Final

ENVIRONMENTAL ASSESSMENT

PROPOSED CONSTRUCTION OF NEW AND UPDATED TRAINING FACILITIES AT MAXWELL AIR FORCE BASE

Maxwell Air Force Base
Montgomery, Alabama
October 2008

Report Documentation Page

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14. ABSTRACT

The proposed action includes new construction and upgrades to facilities in order to accommodate increased training requirements for Air Force personnel. The proposed action would include the following five areas 1) construction of a new small arms firing range training facility 2) construction of a new dormitory and dining hall/multi-purpose facility for trainees 3) construction of a new covered training area and equipment issue and storage support building 4) establishment of a new Evasion and Conduct After Capture Course at Maxwell AFB, which would require construction of a specialized tactical training area and the renovation of one facility for expeditionary training 5) upgrades to the grounds and related permanent support structures at Blue Thunder expeditionary training area. All of the proposed new facilities would be constructed on previously disturbed land within the boundaries of Maxwell AFB. The No Action Alternative is to continue use of existing training facilities at Maxwell AFB. This would result in continued problems with training schedules, dining schedules, and space for housing and training. Continued use of existing facilities may hamper or prevent the required training of Air Force trainees and possibly leave them unprepared for combat and deployment situations. Resources considered in this environmental assessment are: air quality, noise, land use geological resources, water resources, transportation and circulation, cultural resources socioeconomics, biological resources, environmental justice, hazardous materials and wastes, and utilities. After considering the potential environmental consequences, the Air Force will decide whether to implement the Proposed Action or the No Action Alternative.

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Acronyms and Abbreviations

42 ABW	42^{d} Air Base Wing
ADEM	Alabama Department of Environmental Management
ADT	average daily traffic
AETC	Air Education Training Command
AFB	Air Force Base
AFI	Air Force Instruction
AFPD	Air Force Policy Directive
AICUZ	Air Installation Compatible Use Zone
ALAGASCO	Alabama Gas Corporation
AMS	Academy of Military Sciences
ANG	Air National Guard
ASBC	Air and Space Basic Course
AQCR	Air Quality Control Region
AVGAS	Aviation Grade Gasoline
bgs	below ground surface
BOT	Basic Officer Training
BMP	Best Management Practices
CAA	Clean Air Act
CATM	Combat Arms Training and Marksmanship
CBRNE	Chemical, Biological, Radiological, Nuclear, and High-Yield Explosives
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CO	carbon monoxide
COC	community of comparison
COT	Commissioned Officer Training
CSAF	Chief of Staff of the Air Force
CWA	Clean Water Act
dB	decibel
dBA	A-weighted decibel
dBP	peak decibels
DNL	Day-Night Average Sound Level
DoD	Department of Defense
DRMO	Defense Reutilization and Marketing Office
EA	environmental assessment
ECAC	Evasion and Conduct After Capture
EIAP	Environmental Impact Analysis Process
EIS	environmental impact statement
EMIS	Environmental Management Information System
EO	Executive Order
EPCRA	Emergency Planning and Community Right-to-Know Act
ERP	Environmental Restoration Program
ESA	Endangered Species Act
°F	degrees Fahrenheit
FICAN	Federal Interagency Committee on Aircraft Noise
FICON	Federal Interagency Committee on Noise
FONPA	Finding of No Practicable Alternative
FONSI	Finding of No Significant Impact
FY	fiscal year
HRMA	Housing Requirements and Market Analysis
HQ	Headquarters
Hz	Hertz
ICRMP	Integrated Cultural Resources Management Plan
IICEP	Interagency and Intergovernmental Coordination for Environmental Planning
IRP	Installation Restoration Program
Leq	equivalent noise level
Ldn	day-night average sound level
Lmax	maximum sound level
log	logarithm
MAFB	Maxwell Air Force Base
MAP	Management Action Plan
MGD	million gallons per day
MMRP	Military Munitions Response Program
MRA	Munitions Response Area
MSA	Metropolitan Statistical Area
MSD/CEV	Maxwell Support Division Civil Engineering Environmental Section
MSL	Mean Sea Level
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NFRAP	No Further Remedial Action Planned
NO_2	nitrogen dioxide
NO_x	nitrogen oxides
NOR	Notice of Registration
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
O_3	ozone
OSHA	Occupational Safety and Health Act
OTS	Officer Training School
PAH	polycyclic aromatic hydrocarbons
Pb	Lead
$PM_{2.5}$	particulate matter less than 2.5 microns in diameter
PM_{10}	particulate matter less than 10 microns in diameter
ppm	parts per million
PSD	Prevention of Significant Deterioration
RA	Remedial Action
ROD	Record of Decision
ROTC	Reserve Officer Training Corps
RCRA	Resource Conservation and Recovery Act
ROI	region of influence
SARNAM	Small Arms Noise Assessment Model
SF	square foot
SIP	State Implementation Plan
SO_2	sulfur dioxide
SOC	Squadron Officer College
TCE	tetrachloroethylene
Tpy	tons per year
USAF	U.S. Air Force
USC	United States Code
USCB	U.S. Census Bureau
USEPA	U.S. Environmental Protection Agency
UST	underground storage tank
UXO	unexploded ordnance
VOC	volatile organic compound
VW	Vigilant Warrior

FINDING OF NO SIGNIFICANT IMPACT
FINDING OF NO PRACTICABLE ALTERNATIVE

PROPOSED CONSTRUCTION OF NEW AND UPDATED TRAINING FACILITIES

MAXWELL AIR FORCE BASE, ALABAMA

AGENCY: United States Air Force, Air Education and Training Command, 42nd Air Base Wing (42 ABW), Maxwell Air Force Base, Alabama.

BACKGROUND: The Air Force has proposed changes to several training programs and facilities in order to provide a common training experience and additional expeditionary training for Air Force personnel. Much of the desired training can only take place with additional resources such as equipment for field training, improvements at field training locations, additional specialized training facilities, and expansion of the firing range capacity.

PROPOSED ACTION AND ALTERNATIVES: The Proposed Action evaluated in the environmental assessment (EA), which is hereby incorporated by reference, is to construct six (6) new facilities at Maxwell Air Force Base (MAFB): a new small arms firing range complex, a dormitory, a dining hall/multi-purpose facility, a covered training area, an equipment issue and storage facility, and a specialized evasion training lab. Also under the Proposed Action, the existing small arms range and Building 1429 will be renovated and the Blue Thunder field training area will be upgraded with new pavilions, tent pads, obstacles, and other support structures. The Proposed Action includes construction of the new firing range facilities within the 100-year floodplain at MAFB. As discussed in the EA, other sites and alternatives were considered but were eliminated from detailed analysis.

SUMMARY OF FINDINGS FOR PROPOSED ACTION: As discussed in the accompanying EA, implementation of the Proposed Action will have little or no effect on biological resources, cultural resources, land use, minority or low-income populations, and children.

Minor, short-term increases to air emissions, traffic and circulation, and noise will be associated with construction activities. Slight increases to air emissions will not be considered regionally significant and will not change Maxwell's emissions status. MAFB is located in an area that is in attainment for air quality. Therefore, a conformity determination is not required. Geological impacts will consist of ground disturbance, grading, and introduction of fill material at construction sites, which are all previously disturbed areas. Impacts to geological resources will be minimized by using best management practices for erosion control. Utility usage will increase, but there are no daily limits placed on utility usage at MAFB. Regional utility systems that serve MAFB have adequate capacity to accommodate anticipated increases. The construction activities and slight increase in personnel at MAFB for the Evasion and Conduct After Capture (ECAC) course will have a small beneficial impact on the socioeconomics of the region. Other impacts to resources are described below.

Noise: Minor, temporary increases in noise will be expected by vehicles and equipment involved in construction activities. Short-term exposures to noise levels above ambient daytime noise levels will occur near construction sites, normally during standard working hours. An increased area of noise impact will be located within an area of approximately 1000 feet from the proposed firing range. This projected area of noise impact includes outdoor recreational areas such as the golf course and equestrian activities, resulting in possible annoyance, startle effect, and speech interference.

Water Resources: There will be a small increase in impervious surface area at MAFB. No wetland areas will be impacted. Floodplain areas will be impacted at the proposed site of the firing range complex, as discussed in the EA. Measures to prevent environmental harm to the floodplain area will be taken by limiting disturbed areas during construction and restoring any disturbed ground to its original grade and condition. No appreciable net increase in storm water volumes and intensities is anticipated.

Hazardous Materials and Wastes: There will be no change to the management of hazardous materials at MAFB. The amount of hazardous waste from firing range operations would increase, but levels will remain below Maxwell's hazardous waste goals and will not change MAFB's hazardous waste generator status. The proposed firing range site has been identified as a possible munitions response area (MRA) due to possible soil contamination from the previous use of the site as a firing range. The construction of the new range will include any remedial action necessary, which may include soil testing, remedial design, and appropriate removal of lead fragments or contaminated soil that may be disturbed. A construction waiver will be required to be submitted to HQ AETC for approval to allow construction of the proposed range on this possible MRA site.

NO-ACTION ALTERNATIVE: Under the No-Action Alternative, proposed construction, renovation, and upgrades would not occur. Training would continue at present levels utilizing present facilities. This alternative would not enable the Air Force to increase expeditionary training capacity or facilities at Maxwell and would hinder the Air Force goal of a common training experience for Airmen. The current small arms range would continue to be in non-compliance with Air Force standards and continue to deteriorate, possibly putting Air Force students and instructors at risk.

SUMMARY OF PUBLIC REVIEW AND INTERAGENCY COORDINATION: A 30-day public review period was held June 18 through July 18, 2008, to solicit public comments on the draft EA. Notice was published in the local newspaper (Montgomery Advertiser), and the document was available for review at the Montgomery Public Library and Maxwell Air Force Base Air University Library for the entire 30-day review period. There were no public comments received.

ECAC LOCATION: In order to minimize impacts within the floodplain as well as impacts from possible inundation, the proposed site for the ECAC evasion lab within the floodplain is no longer the preferred location. This change in preferred site was made in order to remove the training lab from the floodplain on the west side of the base, decreasing both the cost and the environmental impact. Though an alternate site near the Officer Training School and Squadron Officer College training area was originally eliminated from detailed analysis, the training area was reevaluated for suitability. The original alternate site was proposed to be the rectangular grassy area adjacent to the active taxiway. This site was initially eliminated due to the concerns mentioned in the EA, which included future land use conflicts, encroachment upon space for aircraft maintenance and operations, and aesthetics.

After reconsideration of possible sites, the current preferred site shifts the alternate location for the ECAC lab slightly to the north of the original alternate site. This option will locate the ECAC lab on the plot of land behind the aircraft maintenance hangars where there are now flickerball fields. This site option provides several advantages. First, it places the ECAC lab further away from the active taxiway and keeps the strip north of the taxiway available for future flightline expansion. Second, it places the ECAC lab behind the aircraft hangars and further away from the area where visitors arrive by aircraft, which lessens the concerns about the aesthetics of the ECAC training lab. Third, it maintains more compatibility with existing land use, since the ECAC lab is more centralized in the current training area.

All potential impacts from the activities and operation of the ECAC lab remain the same. Only the proposed location of the facility was changed. The impacts of relocation were then evaluated further. There will be no change in impacts to air quality, geological resources, cultural resources, socioeconomics, hazardous materials and waste, and utilities. Potential impacts to land use may actually decrease, as development would not be initiated on the northwest side of the base, and locating the ECAC lab within the currently developed training area would maintain functional land use. Noise impacts would not change, as no significant noise-generating activities are expected to be associated with the ECAC lab, and the airfield noise will continue to be the dominant noise factor in the proposed area. Noise from the center is not expected to impact students residing in the dormitories, as the ECAC lab would be operated during normal daytime hours when the students would not normally be sleeping. Traffic and circulation impacts will be lessened since the ECAC lab's proximity to other academic and training facilities will allow students to walk to the ECAC lab rather than being transported by bus. The ECAC lab will be removed from the floodplain, thus decreasing impact to the water resources. There are no additional adverse environmental impacts expected from this proposed change in site.

FIRING RANGE LOCATION: Preliminary evaluation of other possible locations for the proposed Small Arms Range Facility included evaluation of four alternatives, which were not deemed practicable. Practicability includes consideration of all pertinent factors and existing constraints, including environmental impacts, cost, mission capability, aesthetics, social concerns, land use patterns, and technology. Alternatives considered but eliminated from further study are discussed below and depicted on the map included as Attachment 1 to this document.

Alternative #1 was to locate the facility on the western edge of Maxwell Air Force Base. The Maxwell General Plan classifies this area as "Outdoor Recreation"; therefore, siting a range in this area would be inconsistent with the current and future land use prescribed by the General Plan. With the exception of ballfields and fishing ponds, it remains largely an undeveloped site, due in part to the fact that it lies within the 100-year floodplain. Approximately 11 feet of fill over an area of approximately 2 acres would be necessary for the construction of the firing range facilities in this location, increasing both the cost and the environmental impact within the floodplain. Regardless of the placement or orientation of the range in this area, it would be impossible to completely avoid the floodplain while keeping the facility outside of restricted airfield areas. This site has water and electrical service available, but sanitary sewer is not yet available on the northwestern side of the base. Sewer lines would need to be expanded to this site, also increasing the cost and impact. Initiating development along the northwestern border of the base may serve as indirect support for further development within the floodplain in this area. This placement would also result in higher operating costs to transport students to and from the range for training. Situating a firing range facility adjacent to the western border of the base would create greater potential for off-base conflicts or complaints due to increased noise levels. Since other available sites would not require as much fill material within the floodplain or initiate development within the floodplain on the western edge of the base, this site was deemed not practicable.

Alternative #2 was to locate the facility in the southwest corner of the base. According to Maxwell's Capital Improvement Plan and General Plan, locating the range in this area of the base would be incompatible with current and planned future land use, and may prevent future expansion of airfield operations, such as construction of a proposed new assault strip and Base Operations Tower in the area. Land uses in this corner of the base include sports fields, Family Camp, base recreational lakes, and other recreational areas. As with Alternative #1, recreational areas were located in this corner of the base because it is within the 100-year floodplain, which limits other types of development. Regardless of the placement or orientation of the facility, it is not possible to avoid the floodplain completely without displacing current facilities such as a sports complex. Much of this area is also adjacent to the base perimeter. Constructing a firing range near the base border may increase the potential for off-base conflicts or complaints due to increased noise levels. Because construction of a firing range on this site would create incompatible land use and would not avoid the floodplain without displacing current facilities, resulting in higher costs for relocation, this site was deemed not practicable.

Alternative #3 was to utilize a parcel of vacant land that lies on the eastern edge of MAFB. This parcel of land, known as the former Riverside Heights parcel, was recently obtained by the Air Force for the purpose of Military Family Housing. Since that time, the need for and management of Military Family Housing has changed considerably, and there are no plans at this time to construct housing on the Riverside Heights land. However, locating training facilities in this eastern location would separate them from other training and academic areas of the base, creating land use conflicts. Constructing a firing range in this location would be incompatible with the adjacent community housing and elementary school areas of MAFB, and would also be incompatible with adjacent off-base housing and recreational areas. The potential for noise conflicts and complaints would be high, from both on-base and off-base adjacent residential areas. This site was deemed not practicable because of land use conflicts and potential noise conflicts.

Alternative #4 was to consider placing the new facilities in an area northwest of the active runway along March Road. Because of current facilities and clear zone constraints, this area was not evaluated further as a viable option. The assault strip that runs north and south is active, and care must be taken so that the exclusion areas for this landing zone are not violated, as outlined in Air Force Engineering Technical Letter 04-7, *C-130 and C-17 Landing Zone Dimensional, Marking, and Lighting Criteria.* The Blue Thunder training area, compost facility, and Federal Prison Camp occupy areas adjacent to the northern base boundary, and south of these facilities are a fire training area, munitions storage facilities, and an engine test facility. As in some of the other areas considered, siting a firing range near the base boundary increases potential noise impacts and complaints. Another constraint in the suggested area is that the Hazardous Cargo Pad explosive clear zone covers the majority of this area, which prevents the siting of new facilities in the area. There was not enough unencumbered space in this area that would also avoid the floodplain.

The Recommended Range Site is to expand the existing small arms firing range complex at its current location. The site is partially within the floodplain, being located on the edge of the floodplain boundary. To make room for the new firing range, the equestrian arena will be relocated to a grassy area to the northwest (also in the floodplain). To construct the range facilities above the floodplain, only about 3 feet of fill material over an area of approximately ½ acre is needed, much less than is necessary for Alternative #1, thus greatly reducing costs. Of all the Alternatives considered, the proposed location is the only one internal to MAFB, so potential noise impacts will not affect the off-base community. If the range complex is kept at its current location, no changes in land use or operations are required, thus there are no additional utility or transportation costs. Taking all things into consideration, the Proposed Action is the only practicable alternative for expanding the small arms firing range complex.

FINDING OF NO PRACTICABLE ALTERNATIVE: Pursuant to Executive Order 11988, and taking the supporting information into consideration, I find that the Proposed Action evaluated in the accompanying EA, which includes construction of the new firing range complex within the 100-year floodplain, includes all practicable measures to minimize harm to the existing environment. Because the firing range facility should be located in an area of compatible land use that minimizes the potential for impacting the noise environment of both the on-base and off-base community, I find that there is no practicable alternative to locating the proposed firing range facility in the floodplain.

MARK A. CORRELL, Colonel, USAF
The Civil Engineer
Headquarters Air Education and Training Command

14 OCT 08
Date

FINDING OF NO SIGNIFICANT IMPACT: I have reviewed the facts and analysis in the EA, which has been prepared in accordance with the requirements of the National Environmental Policy Act, regulations promulgated by the President's Council on Environmental Quality, and Title 32 Code of Federal Regulation Part 989. I conclude that the Proposed Action will not have a significant direct, indirect, or cumulative impact upon the environment and, therefore, an environmental impact statement is not required.

for Tyrone M. Woodyard, Col, USAF
KRISTIN D. BEASLEY, Colonel, USAF
42d Air Base Wing Commander
Maxwell Air Force Base, Alabama

17 Nov 08
Date

Attachment 1: Map

MAFB ENVIRONMENTAL CONSTRAINTS

0 750 1,500 3,000 4,500 6,000 Feet

Legend

- hot cargo pad explosive clear zone
- projected 87 dB noise area
- ERP monitoring well
- APZs & primary surface boundary
- installation boundary
- water body
- athletic field
- floodplain

F. Rollins, MSD/CE
30 Sept 2008

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COVER SHEET
ENVIRONMENTAL ASSESSMENT FOR PROPOSED CONSTRUCTION OF NEW AND UPDATED TRAINING FACILITIES AT MAXWELL AIR FORCE BASE

Responsible Agency: Department of the Air Force

Contact for Further Information: Brenda King
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All comments regarding this Draft Environmental Assessment must be received by July 21, 2008.

Proposed Action and Location: The Air Force proposes to construct several new training facilities and upgrade several existing training programs and facilities in order to accommodate trainees at Maxwell Air Force Base (AFB), Montgomery County, Alabama.

Designation: Final Environmental Assessment

Abstract: The proposed action includes new construction and upgrades to facilities in order to accommodate increased training requirements for Air Force personnel. The proposed action would include the following five areas:

1) construction of a new small arms firing range training facility
2) construction of a new dormitory and dining hall/multi-purpose facility for trainees
3) construction of a new covered training area and equipment issue and storage support building
4) establishment of a new Evasion and Conduct After Capture Course at Maxwell AFB, which would require construction of a specialized tactical training area and the renovation of one facility for expeditionary training
5) upgrades to the grounds and related permanent support structures at Blue Thunder expeditionary training area.

All of the proposed new facilities would be constructed on previously disturbed land within the boundaries of Maxwell AFB. The No Action Alternative is to continue use of existing training facilities at Maxwell AFB. This would result in continued problems with training schedules, dining schedules, and space for housing and training. Continued use of existing facilities may hamper or prevent the required training of Air Force trainees and possibly leave them unprepared for combat and deployment situations. Resources considered in this environmental assessment are: air quality, noise, land use, geological resources, water resources, transportation and circulation, cultural resources, socioeconomics, biological resources, environmental justice, hazardous materials and wastes, and utilities. After considering the potential environmental consequences, the Air Force will decide whether to implement the Proposed Action or the No Action Alternative.

PRIVACY ADVISORY NOTICE

Public comments on this draft Environmental Assessment (EA) are requested pursuant to the National Environmental Policy Act, 42 United States Code 4321, *et seq*. All written comments received during the comment period will be made available to the public and considered during Final EA preparation. Providing private address information with your comment is voluntary and such personal information will be kept confidential unless release is required by law. However, address information will be used to compile the project mailing list and failure to provide it will result in your name not being included on the mailing list.

EXECUTIVE SUMMARY

NEED AND PURPOSE

The Air Force Chief of Staff has directed changes and increases in training requirements for Air Force personnel, resulting in an increase of trainees utilizing facilities at Maxwell Air Force Base. The 42d Air Base Wing at Maxwell Air Force Base (MAFB), Alabama, has initiated planning efforts to implement the recommendations and requirements of these Air Force directives by constructing several new facilities for Air Force trainees and rehabilitating the current small arms range and existing Building #1429. The proposed new facilities would consist of: a new small arms firing range, a dormitory, a dining hall/multi-purpose facility, a covered training facility, an equipment storage building, an evasion laboratory training area, and additions to the Blue Thunder field training area.

The current small arms range was built in 1943 and does not meet current Air Force range requirements or safety standards. Due to age and increased usage, range deterioration has become a concern, and it is currently unsafe to fire at 17 of the 27 firing points. The range has several bullet-deflecting baffles that are falling, and the overhang has separated from the wall, resulting in lower baffles and the danger of cave-in from structural failure. The baffles do not overlap fully, creating risk of a projectile escaping from the range, which results in risk of bodily harm or death. The firing range is also inadequate for the number of trainees utilizing training facilities at MAFB. The range is used by 42d Air Base Wing, Air University, 908th Airlift Wing, Air National Guard (ANG), and Reserve Officer Training Corps (ROTC). Over the past several years, usage rates for the range have increased greatly, from 3,635 persons in 2005 to 9,300 in 2007. With the projected changes to the Air and Space Basic Course (ASBC), the number of students trained is expected to increase to around 16,500 in the year 2010, and then remain constant for the foreseeable future. The proposed new facility would be a fully-contained firing range, built to current Air Force safety standards that would have 56 firing points to accommodate the increased usage. The new range would be constructed adjacent to the current range. In addition to the construction of a new range, the existing range would be rehabilitated by replacing the overhead support structure and safety baffles. This would provide additional range capacity, especially during the summer months when ROTC cadets and other summer trainees need weapons familiarization training.

A new dormitory and dining/multi-purpose facility are also proposed to accommodate trainees attending the training programs at MAFB. The Current Officer Training School (OTS) facilities support both Basic and Commissioned Officer trainees and OTS-Civilian trainees, as well as Reserve Officer Training Corps (ROTC) Field Training cadets and possible future trainees from the Air National Guard Academy of Military Sciences (AMS). Both the current base dining facility and the existing OTS dining facility function at full capacity, especially during the summer months when additional trainees

are at Maxwell. Expansion of the current OTS dining hall or River Front Inn is not possible because of existing site constraints for each current dining facility. The proposed project would allow OTS to have adequate housing space and dining operations in order to maintain training schedules and accommodate surges in personnel.

To facilitate the proposed changes in training within the Air and Space Basic Course at Maxwell, Airmen are to receive increased training in expeditionary operations and tactics. A covered training area is needed to shelter trainees from excessive sunlight and heat and to maintain training schedules during inclement weather. Several types of training activities are proposed to take place in the covered training area. These include, but are not limited to, ten hours of Air Force Combatives Program training, basic training in dealing with chemical, biological, radiological, nuclear, and high-yield explosive hazards (CBRNE training), and small-unit tactics training. No actual chemical or biological agents would be used in the training exercises, but exercises would include practice with related equipment. Paintball equipment may be used in this training area. A storage facility is also needed to accommodate equipment and a deployment-mobility issue line for the equipment.

Another facet of the increased expeditionary training is the establishment of an Evasion and Conduct After Capture (ECAC) Course at Maxwell AFB. This course would involve four days of training for students and would be completed in conjunction with the existing Air and Space Basic Course (ASBC). Two specialized facilities would be needed for the requirements of the ECAC Course. Building #1429 would be renovated to include classrooms, offices, and training labs. Also, a specialized evasion laboratory training area would be established on the western edge of the base in which students would practice specific skills associated with evasion tactics.

ASBC students and other trainees spend time training at the Blue Thunder field training site while at MAFB. This area includes tents, obstacles, and training equipment to facilitate field exercises. Possible additions and improvements to this training area include: addition of tents and tent pads, additions or upgrades to obstacles or similar training structures, additional covered training pavilions, and upgrades or replacements to support structures such as latrines, parking areas, fencing, gates, or other equipment.

PROPOSED ACTION

The Proposed Action is to construct a new range just to the northwest and adjacent to the current range (Facility #1318), to rehabilitate or replace the current small arms range, to construct a new dormitory and dining hall/multi-purpose facility adjacent to the current OTS complex, to construct a covered training facility and a storage facility west of the OTS complex in the training area near the "Project X" facility, to establish two specialized training areas for the Evasion and Conduct After Capture Course to be instituted at MAFB, and to upgrade training facilities at the Blue Thunder training area. This environmental assessment (EA) evaluates the significance of any potential environmental and human resource impacts of the Proposed Action and the No Action

Alternative. This EA describes existing conditions and potential impacts on environmental resources at MAFB, Alabama, and within the region of influence.

This EA evaluated the following 10 resource areas to identify potential environmental consequences: air quality, noise, land use, geological resources, water resources, transportation and circulation, cultural resources, socioeconomics, hazardous materials and wastes, and utilities. Biological resources and Environmental Justice and Protection of Children were also considered but were not assessed in detail because negligible impacts would be expected to these resources. Impacts resulting from proposed construction activities would be temporary and minor; no long-term impacts would result from implementation of the Proposed Action at the installation. Direct, indirect, and cumulative impacts associated with the Proposed Action at the installation would not be significant for all resource areas. Specific resource areas are summarized below.

Air Quality: Implementation of the Proposed Action would result in minor and temporary increases in criteria pollutant emissions associated with proposed construction activities. Long-term increases in criteria pollutant emissions would be minimal. Fugitive dust emissions (particulate matter less than 10 microns in diameter [PM_{10}]) would be reduced by employing dust minimization practices. Implementation of the Proposed Action would not lead to an exceeding of *de minimis* thresholds, and estimated criteria pollutant emissions would not violate the National Ambient Air Quality Standards (NAAQS). Determination of conformity to the Alabama State Implementation Plan would not be required. Only slight impacts to air quality would occur as a result of implementation of the Proposed Action.

Noise: Under the Proposed Action, minor, temporary impacts to the noise environment in the vicinity of the proposed construction site would occur. The use of heavy equipment for site preparation and development (e.g., grading and back fill) could potentially generate noise levels above average ambient noise levels. However, noise levels would be typical of standard construction activities; would cease with the completion of proposed construction activities; and would only occur during normal working hours (i.e., between 7:00 A.M. and 5:00 P.M., Monday through Friday).

The operation and use of the proposed new firing range would result in increased noise levels near the range. Loud impulse noise from the range would be likely to interfere with speech and potentially startle nearby observers. However, this area is already impacted by noise from the current firing range, and the surrounding land use is for outdoor recreation. There are no sensitive receptors within approximately 1400 feet, and beyond that distance, noise levels are within normal daytime noise levels. The noise levels on Maxwell would continue to be dominated by aircraft and vehicular traffic. Therefore, no significant changes to the noise environment would occur as a result of implementation of the Proposed Action.

Land Use: Implementation of the Proposed Action would result in no changes to land use at MAFB. Use of the sites selected for the Proposed Action is in accordance with the

pending General Plan for MAFB, and all project components would be designed and sited to be compatible with existing base land use. The proposed site for the firing range is adjacent to the current site, so there is no change in the land use. The proposed sites for the dormitory and dining/multi-purpose facility are adjacent to the present OTS complex and compatible with the OTS Area Development Plan of the pending Maxwell General Plan, thereby maintaining the functional relationship among land uses at the base. The Squadron Officer College (SOC) storage facility and covered training facility would be within current OTS training areas, adjacent to the "Project X" training facility. The proposed renovation of Building #1429 for the ECAC classrooms and training labs would keep this facility compatible with surrounding residential and academic land uses. Placing the Evasion Lab training area on the western edge of the base would maintain the uninhabited condition of this area and would not conflict with required airfield open space requirements. The land use at Blue Thunder training area would not change. Therefore, there would be no impacts to land use as a result of the implementation of the Proposed Action.

Geological Resources: Construction activities associated with the Proposed Action would not affect any sensitive geologic units underlying the installation, as no unique geologic features or geologic hazards are present. Although ground disturbance would occur at the installation during construction, the construction would occur over previously disturbed surfaces. In addition, while proposed construction activities would require some fill and grading, no important topographic features would be affected as a result of development associated with the Proposed Action. Soils would be disturbed during grading activities associated with proposed construction. However, implementation of Best Management Practices (BMPs) during construction would reduce impacts to soils associated with grading and clearing activities. In addition, standard erosion control measures (e.g., silt fencing, sediment traps, application of water sprays, and revegetation of disturbed soils) would be implemented to reduce potential impacts. Therefore, impacts to geological resources would be minimal as a result of implementation of the Proposed Action.

Water Resources: Construction would have minor localized (i.e., site-specific) effects on surface water hydrology; however, BMPs would be incorporated during construction to minimize potential erosion, runoff, and sedimentation. The Proposed Action would potentially disturb greater than one acre of land at MAFB. Therefore, the contractor would contact the Alabama Department of Environmental Management (ADEM) Water Division and file a Notice of Registration for National Pollutant Discharge Elimination System (NPDES) General Permit coverage. In addition, a Construction Best Management Practices Plan would be developed and implemented on-site for the duration of the construction period.

Under the Proposed Action, the construction of two of the facilities would take place within a 100-year floodplain zone. The proposed firing range site is in an area that has an elevation of approximately 158 to 160 feet mean sea level (MSL). The floodplain

elevation boundary at MAFB is 162 feet MSL. Therefore, the proposed area of construction would be filled to raise the new structures above the 100-year floodplain level. The area affected by this fill for the range would be approximately 1.5 to 2 acres. A Finding of No Practicable Alternative (FONPA) would need to be approved before a new firing range complex could be constructed within the floodplain, per Executive Order 11988 (*Floodplain Management*, May 24, 1977).

The proposed ECAC evasion lab training area on the west side of the base is also situated within the 100-year floodplain. This proposed site lies at an elevation of approximately 150 feet MSL. This area would not be filled to raise it above the floodplain boundary. It would only be filled as needed for site preparation and adequate drainage. Most of the structures in this training area would consist of impermanent shipping containers that have windows and doors cut into them to simulate buildings and obstacles to movement. These structures would not impede the flow of flood waters and would not be greatly affected if they were inundated with water. Two permanent structures are proposed within this evasion lab training area. They would not be inhabited or permanently occupied buildings but would serve as equipment storage, staging and instructor areas during field training, field medical treatment areas, and temporary shelters for the students during inclement weather. These structures are proposed to be constructed of concrete block in order to minimize damage and facilitate clean-up in the event of minor flooding. A FONPA would need to be approved before a training lab could be constructed at this proposed site.

Because much of the land on MAFB is already developed, no appreciable net increase in storm water discharge volumes and intensities is anticipated following completion of the proposed construction. Site disturbance and construction associated with the Proposed Action is not anticipated to affect groundwater resources. Construction operations would not reach depths that could affect groundwater resources.

Biological Resources: Construction associated with the Proposed Action would require minor vegetation removal (i.e., grass) in previously disturbed areas. There would be minimal natural vegetation that would be affected by the proposed construction. No Federally-listed endangered, threatened, or proposed species, or their designated critical habitat under the jurisdiction of the U.S. Fish and Wildlife Service, occur at or in the vicinity of the Proposed Action. There are no sensitive natural communities in the areas of the Proposed Action. Therefore, there would be very slight impacts to biological resources as a result of implementation of the Proposed Action.

Transportation and Circulation: Implementation of the Proposed Action would result in a minor temporary increase in average daily traffic volumes on base and within the vicinity of the installation during construction activities. However, construction-related traffic would constitute a small percentage of traffic in the region and most vehicles would remain on site for the duration of construction activities. Therefore, the increase in traffic levels would not affect safety and/or the capacity of roads at the installation or within the region. From a base operational standpoint, the Proposed Action would have minimal

impact on vehicle circulation. The construction of the proposed firing range complex would result in a slight increase of traffic from privately owned vehicles to and from the range. At the same time, the proposed new range would accommodate larger numbers of students at one time, decreasing the number of bus trips necessary to transport students to and from the range. The construction of the proposed range parking lot would provide adequate and properly configured parking space for car and bus traffic, and would improve orientation of the parking area and access points to adjoining roads, resulting in a positive impact on both the parking capacity and safety along March Road.

Cultural Resources: The proposed construction would take place in an area previously disturbed by urban development. All regulations and policies relevant to the protection of cultural resources would be adhered to by the contractor during the construction process. However, no archaeological sites or architectural resources are known to exist at, or in the vicinity of, the Proposed Action. Therefore, no impacts to cultural resources would occur as a result of implementation of the Proposed Action.

Socioeconomics: The construction activities would be expected to have a small positive impact on the socioeconomics of the surrounding region by providing temporary jobs. There would be a slight increase in personnel employed on Maxwell AFB and within the Montgomery area due to the addition of instructor and support personnel associated with the establishment of the ECAC course. Possible future use of the OTS facilities, including the proposed dormitory and dining hall/multi-purpose facility, by Air National Guard AMS personnel may also result in a slight increase of permanent personnel. This would cause no adverse impact for either Maxwell AFB or the surrounding area and may have a slight beneficial socioeconomic impact.

Environmental Justice and Protection of Children: There are no impacts to children from health risks or safety risks that would occur as a result of implementing the Proposed Action. The Proposed Action would impact only areas on Maxwell AFB, and the Proposed Action and construction on Maxwell would not be close to the family housing areas, daycare centers, or schools. The Proposed Action is not expected to impact any off-base areas, so there are no minority or low-income areas off base that would be impacted. Therefore, there is no need for an Environmental Justice analysis.

Hazardous Materials and Wastes: The proposed action is not expected to have a negative impact on the management of hazardous materials at MAFB. The amount of hazardous waste from firing range operations would increase, but hazardous waste amounts would remain well below the base's hazardous waste goals. There would be no change to Maxwell's hazardous waste generator status.

The proposed firing range site is a possible munitions response area (MRA). During the Phase I evaluation in 2007, the area was identified under the Military Munitions Response Program (MMRP) as a possible area of contamination due to its use as an old firing range. The construction of a new firing range would need to include any remedial action necessary, which may include soil testing, remedial design, and appropriate

removal and disposal of any contaminated soil that would potentially be disturbed. Also, a construction waiver would be required to be submitted to Headquarters Air Education and Training Command (HQ AETC) for approval to allow construction of the proposed new firing range on this possible MRA site.

Utilities: No daily limits are placed on MAFB regarding the consumption of electricity, natural gas, and potable water. In addition, regional facilities that would handle wastewater and solid waste from the Proposed Action have adequate capacity to accommodate anticipated minimal increases. Therefore, no negative impacts to utilities would occur as a result of implementation of the Proposed Action.

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FINAL ENVIRONMENTAL ASSESSMENT

PROPOSED CONSTRUCTION OF NEW AND UPDATED TRAINING FACILITIES AT MAXWELL AIR FORCE BASE, ALABAMA

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PURPOSE AND NEED FOR THE PROPOSED ACTION

1.1 INTRODUCTION

Maxwell Air Force Base is a United States Air Force Base (AFB) under the Air Education and Training Command (AETC). Maxwell AFB (MAFB) currently occupies approximately 2,524 acres of land in Montgomery County in Central Alabama (Figure 1-1). MAFB is headquarters to 42d Air Base Wing (42 ABW) and Air University. The 42 ABW's primary mission is to provide support to Air University, the Air Force's professional military education center.

The Air Force is striving to facilitate more comprehensive training for Air Force personnel. As a result of the revision of some existing training programs at Maxwell and the Air Force directive to institute one new training course, MAFB proposes to construct several new training facilities and improve several existing facilities. The Proposed Action would take place within the boundaries of MAFB in previously disturbed areas.

1.2 PURPOSE OF THE PROPOSED ACTION

The purpose of the Proposed Action is to adequately train and equip Airmen for the challenges of deployment and combat. The objective is to provide adequate training locations and facilities that will enable this training to take place in an expedient manner while avoiding and minimizing environmental impacts.

1.3 NEED FOR THE PROPOSED ACTION

The Air Force recognizes the need to organize, train, and equip its Airmen for ground combat. Today's wars are being fought differently than wars of the past, with Air Force personnel increasingly playing a role in ground-based combat and support, rather than pilots firing guided weapons from long ranges (Hebert 2006).

The Air Force Chief of Staff (CSAF) is working to continually improve Air Force training. In 2007, CSAF presented several ideas about overall force-shaping of the Air Force for the 21st Century. One goal is to give all Air Force personnel a common training experience since Air Force personnel will potentially be deployed and fight together. The common training experience will apply to active duty Air Force personnel, Officer Training School (OTS) Civilian trainees, Air National Guard (ANG) trainees, and Reserve Officer Training Corps (ROTC) cadets. This goal of a shared training experience has affected the number of trainees coming to Maxwell AFB, since Maxwell's mission is primarily one of training. A second goal is to better prepare Airmen for ground situations they may face during deployment and combat. A number of field training programs and courses already take place at Maxwell, and several of these programs would be enhanced and upgraded.

One program to be enhanced is the Air University Air and Space Basic Course (ASBC) (also known as "ASBC Retool.") The Air and Space Basic Course is a six-week officer

training course that is conducted at MAFB. Training includes instruction in a traditional academic setting as well as exercises and training in field conditions. CSAF has directed that the ASBC become more combat-focused, providing more expeditionary training opportunities for all officers during their time at ASBC. Much of the retooling can only be accomplished with additional resources, such as skills trainers, equipment for field conditions, improvements at field training locations, additional training facilities, and expansion of the firing range capacity.

Maxwell's current small arms range is used not only by Air University students but also by other resident and tenant units. These include: 42d Air Base Wing Security Forces, 908th Airlift Wing, and Air Force ROTC summer trainees (Waddle 2008). In the past three years, the firing rates have increased considerably: in 2005, 3,635 students were trained; in 2006, 8,280 students; in 2007, 9,300 students. With projected changes in the Air and Space Basic Course, the number of shooters trained is expected to increase to around 16,500 in the year 2010 and then remain constant for the foreseeable future. The threshold for the existing Maxwell range is 4,275 shooters per year, but Maxwell is currently processing on average 5,000 students per year above the capacity of the current range. The existing facility is not sufficient to serve the number of students that are currently training at MAFB or the projected number of trainees. Construction of a new firing range would expand current capacity to allow all ASBC students to be qualified with both M4 and M9 weapons (AETC 2007).

The current small arms range was built in 1943. Due to age and increased usage, it has become highly worn and unsafe. As of the spring of 2008, 17 of the 27 firing points were closed due to maintenance or safety concerns (Oliver 2008). The deterioration of the bullet-deflecting baffles and the overhang has created a risk of bodily injury to students and instructors. Even with constant and costly repair, the dated range does not meet current Air Force safety standards. There is a need to repair the existing range by replacing the overhead support structure and bullet-deflecting baffles to meet Air Force requirements. Even with the construction of the new range, the old range would still be needed in order to handle the summer influx of ROTC cadets.

The Officer Training School has been required to have additional capacity to meet Air Force training needs. The current dormitories and dining facility used by OTS are at capacity, especially during summer surge months. Programs using the OTS facilities include Basic Officer Training (BOT), Commissioned Officer Training (COT), and OTS Civilian trainees. Current projections call for an annual increase of approximately 700 Air National Guard Academy of Military Sciences trainees utilizing the OTS facilities. There will also be up to approximately 2,500 Air Force ROTC cadets training at MAFB annually during the summer by the year 2012 (Swenson 2007). COT produces 75% of its graduates during the same time period that ROTC cadets are at Maxwell for training; ANG officer training and OTS Civilian trainees would occupy the facilities during the other months. To handle the increased surge production, new facilities will be needed.

Expanding either the current OTS dining facility or base dining facility (River Front Inn) is not possible because of site constraints at each location.

A covered training area and equipment storage building are needed to enable the Squadron Officer College (SOC) to carry out necessary training exercises. The weather covering is necessary in order to protect personnel from excessive sunlight and heat and to maintain training schedules in rain or other inclement weather. Several types of training activities would be scheduled in this facility. They include, but are not limited to, ten hours of Air Force Combatives Program Training, basic CBRNE (Chemical, Biological, Radiological, Nuclear, High-Yield Explosives) training, and small unit tactics training. No actual chemical or biological agents would be used in the training exercises, but exercises would include practice with related equipment. Paintball equipment may be used in this training area. The storage and support facility is needed near the location of the covered training area and "Project X" training facility for the storage and handling of individual and group training equipment. The facility would accommodate a deployment/mobility issue line for two rotations of up to 400 students each. This storage and support facility would also house restroom facilities for the training facilities in the immediate area.

The Air Force has recommended that a new Evasion and Conduct After Capture (ECAC) Course be instituted at Maxwell. This training would better prepare Air Force students for situations they may face during deployment and combat and would be completed in conjunction with their time at the Air and Space Basic Course. Two specialized facilities would be needed in order to establish this course at MAFB. Indoor space would be needed for classroom instruction, and an open space of approximately 160,000 square feet would be needed for the specialized evasion laboratory. The current Building #1429, an old dormitory, would be renovated for offices, classrooms, and training laboratories. An evasion training facility would be established on the western side of the base. The evasion lab is a specially designed facility in which instructors would demonstrate and students would practice specific tasks associated with evading capture in both rural and urban environments. This facility would consist mainly of impermanent mock buildings and props to simulate an urban environment, village, marketplace, or other settings that Airmen may encounter when deployed. Two non-inhabited permanent support facilities would be constructed in the lab for equipment storage, instruction, and student safety during lightning or other adverse conditions.

Blue Thunder is a mobilization training area that includes tents, obstacles, and other mobilization training facilities. ASBC students spend one week training at Blue Thunder in field conditions. Improvements proposed at Blue Thunder include the addition of concrete pads and climate control systems for several additional tents within the fenced tent environment, the addition of covered training structures similar to the existing pavilion so that up to 90 people at a time could be accommodated for group instruction, and upgrading training equipment and structures such as obstacle courses, parking area,

latrines or other necessary support facilities. These are needed in order to continue to accommodate current and future student loads.

1.4 LOCATION OF THE PROPOSED ACTION

The Proposed Action would take place within the boundaries of Maxwell AFB, which is located in Montgomery County, within the city limits of Montgomery, Alabama (Figure 1-1). All proposed construction would take place in areas that have previously been disturbed. General site locations of the Proposed Action are shown in Figure 1-2.

The site for the proposed construction of a new small arms range is in the north central portion of the installation. The site is bordered on the south by March Road, on the north by the golf course, on the west by Beech Street, and on the east by the existing small arms range, Building #1318. Approximately 30 percent of MAFB lies within the 100-year floodplain, which covers a large area in the northeast portion of the base along the Alabama River and also encompasses land along the south and west perimeters of the base. Both the current small arms range and the proposed site for the new range lie within the edge of this floodplain area, approximately 2-4 feet below the 100-year flood level. A previous small arms range occupied the proposed location. The current condition of this site is discussed further in Chapter 3. The proposed range site would be made available by the relocation of the equestrian arena that currently occupies the site. The arena would be moved to a grassy area to the northwest, near the intersection of March Road and Beech Street. As discussed in Section 2.4.1.1, an alternate site was considered for the proposed firing range complex, but was eliminated from further analysis. See Figure 1-3 for the proposed firing range location.

The site for the proposed construction of a new dormitory and dining hall/multi-purpose facility is approximately in the center of the base, adjacent to the Officer Training School (OTS) residential area to the east (specifically, Building #1486) and OTS training facilities to the north. Both facilities would be constructed in a vacant area that had previously been paved and used as part of the airfield. This paved area is currently used for vehicle parking and a motorcycle training area for Wing Safety; therefore, both the parking area and motorcycle training area would be moved further to the southwest along this same strip of pavement. See Figure 1-4 for the proposed dormitory and dining hall/multi-purpose facility location.

The site for the proposed construction of a SOC training area and storage facility is in the Officer Training School (OTS) complex. Both facilities are proposed to be sited on the current Flickerball Field #12. The storage and support facility would be situated next to the old taxiway parking area to facilitate equipment loading and unloading. The desired location for these facilities is near the Project X training facility because of its central location between Building #1403 and the Blue Thunder training area. Students would be expected to travel on foot to the training facility several times during their week at Blue Thunder and several times while they are in training in Building #1403. See Figure 1-5 for the proposed location of training and storage facilities.

The locations for the proposed specialized ECAC facilities were suggested after a site study was completed at MAFB. Building #1429 is located in the central portion of the base, just east of the current OTS complex, near the intersection of East Sycamore Street and Maple Street. It is an old dormitory that was no longer in serviceable condition as lodging, and was therefore scheduled for demolition. As a result of the site study, it was determined that Building #1429 was a candidate for adaptive reuse. The use of this building for ECAC training would be compatible with surrounding current and future land use and would be conveniently located adjacent to other academic training and residential areas. The site study examined possible locations for the tactical evasion lab, and an area on the western edge of the base was proposed. The site lies between March Road and the base's western border, just north of what is currently Ballfield #17. This was the only location that was deemed practicable for carrying out the training mission requested by the Air Force. This proposed area is located within the 100-year floodplain of the Alabama River. Locating the evasion lab within the floodplain is discussed below and in Section 2.4.1.2. See Figure 1-6 for the proposed location of ECAC training facilities.

Blue Thunder is an expeditionary training area that encompasses approximately 9.8 acres at the northwestern edge of MAFB. The area consists of a cantonment area with tents placed on slabs, an obstacle course, sanitary latrines, a covered pavilion, and other outdoor training areas. This training area is bordered by March Road on the south, the base boundary on the north, the compost facility (Building #1481) to the east, and the airfield to the west. See Figure 1-7 for the location of the Blue Thunder training area.

Proposed Sites Within the Floodplain

The Proposed Action includes construction of two new training facilities within the 100-year floodplain at MAFB. Approximately 30 percent of MAFB lies within the 100-year floodplain, leaving few undeveloped areas outside the floodplain, and resulting in a lack of space for future development and expansion. The floodplain area is represented in Figure 3-4 and described further in Section 3.5.2.2.

The new firing range complex is proposed near the edge of the floodplain elevation boundary in the north central part of the base. The floodplain level at MAFB lies at an elevation of 162 feet above mean sea level (MSL). Both the current small arms firing range and the adjacent proposed site for the new firing range complex lie at an elevation of approximately 158-160 feet MSL. The construction of the proposed range and its support facility would require approximately 3-4 feet of fill material over an area of approximately 2 acres in order to raise the proposed facilities above the 100-year floodplain elevation boundary. An alternate location on the west side of MAFB that was considered also lies within the floodplain, and would require approximately 11 feet of fill in order to raise the proposed facilities out of the floodplain, increasing both the cost and the environmental impact. The only site considered for the proposed firing range that does not lie in the floodplain was a parcel of recently-acquired land on the eastern edge of MAFB that is referred to as the former Riverside Heights parcel. Locating the proposed

range on this site would separate the range from other training areas on base, and would result in incompatible land use with the adjacent family housing area, elementary school, and surrounding off-base land use. Locating a firing range at this site would also create high potential for noise conflicts with both on- and off-base areas.

The Proposed Action also includes the construction of the specialized evasion laboratory training area within the 100-year floodplain along the western edge of MAFB. This area lies at an elevation of approximately 150 feet MSL, 11-12 feet below the flood elevation boundary. The proposed site would not be raised above the flood elevation level. As discussed further in Section 2.2.4, most of the equipment would be nonpermanent, uninhabited shipping containers that would not impede the flow of flood waters. Two permanent structures are proposed within this lab, as described in Section 2.2.4. An alternate site outside the floodplain in the central portion of the base was considered for this evasion lab training area, as discussed in Section 2.4.1.2. Locating the facility at this central location would create problems with aesthetics and surrounding current and future land use for aircraft operations and maintenance. The former Riverside Heights parcel of land was also considered for this facility, but would separate the proposed evasion lab from other training areas of the base, and create possible land use incompatibility.

1.5 DECISION TO BE MADE AND THE DECISION MAKER

The decision to be made by the Air Force with respect to the Proposed Action is whether or not Maxwell can continue to provide adequate and required training for Air Force personnel by utilizing present facilities for training, lodging, and dining. As required by the National Environmental Policy Act (NEPA) (42 United States Code 4321-4347) and its implementing regulations, preparation of an environmental document must precede final decisions regarding the proposed projects. This document must be available to inform decision-makers of the potential impacts upon the natural and man-made environment of selecting either the Proposed Action or No Action Alternative. This information, as well as operational and economic considerations, will guide the Air Force in its decision whether to implement the Proposed Action or take no action (No Action Alternative).

The decision to approve the Proposed Action begins at MAFB with the 42d Air Base Wing Commander. Should the Wing Commander approve the Proposed Action, the Commander would request that AETC/A7C (planning function of the Air Education and Training Command [AETC]) sign the Finding of No Practicable Alternative (FONPA) for the facilities that would be located within the floodplain. After the FONPA is approved, the Wing Commander would then approve and sign the Finding of No Significant Impact (FONSI).

1.6 SCOPE OF THE ENVIRONMENTAL REVIEW

1.6.1 Resource Areas Evaluated

The intent of this EA is to identify potential impacts associated with the Proposed Action or No Action Alternative. The following resource areas are discussed in detail in this EA:

- Air Quality
- Noise
- Land Use
- Geological Resources
- Cultural Resources
- Water Resources
- Transportation and Circulation
- Socioeconomics
- Hazardous Materials and Waste
- Utilities

This EA also addresses cumulative impacts of the Proposed Action and alternatives as well as their compatibility with the objectives of federal, regional, state, and local land use plans, policies, and controls. The relationship between the short-term use of the environment and its long-term productivity, as well as an assessment of any irreversible and irretrievable commitments of resources associated with the alternative, will also be evaluated.

1.6.2 Resources Eliminated from Detailed Analysis

1.6.2.1 Biological Resources

Vegetation within the proposed project areas consists mainly of manicured lawn grasses in these previously disturbed areas. There are no unique habitat areas within the areas of potential impact. A 2002 survey found no Threatened or Endangered Species on Maxwell AFB (Alabama Natural Heritage Program 2002), and a 2008 letter from the U.S. Fish and Wildlife Service states that no adverse effects are expected from the Proposed Action (See Appendix A). The proposed sites avoid wetland and open water areas, and very few trees exist on the proposed sites. Best Management Practices (BMPs) would be utilized during construction in order to protect surrounding areas, and trees would be managed in accordance with Air Force Instruction 32-7064, Air Education and Training Command Supplement 1. If any new information during the proposed action or

construction reveals any unforeseen threats to biological resources, they would be reevaluated accordingly.

1.7 APPLICABLE REGULATORY REQUIREMENTS

The Environmental Impact Analysis Process (EIAP) is the process by which Federal agencies facilitate compliance with environmental regulations. The primary legislation affecting these agencies' decision-making process is the National Environmental Policy Act (NEPA) of 1969 (Public Law 91-190, 42 United States Code [USC] Sections 4321 through 4347). This act and other facets of the EIAP are described below.

1.7.1 National Environmental Policy Act

This act requires Federal agencies to consider potential environmental consequences of proposed actions in their decision-making process. The intent of NEPA is to protect, restore, or enhance the environment through well-informed Federal decisions. The Council on Environmental Quality (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 Code of Federal Regulations [CFR] §1500-1508). These regulations specify that an EA be prepared to:

- briefly provide sufficient analysis and evidence for determining whether to prepare an environmental impact statement (EIS) or a Finding of No Significant Impact (FONSI);
- aid in an agency's compliance with NEPA when an EIS is deemed unnecessary; and
- facilitate EIS preparation when one is necessary.

Further, to comply with other relevant environmental requirements and to assess potential environmental impacts, the EIAP and the decision-making process involve a thorough examination of all environmental issues pertinent to the Proposed Action.

Other regulations that guide the Air Force in this EIAP include:

- Air Force Instruction (AFI) 32-7061 (The Environmental Impact Analysis Process, January 24, 1995 and AETC Supplement, 6 June 2007)
- Title 32 CFR Part 989 (Environmental Impact Analysis Process, 15 July 1999, and amended 28 March 2001)
- Department of Defense (DoD) Directive 6050.1 (Environmental Effect in the United States of DoD Actions, 30 July 1979)
- DoD 4715.9 (Environmental Planning and Analysis, May 3, 1996)
- Air Force Instruction (AFI) 32-7060 (Interagency and Intergovernmental Coordination for Environmental Planning, March 25, 1994).

1.7.2 Interagency and Intergovernmental Coordination for Environmental Planning

NEPA and CEQ regulations require intergovernmental notifications prior to making any statement of potential environmental impacts. Through the process of Interagency and Intergovernmental Coordination for Environmental Planning (IICEP), the United States Air Force (USAF) notifies relevant federal, state, and local agencies and allows them to make known their environmental concerns specific to the Proposed Action. Comments from these entities are addressed and incorporated into the environmental impact analysis process. IICEP letters and responses are presented in Appendix A.

1.7.3 Permits

Because the proposed projects would involve the disturbance of more than one acre, a Notice of Registration (NOR) under the Alabama Department of Environmental Management's (ADEM) general storm water discharge permit would be filed with ADEM.

1.7.4 Other Regulatory Requirements

The EA considers all applicable laws and regulations, including but not limited to the following:

- Clean Air Act (CAA) (Title 42, U.S. Code (USC), Sections 7401 *et seq*., 1970, as amended Nov. 15, 1990)
- Air Quality Compliance (AFI 32-7040, Aug. 27, 2007)
- Integrated Natural Resources Management (AFI 32-7064, Sept. 17, 2004)
- Protection of Wetlands (Executive Order [EO] 11990, May 24, 1977)
- Clean Water Act (CWA) (33 USC 1251 *et seq*., June 30, 1948, as amended Feb. 4, 1987)
- Rivers and Harbors Act (33 USC, Section 401, Jan. 24, 1994)
- Floodplain Management (EO 11988, May 24, 1977)
- Endangered Species Act (ESA) (Title 16, USC 1531-1544, Dec. 28, 1973 as amended)
- Pollution Prevention Act of 1990 (42 USC 13101 and 13102 *et seq*.)
- Integrated Cultural Resources Management Program (AFI 32-7065, June 1, 2004)
- National Historic Preservation Act (16 USC, Section 470 et seq., Oct. 15, 1966 as amended)
- Archaeological Resources Protection Act (16 USC, Section 470, Oct. 31, 1979 as amended)

- Consultation and Coordination With Indian Tribal Governments (EO 13175, Nov 6, 2000)
- Native American Graves Protection and Repatriation Act of 1991 (25 USC 3001 *et seq*., Nov. 16, 1990 as amended)
- Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (EO 12898, Feb. 11, 1994)
- Hazardous Materials Management (AFI 32-7086, Nov. 1, 2004 with AETC Supplement June 22, 2007)
- Resource Conservation and Recovery Act (RCRA) (42 USC Section 6901-6992, May 19, 1980 as amended)
- Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA, 42 USC 9601-9675, Dec. 11, 1980 as amended Oct. 17, 1986)

1.8 ORGANIZATION OF THE DOCUMENT

The purpose of this EA is to evaluate any potential impacts associated with the Proposed Action and the No Action Alternative. This EA is organized into 8 chapters, as described below.

Chapter 1 Contains a statement of the purpose of and need for action, the locations of the Proposed Action, identification of the decision to be made, a summary of the scope of the environmental review, identification of applicable regulatory requirements, and a description of the organization of the document.

Chapter 2 Describes the history of the formulation of alternatives, describes the No Action Alternative, identifies alternatives eliminated from further consideration, provides a detailed description of the Proposed Action, summarizes other actions announced for Maxwell AFB and the surrounding community, and provides a comparison matrix of environmental effects for the Proposed Action and No Action Alternative.

Chapter 3 Provides a general description of the current conditions of the resources that potentially could be affected by the Proposed Action or No Action Alternative. These resource areas include specific elements of both the natural and man-made environment.

Chapter 4 Evaluates the potential impacts of both the Proposed Action and the No-Action Alternative on the resource areas described in Section 3.

Chapter 5 Analyzes potential cumulative effects of the Proposed Action; addresses unavoidable adverse environmental impacts; discusses the compatibility of the Proposed Action and No Action Alternative with the objectives of federal, regional, state, and local land-use plans, policies, and controls;

assesses the relationship between the short-term use of the environment and long-term productivity; states irreversible and irretrievable commitment of resources; and discusses special procedures.

Chapter 6 Lists preparers of this document.

Chapter 7 Lists persons and agencies consulted and source documents relevant to the preparation of this EA.

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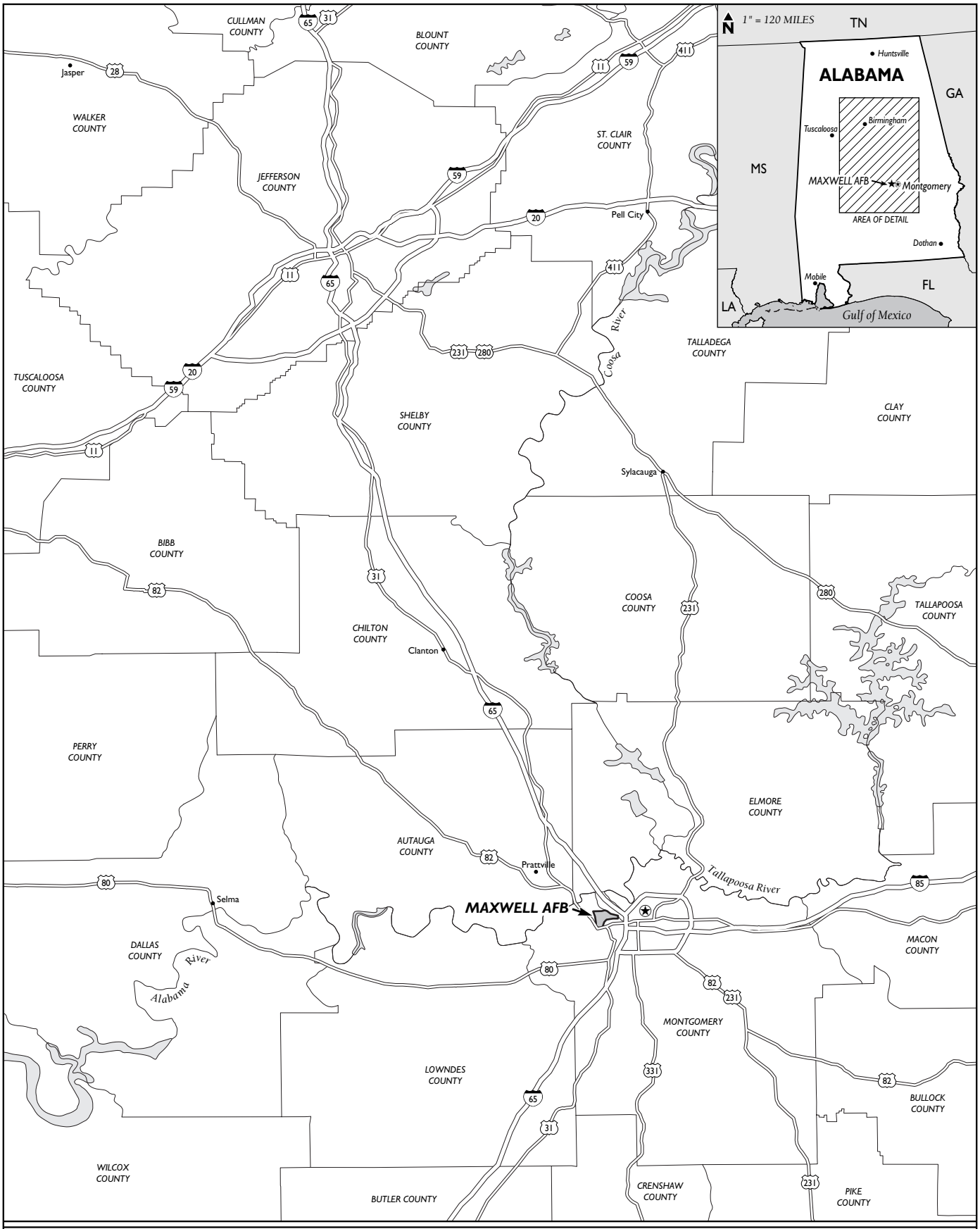

Figure 1-1
Maxwell Air Force Base, Alabama

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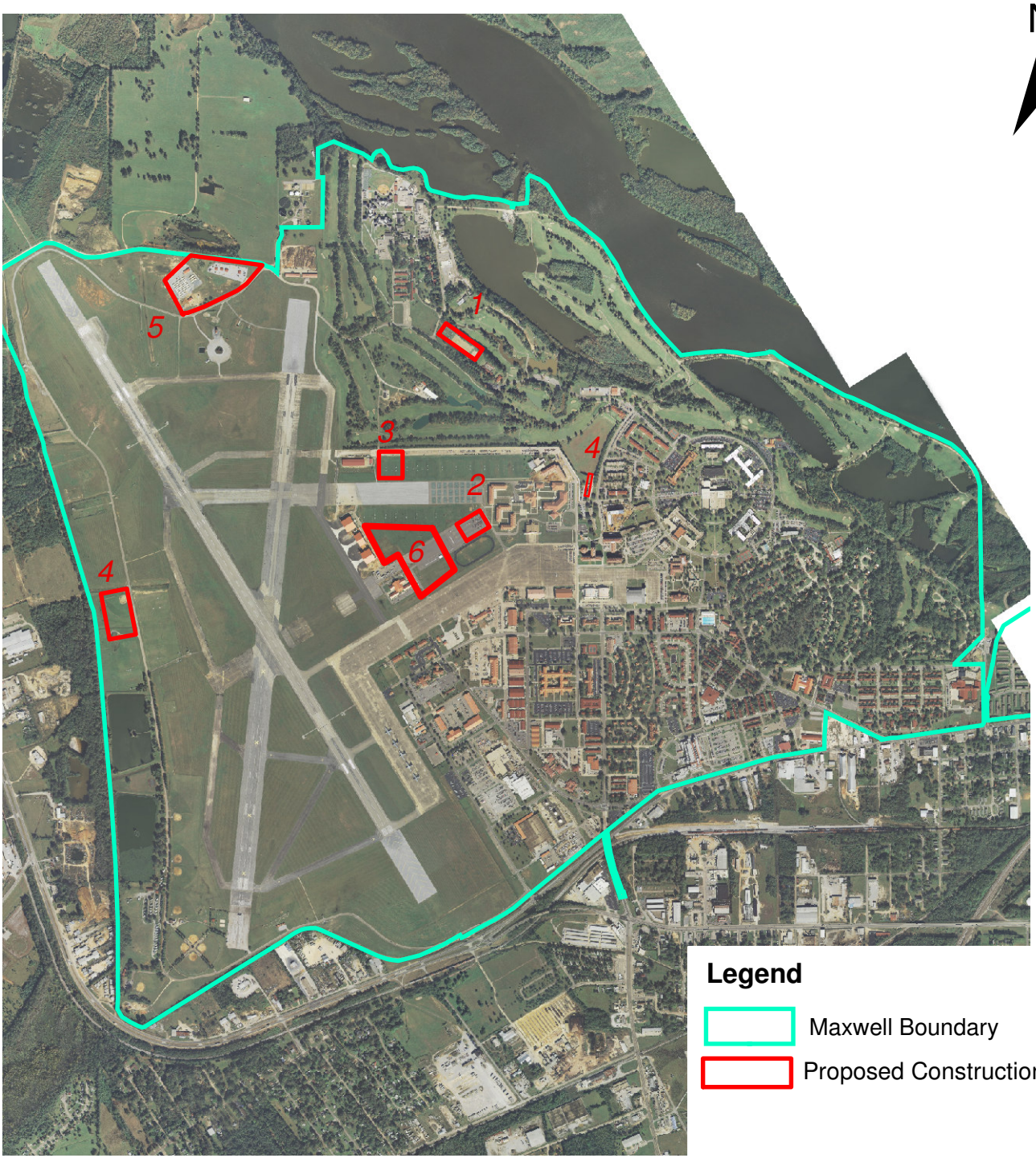

Source: Maxwell Geobase March, 2008

0 800 1,600 3,200 4,800 6,400 Feet

Proposed Facility Locations

1 Proposed Firing Range Complex
2 Proposed New Dormitory and Dining Hall/ Multi-Purpose Facility
3 Proposed SOC Training Facility
4 Proposed ECAC Training Facilities
5 Blue Thunder Field Training Area
6 Alternate ECAC Lab

Figure 1-2 Proposed Facility Locations

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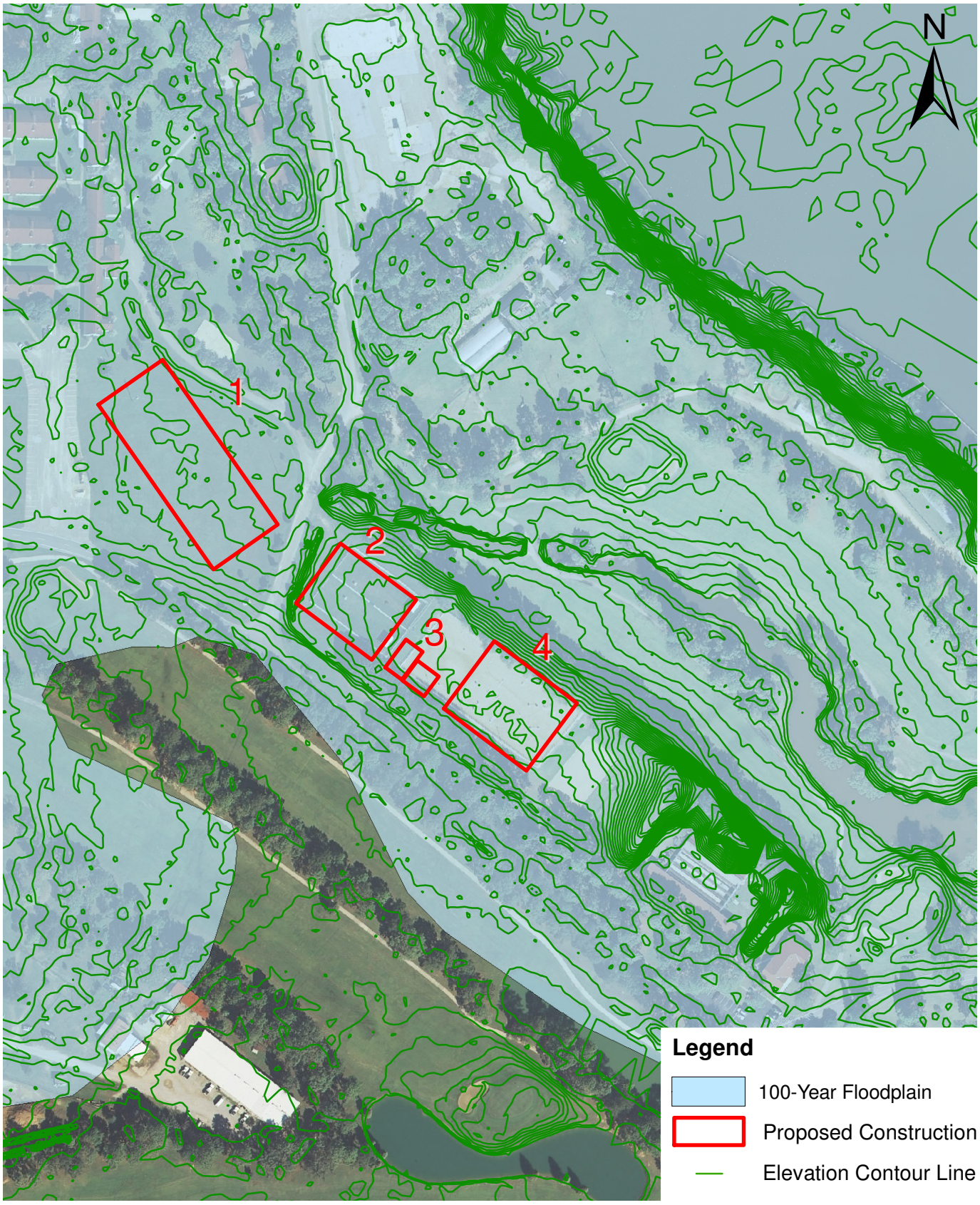

Figure 1-3 Proposed Firing Range Location

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Figure 1-4 Proposed Dormitory and Dining Hall/ Multi-Purpose Facility

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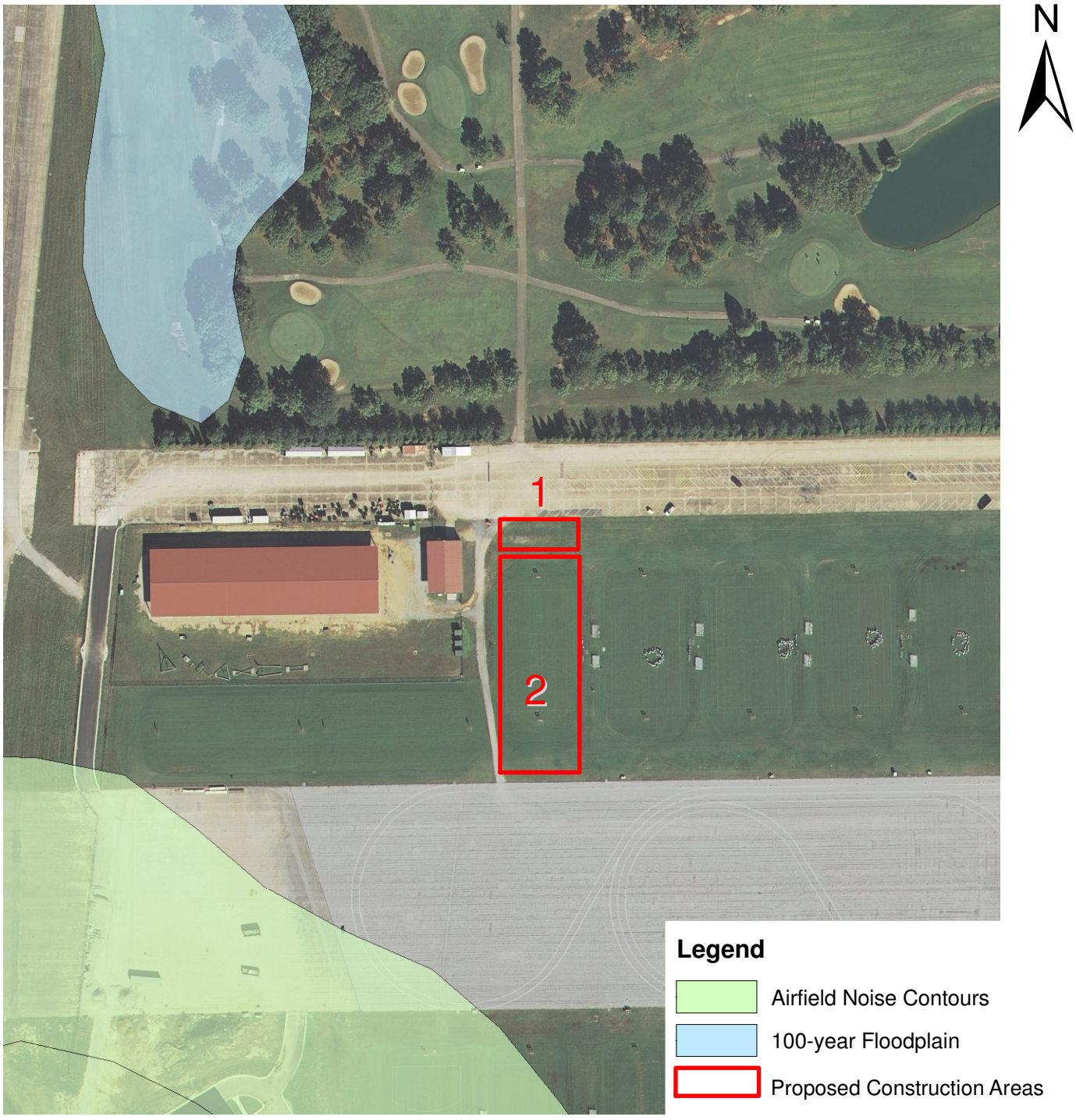

Source: Maxwell Geobase March, 2008

0 75 150 300 450 600 Feet

Proposed Facilities

1 Storage Facility
2 Covered Training Area

Figure 1-5 Proposed SOC Facilities

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Source: Maxwell Geobase March, 2008

0 500 1,000 2,000 3,000 4,000 Feet

Proposed Facilities
1 Bldg 1429
2 Evasion Lab
3 Alternate Evasion Lab

Figure 1-6 Proposed ECAC Facilities

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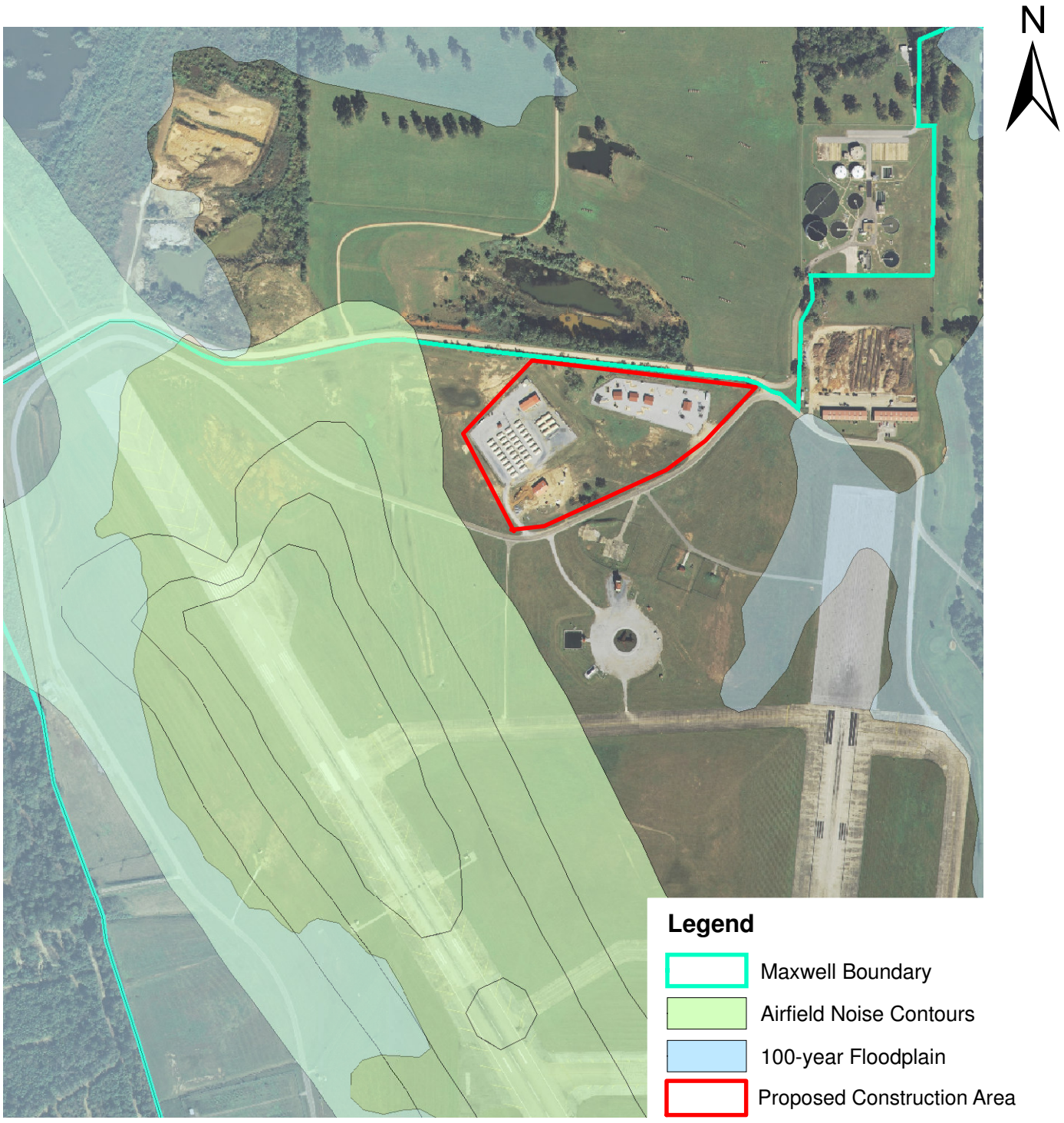

Figure 1-7 Blue Thunder Field Training Area

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DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

2.1 HISTORY OF THE FORMULATION OF ALTERNATIVES

Section 2 describes the Proposed Action and the No-Action Alternative. Other alternatives that were considered but eliminated from detailed study are discussed in Section 2.4. The decision has been made that the training programs should take place at Maxwell Air Force Base, and that the proposed locations for the facilities are the only practicable alternatives.

2.2 DETAILED DESCRIPTION OF THE PROPOSED ACTION

The Proposed Action is to institute one new training course at MAFB, construct several new training facilities and upgrade several existing facilities. The proposed action would include the following five areas which are described in detail in the remainder of this section:

1) a new Combat Arms Training and Marksmanship (CATM) Facility,

2) a new dormitory and dining hall/multi-purpose facility for trainees,

3) a new covered training area and equipment issue/storage support building,

4) a new Evasion and Conduct After Capture (ECAC) course, a new tactical training area and one renovated facility for expeditionary training, and

5) upgrades to training area and related permanent support structures at Blue Thunder expeditionary training area.

2.2.1 Proposed Combat Arms Training and Marksmanship Facilities

The Proposed Action is to construct a new 56-point, 50-meter small arms firing range complex and to rehabilitate or replace the current small arms range. The new firing range would be a 22,960 square-foot facility containing an automated target system. Immediately adjacent to the range, a 6,900 square-foot support facility would be constructed to house an administrative area, classroom, weapons storage/weapons cleaning area, restrooms, and break area. The firing range complex would be located along March Road, just northwest of the existing range, in the north central portion of the base. The proposed location for the range would displace the equestrian arena, which would be relocated to a grassy area of open space at the northwest corner of the intersection of March Road and Beech Street. A paved parking area would be constructed next to the proposed new range at the northeast corner of the intersection of March Road and Beech Street. The current small arms range would be retained and rehabilitated by replacing the overhead support structures and baffles.

2.2.2 Proposed Dormitory and Dining Hall/Multi-Purpose Facility

The Proposed Action is to construct one dormitory and one dining hall/multi-purpose facility to provide housing and meals for Air Force trainees. The dormitory would be a three-story, 120-room facility of approximately 66,000 square feet. The dormitory could house up to 240 OTS personnel at two per room or up to 480 ROTC cadets at 4 per room. It would include room/bath modules, laundry areas, storage areas, study areas, luggage room, covered entry, and all necessary utilities and communications to construct a complete and usable facility. The dining hall/multi-purpose facility would be a 14,000 to 25,000 square-foot facility with dining area, serving line, dishwashing area, kitchen, non-perishable and refrigerated storage areas, covered queuing area, office, restroom, and all necessary support. Both the dormitory and dining hall/multi-purpose facility are proposed to be constructed on a paved area that was previously used for airfield operations. This paved area is currently used for vehicle parking and a motorcycle safety training course; therefore, both the parking area and motorcycle course would be shifted further to the southwest on this paved area.

2.2.3 Proposed Training and Storage Facilities

The Proposed Action is to construct a covered training pavilion and a new storage and support building. The training facility would be an 18-foot-high, free-span covered area of approximately 100 feet by 250 feet. The floor would be an Astroturf-covered sand floor with adequate drainage so the area could easily be washed after training exercises. This facility would include lightning protection, fans for ventilation, lighting, electrical outlets, and a suspended catwalk along one side for observation. This covering would enable training schedules to be met in all but severe weather conditions. The proposed storage and support facility would be a pre-engineered metal building approximately 100 feet long by 40 feet wide. The building would include roll-up doors for forklift access, shelving, ventilation, and all necessary utilities and communication capabilities. The facility would tie into the existing sanitary sewer lines to provide restroom facilities for the adjacent training operations. This facility would accommodate equipment storage and issue for two rotations of up to 400 students each. Both the covered training area and the storage facility would be constructed on the current Flickerball Field #12 next to the Project X training facility. The storage building would be situated next to the old taxiway parking area to facilitate equipment loading and unloading.

2.2.4 Proposed ECAC Course Training Facilities

The Proposed Action is to institute a new Evasion and Conduct After Capture (ECAC) Course at MAFB. This course would provide additional tactical training to equip Airmen for situations they may face during deployment and combat. The course would be a four-day training session which may be completed by trainees either immediately before or after the Air and Space Basic Course at Maxwell. The proposed training for ASBC students would result in the facility being utilized by approximately 180 students per

class, 20 classes per year. Other military training classes could be conducted at the facility, subject to scheduling and staffing. Two specialized facilities and additional trainers would be required for this course. The projected increase in personnel would be approximately 15 active duty staff positions and 25-30 contract positions. Building #1429 is an old dormitory building that was scheduled for demolition. Under the Proposed Action, Building #1429 would be retained, renovated, and used for new training requirements. This building is in the central portion of the base and is just east of the current OTS training and residential section. It would be converted into administrative and instructor offices, a supply issue and return area, a conference room, restrooms, student break rooms, academic classrooms, and specialized training laboratories.

The second specialized facility proposed would be a new evasion laboratory on the west side of the base. It would be located west of March Road and north of the two man-made base lakes. This tactical training area of approximately 320 feet by 500 feet would be constructed to resemble rural, urban, and industrial surroundings that deployed Airmen might encounter. The facility would consist primarily of non-permanent equipment that would provide barriers to an evader's movement, with a few permanent support facilities. Mock buildings would be created with non-permanent shipping containers with attached facades and cut-out windows and doors. Several towers are proposed, from which instructors can direct and observe students. The 7:1 slope angle for airfield clearance requirements would have to be observed at the proposed location in order to avoid creating airfield obstructions. However, this should not be a problem, since the maximum height of the training structures proposed would be approximately 20 feet. Final design would take into account all applicable airfield clearance requirements and site constraints. Two of the structures within the evasion lab would be permanent facilities that would provide secure space for equipment storage, medical attention, and shelter for students during lightning or other weather emergencies. Water and electricity are readily Fencing would fully enclose the training lab, and a parking area and/or bus turn-around to facilitate the transportation of students would be included in the project.

2.2.5 Proposed Additions and Improvements to Blue Thunder Training Area

The Proposed Action is to upgrade the Blue Thunder mobilization training area located at the northwestern end of MAFB. Improvements may include: adding several additional slabs, tents, and climate control systems for tents within the fenced tent environment; installing an additional Alaskan shelter tent next to the existing ones; constructing additional training structures similar to the existing pavilion; and upgrading other training equipment and support structures, such as obstacle courses, parking areas, or latrines.

2.3 DESCRIPTION OF THE NO-ACTION ALTERNATIVE

The No-Action Alternative would be for Maxwell AFB to continue to utilize the existing facilities for training, housing, and dining. This would hinder and/or prohibit training schedules and capabilities, limit Maxwell's ability to accommodate additional personnel, and possibly leave Air Force personnel unprepared for situations of deployment and

combat. In addition, the current small arms range will continue to deteriorate, causing safety concerns for Air Force students and instructors and requiring high repair and maintenance expenditures.

2.4 OTHER ALTERNATIVES CONSIDERED BUT ELIMINATED FROM FURTHER STUDY

Other alternatives were considered but eliminated from further study. Many factors were considered during the elimination process, including environmental impact, security, cost, transportation of personnel, compatible land use, safety, and other factors.

2.4.1 Alternate Sites Considered

2.4.1.1 Alternate Site Considered for CATM Small Arms Facility

An alternate area for the new firing range complex was considered along March Road near the western border of the base. This site lies within the 100-year floodplain, approximately 10-11 feet below flood level. Approximately 11 feet of fill over an area of 1.5 to 2 acres would have been necessary for the construction of the firing range facilities, increasing both the cost and the environmental impact within the floodplain. This site had water and electrical service available, but sanitary sewer was not yet available in this undeveloped area; therefore, this also would have increased the cost and impact. This alternate site lies next to the western border of MAFB where the noise may have been more likely to affect the off-base community. Therefore, this alternate site was deemed not practicable and was not chosen as an alternate site and was eliminated from detailed analysis.

2.4.1.2 Alternate Site Considered for ECAC Evasion Lab Training Area

An alternate location in the central portion of the base was considered for the ECAC evasion lab within the current OTS and SOC training areas. After evaluating current and future land use, there were concerns about conflicts with future aircraft operations and maintenance land use areas because new aircraft operations and maintenance facilities have been proposed adjacent to this training area. Also, concerns were raised about the aesthetics of this specialized training area in a central area of base that is very visible to base personnel and guests arriving by aircraft. Another concern was the displacing of currently-used facilities such as the present flickerball fields and running tracks. Therefore, this alternate site was not chosen as the preferred site and was eliminated from detailed analysis.

2.4.1.3 Alternate Sites Considered for Proposed New Training Facilities

At Maxwell AFB, open space must be maintained near the airfield in order to comply with airfield clearance requirements. Much of the remaining open, undeveloped space on base lies within the 100-year floodplain of the Alabama River, further discouraging development in these areas. When selecting a site for the proposed new training facilities, current and future land use was carefully considered. The Airfield, Lodging,

and Officers Training School Area Development Plans were evaluated in order to place the facilities in compatible land use areas.

One parcel of undeveloped land, referred to as the former Riverside Heights Area, lies on the eastern edge of MAFB, but placing training facilities in this location would be incompatible with the surrounding community housing areas of MAFB and the surrounding off-base land use. Locating training facilities in this eastern location would separate them from other training and academic areas of the base, resulting in increased transportation circulation problems, logistics issues, and costs. Because of these conflicts, this eastern location was not evaluated further for the proposed new training facilities. Off-base sites were also eliminated from further analysis because of lack of specialized facilities such as the firing range and training labs, Force Protection considerations, and high costs of lodging, food, and transportation.

2.5 COMPARISON MATRIX OF ENVIRONMENTAL EFFECTS OF PROPOSED ACTION AND NO-ACTION ALTERNATIVE

Table 2-1 presents a comparison of the potential environmental effects, including cumulative effects, resulting from implementation of the Proposed Action or the No-Action Alternative. The environmental effects are described in Section 4. As shown in Table 2-1, the Proposed Action and the No-Action Alternative would have no appreciable effects on these resources.

Table 2-1
Comparison of Potential Environmental Consequences

Resource Area	Proposed Action	No-Action
Air Quality	○	○
Noise	◘	○
Land Use	○	○
Geological Resources	○	○
Water Resources	○	○
Biological Resources	○	○
Transportation/Circulation	○	○
Cultural Resources	○	○
Socioeconomics	○	○
Environmental Justice	○	○
Hazardous Materials and Wastes	◘	○
Utilities	○	○

Notes: ○ = No significant impact
◘ = Adverse, but not significant impact
● = Significant impact
+ = Beneficial impact

3 AFFECTED ENVIRONMENT

This section describes relevant existing environmental conditions for resources, either man-made or natural, that could potentially be affected by the Proposed Action or alternatives as described in Section 2. This description of the environment that may be affected provides a framework for understanding the potential direct, indirect, and cumulative effects of the Proposed Action and the alternatives.

As directed by guidelines contained in NEPA, CEQ regulations, and Air Force Instruction (AFI) 32-7061, *The Environmental Impact Analysis Process*, the description of the affected environment focuses only on those resource areas potentially subject to impacts and should be commensurate with the anticipated level of environmental impact.

This EA analyzes potential environmental effects for the following resource areas: air quality, noise, land use, geological resources, water resources, transportation and circulation, cultural resources, socioeconomics, hazardous materials and wastes, and utilities. The following subsections contain definitions of each resource, a description of the associated region of influence (ROI) for each resource, and existing conditions for each resource within the associated ROI.

3.1 AIR QUALITY

3.1.1 Definition of Resource

Air quality is determined by the type and amount of pollutants emitted into the atmosphere, the size of the particles emitted into the atmosphere, and the prevailing meteorological conditions of an area. Federal air quality standards are currently established for six pollutants, known as criteria pollutants. These criteria pollutants are: carbon monoxide (CO), nitrogen oxides (NO_x), sulfur dioxide (SO_2), lead (Pb), particulate matter – which is further divided by size of the particles [equal to or less than 10 microns in diameter (PM_{10}), and equal to or less than 2.5 microns in diameter ($PM_{2.5}$)], and ozone (O_3). (Although O_3 is considered a criteria pollutant and is measurable in the atmosphere, it is often not considered as a pollutant when reporting emissions from specific sources, because O_3 is not typically emitted directly from most emission sources. It is formed in the atmosphere from its precursors – nitrogen oxides (NO_x) and volatile organic compounds (VOCs) – that are directly emitted from various sources. Thus, emissions of NO_x and VOCs are commonly reported instead of O_3.)(USEPA 2008a)

To establish limits on pollutant concentrations, the USEPA has created National Ambient Air Quality Standards (NAAQS) to identify the maximum allowable concentrations of criteria pollutants that are considered safe, with an additional adequate margin of safety, to protect human health and welfare. Levels of pollutants are generally expressed as concentrations of either micrograms per cubic meter of air ($\mu g/m^3$) or parts per million (ppm). The NAAQS for the six criteria pollutants are shown in Table 3-1 (USEPA 2008b). Units of measure for the standards shown in this table are micrograms per cubic meter of air, except for ozone, which is in parts per million.

The U.S. Environmental Protection Agency (USEPA) classifies the air quality within an Air Quality Control Region (AQCR) according to whether the region, or more specifically the counties within the region, meets federal primary and secondary air quality standards. An AQCR or portion of an AQCR may be classified as an attainment, non-attainment, or unclassified area with regard to the air quality standards for each of the six criteria pollutants. "Attainment" describes a condition in which standards for one or more of the six pollutants are being met in an area. The area is considered an attainment area for only those criteria pollutants for which the national standards are being met. "Non-attainment" describes a condition in which standards for one or more of the six pollutants are not being met in an area. "Unclassified" indicates that air quality in the area cannot be classified and the area is treated as attainment. An area may have all three classifications for different criteria pollutants.

The criteria for non-attainment status varies by pollutant: 1) an area is in non-attainment for O_3 if the NAAQS have been exceeded more than three discontinuous times in three years; and, 2) an area is in non-attainment for any other pollutant if the NAAQS have been exceeded more than once per year.

The Region of Influence (ROI) used for air quality analysis generally centers on the county or counties in which the action would take place.

3.1.2 Clean Air Act Amendments

Through the Clean Air Act (CAA) Amendments of 1990 (42 USC 7401 *et seq.*), the USEPA also requires each state to prepare a State Implementation Plan (SIP), which describes how each state will achieve compliance with the NAAQS. The SIP is a compilation of goals, strategies, schedules, and enforcement actions that will help lead that state into compliance with the NAAQS. Alabama has adopted the NAAQS.

The CAA established certain statutory requirements for federal agencies with proposed federal activities to demonstrate conformity of the proposed activities with the SIP for attainment of the NAAQS. Under these rules, certain actions are exempt from conformity determinations, while others are presumed to be in conformity if total project emissions are below *de minimis* levels established under 40 CFR 93.153. *De minimis* levels (in tons per year) vary from pollutant to pollutant and are also subject to the severity of the non-attainment status.

Table 3-1
National Ambient Air Quality Standards

Pollutant	Standard Value ($\mu g/m^3$)[a]	Standard Type
CO		
1-hr average	40,000	Primary
8-hr average	10,000	Primary
NO_2		
Annual average	100	Primary and secondary
O_3		
1-hr average[b]	0.12	Primary and secondary
8-hr average[c]	0.075	Primary and secondary
Lead		
Quarterly average	1.5	Primary and secondary
PM_{10}		
24-hr average[d]	150	Primary and secondary
Annual average[e]	50	Primary and secondary
$PM_{2.5}$		
24-hr average[f]	35	Primary and secondary
Annual average[g]	15	Primary and secondary
SO_2		
3-hr average	1,300	Secondary
24-hr average	365	Primary
Annual average	80	Primary

CO=carbon monoxide NO_2=nitrogen dioxide O_3=ozone
SO_2=sulfur dioxide $\mu g/m^3$=micrograms per cubic meter
$PM_{2.5}$=particulate matter equal or less than 2.5 micrometers in diameter
PM_{10}= particulate matter equal or less than 10 micrometers in diameter

[a] Units for ozone are parts per million (ppm).

[b] The 1-hour ozone standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above 0.12 ppm is ≤ 1. The 1-hour NAAQS will no longer apply to an area 1 year after the effective date of the designation of that area for the 8-hour ozone NAAQS. The effective date for most areas is 15 June 2004.

[c] To attain the 8-hour ozone standard, the 3-year average of the fourth-highest daily maximum 8-hour average ozone concentrations measured at each monitor within an area over each year must not exceed 0.08 ppm.

[d] The 24-hour standard for PM_{10} is not to be exceeded more than once per year.

[e] To attain the annual PM_{10} standard, the expected annual arithmetic mean PM_{10} concentration at each monitor within an area must not exceed 50 μg/m3.

[f] The $PM_{2.5}$ 24-hour standard is based on the 3-year average 98th percentile of 24-hour concentrations at each population-oriented monitor.

[g] The $PM_{2.5}$ annual standard is based on 3-year average of annual arithmetic means.

Source: USEPA 2008b

3.1.3 Existing Conditions

3.1.3.1 Climate

MAFB is situated in a humid subtropical climate regime. The average annual high temperature is approximately 75 degrees Fahrenheit (°F), ranging between an average summer high of 91°F and an average winter high of 60°F. Winters in the region are temperate, with subfreezing temperatures and snow rarely occurring. The MAFB area (Montgomery) averages approximately 53 inches of rain a year, with the majority of rain falling in the late winter and spring months. Winds average approximately six miles per hour, typically from the east or west, depending upon the time of year (NOAA 2000).

3.1.3.2 Regional Air Quality

MAFB is located in Montgomery County, Alabama, within Air Quality Control Region (AQCR) 58 (The Columbus [GA] - Phenix City [AL] Interstate AQCR). All of Montgomery County is in attainment or unclassified for all of the NAAQS (USEPA 2002b). No Prevention of Significant Deterioration (PSD) Class I areas are located within the vicinity of MAFB (USEPA 2008c).

Potential emissions from the proposed and alternative actions would occur primarily from construction activities at Maxwell AFB such as grading, filling, and equipment operation. The proposed dining hall/multi-purpose facility would include a new boiler, but the increase in total emissions for Maxwell would be negligible. (According to ADEM regulations, the firing range and sources associated with housing are exempt [ADEM 1995]). Emissions would be localized within the area surrounding the base. For this reason, the analysis in this EA will address potential impacts within the Montgomery Metropolitan Statistical Area (MSA), which includes Autauga, Elmore, and Montgomery Counties, instead of the entire AQCR that covers a large geographical area.

3.1.3.3 Maxwell AFB Air Quality

Air quality management at Air Force installations is established in AFI 32-7040, *Air Quality Compliance*. AFI 32-7040 requires installations to achieve and maintain compliance with all applicable federal, state, and local standards. Air quality compliance involves prevention, control, abatement, documentation, and reporting of air pollution from stationary sources and mobile sources if located in nonattainment areas. Maintaining compliance with air quality regulations may require reduction or elimination of pollutant emissions from existing sources and control of new pollution sources.

The 2007 Air Emissions Inventory categorizes emissions from all stationary sources at MAFB. Primary stationary sources include emissions from boilers, generators, surface coating, paint booths, storage tanks, and fueling operations, among others. MAFB is considered a minor source of emissions and is therefore not required to obtain a synthetic minor operating permit or a CAA Title V major source operating permit (Alabama

Department of Environmental Management [ADEM] 2003). Mobile emission sources are not included in the emission totals for Maxwell.

Table 3-2 shows the Air Emissions values for Maxwell AFB (including Gunter Annex) (MAFB 2008a). This table compares the 2007 actual and potential emissions for Maxwell AFB and the 2002 Montgomery MSA emissions. As shown in Table 3-2, Maxwell AFB contributes an insignificant amount to the Montgomery MSA emission totals.

Table 3-2
Montgomery MSA Emissions and Maxwell AFB
Actual[a] and Potential[b] Emissions

	Annual Emissions (tpy)					
	CO	**VOC**	**NO_x**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
2002 Montgomery Metropolitan Statistical Area[c]	145,548	24,336	20,558	5,505	23,796	7,118
2007 Maxwell AFB Actual Emissions[d]	3.31	2.15	5.09	0.06	0.38	0.38
2007 Maxwell AFB Potential Emissions[d]	27.02	6.44	52.53	1.07	3.07	3.13

tpy = tons per year

[a] Actual emissions are the air pollutant emissions that result from the actual operation and material usage quantities during a one-year period (i.e., typically a calendar year).

[b] Potential emissions are those emissions that could result from the operation of an emission unit under maximum potential conditions, unless operation is restricted by a regulatory condition (e.g., fuel use limit in permit). For example, calculating emissions from a boiler by taking into account its maximum rated heat input capacity and operation 24 hours per day, 7 days per week, 52 weeks per year would result in a potential emission calculation.

[c] Draft Tri-County (Autauga, Elmore, and Montgomery) emission totals. Source: Cole 2005.

[d] As reported in the 2007 Air Emissions Inventory for Maxwell Air Force Base, March, 2008 (MAFB 2008a). Includes the emission totals from Gunter Annex. Lead emissions from Maxwell AFB and Gunter Annex are not reported in the 2007 Air Emissions Inventory.

3.2 NOISE

3.2.1 Definition of Resource

Noise can be defined as any unwanted sound that interferes with normal activities such as communication, is intense enough to damage hearing, or is otherwise annoying. Human response to noise varies according to the type and characteristics of the noise source, distance between the source and the receptor, sensitivity of the receptor, duration of the noise, and time of day.

All sounds come from a source such as a voice speaking, a musical instrument, or an airplane. The energy that produces sound is transmitted through the air or another medium in tiny pressure waves which are then detected by the eardrum, producing the sound that we hear. Sound waves travel outward from their source in all directions until the sound waves are reflected, refracted, or absorbed, dispersing the wave energy until it can no longer be detected at significant levels by the human ear. This may be likened to the ripples in water that would be produced when a stone is dropped into it and the waves travel outward around the source.

As the acoustic energy at the source increases, the intensity or amplitude of these pressure waves increases, and the ear senses louder noise. The unit used to measure the intensity of sound is the decibel (dB). Typical noise signals range from a whisper to jet engines, a range of 100 trillion dB. To compress this range into a more manageable, narrow range, the logarithmic (log) scale is used. The logarithm and its use are nothing more than a mathematical tool that simplifies dealing with very large and very small numbers. For example, the logarithm of the number 1,000,000 is 6, and the logarithm of the number 0.000001 is -6 (minus 6). As more zeros are added before or after the decimal point, converting these numbers to their logarithms greatly simplifies calculations that use these numbers. Therefore, the decibel scale is commonly represented as a range of sound levels from zero dB to more than 150 dB.

The frequency, or "pitch," of sound is measured in cycles per second, or hertz (Hz). This measurement reflects the number of times per second the air vibrates from the acoustic energy. The normal human ear can detect sounds that range in frequency from about 20 Hz to 20,000 Hz (Federal Interagency Committee on Noise [FICON] 1992). Low frequency sounds are heard as rumbles or roars, and high frequency sounds are heard as high-pitched whines or screeches. However, all sounds throughout this range are not heard equally well. When analyzing noise, we are interested in how much is low-, middle-, and high-frequency noise. Because our ears are more sensitive to middle- and high-frequency noise, we find these frequencies more annoying.

Therefore, through internal electronic circuitry some sound meters are calibrated to emphasize frequencies in the 1,000 to 4,000 Hz range. The human ear is most sensitive to frequencies in this range. Sounds measured with these instruments are termed "A-weighted," and are shown in terms of A-weighted decibels (dBA).

The duration of a noise event and the number of times noise events occur are also important considerations in assessing noise impacts. Duration is characterized by the time period of the sound pattern. Continuous sounds are those produced for relatively long periods, while intermittent sounds are those that are produced for short periods, such as a burst of gun fire.

3.2.2 Noise Metrics

The word "metric" is used to describe a standard of measurement. As used in environmental noise analysis, there are many different types of noise metrics. Each

metric has a different physical meaning or interpretation. Each metric was developed by researchers attempting to represent the effects of environmental noise. The metrics supporting the assessment of noise from proposed munitions use and construction activities are the maximum sound level (L_{max}), the Sound Exposure Level, and Time-Averaged Sound Levels. Each metric represents a "tier" for quantifying the noise environment, and is briefly discussed below.

- Maximum Sound Level (L_{max}) defines peak noise levels. A-weighted sound levels vary with time. For example, the sound increases as an aircraft approaches, rises to the maximum level as the aircraft flies closest to the observer, then falls and blends into the background as the aircraft recedes into the distance. L_{max} is the highest sound level measured during a single noise event (e.g., the loudest level of sound produced by the aircraft in flight), and would normally be the loudest sound actually heard by an observer. Maximum sound level is important in judging a noise event's interference with conversation, sleep, or other common activities. Noise from munitions is "impulse" noise, meaning that it occurs suddenly and is of short duration. It is often measured with this metric of maximum or peak sound level for the firing event and may be expressed as dBA (A-weighted decibels) or dBP (peak decibels).

- Day-Night Average Sound Level (L_{dn}), also known as Day-Night Level (DNL), is a measurement of the average sound exposure level during a 24-hour period. The L_{dn} assumes that noise events at night are louder than they really are because the potential for annoyance is greater during the nighttime hours. Therefore, a "penalty" of 10 dB is applied to all noise events between the hours of 10 p.m. and 7 a.m. This metric represents the listener's noise dose over a full day. Computed values of L_{dn} are often depicted as noise contours, showing lines of equal exposure areas around the noise source (much as topographic maps indicate contours of equal areas of elevation). L_{dn} contours usually reflect annual average operating conditions. The Day-Night Level is the primary descriptor for military aircraft noise.

- Equivalent Noise Level (L_{eq}) adds together all of the individual noise events and averages them over a specified time period. Common averaging times are 8- and 24-hour periods ($L_{eq(8)}$ and $L_{eq(24)}$). This metric differs slightly from the L_{dn} because the L_{eq} assigns no penalty for the time of the noise event. However, if no noise events occur at night, calculations of Day-Night Average Sound Level (L_{dn}) and L_{eq} would be identical. L_{eq}, without an indication of the time period, is considered to be the sound level over the time a source is generating sound, such as when construction equipment is operating.

3.2.3 Human Response to Noise

Human response to noise is very subjective, and there is wide diversity in response to noise. Responses vary not only according to the type of noise and the characteristics of the sound source, but also according to the sensitivity and expectations of the receptor, the time of day, and the distance between the noise source (e.g., an aircraft) and the receptor (e.g., a person or animal). Table 3-3 summarizes some typical noise sources with the corresponding noise measurement and a general human response to the sound level.

Table 3- 3
Sound Levels of Typical Noise Sources in the Environment

dB	Human Response	Noise Sources
120	Uncomfortably Loud	Military jet aircraft takeoff from aircraft carrier with afterburner at 50 feet – 130 dB
110		Turbo-fan aircraft at takeoff power at 200 feet – 118 dB Rock band
100	Very Loud	Boeing 707 aircraft at 6,080 feet before landing – 106 dB Jet flyover at 1,000 feet – 103 dB Bell J-2A helicopter at 100 feet
90		Boeing 737 aircraft at 6,080 feet before landing – 97 dB Motorcycle at 25 feet Food blender at 3 feet
80		Propeller plane flyover at 1,000 feet – 88 dB Diesel train 45 mph at 100 feet – 83 dB Garbage disposal at 3 feet
70	Moderately Loud	Passenger car 65 mph at 25 feet – 77 dB Vacuum cleaner at 10 feet
60		Air conditioning unit at 100 feet Normal speech at 3 feet Daytime commercial area
50	Quiet	Large transformer at 100 feet Dishwasher in the next room
40		Lowest limit of ambient sound Library background noise
10		Just audible
0		Threshold of hearing

Source: FICON 1992 and FICAN 2008
dB = decibels; mph = miles per hour

3.2.4 Existing Conditions

Noise at MAFB is primarily generated by aircraft operations, on- and off-base vehicle operations, and intermittent construction projects. MAFB has an 8,000-foot by 150-foot primary runway and one 3,000-foot by 60-foot landing zone. The primary assigned

aircraft include nine C-130's. Flying operations are typically conducted between the hours of 7 a.m. and 10 p.m. (MAFB 1998). The 2007 Air Installation Compatible Use Zone (AICUZ) Noise Contour updates show that areas of aircraft noise of greater than 65 dB L_{dn} are centered on the runway and are mainly confined to MAFB, extending only slightly into the northern and southern clear zones beyond the ends of the runway. Noise zones above 70 dB are located entirely within the boundaries of MAFB and do not impact development outside the base (MAFB 1998; MAFB 2007a). Figure 3-1 shows the general areas of noise greater than 65 dB around the airfield (MAFB 2008b).

Construction projects are considered short-term in their effects, and noise impacts are generally isolated to the site of the project and the immediate vicinity.

The existing small arms range generates impulse noise, but the noise is localized and dissipates within a short distance from the range. Small arms range noise decays fairly rapidly, so it does not usually have an impact on the surrounding community if the range is 500-1000 meters from the installation's boundary (Reichard 2008). Most of the land use surrounding the range is for outdoor recreation, so there are no receptors near the current range that would be especially sensitive to elevated noise levels.

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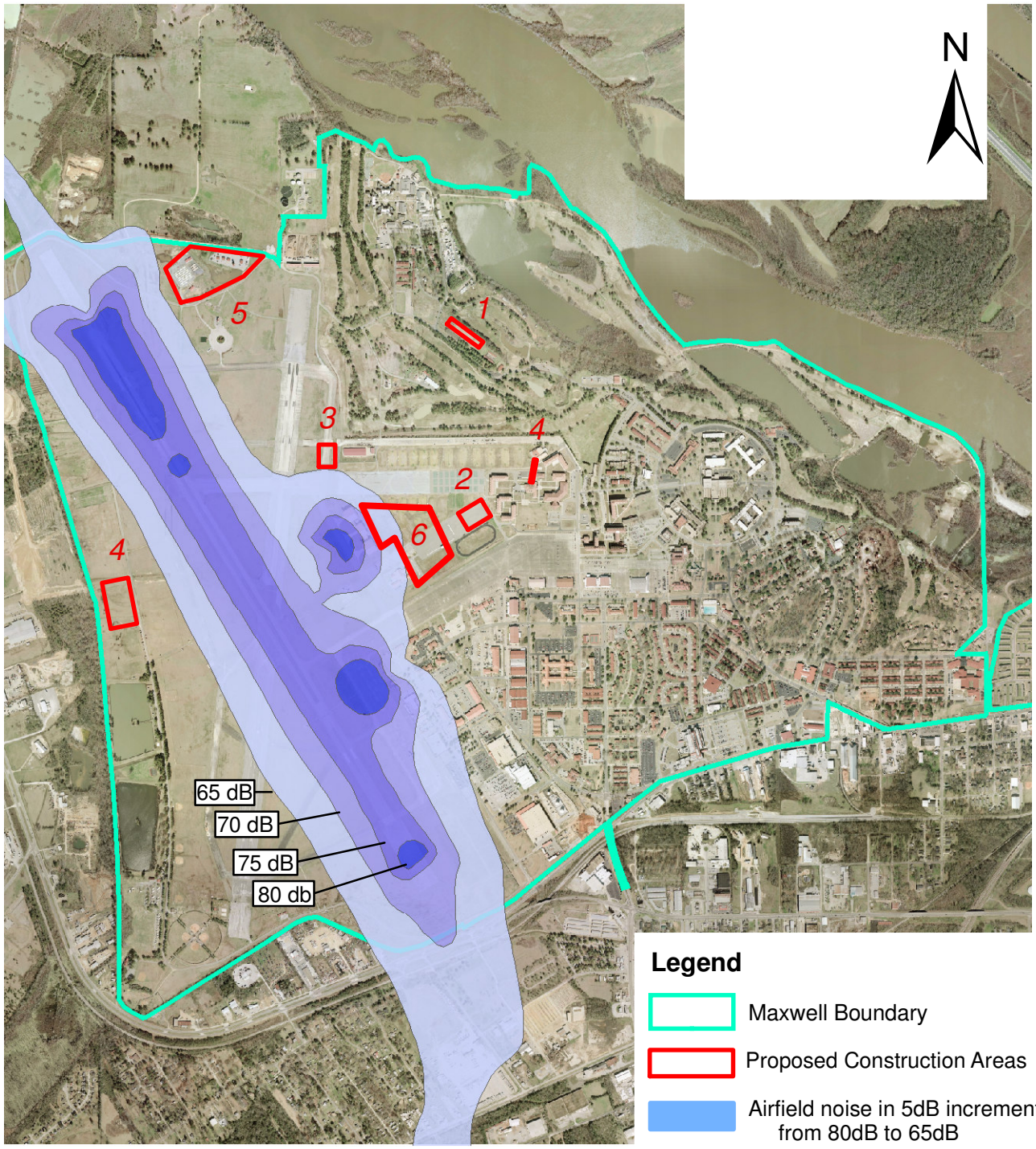

Source: Maxwell Geobase March, 2008

0 800 1,600 3,200 4,800 6,400 Feet

Proposed Facilities

1 Proposed Firing Range Complex
2 Proposed New Dormitory and Dining Hall/ Multi-Purpose Facility
3 Proposed SOC Training Facility
4 Proposed ECAC Training Facilities
5 Blue Thunder Field Training Area
6 Alternate ECAC Lab

Figure 3-1 Existing Airfield Noise Contours

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3.3 LAND USE

3.3.1 Definition of Resource

Land use describes the natural conditions and/or human-modified activities occurring at a particular location. Human-modified land use categories include residential, commercial, industrial, transportation, communications and utilities, agricultural, institutional, recreational, and other developed use areas. Land use management plans and zoning regulations determine the type and extent of land use allowable in specific areas and are often intended to protect specially designated or environmentally sensitive areas.

3.3.2 Existing Conditions

3.3.2.1 Regional and Local Land Use

MAFB is located in Montgomery County, Alabama, south of the foothills of the Appalachian Mountains. It is located in the northwest section of the City of Montgomery, approximately one quarter mile west of the downtown area. MAFB is bordered on the east and south by the City of Montgomery and on the northeast by the Alabama River. A public housing project and the primary concentration of office and governmental buildings in Montgomery are located east of the installation. To the south and west of MAFB, the land uses are a mix of commercial, residential, and industrial. Land to the west of MAFB includes some development, agricultural areas, and floodplain areas. The recent urban development of the City of Montgomery includes a mix of residential, industrial, and strip commercial uses.

3.3.2.2 Installation Land Use

MAFB consists of approximately 2,524 acres of land, all of which are improved or developed in some manner. Occupied buildings, structures, pavements, and landscaped residences make up approximately 700 acres, and the runways, taxiways, and adjacent infield areas account for approximately 880 acres (MAFB 2000b). Two golf courses, playgrounds, picnic areas and other recreational developments, and several ponds occupy the remaining land. Figure 3-2 shows the existing land use at MAFB.

Land use at MAFB can be divided into 15 categories, which are classified and defined in Table 3-4 and illustrated in Figure 3-2.

Land Use and the Noise Environment

Noise generated from aircraft and roadway traffic represents the greatest contribution to the overall noise environment at MAFB. Construction activities can also result in disruption to noise-sensitive receptors and land use areas (e.g., academic areas, residences, or administrative personnel); however, construction activities tend to be temporary and associated noise can be reduced with special equipment and scheduling

restrictions. The commercial and industrial land uses immediately surrounding MAFB are generally not in conflict with the noise levels generated by installation activities.

Table 3-5 below compares the acceptability of land use categories to various levels of noise exposure (FICON 1992). As illustrated, land use areas most sensitive to elevated noise levels are residential, public service (churches, hospitals, libraries), academic (classrooms), and both indoor and outdoor recreation (concert halls, auditoriums, parks, outdoor arenas).

Table 3-4
Land Use Categories

Land Use Category	Description
1. Airfield Space	Airfield criteria open space and unused land
2. Airfield Surfaces	Aprons, runways, and taxiways
3. Aircraft Operations and Maintenance	Aircraft shops and air operations training
4. Industrial	Civil engineering shops, supply facilities, fuels storage facilities, transportation facilities, and utility operations
5. Administrative	Non-aircraft or operations buildings
6. Academic	Facilities and structures used to support academic activities
7. Community Commercial	Retail, service clubs, and commissary
8. Community Service	Services Squadron, chapel, and library
9. Medical	Hospital and medical storage
10. Accompanied Housing	Military family housing
11. Unaccompanied Housing	Dormitories and transient quarters
12. Recreational	Golf course and sports fields
13. Open Space	Non-dedicated lands
14. Water	Rivers, lakes, streams, and ponds
15. Prison	Land and facilities dedicated to the on-base Federal Prison Camp

Source: MAFB 2000b.

Figure 3-2
Existing Land Use

- Installation Boundary
- Airfield
- Runway/Taxiway/Apron
- Aircraft Operations & Maintenance
- Academic Training
- Industrial
- Prison
- Administrative
- Community
- Medical
- Housing (Accompanied)
- Housing (Unaccompanied)
- Outdoor Recreation
- Open Space
- Water

NORTH

0 700 1400 2800

SCALE IN FEET

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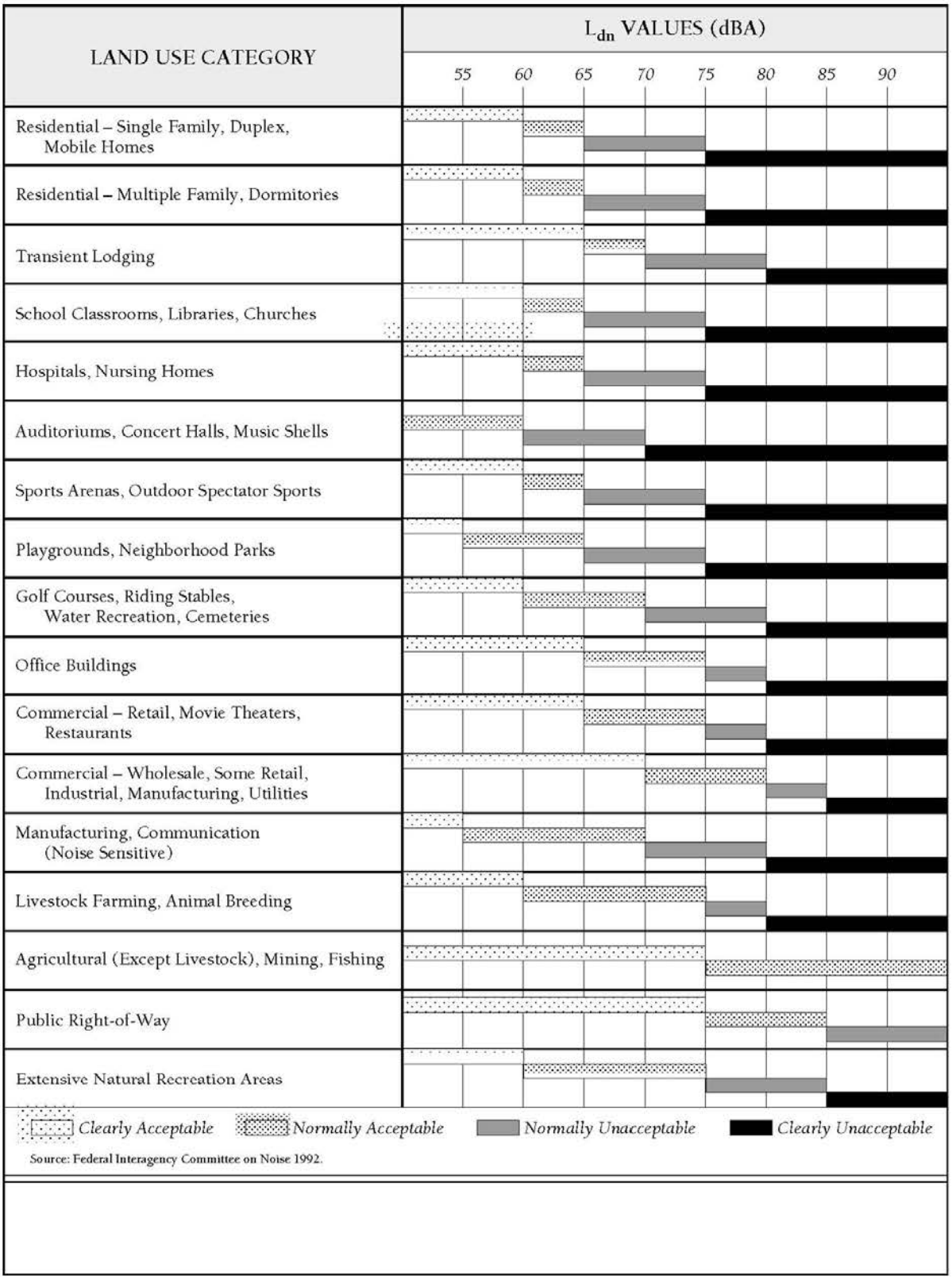
Table 3-5
Recommended Land Use for L_{dn}-Based Noise Values



Source: Federal Interagency Committee on Noise 1992.

3.4 Geological Resources

3.4.1 Definition of Resource

Geological resources are defined as the geology, soils, and topography of a given area. The geology of an area includes bedrock materials, mineral deposits, and fossil remains. The principal geologic factors influencing stability of structures are soil stability and seismic properties. Soil, in general, refers to unconsolidated earthen materials overlying bedrock or other parent material. Soil structure, elasticity, strength, shrink-swell potential, and erosivity all determine the ability of the ground to support structures and facilities. Relative to development, soils typically are described in terms of their type, slope, physical characteristics, and relative compatibility or limitations with regard to particular construction activities and types of land use. Long-term geological, erosional, and depositional processes typically influence the topographic relief of an area. Topography incorporates the physiographic, or surface, features of an area and is usually described with respect to elevation, slope, aspect, and landforms.

3.4.2 Existing Conditions

3.4.2.1 Geological Resources

MAFB is located within the Alluvial Deltaic Plain of the upper Gulf Coastal Plain Physiographic region. Within the Coastal Plains Region of Montgomery County, the geologic units range in age from the Upper Cretaceous to the Holocene. This range is characterized by low rolling hills and shallow valleys. The topography of MAFB is generally level with elevations averaging 168 feet above mean sea level.

The regional surficial geology is dominated by Quaternary Terrace and Alluvial deposits consisting of coarse sands, gravels, silts, and clays deposited by the ancestral and current Alabama River. The thickness of the deposits generally range from 30 to 50 feet, but in some areas can be as thick as 80 feet. The thickness of the individual geologic units tends to follow a pattern that shows a gradual dip seaward at a shallow rate. Lithologic logs during drilling activities show that between the 10 and 30 foot depths, the deposits are composed of fine-to-medium grained silty sand with variable amounts of quartz pebbles and some clayey sand. At soil depths greater than 30 feet, the amount of quartz pebbles decreases and the deposits grade into mostly poorly graded sand with sand lenses (MAFB 2002a).

3.4.2.2 Soils

Six soil associations have been mapped at MAFB and are described below in Table 3-6. The majority of the base consists of the Amite-Cahaba association which are typically found on level to sloping uplands of high stream terraces. Soils range from very poor to well-drained and moderate to poor permeability. The Cahaba-Wickham-Roanoke association is typically found on level to gently sloping lowlands of floodplains and low stream terraces and is present along the north and west base boundaries. Soils range from

poor to well-drained and subsoils have a seasonally high water table. The pH level in soils at MAFB averages 5.2 pH. On average, soils are found to be low in nitrogen, phosphate, potash, calcium, and magnesium.

Table 3-6
Soil Types Found at MAFB

Soil Type	Description
1. *Congaree silt loam (0-2% slopes)*	Contains some mica throughout profile. At 0 to 6 inches soil includes a dark grayish-brown silt loam with moderate, medium, granular structure. At 6 to 20 inches soils are dark yellowish-brown silty clay loam; friable when moist and slightly plastic when wet, and highly acidic.
2. Terrace escarpments (15-25% slopes)	Generally found between two stream terraces or within floodplains. Sandy and gravelly, slightly developed, not fertile. Most of the area is moderately to severely eroded, and numerous shallow to deep gullies have formed.
3. Amite fine sandy loam (2-5% slopes)	At 0 to 5 inches soil is dark reddish-brown fine sandy loam, weak crumb structure, very friable when moist and loose when dry, moderately acidic. High runoff and erosion potential.
4. Roanoke silt loam (0-3% slopes)	Very small amount of very fine sand and some mica. At 0 to 10 inches the soils are gray silt loam streaked with dark-brown organic stains; weak, medium, granular structures; friable; and highly acidic. Contains moderate amount of organic matter and moderate permeability.
5. Wehadkee silt loam (0-2% slopes)	At 0 to 6 inches soil is dark-gray silt loam with few, fine, faint mottles of dark brown; weak, medium, granular structure; friable; and highly acidic. Contains moderately high natural fertility and moderately high water holding capacity.
6. Wickham fine sandy loam (0-2% slopes)	At 0 to 6 inches soil is dark brown fine sandy loam; weak, fine, crumb structure; very friable; highly acidic. At 6 to 20 inches soil is yellow-red to red fine sandy clay; weak to moderate, fine, subangular blocky structure; firm when moist, sticky when wet, and hard when dry; highly acidic. Slow permeability rate and moderately high capacity for holding moisture. Contains moderately small amount of organic matter and moderately low natural fertility.

Source: MAFB 2000b.

3.5 WATER RESOURCES

3.5.1 Definition of Resource

Water resources include both surface and subsurface water. Surface water includes all lakes, ponds, rivers, and streams within a defined area or watershed. Surface drainage, or storm water runoff, is also described in this section. Subsurface water, commonly referred to as groundwater, is typically found in certain areas known as aquifers. Aquifers are areas of mostly high porosity soil where water can be stored between soil particles and within soil pore spaces. Groundwater is typically recharged during precipitation events and is withdrawn for domestic, agricultural, and industrial purposes.

Due to dangers and damages associated with major flooding, legislation has been developed to limit construction within identified flood-prone zones. Specifically, development of areas within the identified 100-year floodplain zone (areas generally subject to a flood event that has a one percent chance of occurring in any given year) is typically limited to recreation and preservation activities.

The Clean Water Act (CWA) of 1972 (33 USC 1251 *et seq*.) is the primary Federal law that protects the nation's waters, including lakes, rivers, aquifers, and coastal areas. The primary objective of the CWA is to restore and maintain the integrity of the nation's waters.

The ROI for water resources analyzed in this section includes the surface and subsurface water resources at and surrounding MAFB.

3.5.2 Existing Conditions

3.5.2.1 Surface Water and Drainage

Maxwell AFB is located on the western bank of the Alabama River within the Alabama/Cahaba River Basin. Prominent water features on the base include the lakes and drainage basins associated with the river floodplains, several small ponds on the golf courses, and two small manmade fishing lakes on the southwest side of the base (Figure 3-3).

A network of existing inverts and storm water channels currently controls storm water runoff from MAFB. Due to the large amount of impermeable surfaces throughout the MAFB complex, the volume of storm water runoff can be relatively high. The surface drainage patterns on MAFB are generally from southwest to northeast towards the Alabama River. Storm water from MAFB is routed to four outfalls that discharge to the river, located approximately 0.4 miles north of the base. Monitoring indicates the Alabama River fully supports aquatic life uses.

National Pollutant Discharge Elimination System (NPDES) permitting for point and storm water discharges has been delegated to the State of Alabama. Individual and general storm water permits require the applicant to develop and implement a pollution

prevention plan and in some instances, monitor discharges for specific pollutants. Alabama Department of Environmental Management (ADEM) NPDES General Permits issued to Maxwell Main Base and Gunter Annex cover each location's Phase II Storm Water Program (ADEM 2007). The receiving water is the Alabama River.

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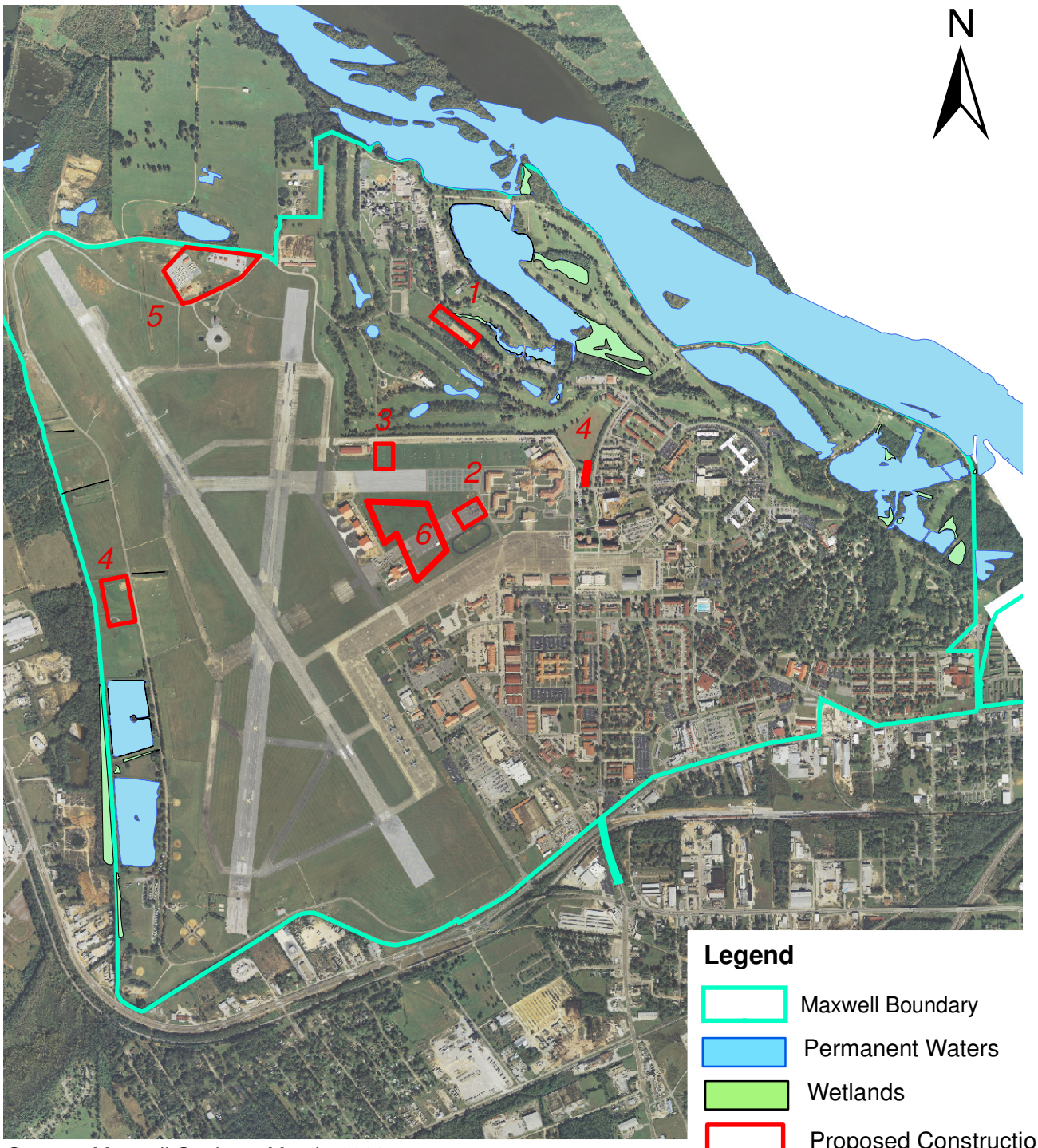

Source: Maxwell Geobase March, 2008

0 800 1,600 3,200 4,800 6,400 Feet

Proposed Facility Locations

1 Proposed Firing Range Complex
2 Proposed New Dormitory and Dining Hall/ Multi-Purpose Facility
3 Proposed SOC Training Facility
4 Proposed ECAC Training Facilities
5 Blue Thunder Field Training Area
6 Alternate ECAC Lab

Figure 3-3 Surface Water Features

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3.5.2.2 Floodplains

Approximately 30 percent of MAFB lies within an identified 100-year floodplain zone (MAFB 2000a). The floodplain elevation at MAFB is approximately 162 feet above mean sea level (MSL) (MAFB 2000a). The floodplain covers a large area in the northeast portion of the base along the Alabama River and also extends along the south and west perimeters of the base (Figure 3-4). The majority of the floodplain on base is comprised of recreational land uses, including two golf courses and surface lakes. Both the current firing range and the proposed site for the new range lie within this 100-year floodplain area, at an elevation of approximately 158-160 feet MSL. Also, the proposed site for the new evasion lab training area is within the floodplain along the west side of the base at an elevation of approximately 150 feet MSL. These floodplain areas are evaluated in Section 4.5.

3.5.2.3 Groundwater

The groundwater zone at MAFB ranges from depths of 4 to 40 feet below ground surface (bgs) (MAFB 2000a). The major aquifer in the region of MAFB is the Lower Eutaw which produces up to 450 gallons per minute. This aquifer is found at depths of 100 to 200 feet bgs. Groundwater at this aquifer is influenced by the Alabama River and is the source for recharging the wells that supply MAFB and the City of Montgomery with their potable water. MAFB has no production wells used for human consumption and receives its water supplies from the municipal water authority of Montgomery (MAFB 2000a).

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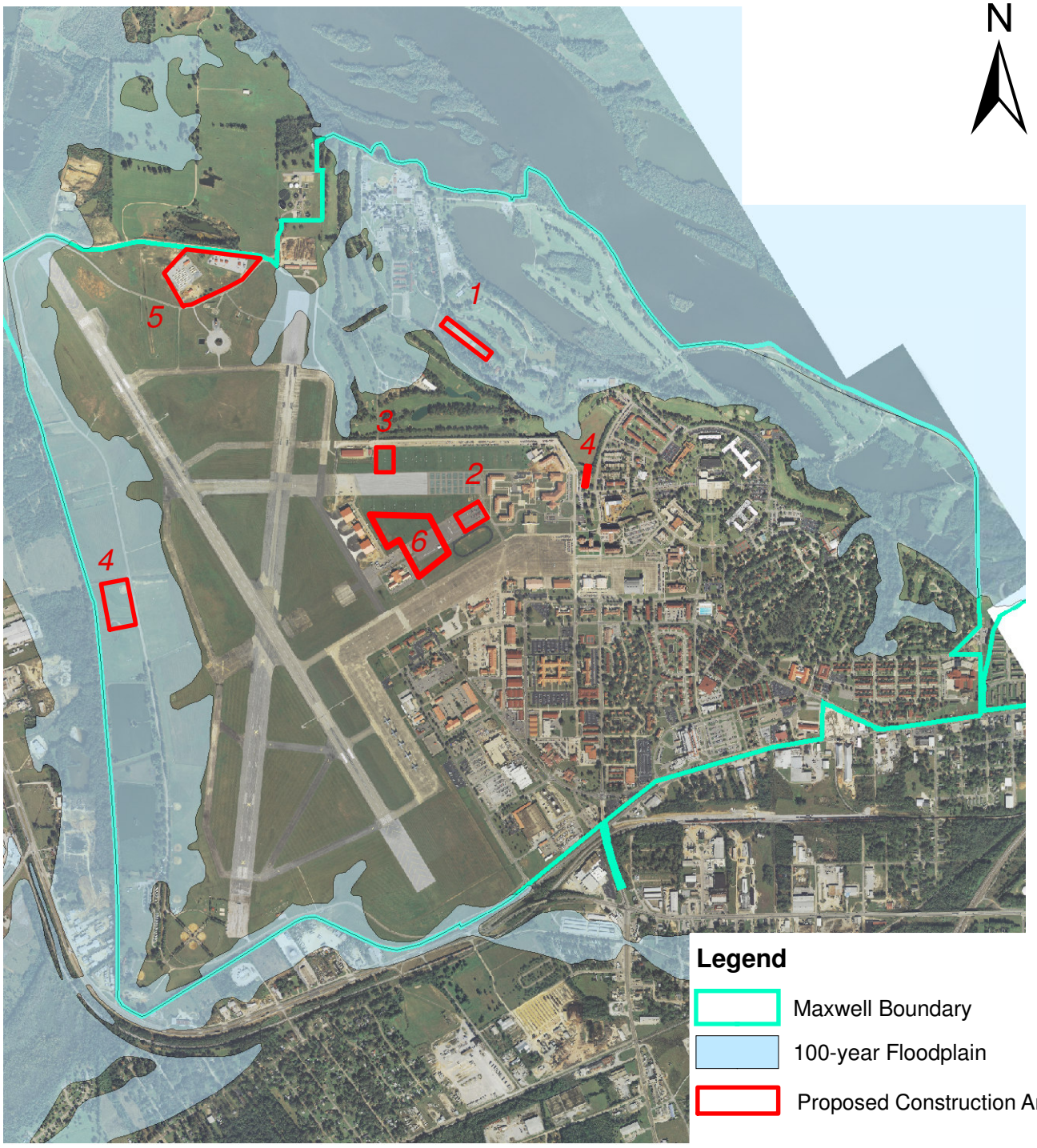

Source: Maxwell Geobase March, 2008

0 800 1,600 3,200 4,800 6,400 Feet

Proposed Facility Locations

1 Proposed Firing Range Complex
2 Proposed New Dormitory and Dining Hall/ Multi-Purpose Facility
3 Proposed SOC Training Facility
4 Proposed ECAC Training Facilities
5 Blue Thunder Field Training Area
6 Alternate ECAC Lab

Figure 3-4 Proposed Facilities and 100-year Floodplain

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3.6 TRANSPORTATION AND CIRCULATION

3.6.1 Definition of Resource

Transportation refers to the movement of vehicles on roadway networks. Primary roads, such as major interstates, are designed to move traffic and do not necessarily provide access to all adjacent areas. Secondary roads, commonly referred to as surface streets, are used to gain access to residential and commercial areas, hospitals, and schools. Roadway operating conditions are typically described in terms of average daily traffic (ADT) volumes. The ROI includes Maxwell AFB, surrounding roadways, and major traffic arteries leading to Maxwell.

3.6.2 Existing Conditions

3.6.2.1 Installation Circulation

MAFB is located approximately one quarter mile west of downtown Montgomery, Alabama. Access to the installation from Interstate 65 is via Bell Street, which leads to the main entrance at the Bell Street Gate. A project is currently underway by the City of Montgomery to widen Bell Street. The installation may also be accessed from Interstate 85 via Day Street and the Day Street Gate. Direct access to the installation is possible through three gates which provide the primary circulation to the secondary and local routes of the installation. The primary east-west route is Maxwell Boulevard, which starts at the main entrance, Bell Street Gate. The primary north-south routes are Kelly Street (Kelly Street Gate), Mitchell Street (Day Street Gate), and LeMay Plaza and Poplar Street to Chennault Circle.

The secondary and local roadway systems at MAFB provide access from the primary routes to various installation facilities. Parking is generally adequate throughout the base except near the schools on the Academic Circle due to the increase in student populations.

The Maxwell Traffic Study of September 2007 revealed that all intersections studied in the vicinity of the Proposed Action had acceptable levels of service during peak traffic hours. In the study, traffic capacities were expressed as levels of service, ranging from "A" (best) to "F" (worst). In general, a level of service "C" was considered desirable, while a level of service "D" was considered acceptable during peak hours of traffic flow (MAFB 2007b).

Current Traffic Near Firing Range Sites

Both the current and proposed sites for the small arms firing range are located along March Road, which has a low volume of traffic. The intersection closest to the range location that was evaluated in the traffic study is the intersection of March Road and Maple Street. This is a low traffic intersection that received a rating of "A," which is the best level of service possible. There were no concerns with the traffic flow at this

intersection. The current parking configuration at the firing range is not desirable. This parking area was not evaluated in the traffic study. The parking area is awkwardly situated at a bend in March Road and is contiguous with the roadway surface. This creates a potential hazard as vehicles pull in and out of the parking area into the flow of traffic along March Road.

Current Traffic Near Proposed Site of Dormitory, Dining Hall/Multi-Purpose Facility, SOC Training Facility, SOC Storage Facility, and Building #1429

The traffic study evaluated two intersections along LeMay Plaza in the vicinity of the OTS complex. These intersections were the closest ones evaluated in the study to the proposed sites of the Dormitory, Dining Hall/Multi-Purpose Facility, SOC Training and Storage Facilities, and Building #1429. The intersection of LeMay Plaza at Sycamore Street is a 3-way stop that received the highest rating of "A" in all categories evaluated. The intersection of LeMay Plaza at Chestnut Street is an unsignalized intersection that received acceptable ratings of "A" and "B" in all categories evaluated. Minor improvements (crosswalk striping, sidewalks, handicap ramps, etc.) were suggested to these intersections, but no major concerns were expressed about traffic volume and flow. Parking is plentiful near the intersection of LeMay Plaza at Chestnut Street and along the north and southwest edges of the OTS residential and training area. Additional parking is planned across the street from Building #1429 in conjunction with a future project.

Current Traffic Along March Road – Proposed Sites of Blue Thunder Training Area and ECAC Evasion Lab Training Area

March Road is currently a low traffic route on the north and western sides of the base. It crosses into both the north and south airfield clear zone areas as it encircles the western side of the base. There are few developments along these sections of March Road due to airfield requirements and site constraints, and current conditions and development are not expected to change greatly in the foreseeable future.

3.7 CULTURAL RESOURCES

3.7.1 Definition of Resource

Cultural resources may consist of prehistoric and historic districts, sites, structures, artifacts, or any other physical evidence of human activity considered important to a culture, subculture, or community for scientific, traditional, religious, or other reasons. Cultural resources can be divided into three major categories: archaeological resources (prehistoric and historic), architectural resources, and traditional cultural resources.

Archaeological resources are locations where human activity measurably altered the earth or left deposits of physical remains (e.g., tools, arrowheads, or bottles). "Prehistoric" refers to resources that predate the advent of written records in a region. These resources can range from a scatter composed of a few artifacts to village sites and rock art. "Historic" refers to resources that postdate the advent of written records in a

region. Archaeological resources can include campsites, roads, fences, trails, dumps, battlegrounds, mines, and a variety of other features.

Architectural resources include standing buildings, dams, canals, bridges, and other structures of historic or aesthetic significance. Architectural resources generally must be more than 50 years old to be considered for protection under existing cultural resource laws. However, more recent structures, such as Cold War era military buildings, may warrant protection if they have exceptional characteristics and the potential to be historically significant structures. Architectural resources must also possess integrity (i.e., important historic features must be present and recognizable).

Traditional cultural resources can include archaeological resources, buildings, neighborhoods, prominent topographic features, habitats, plants, animals, and minerals that Native Americans or other groups consider essential for the continuance of traditional cultures.

Only significant cultural resources, known or unknown, warrant consideration with regard to adverse impacts resulting from a proposed action. To be considered significant, archaeological or architectural resources must meet one or more criteria as defined in 36 CFR 60.4 (July 1, 1987) for inclusion in the National Register of Historic Places (NRHP).

Several Federal laws and regulations have been established to manage cultural resources, including the National Historic Preservation Act (16 USC 470 *et seq*., 1966), the Archaeological and Historic Preservation Act (16 USC 469, 1974), the American Indian Religious Freedom Act (42 USC 1996, 1978), the Archaeological Resource Protection Act (16 USC 470 *et seq*., 1979), and the Native American Graves Protection and Repatriation Act (25 USC 3001 *et seq*., 1990). In addition, coordination with Federally recognized Native American tribes must occur in accordance with EO 13084, *Consultation and Coordination with Indian Tribal Governments,* May 14, 1998.

On November 27, 1999, the DoD declared its Annotated American Indian and Alaska Native Policy (16 USC 470), which emphasizes the importance of respecting and consulting with tribal governments on a government-to-government basis. This Policy requires an assessment, through consultation, of the effect of proposed DoD actions that may have the potential to significantly affect protected tribal resource, tribal rights, and Indian lands before decisions are made by the respective services.

3.7.2 Existing Conditions

There are 152 buildings at MAFB listed on the NRHP, all of which were constructed during the inter-war period of 1928 to 1939. Most of these listed buildings are contained in the Senior Officers Quarters family housing area located in the eastern section of the base. There is one archaeological site eligible for listing on the NRHP.

A comprehensive Integrated Cultural Resources Management Plan (ICRMP) has been prepared and provides focused guidance to land managers for compliance with the

requisite cultural resource laws and regulations (MAFB 2006). The ICRMP recognizes that activities associated with the ongoing mission of MAFB have the potential to be destructive to historic properties. Therefore, the following activities require prior consultation with the MAFB Historic Preservation Office to ensure compliance with the ICRMP and cultural resource protection laws and regulations:

- all new construction;
- ground-disturbing activities such as excavations or earthmoving for training facilities, roads, trails, landing strips, etc;
- any activities that affect properties that are eligible or potentially eligible for the NRHP; and
- the disposal of Federally owned lands.

3.8 SOCIOECONOMICS

3.8.1 Definition of Resource

Socioeconomics comprise the basic attributes of population and economic activity within a particular area or ROI and typically encompass population, employment and income, and industrial/commercial growth. Impacts on these fundamental socioeconomic resources can also influence other components such as housing availability and public services provision.

MAFB is located in the City of Montgomery, Montgomery County, Alabama. Montgomery is the state capital of Alabama and serves as a focal point for many state agencies and related service industries. Socioeconomic data are presented for the City of Montgomery, Montgomery County, the State of Alabama, and the U.S. to analyze baseline socioeconomic conditions in the context of regional, state, and national trends. The data is based on the most current census, with 2006 estimates where available.

3.8.2 Existing Conditions

3.8.2.1 Population

Regional

The Montgomery Metropolitan Statistical Area (MSA) (composed of Montgomery, Autauga, and Elmore Counties) population increased over 60,000 from 1990 to 2006, and half of this increase occurred in between 2000 and 2006. Growth was strongest in the two suburban counties; between 2000 and 2006 Autauga's population increased 13.9 percent and Elmore's grew 14.9 percent, while the increase in the population of Montgomery County was minimal during that period. However, the population of Montgomery County has increased since 8.0 percent as a whole since 1990, and the City of Montgomery itself experienced population growth of 7.9 percent since 1990. Growth of the city, the county and the MSA lagged slightly behind that of the State of Alabama

and the United States over the last decade (USCB 2008a). The Montgomery MSA population is expected to continue to increase by over 100,000 persons to 433,292 between 2000 and 2025 (University of Alabama 2002).

Table 3-7
Estimated Population for the United States, State of Alabama, Montgomery MSA, Montgomery County, and City of Montgomery, 1990-2006

Year	United States Population	Alabama Population	Montgomery MSA	Montgomery County Population	City of Montgomery Population
1990	248,709,873	4,040,587	305,175	209,085	187,106
2000	281,421,906	4,447,100	333,055	223,510	201,568
2006	299,398,484	4,627,851	365,962	225,791	201,998
% Change '90-'00	13.2	10.1	9.1	6.9	7.7
% Change '00-'06	6.4	4.1	9.9	1.0	0.2

Source: USCB, 2008a

Maxwell-Gunter AFB

The current personnel levels associated with Maxwell-Gunter AFB total an estimated 12,182. This total is composed of 2,339 active duty personnel, 1,218 guard and reserve personnel, 3,506 civilians, and 2,138 contract employees. The remainder of the Maxwell-Gunter AFB population is made up of students attending classes on base (King, 2007).

3.8.2.2 Housing

The Maxwell AFB Housing Requirements and Market Analysis (HRMA) defines the "Housing Market Area boundary" as covering a 60-minute or 20-mile commute, which includes most of Montgomery, Elmore, Autauga, and Lowndes counties, as well as portions of Bibb, Coosa, Tallapoosa, Macon, Bullock, Crenshaw, Butler, Dallas, Wilcox, Lee, Barbour and Chilton counties. The bulk of Maxwell AFB military personnel live in the City of Montgomery (50 percent of personnel), while the remaining base staff primarily reside in the neighboring cities of Millbrook and Prattville (MAFB 2003a). Maxwell AFB is responsible for supporting approximately 6,500 military personnel, including both Air Force and tenant personnel (King 2007). Based on the 2003 Maxwell AFB Economic Information, there were 1,127 military personnel living on-base (16.9 percent) and 5,559 living off-base (83.1 percent). There were 1,216 active duty military dependents living on-base (1.07 dependents per person), and 3,657 off-base military dependents (0.65 dependents per person) (Maxwell AFB 2003b).

According to the HRMA, the 2003 rental vacancy rate in the Housing Market Area was 11.4 percent, and the projected rental vacancy rate for 2008 is 10.8 percent (MAFB 2003a).

3.8.2.3 Education

Children of, or children sponsored by, personnel who live in permanent quarters on Maxwell AFB may attend Maxwell Elementary School. Maxwell Elementary has an enrollment of 458 students, with a capacity of 700 (WESTON 2005).

The following public schools are located in the vicinity of Maxwell Main Base (National Center for Educational Statistics 2008):

- Carver Elementary School
- McIntyre Junior High School
- G. W. Carver Senior High School

The following public schools are located in the vicinity of Gunter Annex (National Center for Educational Statistics 2008):

- Dalraida Elementary School
- Lee High School
- Goodwyn Jr. High School

In addition to the public schools listed above, Montgomery has more than 30 private primary and/or secondary schools. There are also a number of colleges and universities in Montgomery, with a variety of academic disciplines as well as state technical colleges and private vocational schools (Maxwell AFB 2005a).

3.8.2.4 Economy

Maxwell AFB Economic Activity and Contribution

Maxwell AFB generates economic activity in the region through employee payrolls, local procurements, and other expenditures. Annual payroll for military personnel living on-base is $31.6 million and $165.3 million for those living off-base. The total annual payroll, for both military and civilians, is $608.3 million. Annual expenditures for construction, services, and procurement of materials, equipment, and supplies (not including contracts for services for other Air Force installations) are $862.9 million. Of that amount, $6.2 million is for military family housing and $78.2 million is for installation operation and maintenance. The number of base jobs created on the installation, including both military and civilian, is 12,695, and other jobs created indirectly is calculated to be 4,424, resulting in $128.8 million in value (salary for jobs created, at an average salary of $29,124). Thus, the cumulative annual economic impact is estimated to be $1.6 billion, where payroll accounts for 38 percent, expenditures for 54 percent and estimated value of jobs created for 8 percent) (Maxwell AFB 2003b).

Regional Job Growth and Unemployment

The service-producing sectors accounted for more than 40 percent of jobs in the Montgomery area in 2003. The City of Montgomery maintains a diverse manufacturing

base, including: food/kindred products; transportation equipment; textile/apparel; machinery/equipment; printing/publishing; furniture/fixtures; software engineering; and plastics. The Montgomery area is a major distribution center for the southeast, supporting large companies such as Russell Corporation, and Consolidated Stores. The Information Technology industry is a growing part of the Montgomery area economy, with 125 companies located in the capital city in 2001. Five local universities and colleges and MAFB and its auxiliary location, the Gunter Annex provide opportunities for employment and supply a well-educated workforce. The Montgomery MSA as well as the State of Alabama has experienced a steady decline in the manufacturing sector since 1995. For example, from July 1998 to July 1999, Alabama manufacturing firms lost 9,300 jobs. Sixty percent of the jobs were in the textile and apparel industries (MAFB 2004a). However, several large companies, including Hyundai Motors, have opened factories in the Montgomery area since 2000, contributing additional manufacturing jobs to the area.

The largest single contributor to the economy of the Montgomery region is the government sector. The U.S. military's presence in the region includes MAFB and its auxiliary location, the Gunter Annex, which provide a broad spectrum of educational, training, command, and personnel support. The Public Affairs Office at MAFB estimates that the total economic impact of the military and civilian employment associated with the U.S. military in the region (including contracted dollars) in FY 2001 was $1.101 billion (MAFB 2001).

Job Composition

The labor force level for the Montgomery MSA was 143,440 jobs in 2003 (USCB 2008c). Sixty percent of these jobs were concentrated in retail and services industries (Table 3-8).

Table 3-8
Estimated Distribution of Employment by Industrial Sector, Montgomery MSA, 2003

Industrial Sector	Number of Jobs	Percent
Agriculture	384	0.3
Construction	12,782	8.9
Manufacturing	12,036	8.4
Wholesale Trade	3,971	2.8
Retail Trade	15,087	10.5
Transportation and Utilities	9,116	6.4
Information	1,895	1.3
Finance, Insurance, and Real Estate	10,266	7.2
Services (combined)	59,675	41.6
Public Administration	18,228	12.7

Source: USCB, 2008c

According to the Montgomery Chamber of Commerce, there are approximately 8,203 businesses located in Montgomery. Table 3-9 lists the region's ten largest employers, excluding MAFB, which is the largest area employer.

Table 3-9
Top Ten Employers in the Montgomery Region (2005)

Employer (Overall Rank)	Number of Employees
1. State of Alabama	9,500
2. Montgomery Public Schools	4,524
3. Baptist Health	4,300
4. Hyundai Motor Manufacturing Alabama, LLC	3,171
5. Alfa Insurance Companies	2,568
6. City of Montgomery	2,500
7. 754th Electronics Systems Group	1,943
8. Jackson Hospital & Clinic, Inc.	1,300
9. Rheem Water Heaters	1,050
10. Baptist Medical Center South	980

Source: Montgomery, Alabama Chamber of Commerce (2008)

Earnings

Average annual wages vary in Alabama due to factors such as the type of jobs available, the different industrial composition of the counties, the mix between seasonal and year-round work, and the extent of union activity. Many of the jobs in the Montgomery MSA provide relatively high wages, resulting in an annual average wage of $34,880 in 2007—ranked third highest among the 12 MSAs in the state. Alabama's average annual wage was $34,950 in 2007 (USDL, 2007).

Per capita income is a broader measure of financial strength for the residents of a county, including resources such as dividends, rents, and government transfer payments, as well as wages. Montgomery County reported a per capita income level of $23,194, while residents within the City of Montgomery earned a per capita income of $23,028 according to 2006 projections. The state per capita income was estimated at $21,270 in 2006, adjusted for inflation. The national per capita income exceeded that of the state, MSA, and the city; in 2006 it was estimated to be $25,267 (USCB 2008c).

Unemployment

The data available from the U.S. Department of Labor and the Census Bureau on unemployment rates in 2000 and 2006 reveal that both the City of Montgomery and Montgomery County had unemployment rates above those of the State of Alabama (Table 3-10).

Table 3-10

Unemployment Rates for City of Montgomery, Montgomery County, and State of Alabama: 2000, 2006 (estimated)

Year	City of Montgomery	Montgomery County	State of Alabama
2000	4.2%	3.7%	4.1%
2006	7.4%	3.7 %	3.5 %

Source: USDL 2008

3.9 ENVIRONMENTAL JUSTICE AND PROTECTION OF CHILDREN

3.9.1 Definition of Resource

In 1994, EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, was issued to focus attention of Federal agencies on human health and environmental conditions in minority and low-income communities. In addition, EO 12898 aims to ensure that disproportionately high and adverse human health or environmental effects on these communities are identified and addressed.

In order to provide a thorough environmental justice evaluation, this section gives particular attention to the distribution of race and poverty status in areas potentially affected by implementation of the proposed action. For purposes of this analysis, minority and low-income populations are defined as follows:

- *Minority Populations*: Persons of Hispanic origin, Blacks, American Indians and Alaska Natives, Asians, Native Hawaiian and Other Pacific Islanders, as well as those individuals who categorized themselves as "two or more races" or "some other race" on the Census 2000 questionnaire.
- *Low-Income Populations*: Persons living below the poverty level, based on U.S. Census Bureau intercensal data reported in the 2006 Current Population Survey for individual counties.

Because children may suffer disproportionately from environmental health risks and safety risks, EO 13045, *Protection of Children from Environmental Health Risks and Safety Risks*, was issued in 1997. EO 13045 helps to ensure that Federal agencies' policies, programs, activities, and standards address environmental risks and safety risks to children. This section identifies the locations where numbers of children may be disproportionately high (e.g., schools, childcare center, family housing) in areas potentially affected by implementation of the proposed action.

3.9.2 Existing Conditions

3.9.2.1 Race and Poverty Status

Population distribution data for Montgomery County, the City of Montgomery, and the State of Alabama in 2006 are summarized in Table 3-11. The City of Montgomery has

the highest minority population (56.9 percent), followed closely by Montgomery County at 56.1 percent and Alabama at 29.6 percent.

Table 3-11
Population Distribution: Montgomery County, City of Montgomery, and State of Alabama, 2006

Race Category	Montgomery County	% Total Pop	City of Montgomery	% Total Pop	Alabama	% Total Pop
White	97,967	43.8	86,957	43.0	3,237,958	70.4
Black	118,676	53.1	108,858	53.8	1,209,321	26.3
American Indian and Alaska Native	592	0.3	429	0.2	20,592	0.4
Asian	3,385	1.5	3,306	1.6	45,882	1.0
Native Hawaiian and Other Pacific Islander	173	0.1	173	0.1	3,244	0.1
Hispanic	3,428	1.5	3,300	1.6	111,432	2.4
Other[1]	2,778	1.2	2,720	1.3	82,033	1.8
TOTAL	223,571	100	201,568	100	4,599,030	100

Source: USCB 2008b

[1]Census 2000 allowed respondents to define their race as either White, Black, American Indian and Alaska Native, Asian, Native Hawaiian and Other Pacific Islander, or Hispanic. In addition, respondents were allowed to report "Some other race" and were given the option of selecting two or more races (57 possible combinations). The "Other" category combines numbers for "Some other race" and all combinations of two or more races, and the Hispanic classification includes Hispanics or Latino of any race. This classification system could result in discrepancies between the numbers totaled in the table and actual totals.

Table 3-12 compares populations of Montgomery County, the State of Alabama, and the United States that were below the poverty level in 2006, based on U.S. Census Bureau estimates. Data reveals that the incidence of individuals below the poverty level in Montgomery County (18.2 percent) was higher than in the state population (16.6 percent). Both Montgomery County and the State of Alabama had higher levels than the general U.S. percentage of 13.3 percent.

Table 3-12
Poverty Status: Montgomery County, State of Alabama, and United States, 2006

Montgomery County	% Total Pop	Alabama	% Total Pop	United States	% Total Pop
39,080	18.2	742,064	16.6	38,757,253	13.3

Source: USCB 2008d

3.9.2.2 Protection of Children

As required by EO 13045, this analysis includes an assessment of the potential for children to be disproportionately exposed to environmental health risks and safety risks. According to the MAFB-Gunter Annex Comprehensive Plan, as well as a field survey, there are no facilities adjacent to, or in the immediate area of, the proposed action that would contain disproportionate populations of children.

3.10 HAZARDOUS MATERIALS AND WASTES

3.10.1 Definition of Resource

Hazardous materials and hazardous waste are defined and categorized by numerous environmental statutes as substances with physical properties of ignitability, corrosivity, reactivity, concentration, or toxicity that may cause or contribute significantly to an increase in mortality, serious irreversible illness, or incapacitating reversible illness, or pose a substantial threat to human health or the environment. Hazardous materials must be used and managed in a particular manner to safeguard public health and the environment and are regulated by laws that include the Occupational Safety and Health Act (OSHA) of 1970 (29 USC 651 *et seq.*), Emergency Planning and Community Right-to-Know Act (EPCRA) of 1986 (42 USC 11001 *et seq.*), and Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980 (42 USC 9601-9675). Hazardous waste is a hazardous material that is no longer used or needed. Hazardous waste is regulated by the Solid Waste Disposal Act and the Resource Conservation and Recovery Act (RCRA) and its amendments (42 USC 6901-6992).

To protect people and the environment from potentially harmful releases of hazardous substances, and pursuant to Federal and state laws, the Executive Branch (Executive Order 12088, Federal Compliance with Pollution Control Standards, Oct. 13, 1978) and the Department of Defense (DoD Instruction 4150.7) have directed that all military departments develop and implement hazardous materials and hazardous waste management procedures.

The U.S. Air Force, through Air Force Policy Directive (AFPD) 32-70, *Environmental Quality*, established the policy that the Air Force is committed to environmentally sound practices, including: cleaning up environmental damage from past activities; meeting all environmental standards applicable to present operations; planning future activities to minimize environmental impacts; managing responsibly any natural and cultural resources it holds in public trust; and eliminating pollution from its activities wherever possible. AFPD 32-70 and the Air Force Instructions (AFI) series 32-7000 incorporate the requirements of all Federal regulations, DoD Directives, and other AFIs for the management of hazardous materials and hazardous wastes.

3.10.2 Existing Conditions

The Environmental Section at MAFB (Maxwell Support Division Civil Engineering Environmental Section [MSD/CEV]) is responsible for the management of hazardous materials and wastes for the entire installation. MAFB utilizes hazardous materials to accomplish a number of routine and special activities on base, such as aircraft and machinery maintenance, aircraft painting processes, medical procedures, and other tasks. A Hazardous Materials Management Program has been instituted to oversee, and, to the maximum extent possible, minimize the procurement, use, and disposal of hazardous materials. Hazardous materials are tracked and reported through the Air Force Environmental Management Information System (EMIS) and regular inspections.

There is one Hazardous Waste Manager assigned to the Environmental Section and all matters concerning hazardous waste are managed through this position. Disposal of hazardous waste is arranged through a Defense Reutilization Marketing Office (DRMO) service contract wherein licensed hazardous waste contractors remove and dispose of the waste, and DRMO maintains all hazardous waste documentation in accordance with pertinent regulations.

The primary types of hazardous waste generated at MAFB include medical waste, adhesives, paint-related wastes, solvents, batteries, contaminated absorbents from spill cleanup, oil filters, and corrosive liquids. Hazardous waste is tracked and inspected to assure compliance and appropriate disposal. Hazardous waste is accumulated at 16 initial accumulation points, one 90-day accumulation site, and one 180-day accumulation site. Maxwell operates as a large-quantity hazardous waste generator under the Resource Conservation and Recovery Act (RCRA). Gunter is a small-quantity hazardous waste generator. In 2007, Maxwell-Gunter generated and disposed of 9,140 lbs of hazardous waste. This amount is well below the AF goal for Maxwell of 42,574 lbs/year (MAFB 2007c).

The Environmental Section has developed the following specific plans to manage both hazardous materials and hazardous wastes at MAFB.

Hazardous Materials. A user-friendly, simple-to-follow guide for ordering, using, and disposing of hazardous materials at MAFB is used by the Environmental Section. This guide, entitled *Hazmats Made Easy, (Maxwell AFB Hazardous Materials Management Guide)* (MAFB 2004b), incorporates the procedures and standards contained in AFI 32-7086 that govern management of hazardous materials throughout the U.S. Air Force. It applies to all Air Force personnel who authorize, procure, use or dispose of hazardous materials and to those who manage, monitor, or track any of those activities. Base handling of hazardous materials is also governed by the *Oil and Hazardous Material Spill Prevention and Response Plan, 42 ABW Plan 32-11* (MAFB 2008c).

Hazardous Waste. The Environmental Section, pursuant to AFI 32-7042, maintains a *Hazardous Waste Management Plan, 42 ABW Plan 32-10* (MAFB 2008d). This plan provides guidance to MAFB personnel on the proper handling, storage, and disposal of

hazardous waste and implements the USEPA "cradle-to-grave" management controls for hazardous waste.

Asbestos. AFI 32-1052 mandates that installations develop an asbestos management plan to reduce the potential of personal exposure to potentially hazardous levels of airborne asbestos fibers and to maintain compliance with pertinent asbestos regulations. The Environmental Section maintains an *Asbestos Management and Operations Plan* (MAFB 2007d) to meet these requirements.

Lead-Based Paint. Pursuant to U.S. Air Force requirements, the Environmental Section maintains a *Lead-Based Paint Management Plan* that provides guidance for identifying, evaluating, managing, and abating lead-based paint hazards (MAFB 2007e).

Pollution Prevention. AFI 32-7080 implements the regulatory requirements of several federal statutes for the reduction or prevention of pollution by mandating the development of installation Pollution Prevention Management Plans. In furtherance of this requirement, the Environmental Section has developed the *Pollution Prevention Management Action Plan, 42 ABW Plan 32-12* (MAFB 2007f) and the *Oil and Hazardous Materials Spill/Prevention and Response Plan, 42 ABW Plan 32-11* (MAFB 2008c).

Solid Waste Management. MAFB has implemented a Solid Waste Management Plan for the proper disposal of non-hazardous solid waste generation on the installation. There are no solid waste landfills in use at MAFB, so all non-hazardous solid waste is collected and disposed of by licensed private contractors at either the North Montgomery Municipal Landfill or a permitted private landfill. Yard waste is collected and transported to a compost facility on the installation. Recyclable materials, including metals from the firing range operations, are collected and transported by a private contractor to a commercial recycling center or DRMO (MAFB 2008e).

3.10.2.1 Environmental Restoration Program

This section describes activities in the vicinity of the Proposed Action that are part of the MAFB Environmental Restoration Program (ERP), previously known as the Installation Restoration Program (IRP). The status of environmental restoration and associated compliance programs at Maxwell is documented in the *Environmental Restoration Program Management Action Plan*, or ERP MAP (MAFB 2005). The ERP is managed by a Project Team led by the ERP Remedial Project Manager from the 42d Mission Support Group, and includes representatives from EPA Region 4 and ADEM. The various parties strive to work together to address contamination generated from both on-base and off-base sources. The Project Team meets quarterly or on an as-needed basis.

The ERP requires each DoD installation to identify, investigate, and clean up hazardous waste disposal or release sites. MAFB has 32 ERP sites. Table 3-7 lists the MAFB ERP sites and their current status (Thompson 2008). Figure 3-5 shows the ERP/IRP sites (MAFB 2002).

Table 3-13
Status of ERP Sites on MAFB

Site ID No.	Description	Status
SS-002	AVGAS[1] Chlorinated Solvents	ROD[2]
SS-003	Building 913 Contaminated Groundwater	ROD
SS-004*	Contaminated Groundwater (External Source)	ROD
SS-006	Building 1048 Contaminated Groundwater	ROD
SS-007	Building 1037 Contaminated Groundwater	ROD
SS-008	Junk Yard Site	ROD
SS-009	U.S. Highway 31 Gas Station Spill Site	ROD
SS-011	Building 1063 Contaminated Groundwater	ROD
FT-002	Firing Training Area No. 2	ROD
LF-002	Landfill No. 2	ROD
LF-003	Landfill No. 3	ROD
LF-004	Landfill No. 4	ROD
LF-005	Landfill No. 5	ROD
LF-006*	Landfill No. 6	ROD
SS-010	Old Pipeline Fuel Contamination	RA[3]
SD-001*	Surface Drainage System	RA
DP-001	Electroplating Waste Disposal Area	NFRAP[4]
FT-001	Firing Training Area No. 1	NFRAP
LF-001	Landfill No. 1	NFRAP
SS-001	Civil Engineering Drum Storage Area	NFRAP
SS-005	Building 1000 Soil Contamination	NFRAP
ST-001	Building 1037 USTs[5]	NFRAP
ST-002	Building 1130 UST	NFRAP
ST-003	Building 913 UST	NFRAP
ST-004	Building 1048 UST	NFRAP
ST-005	Building 1112 UST	NFRAP
ST-006	Building 714 UST	NFRAP
ST-007	Building 1245 Asphalt Storage Tank	NFRAP
ST-008	Runway Lighting Auxiliary Generator UST	NFRAP
ST-009	Building 668 USTs	NFRAP
ST-010	1100 Area Base Fuel Farm	NFRAP
ST-011	AVGAS[1] System and Flightline Area	NFRAP

Source: Thompson 2008.
Notes: [1]AVGAS—Aviation Grade Gasoline
[2] ROD – Record of Decision
[3] RA—Remedial Action
[4] NFRAP—No Further Remedial Action Planned
[5] UST—Underground Storage Tank(s)
*ERP Sites of Interest to the Proposed Action

Evasion Lab Site and ERP Status

The proposed site for the ECAC evasion lab is in proximity of three of the ERP sites. The site lies to the east of ERP site LF-006 and to the north of SS-004 and SD-001.

Table 3-14
Description of ERP Sites in the Vicinity of the Proposed Action

ERP Site No.	Description and Status
• **SD001**	Surface Drainage System. This site includes the West End Ditch along the western boundary of the base. SD001 borders Washington Ferry Road along the north side for approximately 175 feet. From the 1940s to the 1970s, this area received untreated industrial waste solutions, including: washrack effluent, electroplating operations rinse-waters, acids, and paint strippers. The risks identified for SD001 are associated with non-point source discharge contributions from adjacent non-DoD sources and from ongoing base grounds-keeping and storm water management activities. The site is not associated with historical CERCLA spills or releases. It is anticipated that with additional rounds of sediment and surface water sampling for non-point source discharges, the site will be removed from the IRP list.
• **SS004**	Solvent Contaminated Groundwater. This site is a large area comprised of the existing fenceline/base boundary area that includes the West End Ditch, extending from the southwest corner of the base northward along the West End Ditch, to the south end of Landfill 6. This site contains low levels of Tetrachloroethylene (TCE) in the groundwater from external sources.
• **LF006**	Landfill site. Along with LF004 and LF005, this area is the site of an old landfill. These landfill sites lie adjacent to the western border of the base. There are low levels of TCE in the groundwater beneath these sites, approximately 20 feet below grade. Groundwater flow is to the north through the West End Ditch toward the Alabama River.

Source: Thompson 2008.

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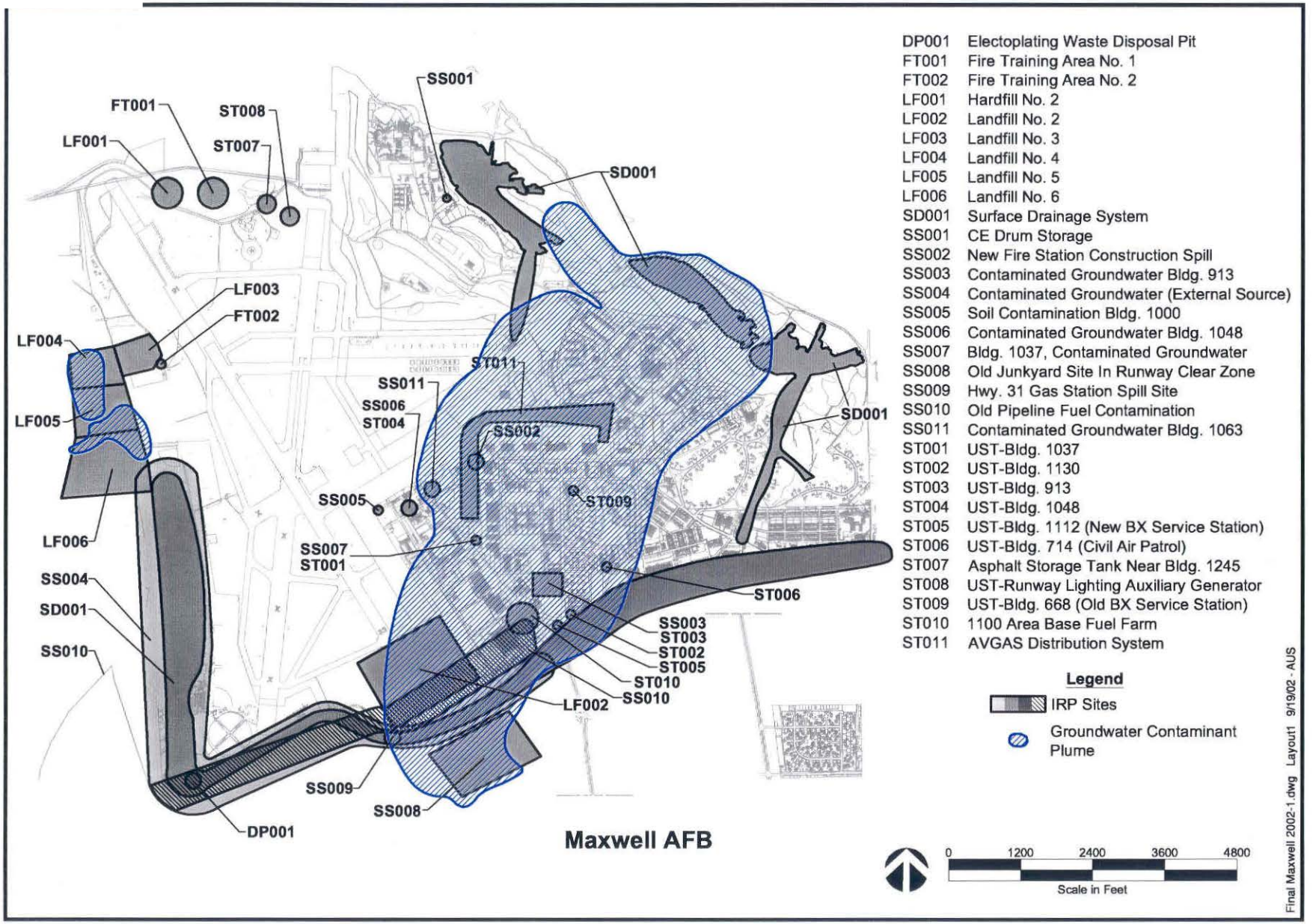
DP001 Electoplating Waste Disposal Pit
FT001 Fire Training Area No. 1
FT002 Fire Training Area No. 2
LF001 Hardfill No. 2
LF002 Landfill No. 2
LF003 Landfill No. 3
LF004 Landfill No. 4
LF005 Landfill No. 5
LF006 Landfill No. 6
SD001 Surface Drainage System
SS001 CE Drum Storage
SS002 New Fire Station Construction Spill
SS003 Contaminated Groundwater Bldg. 913
SS004 Contaminated Groundwater (External Source)
SS005 Soil Contamination Bldg. 1000
SS006 Contaminated Groundwater Bldg. 1048
SS007 Bldg. 1037, Contaminated Groundwater
SS008 Old Junkyard Site In Runway Clear Zone
SS009 Hwy. 31 Gas Station Spill Site
SS010 Old Pipeline Fuel Contamination
SS011 Contaminated Groundwater Bldg. 1063
ST001 UST-Bldg. 1037
ST002 UST-Bldg. 1130
ST003 UST-Bldg. 913
ST004 UST-Bldg. 1048
ST005 UST-Bldg. 1112 (New BX Service Station)
ST006 UST-Bldg. 714 (Civil Air Patrol)
ST007 Asphalt Storage Tank Near Bldg. 1245
ST008 UST-Runway Lighting Auxiliary Generator
ST009 UST-Bldg. 668 (Old BX Service Station)
ST010 1100 Area Base Fuel Farm
ST011 AVGAS Distribution System
Legend
IRP Sites
Groundwater Contaminant Plume
Maxwell AFB
0 1200 2400 3600 4800
Scale in Feet
Final Maxwell 2002-1.dwg Layout1 9/19/02 - AUS

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Proposed Firing Range Site and MMRP Status

In 2007, A Comprehensive Site Evaluation, Phase I, was conducted at Maxwell to identify all sites that may be eligible as a munitions response area (MRA) for the USAF Military Munitions Response Program (MMRP). The purpose of this program was to identify sites that may need remedial action because of previous military munitions use on the site. Three potential MRA sites were identified on Maxwell AFB. The site of interest for the Proposed Action is the proposed site for the new firing range complex. This site is adjacent to the present CATM firing range and is currently used as an equestrian riding arena. This site has been used as a riding arena since at least 1988. Prior to this date, the site had been used as a skeet range from 1937-1942 and then as a pistol range from 1945 to about 1972. A linear berm, approximately 8 feet high runs the length of this site along its northern edge (Figure 3-6).

Since this site was used for munitions, there is the potential for soil contamination from metals associated with small arms debris and polycyclic aromatic hydrocarbons (PAHs) from clay pigeon debris. There was no sampling done in conjunction with the 2007 site evaluation. Recommendations for this site included further sampling to determine whether munitions constituents have been released to the environment (MAFB 2007g).

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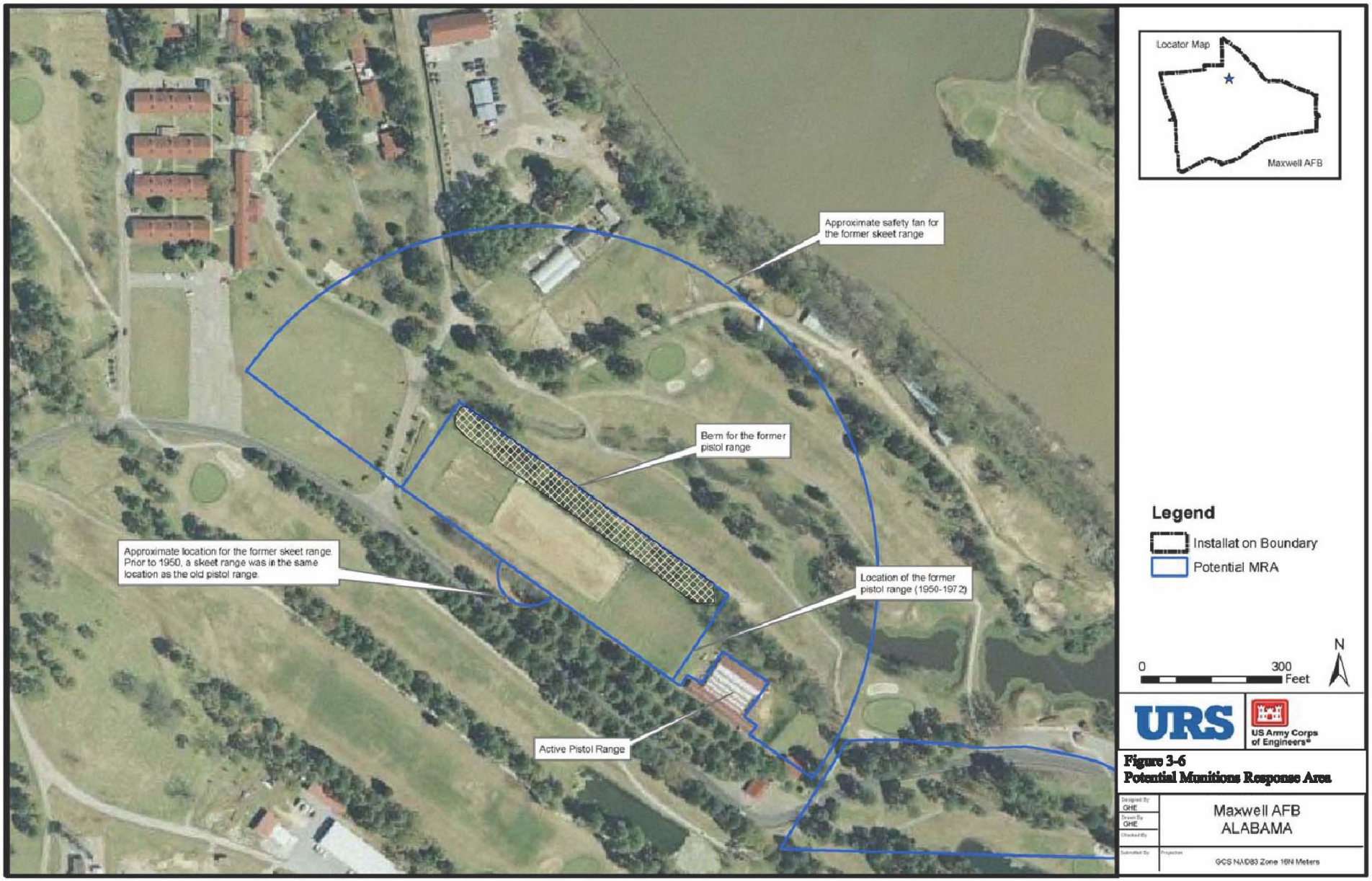

Figure 3-6
Potential Munitions Response Area

Maxwell AFB
ALABAMA

GCS NAD83 Zone 16N Meters

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3.11 Utilities

3.11.1 Definition of Resource

Utilities consist of land, facilities, structures, energy, and services necessary to perform required operations. This assessment presents baseline conditions, including current consumption levels, for electricity and natural gas, potable water, wastewater, and solid waste management.

3.11.2 Existing Conditions

3.11.2.1 Electricity and Natural Gas

MAFB receives electricity from an Alabama Power Company substation located near the installation. MAFB is a "Priority 1" customer for the Alabama Power Company, which ensures that the installation would receive electrical service in the event that peak demands limit the ability of Alabama Power to supply service to all its customers. There are no daily limits imposed on MAFB for electrical consumption (Riley 2008).

Natural gas is provided to MAFB by the Alabama Gas Corporation (ALAGASCO). There are no daily limits imposed on MAFB for natural gas consumption (Riley 2008).

3.11.2.2 Water

MAFB obtains its potable water from the City of Montgomery, which obtains water from both groundwater and surface water sources. Three aquifers are accessed via well fields located in various locations in the city. The Tallapoosa River is the sole source of surface water used by the City of Montgomery for potable water. There are no daily limits imposed on MAFB for water consumption (Riley 2008).

3.11.2.3 Wastewater

The Towassa Wastewater Treatment Plant provides tertiary treatment to MAFB. The treatment plant is operated and maintained by the City of Montgomery. The plant has a capacity of 21 million gallons per day (MGD) and records an annual average of 10 MGD (City of Montgomery 2004b).

3.11.2.4 Solid Waste Management

Solid waste generated at MAFB is either recycled or disposed of in the North Montgomery City Landfill located west of MAFB. This 400-acre landfill began operation in 1980 and incorporates lined cells for garbage refuse and unlined cells for construction debris and other "dry" refuse. As of 2002, the landfill had an estimated 19 years of remaining operating life (City of Montgomery 2004c).

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4 ENVIRONMENTAL CONSEQUENCES

Resource analyses presented in this section are based on an examination of the potential effects of the Proposed Action and the No-Action Alternative (described in Chapter 2) on existing environmental conditions (described in Chapter 3). The discussion of potential environmental consequences follows the sequence of existing environmental conditions, as presented in Chapter 3.

4.1 AIR QUALITY

4.1.1 Approach to Analysis

Criteria pollutant emissions resulting from proposed construction activities at MAFB have been evaluated for the Proposed Action and No-Action Alternative. Air quality impacts would be significant if emissions associated with the Proposed Action or No-Action Alternative would: 1) increase ambient air pollution concentrations above the NAAQS; 2) contribute to an existing violation of the NAAQS; 3) interfere with or delay timely attainment of the NAAQS; or 4) impair visibility within Federally mandated Prevention of Significant Deterioration (PSD) Class I areas. Additionally, a conformity analysis would be required before initiating any action that might lead to nonconformance of a State Implementation Plan (SIP) or an excess of *de minimis* criteria pollutant thresholds or that might contribute to a violation of the NAAQS.

4.1.2 Impacts

4.1.2.1 Proposed Action

Construction Emissions

Construction activities associated with the Proposed Action at MAFB would result in minor, temporary increases in criteria pollutant emissions. Specifically, emissions from construction and construction-related vehicles used during facility construction activities would increase, but the increase would be temporary and short-term. Emissions associated with construction-related vehicles and equipment would be negligible, as most vehicles would be driven to and kept at the affected site until construction was complete. As these are mobile sources, they would have no impact to Maxwell's true minor status determination.

In addition, fugitive dust (i.e., PM_{10}) would increase as a result of surface disturbances (e.g., grading and vegetation removal) associated with construction activities. However, fugitive dust generated by proposed construction activities would be temporary and short-term; no long-term increases in fugitive dust would occur. Additionally, increases in PM_{10} would be moderated through Best Management Practices (BMPs), including watering of exposed soils, soil stockpiling, and soil stabilization, thereby limiting the total quantity of fugitive dust emitted during the construction period.

Emissions from Stationary Sources

A boiler for the dining hall/multi-purpose facility would be the only potential new source that would affect Maxwell's emission levels. The increase in emissions from this source would be minimal when compared to the emissions from Maxwell's current sources. NO_x is Maxwell's greatest criteria pollutant, so levels of this criteria pollutant were evaluated as a benchmark for all of the criteria pollutants. The latest Air Emissions Inventory for stationary sources shows that Maxwell emits 4.077 tons per year (tpy) of NO_x. Maxwell has the potential for 43.76 tpy at maximum operation levels. A building similar to the proposed dining hall/multi-purpose facility normally emits approximately 0.11 tpy, with a potential of 0.81 tpy. Therefore, Maxwell's emissions would be projected to increase from 4.077 tpy to 4.187 tpy. The potential would increase from 43.76 tpy to 44.57 tpy (MAFB 2008a).

The threshold for maintaining Maxwell's true minor status is 100 tpy of NO_x. Therefore, emissions from one additional building would not cause Maxwell to approach the threshold. Implementation of the Proposed Action would not lead to an excess of *de minimis* thresholds, and estimated criteria pollutant emissions would not violate the NAAQS. A determination of conformity to the Alabama SIP is not required. In addition, implementation of the Proposed Action would not impair visibility within a Prevention of Significant Deterioration (PSD) Class I area, as no PSD Class I areas are located within the vicinity of the Proposed Action.

4.1.2.2 No-Action Alternative

Under the No-Action Alternative, proposed short-term construction activities would not occur. Baseline air quality, as described in Section 3.1, would remain unchanged. Therefore, no impacts to air quality would occur as a result of implementation of the No-Action Alternative.

4.2 NOISE

4.2.1 Analysis Methodology

The general Region of Influence (ROI) is the area surrounding the proposed site exposed to elevated noise levels caused by construction, munitions-related noise, and other human activities. For Maxwell AFB, the ROI includes the installation and surrounding areas.

Ambient background noise is not considered in the noise calculations. There are two reasons for this. First, ambient background noise, even in remote areas, varies widely depending on location and other conditions. Therefore, assigning a value to background noise would be arbitrary. Second, and probably more importantly, it is reasonable to assume that ambient background noise in the Proposed Action's ROI would have little or no effect on the calculated Day-Night Average Sound Levels, or L_{dn}. In calculating noise levels, louder sounds dominate the calculations. Overall, aircraft and other

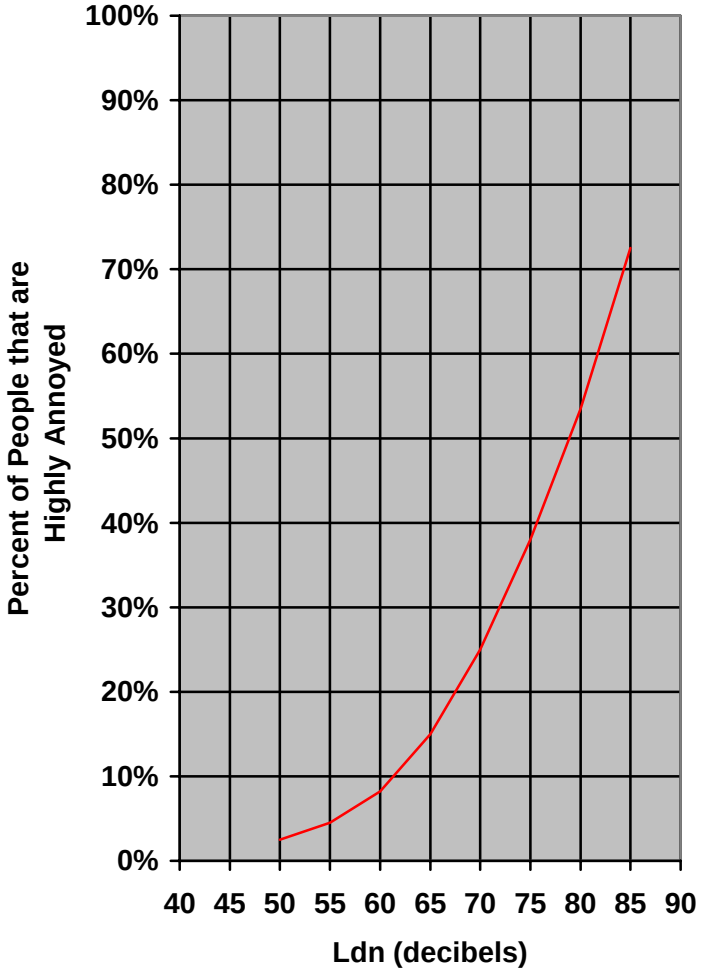
transportation-related noise are, and will continue to be, the dominant noise sources for Maxwell AFB.

Although ambient noise is not measured or included in noise calculations, it is an important factor in determining impacts. For example, a new airfield near an industrial area would have little impact on the noise environment. In comparison, a new airfield built near a residential area may have significant impacts on the noise environment. Therefore, ambient noise is considered in impact determination where applicable.

Public annoyance is the most common impact associated with exposure to elevated noise levels. Most people are exposed to sound levels of 50-55 dBA (L_{dn}) or higher on a daily basis. Studies conducted to determine noise impacts on various human activities have revealed that sound levels below 65 dBA (L_{dn}) do not significantly bother approximately 87 percent of the population (FICON 1992). The USEPA and Air Force rely on the Schultz Curve to predict annoyance levels, which is shown in Table 4-1. Impacts are therefore described in terms of increases in noise levels and the potential for annoyance to receptors (i.e., local residents, personnel, etc.) based on potential increases above ambient noise levels. Under most conditions, a change of 5 dB is required for humans to perceive a change in the noise environment (USEPA 1974). Based on the Schultz Curve, approximately 25 percent of people are highly annoyed by noise levels of 70 dBA (L_{dn}). The percent of people highly annoyed increases to approximately 70 percent at a noise level of 85 dBA (L_{dn}).

Interior noise levels are typically lower than exterior levels because of the attenuation of sound energy by the structure. The amount of noise level reduction provided by a building is dependent on the type of construction and the number of openings, such as doors, windows, chimneys, and plumbing vents. The approximate reduction in noise is 15 dBA when windows are open and 25 dBA when windows are closed (USEPA 1974). The Air Force normally uses 20 dBA to estimate attenuation for closed windows (Randolph AFB 2003).

Table 4-1
Schultz Curve Illustrating the Relationship Between Noise Levels and Human Annoyance Response



Source: Schultz 1978 as cited in Deadrick 2005

4.2.1.1 Analysis Methodology for Construction Noise

The Roadway Construction Noise Model was used to determine potential noise generated by construction equipment that would be utilized during the projects. This model is utilized by the Federal Highway Administration to predict construction noise (USDOT 2006). Types of machinery commonly used in grading and construction projects were analyzed at various distances from the construction site to evaluate potential noise impacts. Table 4-2 summarizes sound levels from typical equipment used on construction sites (USAF 2007).

Table 4-2
Typical Equipment Sound Levels at 50 Feet

Equipment	Sound Level (in dBA) Under Indicated Operational Mode		
	Idle Power	Full Power	Moving Under Load
Dozer	63	74	81
Dump Truck	70	71	74
Excavator	62	66	72
Forklift	63	69	91
Front-end Loader	60	62	68
Grader	63	68	78
Sweeper	64	76	85
Tractor-Trailer	67	78	77

dBA = A-weighted decibels

Construction noise was evaluated for one construction site and may be applied to each of the sites individually for potential negative effects to sensitive receptors in the vicinity of the construction site. The same types of equipment are assumed to be used on each construction site, and construction noise was evaluated at various distances from the construction equipment. Noise levels were evaluated for receptors at 100-foot increments. Noise abatement measures were not considered in this analysis in order to understand the full effect of the potential impact. If noise impacts were evident, then abatement procedures were identified that could mitigate potential noise impacts.

Table 4-3 describes noise levels for receptors at varying distances from a typical construction site. The equivalent noise level, or L_{eq}, is calculated at 84 dBA for receptors 100 feet from the construction site (USAF 2007).

Table 4-3
Noise Levels Expected from Each Construction Site

Distance to Receptor (feet)	Maximum Sound Level (L_{max}) [1] (dBA)	$L_{eq(8)}$ [2] (dBA)
100	79.2	84.0
200	73.1	78.0
300	69.6	74.5
400	67.1	72.0
500	65.2	70.0

dBA = A-weighted decibels

[1] L_{max} = maximum sound level (the maximum sound level heard at the specified distance from the loudest piece of equipment)

[2] $L_{eq(8)}$ = equivalent noise level (average noise level) during the operation of construction equipment and other noise producing construction events over an 8-hour construction period

4.2.1.2 Analysis Methodology for Munitions Noise

Noise generated from various types of munitions is considered "impulse noise." Impulse noise is generally of short duration and high noise level. These noises can be the cause of annoyance to nearby receptors due to the startle effect (i.e., quick onset with no warning). This noise would occur in the same area of base as the current small arms range, so there would be little change in the land area affected by the firing range noise.

The two main weapons that would be fired at the Maxwell small arms range would be the 9mm pistol (M-9) and the M-4 rifle. These would be fired at a target that is 50 meters away from the firing point. Tables 4-4 and 4-5 give the peak sound levels for the firing of these two weapons at various distances.

Table 4-4
Predicted Peak Noise Levels
9mm Pistol - 50 meter target

	Predicted Level, dBP Azimuth		
Distance, meters	**0°**	**90°**	**180°**
50	114-124	109-119	105-115
100	108-118	103-113	99-109
200	102-112	96-106	93-103
400	91-101	84-94	83-93
800	83-93	76-86	75-85
1600	75-85	67-77	67-77

dBP = peak decibels
Note: the 180° azimuth is directly behind the weapon

Table 4-5
Predicted Peak Noise Levels
M-16 Rifle (5.56mm Live) - 50 meter target

	Predicted Level, dBP Azimuth		
Distance, meters	**0°**	**90°**	**180°**
50	140-150	112-127	107-117
100	118-128	111-121	100-105
200	111-121	104-114	99-104
400	98-108	91-101	83-93
800	90-100	82-92	74-84
1600	80-90	72-82	64-74

dBP = peak decibels
Note: the 180° azimuth is directly behind the weapon
Note: noise for the M-4 is identical to the M-16 (Reichard 2008)

Since the M-16 generally has higher peak noise levels, these readings were used in the noise calculations to account for the highest level expected during peak operations of the firing range.

Munitions noise was evaluated utilizing data from the Small Arms Range Noise Assessment Model (SARNAM), version 2.6.2003-06-06. This model provided guidance on noise levels expected from the proposed operation of the new 56-point small arms firing range. The noise contours produced by the SARNAM are representative of the maximum noise levels expected from peak operations of the proposed range (as if weapons with the maximum noise level expected were fired from all 56 points at exactly the same time). This representation does not take into account the sound attenuation from the existing berms or from any other noise mitigation measures, so actual noise levels would be expected to be lower than the projected representations. Noise attenuation measures can also be included in the range complex design to further lower the actual noise levels.

4.2.2 Impacts

4.2.2.1 Proposed Action

Noise Impacts of Construction Activities

Under the Proposed Action, minor, temporary impacts to the noise environment in the vicinity of the proposed construction sites would occur. The use of heavy equipment for site preparation and development (e.g., grading and back fill) could potentially generate noise levels above average ambient noise levels. According to the construction noise analysis described above, the average sound level produced by construction activities would be approximately 84 decibels (dBA) at a distance of 100 feet.

The elevated noise levels could potentially be of particular concern for the construction of the proposed dormitory and dining hall/multi-purpose facility, as these would be close to the residential areas of the OTS complex. Buildings 1486, 1488, and 1489 are cadet quarters that are 100-200 feet from the proposed site of the new dormitory and dining hall/multi-purpose facility. Noise levels would be typical of standard construction activities; would cease with the completion of proposed construction activities; and would only occur during normal working hours (i.e., between 7:00 A.M. and 5:00 P.M., Monday through Friday). Furthermore, sound levels could be reduced through the use of equipment sound mufflers if needed. Under these conditions, elevated noise levels would not occur at night while the cadets are sleeping in the nearby dormitories. Personnel within the nearby dormitories and other buildings could be expected to experience noise levels that are lower than the predicted values for construction noise because the building itself would reduce the noise by approximately 20 dBA. Therefore, the noise levels experienced by occupants of these buildings can be expected to be below 64 dBA during daytime periods of construction. According to the Schultz Curve shown above, average sound exposure levels of 65 dB or below are not expected to cause annoyance to

approximately 87% of the population. Therefore, these temporary increases in sound levels would not be expected to be disruptive to most people.

No other proposed construction sites have sensitive receptors within 500 feet, so no noticeable annoyance would be expected due to construction noise at these other sites.

Noise Impacts For Proposed Firing Range

Munitions noise at the small arms range would be the primary long-term contributor to the noise environment. Munitions noise may have an effect on base personnel utilizing the outdoor recreation areas of the equestrian arena, golf courses, or nearby lakes. The most likely noise impacts would be noticeable speech interference, startle effect, or annoyance.

According to U.S. Army Guidance on small arms range noise effects, two decibel contours are of special interest (US Army 2007). Peak sound levels of 87 dB or below are at low risk of noise complaints and are considered compatible with most land uses. On the other hand, peak sound levels above 104 dB are expected to be disruptive to normal communication and activities, and thus puts the noise-generating source or activity at high risk of noise complaints. Noise sensitive land uses (such as schools and housing) are not recommended where noise levels exceed 104 dB. The noise contours for both the 87 dB level and the 104 dB levels were identified on the SARNAM projections (Figure 4-1).

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Legend

- Distance to Community Area
- Firing Range
- Noise Contour Line
- dB Decibels

DRAWN BY	JNK	CHECKED BY		
		APPROVED BY		

LEC

Figure 4–1. Firing Range
Projected Peak Noise Levels

Environmental Assessment
Proposed Construction of Training Facilities
Maxwell AFB
Montgomery, AL

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According to the SARNAM results, peak noise levels that could exceed 104 dB would be expected within a distance of 120-300 feet from the proposed new firing range. These elevated levels would be disruptive of speech and could have the potential to startle or annoy nearby recreational users. Other than outdoor recreational space, there are no noise-sensitive receptors within this range, so the elevated noise levels are not considered problematic. The 87+ dB area extends to a distance of approximately 990 feet from the proposed range site. As shown in Figure 4-1, the majority of the land use within the 87+ dB area is recreational. The facilities located within this contour include the base greenhouse to the north and the golf course maintenance facility to the southwest.

The operation of the current firing range already impacts the surrounding area. Actual current sound level readings from the existing range were not available because the range was not operational during the period that this assessment was being prepared. The area affected by elevated sound levels would be somewhat larger than the area affected by the current range.

The tactical training that would take place at the Evasion Lab would not include the use of munitions or other activities that would generate loud or continuous noises. The operation and use of the other proposed facilities would not generate elevated noise levels above existing levels.

The noise environment in the vicinity of the Proposed Action and of MAFB in general would continue to be dominated by aircraft and vehicular traffic. Increased noise would be expected to impact a small area immediately surrounding the site of the proposed range but would not be expected to have any impact on sensitive base areas or the surrounding community.

4.2.2.2 No-Action Alternative

Under the No-Action Alternative, proposed construction would not occur. The baseline noise environment, as described in Section 3.2, would remain unchanged. Therefore, no changes in the noise environment would occur as a result of implementation of the No-Action Alternative.

4.3 LAND USE

4.3.1 Approach to Analysis

The significance of potential impacts on land use is based on the level of land use sensitivity in areas affected by a Proposed Action. In general, land use impacts would be significant if they: 1) would be inconsistent or do not comply with applicable land use plans or policies; 2) preclude the viability of an existing land use activity; 3) preclude continued use or occupation of an area; or 4) are incompatible with adjacent or vicinity land uses, to the extent that public health or safety is threatened.

4.3.2 Impacts

4.3.2.1 Proposed Action

Implementation of the Proposed Action would result in no change to land use at MAFB. The proposed firing range would be located adjacent to the current firing range; therefore, there would be no change in land use. The dormitory and dining hall/multi-purpose facility would be adjacent to current OTS housing facilities, and the SOC training facility and storage facility would be within the existing OTS training areas. The locations of the new OTS and SOC facilities would be compatible with the OTS Area Development Plan of the pending General Plan for MAFB. The Blue Thunder improvements would take place within the current Blue Thunder training area and would not change the land use. The ECAC Evasion Training area on the western edge of the base would not conflict with needed open airfield space and would be an unoccupied training facility the majority of the time. It would be located close to the western border of the base, near off-base industrial land use areas. There would be no conflict between the land use of the proposed training site and off-base land uses.

Use of the sites selected for the Proposed Action are compatible with the pending General Plan for MAFB and all project components would be designed and sited to be compatible with existing base land use.

There would be no impacts to off-base land uses as a result of implementing the Proposed Action.

4.3.2.2 No-Action Alternative

Under the No-Action Alternative, proposed construction would not occur. Baseline land use, as described in Section 3.3, would remain unchanged. Therefore, no impacts to land use would occur as a result of implementation of the No-Action Alternative.

4.4 GEOLOGICAL RESOURCES

4.4.1 Approach to Analysis

The protection of unique geologic features, minimization of soil erosion, and the location of facilities relative to potential geologic hazards are considered when evaluating impacts of a proposed action. Generally, impacts on geological resources are not significant if proper construction techniques and erosion control measures are used to minimize or mitigate short- and long-term disturbance to soils and to overcome limitations imposed by earth resources.

4.4.2 Impacts

4.4.2.1 Proposed Action

Geological Resources

Construction activities associated with the Proposed Action would not affect the geologic units underlying the installation, as no unique geologic features or geologic hazards are present. Although ground disturbance would occur at the installation during construction, the construction would occur over previously disturbed surfaces. In addition, while proposed construction activities would require some minimal grading and fill, no important or unique topographic features would be affected as a result of development associated with the Proposed Action. Therefore, no impacts to geological resources would occur as a result of implementation of the Proposed Action.

Soils

Soils would be disturbed during grading activities associated with proposed construction. However, implementation of BMPs during construction would reduce impacts to soils associated with grading and clearing activities. In addition, standard erosion control measures (e.g., silt fencing, sediment traps, application of water sprays, and revegetation of disturbed soils) would be implemented to reduce potential impacts of construction. Therefore, no long-term negative impacts to soils would be expected as a result of implementation of the Proposed Action.

4.4.2.2 No-Action Alternative

Under the No-Action Alternative, proposed short-term construction activities would not occur. There would be no construction or ground-disturbing activities. As a result, baseline conditions for geological resources and soils would remain unchanged.

4.5 WATER RESOURCES

4.5.1 Approach to Analysis

The analysis of water resources included all surface and groundwater resources at the installation as well as watershed areas affected by existing and potential runoff. Significant impacts to water resources could potentially occur if the Proposed Action: 1) resulted in changes to water quality or supply, 2) threatened or damaged unique hydrologic characteristics, 3) endangered public health by creating or worsening health hazards, or 4) violated established laws or regulations. Impacts of flood hazards on Proposed Actions may be significant if such actions were proposed in areas with high probabilities of flooding.

4.5.2 Impacts

4.5.2.1 Proposed Action

Surface Water and Drainage

The Proposed Action consists of shallow excavation, construction, and renovations. The most likely impact associated with the proposed construction would be a temporary increase in total suspended particulate matter (i.e., sedimentation) to nearby surface water. This potential is short-term and localized and is manageable through implementation of best management practices (see Section 4.4.2.1, Soils, above) for sediment control during construction. Implementation of these BMPs would minimize potential erosion, runoff and sedimentation.

The Proposed Action would disturb more than one acre of land at MAFB. Therefore, the contractors would be required to contact the ADEM Water Division and file a Notice of Registration (NOR) for National Pollutant Discharge Elimination System (NPDES) General Permit coverage. In addition, a Construction Best Management Practices Plan would be developed and implemented on-site for the duration of the construction period.

Following completion of the proposed projects, only a small increase in impervious areas on Maxwell AFB is anticipated, primarily due to the construction of the new firing range complex and parking area. Completion of the Proposed Action would have no long-term adverse impacts on surface water quality or quantity on Maxwell AFB or on downstream surface water bodies.

Groundwater

Site disturbance and construction associated with the Proposed Action are not anticipated to affect groundwater resources. Construction operations would not reach depths that could affect groundwater resources. Therefore, no negative impacts to groundwater would be expected as a result of implementation of the Proposed Action.

Floodplains

In addition to the current small arms firing range, two of the proposed facility sites lie within the 100-year floodplain. The current firing range and the proposed firing range locations lie at the edge of the floodplain at an elevation of approximately 158 to 160 feet mean sea level (MSL). The floodplain elevation boundary at MAFB is approximately 162 feet MSL. Therefore, the proposed area of construction would be filled to raise the new buildings above the 100-year floodplain elevation. The construction of the range and support facility would require 2 to 4 feet of fill material over an area of approximately 1.5 to 2 acres. An 8-10 foot earthern berm, which is left from a previous firing range at this location, borders the northern edge of this proposed site. This existing berm already significantly impedes the flow of flood waters at and around the proposed site itself, separating the proposed site from areas of lower elevation along the golf course to the north. No changes are anticipated to this berm. A Finding of No Practicable

Alternative (FONPA) would need to be approved before a new firing range complex could be constructed at this proposed site. The FONPA, which must be approved by AETC, states that the proposed site is the only practicable alternative for the location of this facility. Practicability includes consideration of all pertinent factors and existing constraints, including environmental impacts, cost, mission capability, and technology.

The proposed ECAC evasion lab training area on the west side of the base is also situated within the 100-year floodplain. This proposed site lies at an elevation of approximately 150 feet MSL. This area would not be filled to raise it above the floodplain elevation boundary. It would only be filled as needed for site preparation and adequate drainage. Most of the training equipment in this area would consist of impermanent shipping containers that have windows and doors cut into them to simulate buildings and obstacles to movement. These structures would not impede the flow of flood waters and would not be greatly affected if they were inundated with water. Two permanent structures are proposed within this evasion lab training area. They would not be inhabited or permanently occupied buildings, but would serve as staging and instructor areas during field training, field medical treatment areas, and temporary shelters for the students during inclement weather. They would also provide storage for equipment and instructor aids between training sessions. These two permanent structures would be constructed in such a manner to minimize damage and facilitate clean-up in the event of minor flooding. It has been proposed that they be constructed of concrete block to minimize structural damage. In most cases, adequate notice could be given of impending flood conditions so that equipment and supplies could be moved from these structures in order to minimize flood damage. A FONPA would also need to be approved before a training lab could be constructed at this proposed site.

4.5.2.2 No-Action Alternative

Under the No-Action Alternative, proposed short-term construction activities would not occur. Baseline surface water and groundwater conditions would remain unchanged. Therefore, no impacts to surface water or groundwater would occur as a result of implementation of the No-Action Alternative.

4.6 TRANSPORTATION AND CIRCULATION

4.6.1 Approach to Analysis

Impacts on transportation and circulation would be considered significant if the Proposed Action affected the safety and/or the capacity of roads at the installation and within the region. In addition, impacts would be considered significant if the Proposed Action increased the potential for traffic disruption or congestion along regional and local transportation corridors.

4.6.2 Impacts

4.6.2.1 Proposed Action

Construction Impacts

Proposed construction activities would require the delivery of construction equipment and materials to the installation. However, construction traffic would constitute a small portion of the total existing traffic volume in the region and at the installation. The majority of vehicles used for construction activities would be driven to the construction site and kept onsite for the duration of construction, resulting in only a small increase in vehicle trips. In addition, increases in traffic volumes associated with construction activities would be temporary. Upon completion of construction, no long-term impacts to off-base transportation systems would occur.

Implementation of proposed construction at the installation would result in minor, temporary impacts to on-base traffic circulation as a result of increased traffic associated with construction vehicles. However, these impacts would not have a lasting impact on the installation's transportation network.

Operational Impacts - Firing Range

The Proposed Action includes construction of a new parking area for the firing range complex at the northeast corner of the intersection of March Road and Beech Street. The new parking area would include adequate space for personally owned vehicles as well as bus parking and turn-around areas. This would result in a beneficial impact to the parking, traffic flow, and safety along this section of March Road. A slight increase in traffic to and from the range may be expected from personally owned vehicles of range instructors and operators, but this increase would not be a very small percentage of the existing traffic on base. Groups of students are often expected to transit on foot to the firing range from their dormitories or from their encampment at Blue Thunder. When inclement weather or training schedules require it, students would be transported by bus. Since the proposed new firing range would be able to accommodate more students at one time, fewer bus trips would be expected to be needed. Therefore, the proposed construction of the new firing range would be expected to have a minimal impact on traffic flow and circulation.

Operational Impacts - Other Training Areas

Students utilizing the proposed dormitory and dining hall/multi-purpose facility, SOC training facilities, Building 1429, and Blue Thunder Training Area would normally be expected to travel either on foot or by bus to and from their training sites during their courses at MAFB. The proposed site for the ECAC Evasion Training Lab on the western edge of the base would be accessed by bus. The training lab is expected to be used for 20 classes of up to 180 students per year. Two buses would be needed to transport groups of students to and from the training lab twice a week when the lab is being utilized for

training. The transportation increase would be only eight trips per week. Therefore, only a minimal impact to transportation and circulation would occur as a result of implementation of the Proposed Action.

4.6.2.2 No-Action Alternative

Under the No-Action Alternative, proposed construction activities would not occur. Baseline transportation and circulation conditions, as described in Section 3.6, would remain unchanged. Therefore, no positive or negative impacts to transportation and circulation would occur as a result of implementation of the No-Action Alternative.

4.7 CULTURAL RESOURCES

4.7.1 Approach to Analysis

Cultural resources are subject to review under both Federal and state laws and regulations. Section 106 of the National Historic Preservation Act of 1966 empowers the Advisory Council on Historic Preservation to comment on Federally initiated, licensed, or permitted projects affecting cultural sites listed on or eligible for inclusion on the NRHP. Once cultural resources have been identified, they are subjected to a significance evaluation process, in which they are assessed relative to significance criteria for scientific or historic research, for the general public, and for traditional cultural groups. Only cultural resources determined to be significant (i.e., eligible for the NRHP) are protected under the National Historic Preservation Act.

Analysis of potential impacts to cultural resources considers both direct and indirect impacts. Direct impacts may occur by: 1) physically altering, damaging, or destroying all or part of a resource; 2) altering characteristics of the surrounding environment that contribute to resource significance; 3) introducing visual, audible, or atmospheric elements that are out of character with the property or alter its setting; or 4) neglecting the resource to the extent that it deteriorates or is destroyed. Direct impacts can be assessed by identifying the type and location of the Proposed Action and by determining the exact locations of cultural resources that could be affected. Indirect impacts primarily result from the effects of project-induced population increases and the resultant need to develop new housing areas, utilities services, and other support functions necessary to accommodate population growth. This indirect future development and subsequent use of the facilities can disturb or destroy cultural resources.

4.7.2 Impacts

4.7.2.1 Proposed Action

The proposed sites of the equestrian arena, Firing Range, and Blue Thunder are previously disturbed areas. The proposed sites of the dining hall/multi-purpose facility and dormitory are previously disturbed, paved areas that were once part of the airfield surfaces. The proposed site of the ECAC facility is in an area that has been cleared by a

survey done by Brockington and Associates (1997). None of the proposed sites is near any of the buildings that are listed on the NRHP.

Only one proposed site is in the vicinity of a building that is eligible for listing on the NRHP. This site is the proposed new location of the equestrian arena that is located southeast of the African-American Barracks, in particular, Building #1208. The arena relocation would consist of erecting a fence around the grassy area northwest of the intersection of March Road and Beech Street, near the Federal Prison Camp complex at the northern edge of the base. The relocation of the equestrian arena would not alter any characteristics of the eligible structures because the arena would be outside the Area of Potential Effect. A May 19, 2008, letter from the State Historic Preservation Officer states their concurrence with the proposed project activities (Appendix A).

Therefore, the Proposed Action would not impact any cultural or historical resources.

The installation's ICRMP notes that, due to the nature of historic properties and the current methodological limitations of cultural resources surveys, all archaeological sites at MAFB and its associated lands may not have been discovered during prior surveys. Some properties may be discovered during the construction or implementation of an activity that has been approved. The ICRMP mandates that if archaeological sites are discovered during the construction or implementation of an activity, all work in the area of the suspected site must cease and the MAFB Historic Preservation Officer must be notified immediately by telephone for consultation and appropriate action (MAFB 2006).

4.7.2.2 No-Action Alternative

Under the No-Action Alternative, proposed construction activities would not occur. Baseline cultural resource conditions would remain unchanged. Therefore, no impacts on cultural resources would occur as a result of implementation of the No-Action Alternative.

4.8 SOCIOECONOMICS

4.8.1 Approach to Analysis

The significance of population and expenditure impacts is assessed in terms of direct effects on the local economy and related effects on other socioeconomic resources within the region. Socioeconomic impacts would be considered significant if the Proposed Action resulted in a substantial shift in population trends or notably affected regional employment, spending and earning patterns, or community resources.

4.8.2 Impacts

4.8.2.1 Proposed Action

The proposed construction and the small increase in base personnel would have a slight beneficial impact on the socioeconomic condition of MAFB and the surrounding

communities. The Proposed Action is not expected to have any negative impacts on the socioeconomic condition of the installation or community.

4.8.2.2 No-Action Alternative

Under the No-Action Alternative, proposed construction activities would not occur. Baseline socioeconomic conditions would remain unchanged. Therefore, no positive or negative impacts to socioeconomic conditions would occur as a result of implementation of the No-Action Alternative.

4.9 ENVIRONMENTAL JUSTICE AND PROTECTION OF CHILDREN

4.9.1 Approach to Analysis

In order to comply with EO 12898, *Federal Actions to Address Environmental Justice in Minority and Low-Income Populations*, ethnicity and poverty status in the vicinity of the proposed actions have been examined and compared to city, county, and state data to determine if any minority or low-income communities could potentially be disproportionately affected by implementation of the proposed action or alternatives. Similarly, to comply with EO 13045, *Protection of Children From Environmental Health Risks and Safety Risks*, the locations where numbers of children may be proportionally high on and in the vicinity of the proposed actions was determined to ensure that environmental risks and safety risks to children are addressed.

Three criteria must be met for impacts to minority and low income communities or children to be considered significant. 1) There must be one or more populations within the ROI. 2) There must be adverse (or significant) impacts from the proposed action. 3) The environmental justice populations within the ROI must bear a disproportionate burden of those adverse impacts. If any of these criteria are not met, then impacts with respect to environmental justice or protection of children would not be significant.

4.9.2 Impacts

4.9.2.1 Proposed Action

Under the Proposed Action, construction activities would be limited to the proposed sites as shown in Figure 1-2. The Proposed Action involves military training programs and military trainees, and would occur within the boundaries of MAFB. The minority population in the city of Montgomery is 56.9 percent (Table 3-11). However, consideration of resource areas conclude that populations (including minority and low-income populations) within and outside the installation would not be impacted. Therefore, implementation of the proposed action would not disproportionately impact minority or low-income populations, and no economic justice analysis is needed.

Implementation of the proposed action would not result in environmental health risks or safety risks to children. The proposed construction on Maxwell would not be close to

family housing areas, daycare centers, or schools. During proposed construction, standard construction site safety precautions (e.g., fencing and patrolling) would be implemented. In addition, the existing high-security environment at the installation prohibits access by unauthorized personnel. For these reasons, potential health or safety impacts to children living or playing in the vicinity would be minimized. Therefore, no impacts to children from health risks or safety risks would be expected as a result of implementing the proposed action.

4.9.2.2 No-Action Alternative

Under the No-Action Alternative, continuation of activities would occur at the present site. Baseline conditions would remain unchanged. Therefore, no impacts to environmental justice conditions would occur, nor would children be disproportionately exposed to increased health or safety risks as a result of implementation of the No-Action Alternative.

4.10 HAZARDOUS MATERIALS AND WASTES

4.10.1 Approach to Analysis

The Region of Influence (ROI) for hazardous materials and hazardous waste for the Proposed Action includes the entire installation of Maxwell AFB. The ROI is not solely limited to areas associated with the Proposed Action, since the impact of those actions may affect base-wide hazardous waste management procedures and generation rates. Therefore, the ROI includes all areas on the installation that store and/or use hazardous materials or generate and/or store hazardous waste.

The analyses focused on how and to what degree the Proposed Action affects hazardous materials usage and management and hazardous waste generation and management. Potential impacts related to hazardous materials and hazardous wastes were analyzed based on the following four criteria. Potential impacts could be considered significant if:

1) use of hazardous materials would pose unusual risks to personnel safety or would adversely impact the current hazardous materials management system
2) types or quantities of hazardous waste would be generated that could not be accommodated by the current management system
3) the Proposed Action would result in an increased likelihood of an uncontrolled release of hazardous materials that could contaminate soil, surface water, groundwater, or air
4) implementing the Proposed Action would result in adverse impacts to an existing ERP site.

The sections below discuss the Proposed Action in light of these criteria.

The analysis methodology identified existing ERP sites (including Unexploded Ordnance (UXO) areas) and compared the location of these sites with the location of proposed activities. Where overlaps occurred, ERP site-specific conditions, such as existence of land use controls, were analyzed against proposed construction/training activities to assess potential impacts. For those projects where ground-disturbing activities would occur on or within close proximity to ERP sites, a Request for Waiver to Construct would be required to ensure the site would not be impacted. The factors listed below would be considered in preparation of the waiver.

- The proposed construction must not impact cleanup options or schedules
- The proposed construction must not result in further migration of contaminants from the site
- Provisions must be identified to adequately characterize and appropriately handle contaminants or adverse site conditions discovered during construction. These provisions must be in accordance with applicable state and federal environmental regulations
- The applicable state and federal regulatory agencies must be notified of the proposed construction project.

Federal, state, and local laws regulate the storage, disposal, and transportation of hazardous materials and wastes. These laws have been established to protect human health and the environment from potential impacts. The significance of impacts associated with hazardous wastes and materials is based on the toxicity of the substance, transportation and storage risk, and the method of waste disposal.

4.10.2 Impacts

4.10.2.1 Proposed Action

A variety of products containing hazardous materials would be used on a continual basis as a result of maintenance and other activities associated with the Proposed Action. They include fuels, lubricants, solvents, paints, batteries, cleaners, and other materials. These products are similar, if not identical, to the ones currently used at the installation. These products are not expected to pose undue safety risks to personnel or adverse impacts to established hazardous materials management practices.

Construction

Several construction projects would be initiated as part of this action. New buildings would be constructed utilizing normal construction methods, limiting the use of hazardous materials to the extent possible. However, construction activities would still require the use of hazardous substances, such as petroleum, oil, and lubricants. Use of these substances for fueling and equipment maintenance would create the potential for minor spills and releases. Design features of the project would: 1) restrict vehicle

refueling and maintenance to specific areas where accidental spills could be contained, and 2) require proper storage and handling of these materials. Compliance with Air Force best construction practices, including adherence to Maxwell's Spill Prevention and Response Plan, would be required and would reduce the potential for adverse impacts. During the construction period, the construction contractor would be responsible for notifying the installation before bringing any hazardous materials on the installation. Furthermore, the construction contractor would be responsible for disposing of any hazardous materials used on the site during construction activities. The Air Force does not expect building construction activities to generate hazardous wastes.

Firing Range

The hazardous waste generated by the firing range and the periodic clean out practices would increase. Copper (from brass casings) and antimony and lead (from bullets) are the primary hazardous chemicals associated with this training.

Firing range standard procedures require that, during training, ejected brass casings be recovered for reuse. With the proposed construction of a fully contained range, the dust generated and the spent bullet fragments would be filtered and collected. The filters that collect dust would be replaced regularly, and bullet traps that collect bullet fragments would be cleaned on a periodic basis.

The planned range facility may generate lead-contaminated weapons-cleaning rags, patches, and dirty weapons-cleaning solvent. These wastes would be similar to those currently generated at the installation.

Over the past several years, hazardous waste generated from MAFB small arms range operations has averaged approximately 1,000 lbs/year (Maxwell 2007c). The addition of the proposed new range would approximately triple the current firing capacity. Therefore, for purposes of evaluation, it was assumed that the new firing range would generate approximately three times the amount of hazardous waste generated at the current facility, or approximately 3,000 lbs/year.

Since the current amount of hazardous waste generated is less than 30% of the hazardous waste goal for the base, this projected amount is still well within Maxwell's capabilities and would not result in a failure to meet the base's goals for hazardous waste generation. There would not be any change in Maxwell's status as a large quantity generator.

MMRP Site

Based on the Phase I evaluation for the Military Munitions Response Program, there is the possibility of soil contamination at the proposed site of the new firing range due to the prior use of munitions in the area. Contamination is most likely near the bottom of the berm at the northern edge of this site. It is not anticipated that this berm would be disturbed during construction of a new range.

In order to minimize the threat of exposure to potentially contaminated soils at the site, any soil contamination that is encountered as part of the Proposed Action would be properly segregated by the construction contractor and then sampled by representatives of the Environmental Section at MAFB. Sample results would determine whether soils could be reused on the site or require proper disposal off-site at a facility permitted to receive the soils, pursuant to appropriate State of Alabama regulations. Furthermore, procedures to minimize dust during excavation and construction would be implemented on-site. Therefore, no negative impacts would be expected as a result of implementing the Proposed Action.

4.10.2.2 No-Action Alternative

Under the No-Action Alternative, proposed construction activities would not occur. Baseline hazardous material and waste conditions would remain unchanged and ERP sites in the vicinity of the project site would continue to be studied and remediated as appropriate under the ERP. Therefore, there would be no impacts from hazardous materials and wastes with implementation of the No-Action Alternative.

4.11 UTILITIES

4.11.1 Approach to Analysis

The assessment of impacts to utilities is based on a comparison of their existing use and infrastructure condition to proposed changes in these resources. The analysis compares current utility usage to anticipated future demands brought about by applicable functions. Potential impacts to utilities may occur if a change in demand resulting from the Proposed Action significantly affects the ability of a utility provider to service existing customers. Facilities, such as landfills, may be impacted if they are unable to effectively accommodate additional demands resulting from a proposed activity.

4.11.2 Impacts

4.11.2.1 Proposed Action

Electricity

There are no daily limits imposed on MAFB for electrical consumption (Riley 2008b). Furthermore, MAFB is a "Priority 1" customer for the Alabama Power Company, which ensures that the installation would receive electrical service in the event that peak demands limit the ability of Alabama Power to supply service to all its customers.

Natural Gas

There are no daily limits imposed on MAFB for natural gas consumption (Riley 2008b).

Water

There are no daily limits imposed on MAFB for potable water consumption (Riley 2008b).

Wastewater

Wastewater from MAFB is sent to the Towassa Wastewater Treatment Plant in the City of Montgomery. The plant has a capacity of 21 MGD yet receives an average of only 10 MGD (City of Montgomery 2004a). Given the existing excess operating capacity of the Towassa Wastewater Treatment Plant, an increase in wastewater produced under the Proposed Action would not likely adversely impact the Towassa Wastewater Treatment Plant.

Solid Waste Management

Solid waste would be managed in accordance with the MAFB Integrated Solid Waste Management Plan (MAFB 2008e). All non-hazardous waste would be collected and disposed of by licensed private contractors at the North Montgomery Municipal landfill. Solid waste generated at MAFB is either recycled or disposed of in the North Montgomery Municipal Landfill located west of MAFB. As of 2004, the landfill had an estimated 19 years of remaining operating life (City of Montgomery 2004b). The facility has ample capacity to support the minor increase in overall solid waste levels generated by the proposed construction activities. Therefore, the Proposed Action would not have any negative impact on utilities. Baseline conditions for utility resources would remain unchanged.

4.11.2.2 No-Action Alternative

Under the No-Action Alternative, proposed construction activities would not occur. Baseline conditions for utility resources would remain unchanged. Therefore, no positive or negative impacts to utilities would occur as a result of implementation of the No-Action Alternative.

5 OTHER AREAS OF CONSIDERATION

5.1 CUMULATIVE IMPACTS

Cumulative impacts analysis considers the potential environmental impacts resulting from "the incremental impacts of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions" (40 CFR 1508.7). The EA addresses cumulative impacts in order to assess the incremental contribution of the Proposed Action and the No-Action Alternative to impacts on affected resources from all factors. While any activity may potentially create an incremental, cumulative impact on the environment, the potential for significant cumulative impacts is of concern. The significance of an impact is based on the context and intensity of the impact when considered with the impacts of past, present, or reasonably foreseeable actions.

5.1.1 Changes in Mission

The addition of the ECAC training course and the retooling of the Air and Space Basic Course mentioned in Section 1.3 are known potential changes in the education and training mission of MAFB in the near future. A future possibility also exists for Air National Guard Academy of Military Sciences trainees to utilize these additional facilities at Maxwell in order to fulfill the vision of a common Air Force training experience. This EA takes these training mission changes into account as it assesses the proposed facilities needed to prepare for the increased training requirements.

5.1.2 Vigilant Warrior Field Training Site

One other EA is currently underway to address potential results of retooling the ASBC. ASBC training would be expanded by adding field training exercises at the Vigilant Warrior (VW) training site, which is located in Elmore County, Alabama, approximately 30 miles north of MAFB and, therefore, is not within the same geographic area as the main base. The VW site, which is owned by Alabama Power Company and leased by the Air Force, is utilized by MAFB as a remote field training area. No change would occur in the lease agreement. The EA assesses possible impacts of expanding student load and training facilities at the VW site. This proposed action at the Vigilant Warrior site would expand the current base camp and add several storage facilities, bathhouses, and other training areas at the current location. No significant impacts are expected to any resources within the vicinity of the VW site. Students will be bussed to the site, but the impacts to transportation between MAFB and the VW site for 10 classes per year would be minimal. Cumulative impacts are not expected to be significant when considering these actions together because the proposed action at VW would be geographically separated from actions on and in the vicinity of MAFB.

5.1.3 Bell Street and Bell Street Gate

The City of Montgomery identified one project in the vicinity of the proposed action. The widening of Bell Street, a traffic corridor that provides access to MAFB from Interstate 65, is currently underway. This project will provide improved access to MAFB, with a 4-lane road with a landscaped median and two lanes dedicated to the base entry control facility. MAFB has also recently completed a project to renovate the Bell Street gate and entry control facility, including a new visitor center. It is anticipated that the cumulative effect of these projects with the proposed action would result in a positive impact on transportation, security, and visual resources in the ROI.

5.1.4 Squadron Officer College (SOC) Expansion

Several other Military Construction (MILCON) projects have been proposed within a 5- to 10-year time period. The SOC Expansion Plan, which was originally evaluated under an environmental assessment in October, 2000, is progressing in phases. This Expansion Plan involves the demolition of four dormitories and one administrative building, and the construction of 5 dormitories and one academic building. Phases 1-4 of the expansion have been completed. Phases 5 through 8 are scheduled to progress as MILCON funding is available. This Expansion Plan will result in updated lodging facilities for the SOC trainees. The driving force of this action is the same as the goal for the additional training facilities: to provide a common training experience, centralized at MAFB, for Air Force personnel from various programs. There were no significant impacts found for the proposed SOC expansion (MAFB 2000c). Since this action has already been implemented, the SOC expansion has contributed incrementally to the number of transient students utilizing the MAFB facilities. Cumulative impacts of these actions considered together with the Proposed Action would be expected to consist of slight increases of noise, traffic, and air emissions from construction activities. Cumulative impacts may also include increased development of the limited open space at Maxwell, which could increase the potential for land use conflicts and further limit the areas available for future base development. The actions considered together may result in incremental increases in traffic, noise, air emissions, and energy usage. They may also have a beneficial socioeconomic impact on the ROI.

5.1.5 Other Military Construction (MILCON) Projects

Other proposed MILCON projects include additional development near the airfield, which may include future construction of: a base operations facility/tower, an aircraft parking apron, an aerial port training facility, a squadron operations/logistics facility, and an assault strip to the western side of the active runway. Cumulative impacts of these possible actions may include increasing land use conflicts with development near the airfield and associated clear zones.

An addition is planned for the Air University Library, and a new fitness center is planned for construction on Gunter Annex.

Cumulative impacts from the Proposed Action when considered together with these various projects are discussed below for relevant resources.

5.1.5.1 Air Quality

Cumulative impacts would result from minor and temporary increases in criteria pollutants during periods of construction. Construction will be scheduled from fiscal year (FY) 2009 through FY 2012 and beyond, so that demolition and construction projects would not usually be occurring simultaneously. No significant long-term increase in criteria pollutant emissions would occur. Cumulative impacts would not exceed *de minimis* thresholds, and estimated criteria pollutant emissions would not violate NAAQS.

5.1.5.2 Noise

Minor, temporary noise impacts would be expected in the vicinity of construction projects. As discussed within this EA, noise would be expected to impact a larger area in the vicinity of the proposed firing range. If the assault strip were relocated to the west side of the active runway, noise impacts would not be expected to have a cumulative impact because of the different geographical areas potentially affected by elevated noise levels.

5.1.5.3 Land Use

Cumulative impacts would include increased development of the limited open space at Maxwell, which would increase the potential for land use conflicts and further limit the areas available for future base development. Some of these possible effects may be avoided or mitigated by adherence to Maxwell's General Plan and Area Development Plans and careful consideration of the sitings for proposed future facilities.

5.1.5.4 Water Resources

Since approximately 30 percent of MAFB lies within the 100-year floodplain, development has been limited along the western and northeastern portions of the base. Increased development would result in limited potential for future development in areas that are outside the floodplain and could result in increased demand for development within the floodplain. The impervious surface area at Maxwell would increase, but because MAFB is already highly developed, there would be no significant change expected to stormwater discharge volumes or intensity.

5.1.5.5 Transportation and Circulation

Cumulative effects would include minor increases to traffic volume and circulation. Most transient trainees do not have personally-owned vehicles on base and would transition on foot to various training areas on base, or students would be transported by bus. Temporary increases in traffic would be expected in areas of new construction.

According to the Maxwell Traffic Study (MAFB 2007b), all intersections in the vicinity of the proposed new facilities had acceptable levels of service, so no adverse cumulative impacts would be expected.

5.1.5.6 Hazardous Materials and Wastes

Firing range operations, as evaluated in Section 4.2.10.1, would be the greatest expected contributor to the generation of hazardous waste at MAFB. Most of the other potential projects or actions would have little to no effect on the amount or management of hazardous material or waste at MAFB. Therefore, no cumulative effects would be expected.

5.1.5.7 Utilities

Utility usage would be expected to increase with the addition of new facilities. However, many of the facilities evaluated in the Proposed Action would be outdoor training/storage facilities and would not result in an increased demand that would impact current utility systems or availability. As older facilities are replaced with newer ones, as in the SOC expansion, more energy-efficient systems are being used to replace less energy-efficient systems. This is helping to mitigate the additional utility usage. Since current systems are adequate for the demands, and there are no daily utility limits for MAFB, there would be no adverse cumulative impacts expected.

5.1.5.8 Socioeconomics

The past, present, and reasonably foreseeable future actions would be expected to have a slight beneficial cumulative impact within the Montgomery MSA.

5.1.5.9 Other Resource Areas

No cumulative impacts would be expected to biological resources, cultural resources, geological resources, minority or low-income populations, or the protection of children.

5.2 UNAVOIDABLE ADVERSE IMPACTS AND CONSIDERATIONS THAT OFFSET THESE IMPACTS

Unavoidable adverse impacts occur when a proposed action would result in significant adverse impacts for which there are no reasonably practicable mitigation measures, and for which there are no reasonable alternatives. There are no potential significant adverse impacts of the Proposed Action which could not be avoided or mitigated by implementing a broad range of measures. Such impacts include those associated with erosion and the floodplain. Temporary unavoidable adverse impacts associated with construction would occur under the proposed action. Construction activities would temporarily increase noise, dust pollution, personnel, and traffic density. Noise levels and air emissions would increase around the action areas. Water quality and soil erosion impacts may also occur. The Proposed Action would have a direct impact to floodplain

areas, but the impact would be minimal. Increased development in the floodplain could impede the flow of flood waters, and modifications to the floodplain could result in increased risk of flooding in other areas. The construction of the new firing range is at the edge of the floodplain elevation boundary and would only require a small increase in elevation with fill material. The impact to the floodplain would be minimal, since the area affected would be less than one acre.

The operation of the proposed firing range would unavoidably affect the noise environment of MAFB in the vicinity of the range. The proposed area is already impacted by noise from the current firing range. Measures were taken into considerations that would reduce the impact of the noise effects. During the siting process, options were examined for locations that would minimize the noise impacts. The proposed location avoids family housing areas, unaccompanied housing areas, academic areas, or other receptors that would be sensitive to increased noise levels. The proposed site also avoids possible noise effects to the surrounding off-base community. The old, existing earthen berm on the northern edge of the proposed site would help to mitigate the noise below the projected levels. The size of this berm could be increased if needed. Other mitigation measures such as sound barriers or landscaping could be incorporated into the design and construction of the proposed range if deemed necessary.

The area of the proposed ECAC evasion lab would not be filled to raise it above the floodplain elevation boundary. It would only be filled as needed for site preparation and adequate drainage. Most of the training equipment in this area would consist of impermanent shipping containers that have windows and doors cut into them to simulate buildings and obstacles to movement. These structures would not impede the flow of flood waters; therefore, they would have minimal effect on the floodplain. The shipping containers would not be permanent and would not be greatly affected if they were inundated with water, so this would minimize the risk of flood loss. The two permanent structures that are proposed within this evasion lab training area would not be inhabited or permanently occupied buildings. To mitigate the effects of possible flooding, these structures are proposed to be constructed of concrete block to minimize damage and facilitate clean-up in the event of minor flooding.

Inherent to the Proposed Action are mitigations associated with permitting requirements and Air Force regulations, which are required to be implemented in order to proceed with any action. Such mitigations inherent to the Proposed Action include handling and disposal of all hazardous materials in accordance with applicable laws, regulations, and Air Force management action requirements; incorporating storm water management designs and erosion control measures associated with National Pollutant Discharge Elimination System (NPDES) and state permitting requirements. Implementation of permit and regulatory mitigations would necessarily minimize impacts from the outset and serve to offset many potentially adverse impacts.

5.3 COMPATIBILITY WITH FEDERAL, REGIONAL, STATE AND LOCAL LAND-USE PLANS, POLICIES, AND CONTROLS

The Proposed Action would be appropriately located within compatible land use areas of MAFB and would not adversely impact land use outside the base. The City of Montgomery is currently widening Bell Street to improve access to MAFB. The Proposed Actions are compatible with the development goals of the City of Montgomery. The Proposed Actions would adhere to the requirements of the State of Alabama's erosion and sedimentation control regulations throughout the construction process. In addition, land-disturbing activities would comply with all state regulations and permitting regulations of ADEM.

5.4 RELATIONSHIP OF SHORT-TERM USES AND LONG-TERM PRODUCTIVITY

Short-term use of resources would result from construction, demolition, and renovation-related impacts. Assessment of effects on long-term productivity are related to the maintenance and enhancement of long-term productivity of the regional and local community—in particular, the consistency of the project with long-term regional and local planning objectives.

The Proposed Action would generate a short-term increase in employment, income, and net fiscal benefits and revenues to the surrounding community during the construction period (approximately four-six years). Additionally, there would be a short-term increase in the amount of local building supplies needed to execute the project. Nevertheless, this increase would not necessarily result in a short-term or long-term decrease in the availability of these resources for other users.

Local short-term impacts in use of resources resulting from the proposed action would be consistent with the maintenance and enhancement of long-term productivity for the local communities, the state, and the region.

Some resources that would be valuable in the long term (i.e., natural resources, building materials) are being spent to achieve higher productivity per unit resource in the long term through the development of consolidated and improved training facilities. Investment of resources in the short term for future productivity over the long term results in the need for fewer resources in the future to achieve the same level of productivity. As an example, by providing increased training facilities for students in the same general location of the base, the need for excessive travel and related expenditure of fuel and other resources is minimized or eliminated. This savings in productivity over the long term would be realized through reduced energy consumption, more efficient land use, and reduced financial cost.

5.5 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

NEPA requires that environmental analysis includes identification of any irreversible and irretrievable commitments of resources involved in the implementation of the Proposed

Action. Irreversible and irretrievable resource commitments are related to the use of non-renewable resources and the effects that the uses of these resources have on future generations. Irreversible effects primarily result from the use or destruction of a specific resource (e.g., energy and minerals) that cannot be replaced within a reasonable time frame. Irretrievable resource commitments involve the loss in value of an affected resource that cannot be restored as a result of the action (e.g., extinction of a threatened or endangered species or the disturbance of a cultural site).

Implementing the Proposed Action would require a commitment of natural, physical, human, and fiscal resources. In all of these categories, irreversible and irretrievable commitments of resources would occur. Land required for new permanent construction would be irreversibly committed during the functional life of the facilities. Although it is possible for land to revert to its former state if the facilities were abandoned and destroyed, the likelihood of such an occurrence for established facilities would be low.

Fossil fuels and construction materials, such as steel, cement, aggregate, and bituminous material, would be expended under the action alternatives. However, these physical resources should generally be in sufficient supply during proposed project initiation, and their commitment to the project would not have an adverse effect on the resource's continued or future availability.

Open areas at the installation would be reduced, however, the compared amount of acreage lost would be minimal. Minimal impacts would occur to the floodplain which is already in a developed portion of the base.

In terms of human resources, labor would be used in preparation and construction of the project. Labor is generally not considered to be a resource in short supply, and commitment to the project would not have an adverse effect on the continued availability of these resources. Project construction would require an expenditure of funds.

The proposed commitment of natural, physical, human, and fiscal resources is based on the requirements associated with the various training programs. It is anticipated that businesses, employees, and residents of the local area would benefit from improved economics resulting from implementation of the Proposed Action.

5.6 SPECIAL PROCEDURES

5.6.1 Permitting and Regulatory Requirements

All project-related actions would be in accordance with the then-current and most strict of all applicable codes, standards, regulations, and laws (federal, state, and local) existing at the time of project implementation, without regard to whether they would otherwise be applicable or enforced because the improvements are located on government-owned land. The Air Force would utilize sustainable development principles and practices as set forth in the *Air Force Sustainable Facilities Guide*. This guide seeks to reduce or eliminate the negative impact of buildings on the environment and occupants in five broad areas:

sustainable site planning, safeguarding water and water efficiency, energy efficiency and renewable energy, conservation of materials and resources, and indoor environmental quality (USAF 2005). The Air Force is required to conduct state and federal agency consultation and review of the Proposed Action in compliance with federal and respective state law. The construction contractor is responsible for filing a Notice of Registration for NPDES General Permit coverage and the implementation of permit-related mitigations.

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APPENDIX A

IICEP CORRESPONDENCE

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LEC Maxwell Support Division

March 18, 2008

Mr. Ken Groves
Director of Planning and Development
City of Montgomery Planning Department
Land Use Controls Division
103 North Perry Street
Montgomery, AL 36104

RE: Proposed Construction of New Training Facilities
Maxwell Air Force Base, Alabama

Dear Mr. Groves:

The United States Air Force is preparing an Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA). In response to recommendations by the Air Force Chief of Staff, several training programs are being increased and revised in order to better train our military personnel for deployment and combat. Several new or upgraded facilities are needed in order to implement these training requirements and accommodate military trainees. Due to security measures, all proposed actions are to be within Maxwell Air Force Base (MAFB) boundaries.

Under the Proposed Action, the construction would take place on Maxwell AFB in areas that have previously been disturbed. The proposed action includes the following:

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This will consist of rehabilitating the current small arms range as well as the construction of a new small arms range and supporting structures adjacent to the current range.

2) Establishing an Evasion and Conduct After Capture course at Maxwell as part of the Air and Space Basic Course
The establishment of this new training course would require the renovation of existing building 1429 and establishment of a new Evasion Lab training area.

400 Cannon Street, Building 1060
Maxwell AFB, AL 36112
Tel.: 334-953-5260 • 334-396-4004

3) Adding a covered training area and storage facility for the Squadron Officer College
The covered training area would be a permanent 100 x 300-foot pavilion that would enable training schedules to be met during inclement weather, and an adjacent storage building would house training equipment.

4) Upgrading training and support facilities at Blue Thunder mobilization training area
Upgrades to this training area would include any permanent construction or modernization of latrines, shelters needed for inclement weather, parking areas, and other structures needed to support existing and future facilities. Upgrades may be made to obstacle courses, tent areas, or other training areas.

5) Constructing an additional dormitory and dining hall
This includes the construction of two new buildings to support Air Force personnel. The dormitory would be a three-story, 120-room dormitory containing approximately 66,000 square feet, and the dining hall would be approximately 14,000 square feet.

The EA will evaluate the potential effects of conducting the proposed action with any alternatives that are deemed feasible. As required by NEPA, the Air Force will also consider taking no action.

In accordance with AFI 32-7060 we are requesting any comments or concerns you may have with the proposed project. To aid in analyzing cumulative impacts, we would also appreciate identification of major projects in the vicinity that may contribute to cumulative effects from these proposed actions. Please send your environmental comments to the address listed below within 30 days.

Thank you for your interest and assistance in this matter. If you have questions, please contact me at 334-953-6417.

Sincerely,

Janet Lanier
Environmental Manager
MSD/CEV

JLL: bao
Enclosures

400 Cannon Street, Building 1060
Maxwell AFB, AL 36112
Tel.: 334-953-5260 • 334-396-4004

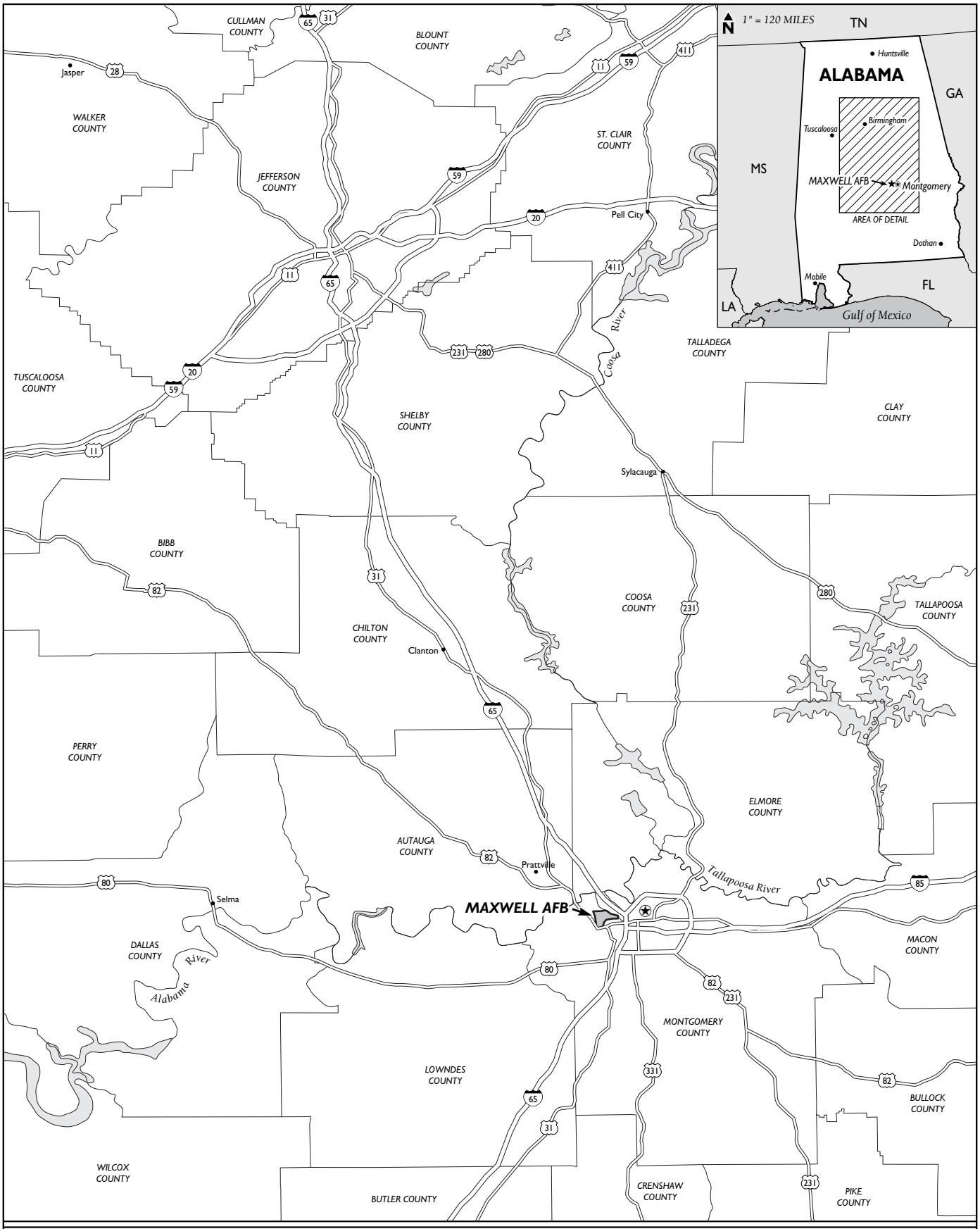
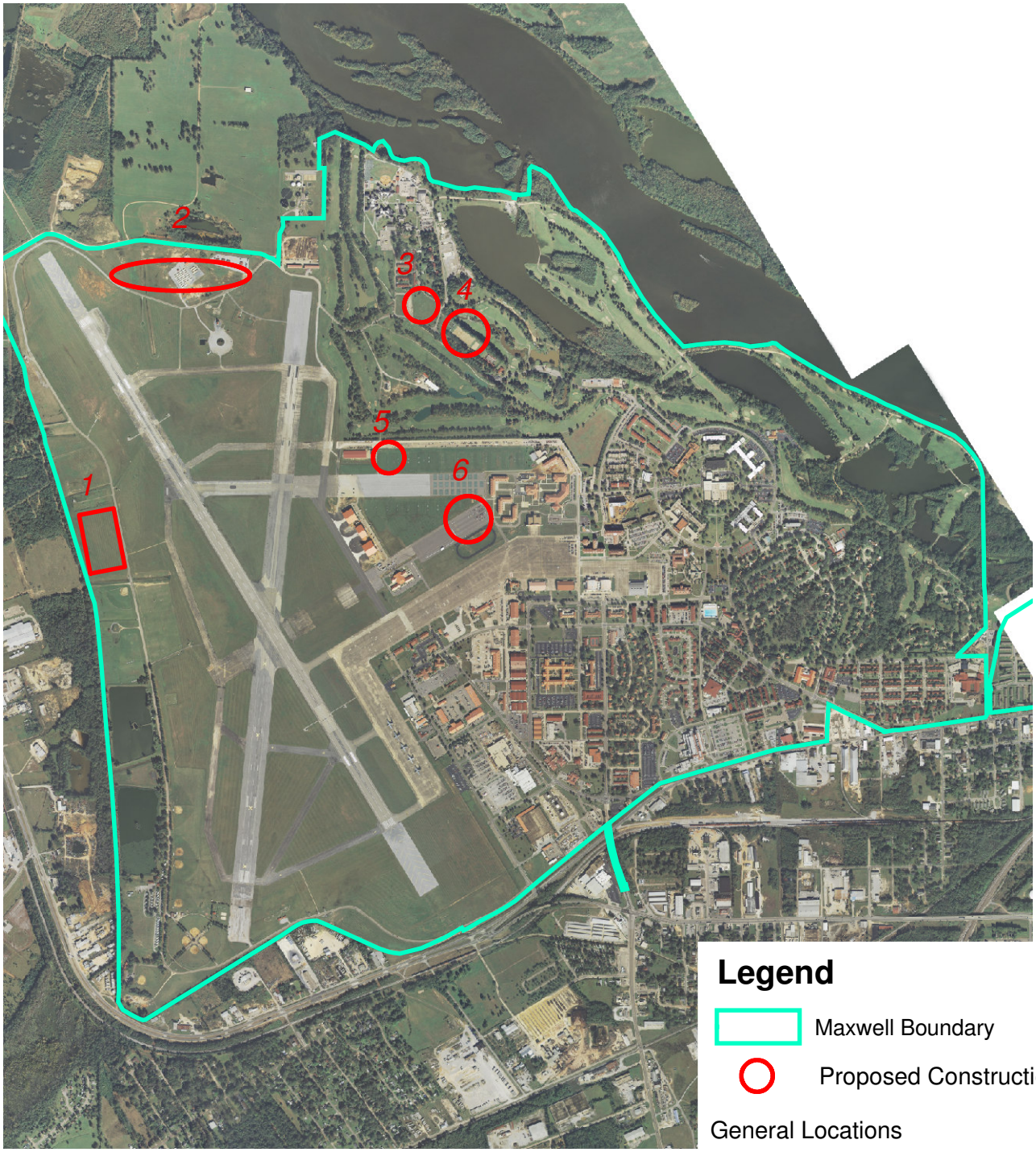


Figure 1-1
Maxwell Air Force Base, Alabama

Environmental Assessments



Source: Maxwell Geobase March, 2008

0 850 1,700 3,400 5,100 6,800
Feet

Legend

Maxwell Boundary

Proposed Construction

General Locations

1 Evasion Lab
2 Blue Thunder
3 Proposed Riding Area Relocation
4 Proposed New Firing Range and Offices
5 Proposed SOC Training Facility
6 Proposed Dining Hall and Dorm

LEC Maxwell Support Division

March 18, 2008

U.S. Fish and Wildlife Service
Bill Pearson, Field Supervisor
1208-B Main Street
Daphne, AL 36526

RE: Proposed Construction of New Training Facilities
Maxwell Air Force Base, Alabama

Dear Mr. Pearson:

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MSD/CEV

JLL: bao
Enclosures

400 Cannon Street, Building 1060
Maxwell AFB, AL 36112
Tel.: 334-953-5260 • 334-396-4004

LEC Maxwell Support Division

March 18, 2008

Mr. Jon Hornsby
Environmental Coordinator
Alabama Department of Conservation and Natural Resources
64 N. Union Street
Montgomery, Alabama 36130

RE: Proposed Construction of New Training Facilities
Maxwell Air Force Base, Alabama

Dear Mr. Hornsby:

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Environmental Manager
MSD/CEV

JLL: bao
Enclosures

400 Cannon Street, Building 1060
Maxwell AFB, AL 36112
Tel.: 334-953-5260 • 334-396-4004

LEC Maxwell Support Division

March 18, 2008

Mr. Bill Tucker, Executive Director
Central Alabama Regional Planning and Development Commission
125 Washington Avenue
Third Floor
Montgomery, AL 36104

RE: Proposed Construction of New Training Facilities
Maxwell Air Force Base, Alabama

Dear Mr. Tucker:

The United States Air Force is preparing an Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA). In response to recommendations by the Air Force Chief of Staff, several training programs are being increased and revised in order to better train our military personnel for deployment and combat. Several new or upgraded facilities are needed in order to implement these training requirements and accommodate military trainees. Due to security measures, all proposed actions are to be within Maxwell Air Force Base (MAFB) boundaries.

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Enclosures

400 Cannon Street, Building 1060
Maxwell AFB, AL 36112
Tel.: 334-953-5260 • 334-396-4004

LEC Maxwell Support Division

March 18, 2008

Ms. Elizabeth Brown
Alabama Historical Commission
468 South Perry Street
Montgomery, Alabama 36130-0900

RE: Proposed Construction of New Training Facilities
Maxwell Air Force Base, Alabama

Dear Ms. Brown:

The United States Air Force is preparing an Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA). In response to recommendations by the Air Force Chief of Staff, several training programs are being increased and revised in order to better train our military personnel for deployment and combat. Several new or upgraded facilities are needed in order to implement these training requirements and accommodate military trainees. Due to security measures, all proposed actions are to be within Maxwell Air Force Base (MAFB) boundaries.

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The Area of Potential Affect for all proposed actions did not include any areas that have historical resources adjacent to it or in previously undisturbed areas. Therefore, we are requesting concurrence of no adverse effects under Section 106 of the Historic Preservation Act.

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JLL: bao
Enclosures

400 Cannon Street, Building 1060
Maxwell AFB, AL 36112
Tel.: 334-953-5260 • 334-396-4004

LEC Maxwell Support Division

March 18, 2008

U.S. Army Engineer District, Mobile
P.O. Box 2288
Mobile, AL 36628-0001

RE: Proposed Construction of New Training Facilities
Maxwell Air Force Base, Alabama

Dear Sir or Madam:

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400 Cannon Street, Building 1060
Maxwell AFB, AL 36112
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LEC Maxwell Support Division

March 18, 2008

Ms. Debbie Thomas
Tribal Historic Preservation Officer
Alabama-Coushatta Tribe of Texas
571 State Park Road 56
Livingston, Texas 77351

RE: Proposed Construction of New Training Facilities
Maxwell Air Force Base, Alabama

Dear Ms. Thomas:

The United States Air Force is preparing an Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA). In response to recommendations by the Air Force Chief of Staff, several training programs are being increased and revised in order to better train our military personnel for deployment and combat. Several new or upgraded facilities are needed in order to implement these training requirements and accommodate military trainees. Due to security measures, all proposed actions are to be within Maxwell Air Force Base (MAFB) boundaries.

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MSD/CEV

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Enclosures

400 Cannon Street, Building 1060
Maxwell AFB, AL 36112
Tel.: 334-953-5260 • 334-396-4004

LEC Maxwell Support Division

March 18, 2008

Ms. Allison Alexander
Alabama-Quassarte Tribal Town of the Creek Nation of Oklahoma
117 North Main
Wetumka, Oklahoma 74883

RE: Proposed Construction of New Training Facilities
Maxwell Air Force Base, Alabama

Dear Ms. Alexander:

The United States Air Force is preparing an Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA). In response to recommendations by the Air Force Chief of Staff, several training programs are being increased and revised in order to better train our military personnel for deployment and combat. Several new or upgraded facilities are needed in order to implement these training requirements and accommodate military trainees. Due to security measures, all proposed actions are to be within Maxwell Air Force Base (MAFB) boundaries.

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400 Cannon Street, Building 1060
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LEC Maxwell Support Division

March 18, 2008

Mr. Terry D. Cole
Director of Cultural Resources
Choctaw Nation of Oklahoma
P.O. Drawer 1210
Durant, Oklahoma 74702

RE: Proposed Construction of New Training Facilities
Maxwell Air Force Base, Alabama

Dear Mr. Cole:

The United States Air Force is preparing an Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA). In response to recommendations by the Air Force Chief of Staff, several training programs are being increased and revised in order to better train our military personnel for deployment and combat. Several new or upgraded facilities are needed in order to implement these training requirements and accommodate military trainees. Due to security measures, all proposed actions are to be within Maxwell Air Force Base (MAFB) boundaries.

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Enclosures

400 Cannon Street, Building 1060
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Tel.: 334-953-5260 • 334-396-4004

LEC Maxwell Support Division

March 18, 2008

Mr. Charles D. Enyart
Chief
Eastern Shawnee Tribe of Oklahoma
P.O. Box 350
Seneca, Missouri 64865

RE: Proposed Construction of New Training Facilities
Maxwell Air Force Base, Alabama

Dear Mr. Enyart:

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400 Cannon Street, Building 1060
Maxwell AFB, AL 36112
Tel.: 334-953-5260 • 334-396-4004

4) Upgrading training and support facilities at Blue Thunder mobilization training area
Upgrades to this training area would include any permanent construction or modernization of latrines, shelters needed for inclement weather, parking areas, and other structures needed to support existing and future facilities. Upgrades may be made to obstacle courses, tent areas, or other training areas.

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Thank you for your interest and assistance in this matter. If you have questions, please contact me at 334-953-6417.

Sincerely,

Janet Lanier

Janet Lanier
Environmental Manager
MSD/CEV

JLL: bao
Enclosures

400 Cannon Street, Building 1060
Maxwell AFB, AL 36112
Tel.: 334-953-5260 • 334-396-4004

LEC Maxwell Support Division

March 18, 2008

Mr. Lowell Wesley
Mekko
Kialegee Tribal Town of the Creek Nation of Oklahoma
P.O. Box 332
Wetumka, Oklahoma 74883

RE: Proposed Construction of New Training Facilities
Maxwell Air Force Base, Alabama

Dear Mr. Wesley:

The United States Air Force is preparing an Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA). In response to recommendations by the Air Force Chief of Staff, several training programs are being increased and revised in order to better train our military personnel for deployment and combat. Several new or upgraded facilities are needed in order to implement these training requirements and accommodate military trainees. Due to security measures, all proposed actions are to be within Maxwell Air Force Base (MAFB) boundaries.

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400 Cannon Street, Building 1060
Maxwell AFB, AL 36112
Tel.: 334-953-5260 • 334-396-4004

LEC Maxwell Support Division

March 18, 2008

Mr. Kenneth H. Carleton
Tribal Archaeologist
Mississippi Band of Choctaw Indians
P.O. Box 6257
Choctaw, Mississippi 39350

RE: Proposed Construction of New Training Facilities
Maxwell Air Force Base, Alabama

Dear Mr. Carleton:

The United States Air Force is preparing an Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA). In response to recommendations by the Air Force Chief of Staff, several training programs are being increased and revised in order to better train our military personnel for deployment and combat. Several new or upgraded facilities are needed in order to implement these training requirements and accommodate military trainees. Due to security measures, all proposed actions are to be within Maxwell Air Force Base (MAFB) boundaries.

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Environmental Manager
MSD/CEV

JLL: bao
Enclosures

400 Cannon Street, Building 1060
Maxwell AFB, AL 36112
Tel.: 334-953-5260 • 334-396-4004

LEC Maxwell Support Division

March 18, 2008

Mr. Billy Cypress
Tribal Historic Preservation Officer
Seminole Tribe of Florida
6300 Stirling Road
Hollywood, Florida 33024

RE: Proposed Construction of New Training Facilities
Maxwell Air Force Base, Alabama

Dear Mr. Cypress:

The United States Air Force is preparing an Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA). In response to recommendations by the Air Force Chief of Staff, several training programs are being increased and revised in order to better train our military personnel for deployment and combat. Several new or upgraded facilities are needed in order to implement these training requirements and accommodate military trainees. Due to security measures, all proposed actions are to be within Maxwell Air Force Base (MAFB) boundaries.

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400 Cannon Street, Building 1060
Maxwell AFB, AL 36112
Tel.: 334-953-5260 • 334-396-4004

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Environmental Manager
MSD/CEV

JLL: bao
Enclosures

400 Cannon Street, Building 1060
Maxwell AFB, AL 36112
Tel.: 334-953-5260 • 334-396-4004

LEC Maxwell Support Division

March 18, 2008

Mr. Charles Coleman
Tribal Historic Preservation Officer
Thlopthlocco Tribal Town
P.O. Box 188
Okemah, Oklahoma 74859

RE: Proposed Construction of New Training Facilities
Maxwell Air Force Base, Alabama

Dear Mr. Coleman:

The United States Air Force is preparing an Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA). In response to recommendations by the Air Force Chief of Staff, several training programs are being increased and revised in order to better train our military personnel for deployment and combat. Several new or upgraded facilities are needed in order to implement these training requirements and accommodate military trainees. Due to security measures, all proposed actions are to be within Maxwell Air Force Base (MAFB) boundaries.

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400 Cannon Street, Building 106C
Maxwell AFB, AL 36112
Tel.: 334-953-5260 • 334-396-4004

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Janet Lanier

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Environmental Manager
MSD/CEV

JLL: bao
Enclosures

LEC Maxwell Support Division

March 18, 2008

Ms. Stephanie Rolin
Tribal Administrator
Poarch Band of Creek Indians
5811 Jack Spring Road
Atmore, AL 36502

RE: Proposed Construction of New Training Facilities
Maxwell Air Force Base, Alabama

Dear Ms. Rolin:

The United States Air Force is preparing an Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA). In response to recommendations by the Air Force Chief of Staff, several training programs are being increased and revised in order to better train our military personnel for deployment and combat. Several new or upgraded facilities are needed in order to implement these training requirements and accommodate military trainees. Due to security measures, all proposed actions are to be within Maxwell Air Force Base (MAFB) boundaries.

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Environmental Manager
MSD/CEV

JLL: bao
Enclosures

400 Cannon Street, Building 1060
Maxwell AFB, AL 36112
Tel.: 334-953-5260 • 334-396-4004

LEC Maxwell Support Division

March 18, 2008

Mr. A.D. Ellis
National Chief
Muscogee (Creek) Nation
P.O. Box 580
Okmulgee, OK 74447

RE: Proposed Construction of New Training Facilities
Maxwell Air Force Base, Alabama

Dear Mr. Ellis:

The United States Air Force is preparing an Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA). In response to recommendations by the Air Force Chief of Staff, several training programs are being increased and revised in order to better train our military personnel for deployment and combat. Several new or upgraded facilities are needed in order to implement these training requirements and accommodate military trainees. Due to security measures, all proposed actions are to be within Maxwell Air Force Base (MAFB) boundaries.

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Enclosures

400 Cannon Street, Building 1060
Maxwell AFB, AL 36112
Tel.: 334-953-5260 • 334-396-4004

LEC Maxwell Support Division

May 2, 2008

Ms. Cindy House-Pearson
U.S. Army Corps of Engineers
218 Summit Parkway, Suite 222
Homewood, AL 35209

RE: Proposed Construction of New Training Facilities
Maxwell Air Force Base, Alabama

Dear Ms. House-Pearson:

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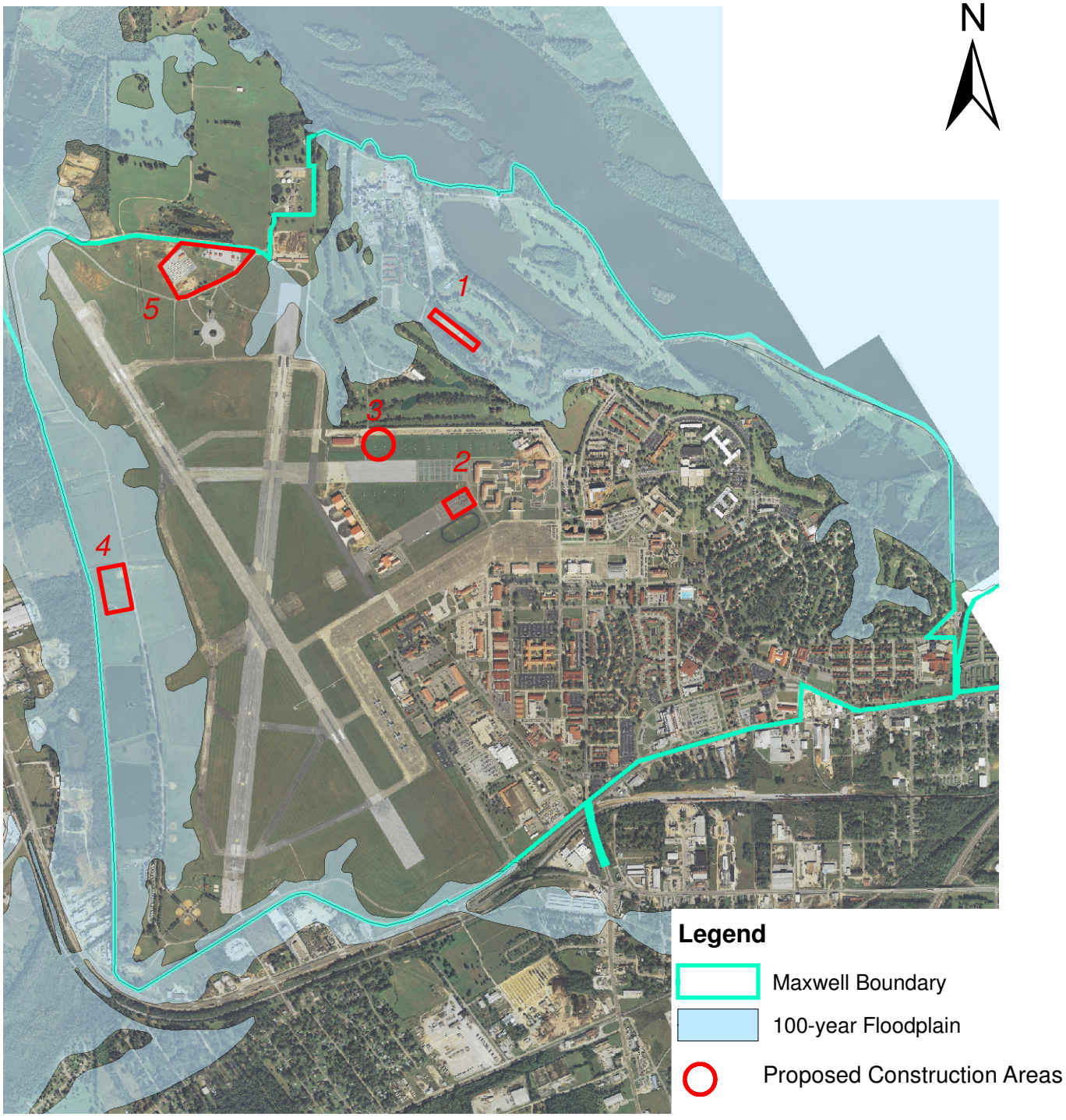

Source: Maxwell Geobase March, 2008

Figure 3-4 Proposed Facilities and 100-year Floodplain

Proposed Facility Locations

1 Proposed Firing Range Complex
2 Proposed New Dormitory and Dining Hall/ Multi-Purpose Facility
3 Proposed SOC Training Facility
4 Proposed ECAC Training Area
5 Blue Thunder Field Training Area

0 800 1,600 3,200 4,800 6,400 Feet

LEC Maxwell Support Division

May 2, 2008

Mr. William Straw
Federal Emergency Management Agency
3003 Chamblee Tucker Road
Atlanta, GA 30341

RE: Proposed Construction of New Training Facilities
Maxwell Air Force Base, Alabama

Dear Mr. Straw:

The United States Air Force is preparing an Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA). In response to recommendations by the Air Force Chief of Staff, several training programs are being increased and revised in order to better train our military personnel for deployment and combat. Several new or upgraded facilities are needed in order to implement these training requirements and accommodate military trainees. Due to security measures, all proposed actions are to be within Maxwell Air Force Base (MAFB) boundaries.

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Janet Lanier

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Environmental Manager
MSD/CEV

JLL: bao
Enclosures

400 Cannon Street, Building 1060
Maxwell AFB, AL 36112
Tel.: 334-953-5260 • 334-396-4004

LEC Maxwell Support Division

May 2, 2008

Mr. Brock Long
Alabama Emergency Management Agency
P.O. Drawer 2160
Clanton, AL 35046-2160

RE: Proposed Construction of New Training Facilities
Maxwell Air Force Base, Alabama

Dear Mr. Long:

The United States Air Force is preparing an Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA). In response to recommendations by the Air Force Chief of Staff, several training programs are being increased and revised in order to better train our military personnel for deployment and combat. Several new or upgraded facilities are needed in order to implement these training requirements and accommodate military trainees. Due to security measures, all proposed actions are to be within Maxwell Air Force Base (MAFB) boundaries.

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Environmental Manager
MSD/CEV

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Enclosures

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Maxwell AFB, AL 36112
Tel.: 334-953-5260 • 334-396-4004

United States Department of the Interior

FISH AND WILDLIFE SERVICE
1208-B Main Street
Daphne, Alabama 36526

APR 07 2008

IN REPLY REFER TO:
2008-TA-0429

Ms. Janet Lanier, Environmental Manager
LEC, Maxwell Support Division
400 Cannon Street, Buildling 1060
Maxwell AFB, AL 36112

Dear Ms. Lanier:

Thank you for your letter dated March 18, 2008, requesting comments on the construction of new (and upgrading of existing) training facilities at Maxwell Air Force Base, Montgomery, Alabama. We have reviewed the information and are providing the following comments in accordance with the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 et.).

After a careful review, the U.S. Fish and Wildlife Service (Service) believes no adverse affect to listed species or critical habitat will occur as a result of constructing new or upgrading of existing training facilities. However, obligations under section 7 of the Act must be reconsidered if: (1) new information reveals impacts of this identified action that may affect endangered or threatened species or critical habitat in a manner not previously considered, (2) this action is subsequently modified in a manner not considered in this review, or (3) a new species is listed or critical habitat is determined that may be affected by the action.

We may have additional comments after review of the Environmental Assessment containing the full description of the proposed action. If you need additional information with regards to this correspondence, please contact Mr. Bruce Porter of this office at (251) 441-5864 via or email at bruce_porter@fws.gov.

Sincerely,

William J. Pearson
Field Supervisor
Alabama Ecological Services Field Office

Watson, Sherrie CTR USAF AETC MSD/CEV

From: Watson, Sherrie CTR USAF AETC MSD/CEV
Sent: Thursday, June 12, 2008 4:37 PM
To: 'bruce_porter@fws.gov'
Subject: Draft EA for New/Updated Training Facilities at Maxwell AFB, AL - Pt 1 of 3
Attachments: USFWS Response 7 Apr 08.pdf; Draft Maxwell Training Facilities EA Pt 1.pdf

Sir,

In response to your letter of April 7, 2008 (attached for reference), we are providing a copy of the Draft Environmental Assessment for new and updated training facilities at Maxwell AFB in Montgomery, AL. Due to the size of this file, we are sending it to you in three parts. Part 1 is attached here. Parts 2 and 3 will be sent in separate messages.

Any comments regarding the draft EA should be submitted within 30 days. If you have any questions, please let us know. Thank you.

Sincerely,

Sherrie Watson
MSD/CEV
Maxwell AFB, AL 36112
Tel 334-953-5260
DSN 493-5260

Watson, Sherrie CTR USAF AETC MSD/CEV

From: Watson, Sherrie CTR USAF AETC MSD/CEV
Sent: Thursday, June 12, 2008 4:43 PM
To: 'bruce_porter@fws.gov'
Subject: Draft EA for New/Updated Training Facilities at Maxwell AFB, AL - Pt 2 of 3
Attachments: Draft Maxwell Training Facilities EA Pt 2.pdf

Sir,

In response to your letter of April 7, 2008, we are providing a copy of the Draft Environmental Assessment for new and updated training facilities at Maxwell AFB in Montgomery, AL. Due to the size of this file, we are sending it to you in three parts. Part 2 is attached here. Part 3 will be sent in a separate message.

Any comments regarding the draft EA should be submitted within 30 days. If you have any questions, please let us know. Thank you.

Sincerely,

Sherrie Watson
MSD/CEV
Maxwell AFB, AL 36112
Tel 334-953-5260
DSN 493-5260

Watson, Sherrie CTR USAF AETC MSD/CEV

From: Watson, Sherrie CTR USAF AETC MSD/CEV
Sent: Thursday, June 12, 2008 4:45 PM
To: 'bruce_porter@fws.gov'
Subject: Draft EA for New/Updated Training Facilities at Maxwell AFB, AL - Pt 3 of 3
Attachments: Draft Maxwell Training Facilities EA Pt 3.pdf

Sir,

In response to your letter of April 7, 2008, we are providing a copy of the Draft Environmental Assessment for new and updated training facilities at Maxwell AFB in Montgomery, AL. Due to the size of this file, we are sending it to you in three parts. Part 3 is attached here, and this part completes the document file.

Any comments regarding the draft EA should be submitted within 30 days. If you have any questions or if you did not receive all three parts of the document, please let us know. Thank you.

Sincerely,

Sherrie Watson

MSD/CEV

Maxwell AFB, AL 36112

Tel 334-953-5260

DSN 493-5260

Watson, Sherrie CTR USAF AETC MSD/CEV

From: Bruce_Porter@fws.gov
Sent: Friday, June 13, 2008 7:33 AM
To: Watson, Sherrie CTR USAF AETC MSD/CEV
Subject: Draft EA for New/Updated Training Facilities at Maxwell AFB, AL - Pt 1 of 3

Return Receipt

Your document: Draft EA for New/Updated Training Facilities at Maxwell AFB, AL - Pt 1 of 3

was received by: Bruce Porter/R4/FWS/DOI

at: 06/13/2008 07:33:13 AM CDT

Watson, Sherrie CTR USAF AETC MSD/CEV

From: Bruce_Porter@fws.gov
Sent: Monday, June 16, 2008 7:34 AM
To: Watson, Sherrie CTR USAF AETC MSD/CEV
Subject: FW: Draft EA for New/Updated Training Facilities at Maxwell AFB, AL - Pt 2 of 3

Return Receipt

Your document:	FW: Draft EA for New/Updated Training Facilities at Maxwell AFB, AL - Pt 2 of 3
was received by:	Bruce Porter/R4/FWS/DOI
at:	06/16/2008 07:33:50 AM CDT

Watson, Sherrie CTR USAF AETC MSD/CEV

From: Bruce_Porter@fws.gov
Sent: Monday, June 16, 2008 7:34 AM
To: Watson, Sherrie CTR USAF AETC MSD/CEV
Subject: FW: Draft EA for New/Updated Training Facilities at Maxwell AFB, AL - Pt 3 of 3

Return Receipt

Your document:	FW: Draft EA for New/Updated Training Facilities at Maxwell AFB, AL - Pt 3 of 3
was received by:	Bruce Porter/R4/FWS/DOI
at:	06/16/2008 07:33:46 AM CDT

City of Montgomery, Alabama

Planning & Development
Ken Groves, Director

Bobby N. Bright
Mayor

Montgomery City Council Members
Charles W Jinright—President
Tracy Larkin—Pro tem
Willie Cook
Cornelius Calhoun
Charles W. Smith
David M. Burkette
Glen O. Pruitt, Jr.
Martha Roby
Jim Spear

March 28, 2008

Janet Lanier
Environmental Manager
400 Cannon Street, Building 1060
Maxwell AFB, AL 36112

Re: Proposed Construction of New Training Facilities
Maxwell Air Force Base, Alabama

Dear Ms. Lanier:

In response to your inquiry of March 18, 2008, please be advised that the City of Montgomery supports the project. As described in your letter the project presents no concerns regarding resources of special interest to the City.

There is only one on-going project in the area that you may wish to consider in your assessment that is the widening of Bell Street from the CSX railroad bridge (I-65) to Washington Ferry Road. The widening project is currently ready to let for construction bids. Plans are to provide a landscaped median and two lanes dedicated to the base entry control facility. Additional right of way will be needed along the north side of Bell Street.

I trust that this response meets your needs. Please advise me if you need any additional description of the two projects mentioned above.

Sincerely,

Kenneth J. Groves

Kenneth J. Groves, AICP
Director of Planning and Development

Cc: Mayor Bobby Bright

CARPDC
CENTRAL ALABAMA REGIONAL PLANNING
AND DEVELOPMENT COMMISSION
AUTAUGA, ELMORE & MONTGOMERY COUNTIES

Jiles Williams, Jr.
Chairman

Bill J. Tucker
Executive Director

March 28, 2008

Mrs. Janet Lanier
400 Cannon Street, Building 1060
Maxwell AFB, AL 36112

RE: Environmental Review
Proposed Training Facilities
Maxwell AFB, AL

Dear Mrs. Lanier:

In response to your letter dated March 18, 2008, CARPDC and I offer the following response.

The United States Air Force is proposing the following construction for Maxwell AFB.

1.) Upgrading and expanding Maxwell's Small Arms Training Facility.

2.) Establishing an Evasion and Conduct After Capture course at Maxwell as part of the Air and Space Basic Course.

3.) Adding a covered training area and storage facility for the Squadron Officer College.

4.) Upgrading Training and support facilities at BlueThunder mobilization training area.

5.) Constructing an additional dormitory and dining hall.

As of this date, I have no negative comments or concerns regarding the proposed activities. Furthermore, I know of no major project in the vicinity of these proposed improvements which might contribute to the cumulative effects of these proposed actions.

CARPDC encourages you to continue efforts to undertake this project. If CARPDC or I may be of any assistance to you in this endeavor, feel free to call anytime.

Sincerely,

Bill J. Tucker
Executive Director

430 SOUTH COURT STREET• MONTGOMERY, ALABAMA 36104
TELEPHONE (334) 262-4300 • FAX (334) 262-6976

STATE OF ALABAMA
DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
64 NORTH UNION STREET
MONTGOMERY, AL 36130

BOB RILEY
GOVERNOR

M. BARNETT LAWLEY
COMMISSIONER

RICHARD C. LILES
OPERATIONS DIRECTOR

JAMES H. GRIGGS, DIRECTOR
GREGORY M. LEIN, ASSISTANT DIRECTOR
STATE LANDS DIVISION

TELEPHONE (334) 242-3484
FAX NO. (334) 242-0990

August 10, 2005

Janet Lanier, Environmental Manager
MSD/CEV
400 Cannon Street, Building 1060
Maxwell Air Force Base, Alabama 36112

Re: Category II Determination for Maxwell Air Force Base and Gunter Annex: exemption from the requirement to prepare an Integrated Natural Resource Management Plan (INRMP).

Dear Ms. Lanier:

The Department of Conservation and Natural Resources concurs with the Category II Determination for Maxwell Air Force Base, including Gunter Annex, provided that we continue to be notified and consulted when major actions are being proposed at the installations in accordance with the Environmental Impact Analysis Process. Actions we would have concerns about would include expansions or alterations of the storm drainage system (storm drains have quite significant impacts on the biota and stability of streams receiving storm water runoff), the discovery of a state- or federally-protected species on site (none are presently known to exist on the installations), and activities which might affect the ecological integrity of streams or wetlands. Such actions should be coordinated with the Environmental Coordinator (334-242-3420). The Marine Police Division (334-242-3669) should be consulted if navigational safety on the Alabama River or other navigable streams might be impacted - changes in dock length, lighting, the placement of pipes in or over the water, etc. The State Lands Division (334-242-3484) should be consulted for any action in the Alabama River or other state-owned waterbottoms, which might include oxbows - dock construction or alteration, the placement of pipes or utilities in or over the water, etc. The tour you provided for the U. S. Fish and Wildlife Service and the Division of Wildlife and Freshwater on July 27th was greatly appreciated.

Sincerely,

M. Barnett Lawley
Commissioner

STATE OF ALABAMA
ALABAMA HISTORICAL COMMISSION
468 SOUTH PERRY STREET
MONTGOMERY, ALABAMA 36130-0900

FRANK W. WHITE
EXECUTIVE DIRECTOR

TEL: 334-242-3184
FAX: 334-240-3477

April 10, 2008

Janet Lanier
LEC Maxwell Support Division
400 Cannon Street, Building 1060
Maxwell AFB, Alabama 36112

Re: AHC 08-0575
New Training Facilities Construction
Maxwell Air Force Base
Montgomery County, Alabama

Dear ~~Ms. Lanier:~~ Janet:

Upon review of the information forwarded by your office, we have determined that the proposed activities should not affect any archaeological resources listed on or eligible for the National Register of Historic Places provide all areas are previously disturbed as stated in your documentation. However, we shall need more information regarding the structures and those surrounding the proposed facilities. Please forward photographs and construction dates of the subject resources and of those around the resources (streetscapes). Finally, please forward a map indicating the location of these resources and those of Maxwell's National Register of Historic Places districts so we can better understand how they relate to each other.

We appreciate your efforts on this project. Should you have any questions, the point of contact for this matter is Susan Enzweiler at (334) 230-2644. Please have the AHC tracking number referenced above available and include it with any correspondence.

Truly yours,

Elizabeth

Elizabeth Ann Brown
Deputy State Historic Preservation Officer

EAB/SE/GCR/gcr

Watson, Sherrie CTR USAF AETC MSD/CEV

From: Lanier, Carrie L CTR USAF AETC MSD/CEV
Sent: Friday, April 25, 2008 4:56 PM
To: Watson, Sherrie CTR USAF AETC MSD/CEV; Osgood, Beth A CTR USAF AETC MSD/CEV
Subject: FW: Information on Proposed Training Sites and Historical Structures

Attachments: ECAC site and Historic Structures.pdf; riding area and historic structures.pdf; AHC 08-0575 Training Facility Construction .pdf


ECAC site and Historic Structu...


riding area and historic struc...


AHC 08-0575 Training Facility...

Lindsay Kennington
EMAIL: Lanier, Carrie L CTR USAF AETC
MSD/CEV
Maxwell AFB, AL 36112
Tel 334-953-7155

-----Original Message-----
From: Lanier, Carrie L CTR USAF AETC MSD/CEV
Sent: Thursday, April 24, 2008 4:48 PM
To: 'susan.enzweiler@preserveala.org'
Cc: 'elizabeth.brown@preserveala.org'
Subject: Information on Proposed Training Sites and Historical Structures

Ma'am:

Attached are three PDF documents. One map (ECAC site and Historic Structures) shows all the proposed construction locations and all Eligible or Listed properties on Maxwell. The second map (riding area and historic structures) shows a close up view of the proposed site of the riding arena and the existing site of the riding arena as well as the nearest historic structures. These structures are the African American Barracks associated with the Fourth Aviation Squadron.The thrid attachment (AHC 08-0575) is a response to the letter we received from SHPO along with photographs of the proposed riding arena which indicate the location of the existing arena and the proximity of the African American Barracks. If any additional information is needed, please let me know.

V/R,

Lindsay Kennington
EMAIL: Lanier, Carrie L CTR USAF AETC
MSD/CEV
Maxwell AFB, AL 36112
Tel 334-953-7155

LEC Maxwell Support Division

April 21, 2008

Ms. Elizabeth Brown
Alabama Deputy State Historic Preservation Officer
Alabama Historical Commission
468 South Perry Street
Montgomery, AL 36130-0900

RE: AHC 08-0575

Dear Ms. Brown:

Attached are the maps that you requested and pictures of the proposed site. There are no Eligible or Listed facilities located in the proposed construction sites. The nearest Eligible structures are the African American Barracks. However, the nearest construction site to these structures is the riding arena, which will consist of an open pasture and a perimeter fence. Thank you for your assistance with this matter. If additional information is needed or if you would like to visit our facility in order to clarify any questions, please contact me at 953-5757.

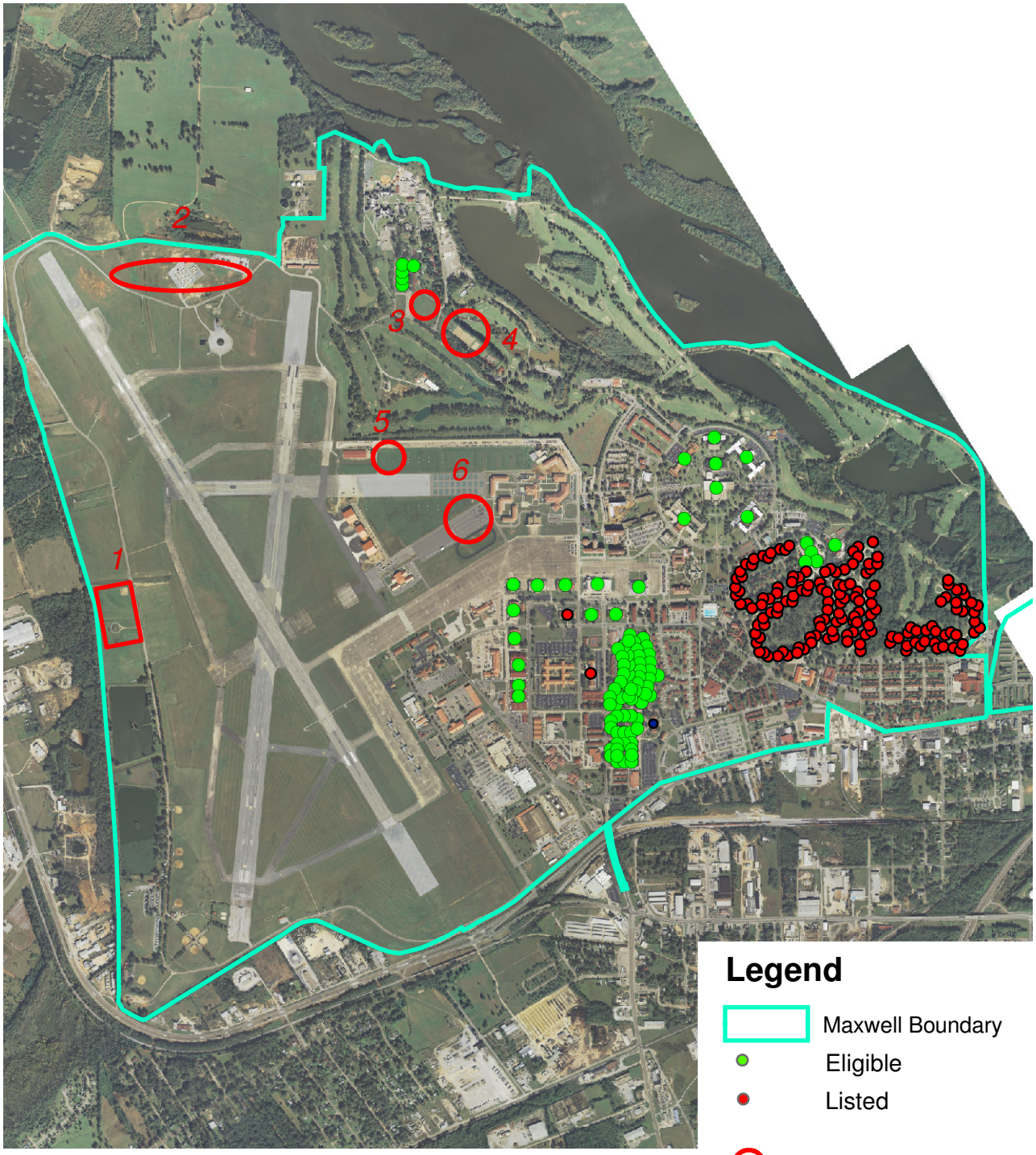
Sincerely,

Janet Lanier
Environmental Manager
MSD/CEV

JLL:clk
Enclosures

400 Cannon Street, Building 1060
Maxwell AFB, AL 36112
Tel.: 334-953-5260 • 334-396-4004

Environmental Assessments



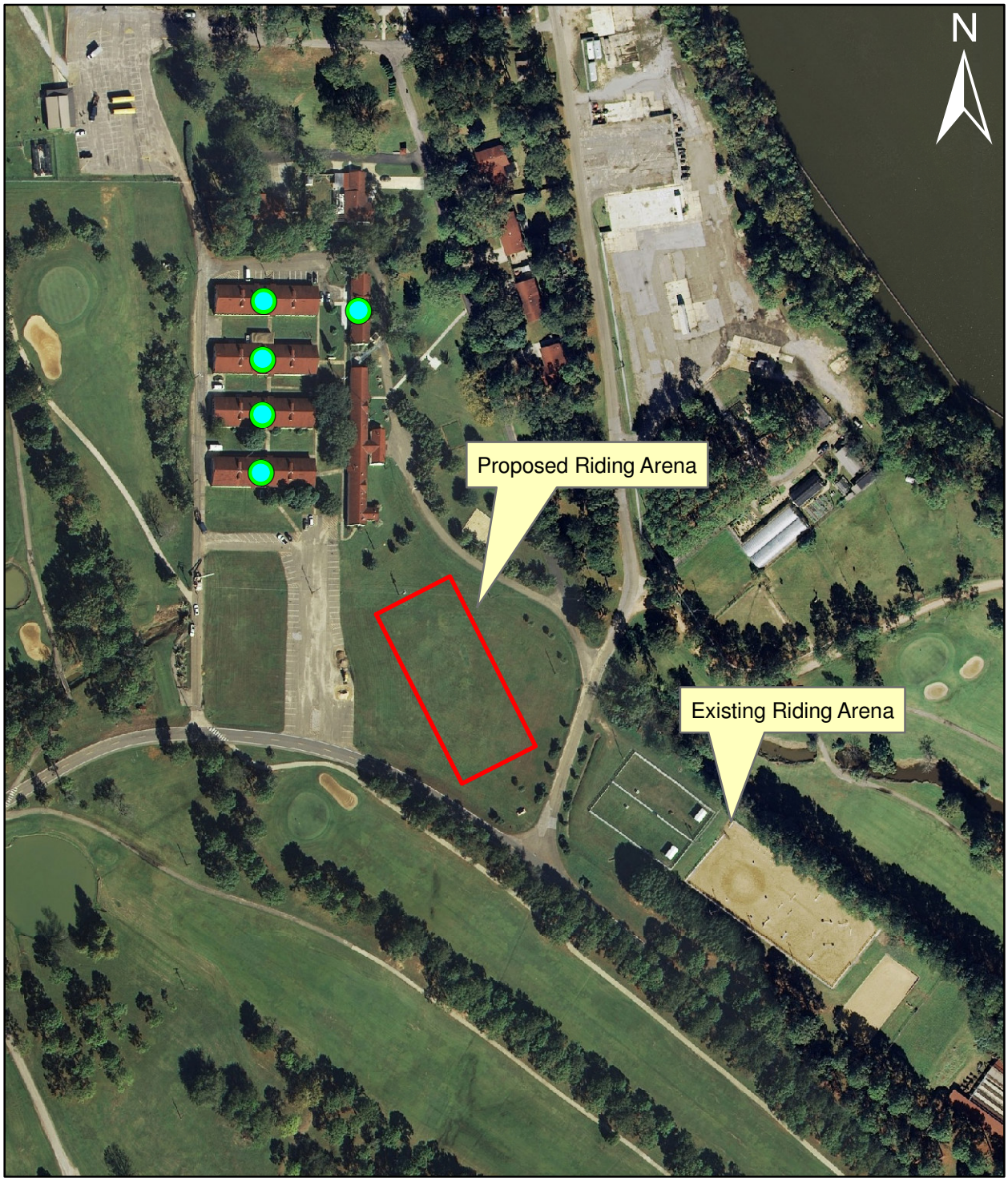
Source: Maxwell Geobase March, 2008

0 875 1,750 3,500 5,250 7,000 Feet

General Locations

1 Evasion Lab
2 Blue Thunder
3 Proposed Riding Area Relocation
4 Proposed New Firing Range and Offices
5 Proposed SOC Training Facility
6 Proposed Dining Hall and Dorm

Proposed Riding Arena



300 150 0 300 Feet

LEGEND

Eligible

400 Cannon Street, Building 1060
Maxwell AFB, AL 36112
Tel.: 334-953-5260 • 334-396-4004

400 Cannon Street, Building 1060
Maxwell AFB, AL 36112
Tel.: 334-953-5260 • 334-396-4004

STATE OF ALABAMA
ALABAMA HISTORICAL COMMISSION
468 SOUTH PERRY STREET
MONTGOMERY, ALABAMA 36130-0900

TEL: 334-242-3184
FAX: 334-240-3477

May 19, 2008

Janet Lanier
LEC Maxwell Support Division
400 Cannon Street, Building 1060
Maxwell AFB, Alabama 36112

Re: AHC 08-0575
New and Upgraded Training Facilities
Maxwell Air Force Base
Montgomery County, Alabama

Dear ~~Ms. Lanier:~~ Janet:

Upon review of the above referenced project, we have determined that the project activities will have no effect on any known cultural resources listed on or eligible for the National Register of Historic Places. Therefore, we concur with the proposed project activities.

However, should artifacts or archaeological features be encountered during project activities, work shall cease and our office shall be consulted immediately. Artifacts are objects made, used or modified by humans. These include but are not limited to arrowheads, broken pieces of pottery or glass, stone implements, metal fasteners or tools, etc. Archaeological features are stains in the soil that indicate disturbance by human activity. Some examples are postholes, building foundations, trash pits and even human burials. This stipulation shall be placed on the construction plans to insure contractors are aware of it.

We appreciate your efforts on this project. Should you have any questions, the point of contact for this matter is Greg Rhinehart at (334) 230-2662. Please have the AHC tracking number referenced above available and include it with any correspondence.

Truly yours,

Elizabeth Ann Brown
Deputy State Historic Preservation Officer

EAB/SME/GCR/gcr

Choctaw Nation of Oklahoma

P.O. Box 1210 • Durant, OK 74702-1210 • (580) 924-8280

Gregory E. Pyle
Chief

Gary Batton
Assistant Chief

April 14, 2008

Janet Lanier
LEC Maxwell Support Division
400 Cannon Street, Building 1060
Maxwell AFB, AL 36112

Dear Janet Lanier:

We have reviewed the following proposed project (s) as to its effect regarding religious and/or cultural significance to historic properties that may be affected by an undertaking of the projects area of potential effect.

Project Description: Construction of New Training Facilities

Site Location: Maxwell Air Force Base

Comments: After further review of the above mentioned project (s), to the best of our knowledge it will have no adverse effect on any historic properties in the project's area of potential effect. However, should construction expose buried archaeological or building materials such as chipped stone, tools, pottery, bone, historic crockery, glass or metal items, this office should be contracted immediately @ 1-800-522-6170 ext. 2137.

Sincerely,

Terry D. Cole
Tribal Historic Preservation Officer
Choctaw Nation of Oklahoma

By: Caren A Johnson
Caren A. Johnson
Administrative Assistant

CAJ: vr

From: House-Pearson, Cindy J SAM [Cindy.J.House-Pearson@usace.army.mil]
Sent: Monday, May 05, 2008 11:49 AM
To: Watson, Sherrie CTR USAF AETC MSD/CEV
Cc: Lanier, Janet L CTR USAF AETC MSD/CEV
Subject: RE: Proposed Construction of New Training Facilities at Maxwell AFB, Montgomery Co., Alabama

Janet, I need a wetland delineation work sheet to accompany your request showing the area is an upland.

Thanks

Cindy J. House-Pearson
Birmingham Field Office Manager
Regulatory Divsion, USACE
218 Summit Parkway, Suite 222
Homewood, AL 35209

For additional information about our Regulatory Program, please visit our web site at www.sam.usace.army.mil/RD/reg, and please take a moment to complete our customer satisfaction survey while you're there. Your responses are appreciated and will allow us to improve our services.

-----Original Message-----
From: Watson, Sherrie CTR USAF AETC MSD/CEV
[mailto:Sherrie.Watson.ctr@maxwell.af.mil]
Sent: Monday, May 05, 2008 11:31 AM
To: House-Pearson, Cindy J SAM
Cc: Lanier, Janet L CTR USAF AETC MSD/CEV
Subject: Proposed Construction of New Training Facilities at Maxwell AFB, Montgomery Co., Alabama

Ma'am,

Janet Lanier asked me to send you the attached letter and information regarding proposed construction of new training facilities at Maxwell AFB, Alabama. Please provide comments or concerns as soon as possible. You may send your comments in a reply to this message or send them to Janet Lanier at Janet.Lanier.ctr@maxwell.af.mil.

Thank you,

Sherrie Watson

MSD/CEV

Maxwell AFB, AL 36112

Tel 334-953-5260

DSN 493-5260

Watson, Sherrie CTR USAF AETC MSD/CEV

From: Osgood, Beth A CTR USAF AETC MSD/CEV
Sent: Monday, June 02, 2008 10:58 AM
To: 'House-Pearson, Cindy J SAM'
Cc: Watson, Sherrie CTR USAF AETC MSD/CEV
Subject: RE: Proposed Construction of New Training Facilities at Maxwell AFB, Montgomery Co., Alabama

Attachments: firing range wetlands.pdf; Wetland Delineation Forms_Firing Range Site.pdf; Wetlands Findings.doc


firing range wetlands.pdf (1 M...


Wetland Delineation Forms_Firi...


Wetlands Findings.doc (28 KB)

Ms. House-Pearson,

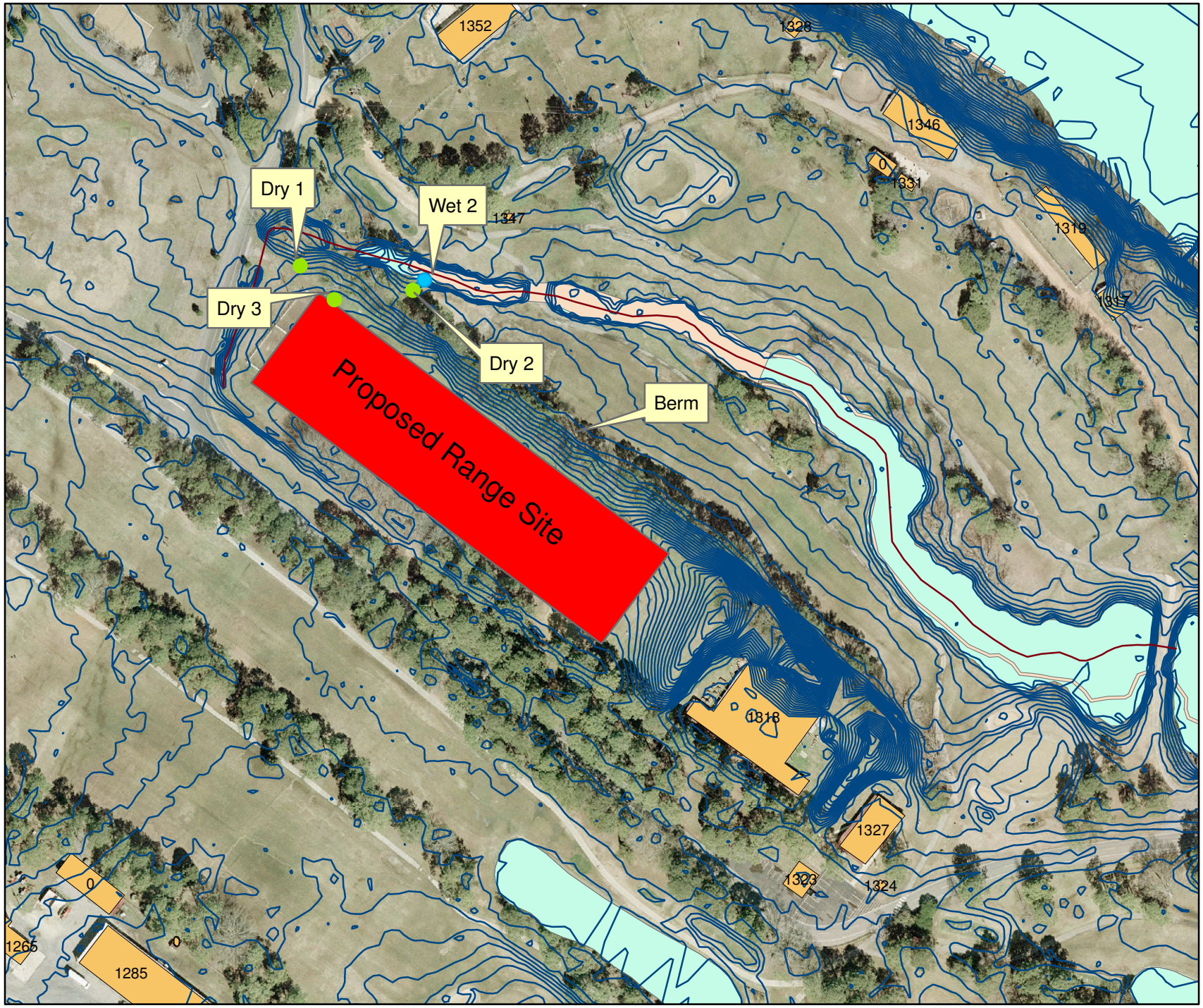
RE: Project file number SAM-2008-00822-CJP, Maxwell Training Facilities

Attached is wetland verification for the proposed site of the new firing range complex at Maxwell AFB. We have included a site map, field wetland delineation sheets, and a brief report of findings. Our field study confirmed that the proposed site was all upland area. As noted in the report, an existing berm and golf course area separates the wetland area from the proposed construction site. (Please note that the rectangle designating the proposed range site on the site map includes the entire potential area for the range itself, the support facility, and the parking area.)

Thanks for your help, and please let us know if any more information is needed.

3 Attachments:
1)Proposed Range Site Map
2)Wetland Determination Forms (4, front and back) 3)Report of Findings

Beth Osgood
Maxwell MSD/CEV
334-953-6417 DSN: 493-6417
beth.osgood.ctr@us.af.mil


Dry 1
Wet 2
Dry 3
Dry 2
Berm
Proposed Range Site
1352
1328
1346
0
1331
1319
1347
1317
1318
1327
1323
1324
0
0
1265
1285
N
Legend
Wetland Area
Surface Waters
<all other values>
SUBTYPEID
DRY
INTERMITTENT
PERMANENT
300
150
0
300 Feet

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Firing Range	Date: 5/14/08
Applicant/Owner:	County: Montgomery
Investigator: PW	State: AL

Do Normal Circumstances exist on the site?	(Yes)	No	Community ID: R1
Is the site significantly disturbed (Atypical Situation)?	(Yes)	No	Transect ID:
Is the area a potential Problem Area?	Yes	(No)	Plot ID: Dry 1
(If needed, explain on reverse.)			

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. manicured lawn	H		9.		
2. penny wort	H		10.		
3. blackberry	V		11.		
4. greenbriar	V		12.		
5. popcorn tree	T		13.		
6. maple	T		14.		
7. ~~oak tree~~	~~T~~		15.		
8. ~~Dead tree~~			16.		

"Percent of Dominant Species that are OBL, FACW or FAC" (excluding FAC-).

Remarks: man-made ditch - hole dug at top of steep 6-8' bank

HYDROLOGY N/A

____ Recorded Data (Describe in Remarks):	Wetland Hydrology Indicators:
____ Stream, Lake, or Tide Gauge	Primary Indicators:
____ Aerial Photographs	____ Inundated
____ Other	____ Saturated in Upper 12 Inches
____ No Recorded Data Available	____ Water Marks
	____ Drift Lines
Field Observations:	____ Sediment Deposits
Depth of Surface Water: N/A (in.)	____ Drainage Patterns in Wetlands
Depth to Free Water in Pit: N/A (in.)	Secondary Indicators (2 or more required):
Depth to Saturated Soil: N/A (in.)	____ Oxidized Root Channels in Upper 12 Inches
	____ Water-Stained Leaves
	____ Local Soil Survey Data
	____ FAC-Neutral Test
	____ Other (Explain in Remarks)

Remarks:

SOILS

Map Unit Name
(Series and Phase): _____ Drainage Class _____

Field Observations

Taxonomy (Subgroup) _____ Confirm Mapped Type? Yes No

Profile Descriptions:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0-10		7.5YR 5/6			silty clay

Hydric Soil Indicators: N/A

_____ Histosol
_____ Histic Epipedon
_____ Sulfidic Odor
_____ Aquic Moisture Regime
Gleyed or Low-Chroma Colors

_____ Concretions
_____ High Organic Content in Surface Layer in Sandy Soils
_____ Organic Streaking in Sandy Soils
_____ Listed on Local Hydric Soils List
Other (Explain in Remarks)

Remarks

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes (No) (Circle)
Wetland Hydrology Present? Yes (No)
Hydric Soils Present? Yes (No)

Is this Sampling Point Within a Wetland? Yes (No) (Circle)

Remarks

Approved by HQUSACE 3/92

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Firing Range	Date: 5/14/08
Applicant/Owner:	County:
Investigator: PW	State:

Do Normal Circumstances exist on the site?	~~Yes~~	No	Community ID: R1
Is the site significantly disturbed (Atypical Situation)?	~~Yes~~	No	Transect ID:
Is the area a potential Problem Area? (If needed, explain on reverse.)	Yes	No	Plot ID: Dry 2

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. manicured lawn	H		9.		
2. long leaf pine	T		10.		
3. dandelion	H		11.		
4. green briar	V		12.		
5. Mimosa	T		13.		
6.			14.		
7.			15.		
8.			16.		

"Percent of Dominant Species that are OBL, FACW or FAC" (excluding FAC-).

Remarks:
Hole dug at top of steep 6-8 ft. bank of man-made ditch

HYDROLOGY N/A

_____ Recorded Data (Describe in Remarks):	Wetland Hydrology Indicators:
____ Stream, Lake, or Tide Gauge	Primary Indicators:
____ Aerial Photographs	_____ Inundated
____ Other	_____ Saturated in Upper 12 Inches
_____ No Recorded Data Available	_____ Water Marks
	_____ Drift Lines
Field Observations:	_____ Sediment Deposits
Depth of Surface Water: N/A (in.)	_____ Drainage Patterns in Wetlands
Depth to Free Water in Pit: N/A (in.)	Secondary Indicators (2 or more required):
Depth to Saturated Soil: N/A (in.)	_____ Oxidized Root Channels in Upper 12 Inches
	_____ Water-Stained Leaves
	_____ Local Soil Survey Data
	_____ FAC-Neutral Test
	_____ Other (Explain in Remarks)

Remarks:

SOILS

Map Unit Name
(Series and Phase): _____

Taxonomy (Subgroup) _____

Drainage Class _____

Field Observations
Confirm Mapped Type? Yes No

Profile Descriptions:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0-1		7.5 YR 3/3			clayey silt
1-10		10 YR 5/6			silty clay

Hydric Soil Indicators: N/A

_____ Histosol
_____ Histic Epipedon
_____ Sulfidic Odor
_____ Aquic Moisture Regime
Gleyed or Low-Chroma Colors
_____ Concretions
_____ High Organic Content in Surface Layer in Sandy Soils
_____ Organic Streaking in Sandy Soils
_____ Listed on Local Hydric Soils List
Other (Explain in Remarks)

Remarks

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes (No) (Circle)
Wetland Hydrology Present? Yes (No)
Hydric Soils Present? Yes (No)

Is this Sampling Point Within a Wetland? Yes (No) (Circle)

Remarks

Approved by HQUSACE 3/92

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: firing range	Date: 5/14/08
Applicant/Owner:	County:
Investigator: PW	State:

Do Normal Circumstances exist on the site?	(Yes)	No	Community ID: R1
Is the site significantly disturbed (Atypical Situation)?	(Yes)	No	Transect ID:
Is the area a potential Problem Area? (If needed, explain on reverse.)	Yes	(No)	Plot ID: Wet 2

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. ~~Old~~ soft rush	H		9.		
2. mimosa	S		10.		
3. greenbriar	V		11.		
4. duckweed	H		12.		
5. longleaf pine	T		13.		
6.			14.		
7.			15.		
8.			16.		

"Percent of Dominant Species that are OBL, FACW or FAC" (excluding FAC-).

Remarks:
man-made ditch surrounded by manicured lawn - hole dug adjacent to standing water at bottom of ditch

HYDROLOGY

____ Recorded Data (Describe in Remarks):	Wetland Hydrology Indicators:
____ Stream, Lake, or Tide Gauge	Primary Indicators:
____ Aerial Photographs	____ Inundated
____ Other	✓ Saturated in Upper 12 Inches
____ No Recorded Data Available	____ Water Marks
	____ Drift Lines
	____ Sediment Deposits
Field Observations:	____ Drainage Patterns in Wetlands
	Secondary Indicators (2 or more required):
Depth of Surface Water: N/A (in.)	____ Oxidized Root Channels in Upper 12 Inches
	____ Water-Stained Leaves
Depth to Free Water in Pit: 16 (in.)	____ Local Soil Survey Data
	____ FAC-Neutral Test
Depth to Saturated Soil: 2 (in.)	____ Other (Explain in Remarks)

Remarks:

SOILS

Map Unit Name
(Series and Phase): _____

Drainage Class _____

Field Observations

Taxonomy (Subgroup) _____

Confirm Mapped Type? Yes No

Profile Descriptions:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0-4		10YR 3/3			
4-10		10YR 4/1			

Hydric Soil Indicators:

_____ Histosol
_____ Histic Epipedon
_____ Sulfidic Odor
_____ Aquic Moisture Regime
Gleyed or Low-Chroma Colors

_____ Concretions
_____ High Organic Content in Surface Layer in Sandy Soils
_____ Organic Streaking in Sandy Soils
_____ Listed on Local Hydric Soils List
Other (Explain in Remarks)

Remarks

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Yes) No (Circle)
Wetland Hydrology Present? (Yes) No
Hydric Soils Present? (Yes) No

Is this Sampling Point Within a Wetland? (Yes) No (Circle)

Remarks

Approved by HQUSACE 3/92

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: firing range	Date: 5/14/08
Applicant/Owner:	County:
Investigator: PW	State:

Do Normal Circumstances exist on the site?	(Yes)	No	Community ID: R1
Is the site significantly disturbed (Atypical Situation)?	(Yes)	No	Transect ID:
Is the area a potential Problem Area?	Yes	(No)	Plot ID: Dry 3
(If needed, explain on reverse.)			

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. manicured lawn	V		9.		
2. mimosa	T		10.		
3. plum	T		11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

"Percent of Dominant Species that are OBL, FACW or FAC" (excluding FAC-).

Remarks:

HYDROLOGY N/A

_____ Recorded Data (Describe in Remarks):
- ____ Stream, Lake, or Tide Gauge
- ____ Aerial Photographs
- ____ Other

_____ No Recorded Data Available

Field Observations:

Depth of Surface Water: _____ (in.)

Depth to Free Water in Pit: _____ (in.)

Depth to Saturated Soil: _____ (in.)

Wetland Hydrology Indicators:

Primary Indicators:
- _____ Inundated
- _____ Saturated in Upper 12 Inches
- _____ Water Marks
- _____ Drift Lines
- _____ Sediment Deposits
- _____ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- _____ Oxidized Root Channels in Upper 12 Inches
- _____ Water-Stained Leaves
- _____ Local Soil Survey Data
- _____ FAC-Neutral Test
- _____ Other (Explain in Remarks)

Remarks:

SOILS

Map Unit Name
(Series and Phase): _____

Drainage Class _____

Field Observations

Taxonomy (Subgroup) _____

Confirm Mapped Type? Yes No

Profile Descriptions:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0-10		10YR 3/6			silty clay
10-16		10YR 4/6			silty clay

Hydric Soil Indicators:

_____ Histosol
_____ Histic Epipedon
_____ Sulfidic Odor
_____ Aquic Moisture Regime
Gleyed or Low-Chroma Colors
_____ Concretions
_____ High Organic Content in Surface Layer in Sandy Soils
_____ Organic Streaking in Sandy Soils
_____ Listed on Local Hydric Soils List
Other (Explain in Remarks)

Remarks

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes (No) (Circle)
Wetland Hydrology Present? Yes (No)
Hydric Soils Present? Yes (No)

Is this Sampling Point Within a Wetland? Yes (No) (Circle)

Remarks

Approved by HQUSACE 3/92

Wetland Verification

On May 14, 2008, a team of environmental specialists conducted a limited wetland delineation for Maxwell AFB, Alabama. The area to be evaluated was the proposed site of a new Combat Arms Training and Marksmanship (CATM) facility (aka: small arms firing range). Based on a previous wetland report completed in 1994 by Woolpert of Dayton Ohio, one area of wetland was identified adjacent to the proposed site of the new firing range.

The wetland area consists of a man-made drainage ditch that drains water via several culverts from the surrounding area into the lakes on the golf course. The drainage ditch is highly channelized and has fairly steep 6-8 foot banks. At the time of the site survey, there was standing water within the drainage ditch. Vegetation along the banks consisted mainly of mimosa, greenbriar, blackberry, popcorn trees, and a variety of grasses. Within the channel were duckweed and soft rush. Along the top of the banks, vegetation was manicured lawn grasses of the golf course with several native and planted trees such as plum, maple, pine, and mimosa.

Using standard techniques and USACE guidelines for delineating wetlands, environmental personnel verified the location of the wetland. Several holes were sampled to verify that the proposed site of the range was not within the wetland boundary. Upon site inspection, it was also noted that both natural and manmade topographical features helped to separate the wetland area from the proposed site of the firing range.

A previous berm lies along the northern edge of the proposed site. This berm then drops off sharply to the golf course north of the proposed site. The drainage ditch runs between two of the holes on the golf course. All holes sampled on the proposed site and along the top of the bank were dry. None showed hydric soils, wetland hydrology, or hydrophytic vegetation. The only wet hole was located within the drainage ditch, adjacent to the standing water.

Team member for field verification included the following personnel from Maxwell MSD/CEV: Jared Kennington, Environmental Specialist; Paul West, Geologist; Frost Rollins, Botanist; and Beth Osgood, Biologist. Questions may be directed to Mrs. Janet Lanier, MSD/CEV at (334) 953-5260 or DSN: 493-5260.

DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, MOBILE DISTRICT
CORPS OF ENGINEERS
P.O. BOX 2288
MOBILE, ALABAMA 36628-0001

REPLY TO
ATTENTION OF:

June 7, 2008

Inland Branch
Regulatory Division

SUBJECT: Department of the Army Permit Not Required - Jurisdictional Number SAM-2008-822-CJH,

Maxwell Air Base
c/o Beth Osgood
Maxwell MSD/CEV
Montgomery, Alabama

Dear Ms. Osgood:

Reference is made to your request a jurisdictional determination for construction of a firing range complex located on Maxwell Air Force Base in Montgomery, Alabama

This letter verifies that your proposed construction activity will take place within an upland/nonwetland area and a Department of the Army authorization is not required to conduct the work. If the project location changes or the project requires the placement of fill material within waters of the U.S. or wetlands, please notify this office for verification of this determination.

The statements contained herein do not convey any property rights, or any exclusive privileges, and do not authorize any injury to property or obviate the requirements to obtain other local, State or Federal assent required by law.

If you have any questions or require further information concerning this matter, please contact Ms. Cindy J. House-Pearson of the Birmingham Field Office at 205-290-9096.

For additional information about our Regulatory Program, please visit our web site at www.sam.usace.army.mil/RD/reg, and please take a moment to complete our customer satisfaction survey while you're there. Your responses are appreciated and will allow us to improve our services.

Sincerely,

CJ House-Pearson

Cindy House-Pearson
Field Office Manager
Regulatory Division

From: Beck, Charles [charles.beck@dhs.gov]
Sent: Monday, May 05, 2008 12:55 PM
To: Watson, Sherrie CTR USAF AETC MSD/CEV
Cc: Straw, William; Lanier, Janet L CTR USAF AETC MSD/CEV; Rountree, Mary
Subject: RE: Proposed Construction of New Training Facilities - Maxwell AFB, Montgomery Co., AL

Ms. Watson:

Thank you for your inquiry. Our comments are limited to flood risks. We note that, away from the airfield, much of the base is mapped as within the 100-year floodplain. We understand that none of the proposed facilities is intended for residential use.

Where consistent with the base mission and when cost-effective, we recommend that buildings and materiel be located outside the 100-year floodplain or above the elevation of the 100-year flood. Buildings and materiel likely to be wetted by the 100-year event should be constructed to withstand inundation without damage or loss of function. Anything mission critical should be protected to a higher standard, e.g., the 500-year event.

If you have questions about specific methods of protecting facilities and equipment, please contact Ms. Mary Rountree (770-220-5366) in our floodplain management program. Or, if I can be of help, call me at 770-220-5334.

Charles Beck

Environmental Specialist

FEMA Region IV

From: Straw, William
Sent: Monday, May 05, 2008 12:34 PM
To: Beck, Charles
Cc: 'Sherrie.Watson.ctr@maxwell.af.mil'
Subject: FW: Proposed Construction of New Training Facilities - Maxwell AFB, Montgomery Co., AL

Charles: For your follow through. Thanks again. w

Wm Straw, PhD

Regional EHP Ofcr

DHS/FEMA R4

3003 Chamblee Tucker Rd

Atlanta GA 30341-4112

770.220.5432

william.straw@dhs.gov <mailto:william.straw@dhs.gov>

From: Watson, Sherrie CTR USAF AETC MSD/CEV
[mailto:Sherrie.Watson.ctr@maxwell.af.mil]
Sent: Monday, May 05, 2008 12:29 PM
To: Straw, William
Cc: Lanier, Janet L CTR USAF AETC MSD/CEV
Subject: Proposed Construction of New Training Facilities - Maxwell AFB, Montgomery Co., AL

Sir,

Janet Lanier asked me to send you the attached letter and information regarding proposed construction of new training facilities at Maxwell AFB, Alabama. Please provide comments or concerns as soon as possible. You may send your comments in a reply to this message or send them to Janet Lanier at Janet.Lanier.ctr@maxwell.af.mil.

Thank you,

Sherrie Watson

MSD/CEV

Maxwell AFB, AL 36112

Tel 334-953-5260

DSN 493-5260

APPENDIX B

PUBLIC INVOLVEMENT

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Appendix B

Public Involvement

As required by NEPA, the Air Force provides opportunities for public involvement in the NEPA process. A public notice, announcing the availability of the Draft EA and proposed FONSI/FONPA for proposed construction of new and updated training facilities at Maxwell Air Force Base, Alabama, was published in the Montgomery Advertiser on June 18, 2008. The notice invited public review and comment on the Draft EA and FONSI/FONPA, and indicated that copies of the document were available at the Montgomery Public Library and Air University Library. A privacy advisory was included with the public notice and indicated that comments received on the Draft EA and FONSI/FONPA and the commentor's name could be published in the Final EA and FONSI/FONPA, but personal home addresses and phone numbers would not be published. Please see the following page for a copy of the Public Notice.

The public comment period ended on July 18, 2008. No comments were received during the public comment period.

DRAFT ENVIRONMENTAL ASSESSMENT AND DRAFT FINDING OF NO SIGNIFICANT IMPACT TO CONSTRUCT NEW AND UPDATED TRAINING FACILITIES AT MAXWELL AFB, MONTGOMERY, ALABAMA

In accordance with the National Environmental Policy Act, Maxwell AFB is making available for the public a draft Environmental Assessment (EA) and draft Finding of No Significant Impact (FONSI).

The U.S. Air Force proposes to construct several new training facilities and to upgrade or renovate several existing facilities. New facilities proposed include: a new small arms firing range facility, a covered training pavilion, an equipment issue and storage building, a dormitory, a dining hall/multi-purpose facility, and an outdoor specialized tactical training area (evasion laboratory). The current small arms firing range and one building (#1429) are scheduled for renovation, and the Blue Thunder outdoor training area would be upgraded with new pavilions, tent pads, obstacles, and other support structures.

The environmental aspects of the proposed plan and alternatives were considered in the draft EA. Maxwell AFB has assessed the potential environmental impacts of the proposed action as described in the draft EA and has determined that it will not significantly impact the quality of the environment. The draft FONSI documents this assessment. A copy of the draft FONSI and draft EA are available for public review at the Montgomery Public Library, 245 High Street, and the Air University Library, Maxwell AFB.

Any comments regarding the draft EA or draft FONSI should be submitted in writing within 30 days of the publication of this notice to: AU/PA, 55 LeMay Plaza South, Maxwell AFB, AL 36112-6335. For further information, contact Brenda King at (334) 953-1517.

PRIVACY ADVISORY

Public comments on this draft Environmental Assessment (EA) are requested pursuant to the National Environmental Policy Act, 42 United States Code 4321, *et seq*. As required by law, all written comments received during the comment period will be made available to the public and considered during Final EA preparation. Providing private address information with your comment is voluntary and such personal information will be kept confidential unless release is required by law. However, address information will be used to compile the project mailing list and failure to provide it will result in your name not being included on the mailing list.

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