 / 1000): Conversion Factor ft^3 to trips (0.32 trip / 1000 ft^3)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase

$VMT_{WT} = WD * WT * 1.25 * NE$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)
1.25: Conversion Factor Number of Construction Equipment to Number of Works
NE: Number of Construction Equipment

$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Vender Trips Emissions per Phase

$VMT_{VT} = BA * BH * (0.05 / 1000) * HT$

VMT_{VT}: Vender Trips Vehicle Miles Travel (miles)
BA: Area of Building (ft^2)
BH: Height of Building (ft)
(0.05 / 1000): Conversion Factor ft^3 to trips (0.05 trip / 1000 ft^3)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

$$V_{POL} = (VMT_{VT} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VT}: Vender Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

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2 FORMAT PAGE