

FINAL
ENVIRONMENTAL ASSESSMENT (EA)
ADDRESSING THE CHANGE IN AIR FORCE OPERATIONS IN
INSTRUMENT ROUTES IR-057 AND IR-059



Hurlburt Field, Florida

January 2021

FORMAT PAGE

PRIVACY ADVISORY

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

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

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 Personal home addresses and phone numbers will not be published in the EA.

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COVER SHEET

FINAL ENVIRONMENTAL ASSESSMENT (EA) ADDRESSING THE CHANGE IN AIR FORCE OPERATIONS IN INSTRUMENT ROUTES IR-057 AND IR-059, HURLBURT FIELD, FLORIDA

- a. *Responsible Agency:* United States Air Force (Air Force)
- b. *Proposals and Actions:* The Environmental Assessment (EA) analyzes a Proposed Action to change the Air Force operations in Military Training Routes (MTRs) Instrument Route (IR)-057 and IR-059, which are located proximate to Hurlburt Field, Florida, by amending the type of aircraft permitted for flight training operations from C-130s and MH-53s to Hurlburt Field-stationed CV-22s, MC-130H/Js, and United States Army (Army) HH-60s. The IRs would continue to have a ground track of approximately 380 nautical miles, with a corridor width of 2 nautical miles on either side of the IR centerline. The IRs would continue to be flown at 250 knots or less, at floor altitudes as low as 200 feet above ground level (AGL) during daytime and nighttime hours by CV-22s and HH-60s, and at floor altitudes as low as 250 feet AGL during daytime and nighttime hours for MC-130H/Js. The Proposed Action, in addition to the No Action Alternative, was evaluated in the EA.
- c. *For Additional Information:* Mr. Derek Adkins, 1 SOCES/CEN, 415 Independence Road, Building 90053, Hurlburt Field, Florida 32544 or by e-mail at derek.adkins@us.af.mil
- d. *Designation:* Final EA
- e. *Abstract:* This EA has been prepared pursuant to provisions of the National Environmental Policy Act (NEPA), Title 42 United States Code Sections 4321 to 4347, implemented by Council on Environmental Quality Regulations, Title 40, Code of Federal Regulations (CFR) Parts 1500 to 1508, and 32 CFR Part 989, *Environmental Impact Analysis Process*. Potentially affected environmental resources were identified in coordination with federal, state, and local agencies. Specific environmental resources with the potential for environmental consequences include airspace management, noise, safety, air quality, biological resources, land use, and environmental justice and protection of children.
- f. The purpose of the Proposed Action is to permit 1st Special Operations Wing (1 SOW) flight crews to continue to conduct flight training in IRs that are authorized for use by 1 SOW. The Proposed Action is needed to accommodate upgrades in the design and capabilities in the type of aircraft involved in 1 SOW and Army training operations, to include CV-22s, MC-130H/Js, and HH-60s through a change in Air Force operations in IR-057 and IR-059. This will provide adequate training airspace for 1 SOW's flight training operations.
- g. To support the continuing mission of 1 SOW at Hurlburt Field and provide realistic training environments for Air Force and Army pilots and crews, the Air Force Special Operations Command proposes a change in Air Force operations in MTRs designated as IR-057 and IR-059 for flight training by Hurlburt Field-stationed CV-22, MC-130H/J, and Army HH-60 flight crews. IR-057 and IR-059 have a corridor width of 2 nautical miles on either side of the IR centerline, a total length of 380 nautical miles, an altitude floor of 250 feet AGL (except for helicopter flight training, which has an altitude floor of 200 feet AGL), and variable-altitude ceilings between 1,300 and 3,000 feet AGL. The IRs support bidirectional air traffic: aircraft fly clockwise on IR-057 and counter-clockwise on IR-059. The Proposed Action would change the Air Force operations in IR-057 and IR-059 to permit the use of CV-22, MC-130H/J, and HH-60 aircraft for training operations and would increase the authorized annual operations in the two IRs from 90 to 146. Neither the number of aircraft stationed at Hurlburt Field nor the

number of personnel or support facilities needed for training operations would be affected. The Proposed Action would not modify the current use of the IRs (i.e., no change in permitted airspeed, altitude floor, avoidance of sensitive areas, or hours of operation) except for amending IR-057 and IR-059 to allow for CV-22, MC-130H/J, and HH-60 training operations.

- h. The analysis of the affected environment and environmental consequences of implementing the Proposed Action concluded that by implementing standing environmental protection measures and best management practices, there would be no significant adverse impacts from the proposed increase in authorized Air Force annual operations in IR-057 and IR-059 on the following resources: airspace management, noise, safety, air quality, land use, biological resources, and cultural resources.

FINDING OF NO SIGNIFICANT IMPACT (FONSI)
ADDRESSING THE CHANGE IN AIR FORCE OPERATIONS IN
INSTRUMENT ROUTES IR-057 AND IR-059, HURLBURT FIELD, FLORIDA

Pursuant to provisions of the National Environmental Policy Act (NEPA), 42 United States Code Sections 4321 to 4370h; Council on Environmental Quality (CEQ) Regulations, 40 Code of Federal Regulations (CFR) Parts 1500-1508; and 32 CFR Part 989, *Environmental Impact Analysis Process*, the United States (US) Air Force (Air Force) prepared the attached Final Environmental Assessment (EA) to address the potential environmental consequences associated with the proposed change in Air Force operations in Military Training Routes (MTRs) Instrument Route (IR)-057 and IR-059, which are located proximate to Hurlburt Field, Florida. The Proposed Action would not modify the current use of the IRs (i.e., no change in permitted airspeed, altitude floor, avoidance of sensitive areas, or hours of operation) except for amending IR-057 and IR-059 to allow for CV-22, MC-130H/J, and US Army HH-60 training operations.

Purpose and Need

The purpose of the Proposed Action is to permit 1st Special Operations Wing (1 SOW) flight crews to continue to conduct flight training in IRs that are authorized for use by 1 SOW.

The Proposed Action is needed to accommodate upgrades in the design and capabilities in the type of aircraft involved in 1 SOW and US Army (Army) training operations, to include CV-22s, MC-130H/Js, and HH-60s through a change in Air Force operations in IR-057 and IR-059. This will provide adequate training airspace for 1 SOW's flight training operations.

Description of Proposed Action and Alternatives

The CV-22, MC-130H/J, and HH-60 flight crews regularly conduct flight training to ensure their effectiveness and readiness when deployed. To support the continuing mission of 1 SOW at Hurlburt Field and provide realistic training environments for Air Force and Army pilots and crews, the Air Force Special Operations Command proposes a change in Air Force operations in MTRs designated as IR-057 and IR-059 for flight training by Hurlburt Field-stationed CV-22, MC-130H/J, and Army HH-60 flight crews. IR-057 and IR-059, originally established in 1989, are currently authorized for 12 C-130 operations and 78 MH-53 operations annually. They have a corridor width of 2 nautical miles on either side of the IR centerline, a total length of 380 nautical miles, an altitude floor of 250 feet above ground level (except for helicopter flight training, which has an altitude floor of 200 feet above ground level), and variable-altitude ceilings between 1,300 feet and 3,000 feet above ground level. The IRs support bidirectional air traffic: aircraft fly clockwise on IR-057 and counter-clockwise on IR-059. Although IR-057 and IR-059 occupy the same airspace corridor, they have different alternate entry points, primary exit points, and alternate exit points.

The Proposed Action is to change the Air Force operations in IR-057 and IR-059 by amending the type of aircraft permitted for flight training operations. The Proposed Action would permit flight training operations by CV-22, MC-130H/J, and HH-60 aircraft and would increase the authorized annual operations in the two IRs from 90 to 146. Neither the number of aircraft

stationed at Hurlburt Field nor the number of personnel or support facilities needed for training operations would be affected. The Proposed Action would not modify the current use of the IRs (i.e., no change in permitted airspeed, altitude floor, avoidance of sensitive areas, or hours of operation) except for amending IR-057 and IR-059 to allow for CV-22, MC-130H/J, and HH-60 training operations. Aircraft would continue to use other special use airspace to access the IRs, and existing procedures for identifying areas of concern would continue to be followed. No new entry or exit routes would be added to the existing IRs. The Proposed Action would not include any new ground operations, nor would it develop any new helicopter landing zones or drop zones. No construction, site alteration, or other ground-disturbing activities are planned as part of the Proposed Action.

Alternatives to implement the Proposed Action were evaluated relative to the project's purpose and need and four selection standards. Of the reasonable alternatives evaluated, only one meets both (1) the project's purpose of and need for the Proposed Action and (2) the four selection standards: change the Air Force operations for the use of IR-057 and IR-059 by amending the aircraft permitted for training operations to include CV-22, MC-130H/J, and HH-60.

No Action Alternative

No action means that an action would not take place, and the resulting environmental effects from taking no action would be compared with the effects of allowing the proposed activity to go forward. Under the No Action Alternative, the change in Air Force operations in IR-057 and IR-059 would not occur and training operations with CV-22, MC-130H/J, and HH-60 aircraft would not be permitted in the IRs, which would substantially impact the 1 SOW's ability to meet mission requirements. These aircraft operations would have to occur in other IRs that are not proximate to Hurlburt Field, increasing transit time while reducing training time.

Summary of Findings

Potentially affected environmental resources were identified through communications with federal, state, and local agencies and review of past environmental documentation. Specific environmental resources with the potential for environmental consequences include airspace management, noise, safety, air quality, land use, biological resources, and cultural resources.

The Proposed Action would result in negligible impacts on airspace management. Changes in operations in IR-057 and IR-059 would lead to a slight increase in the presence of air traffic along the IRs, with authorized aircraft operations in the IRs increasing from 90 annual operations to 146 annual operations.

The Proposed Action would have long-term minor adverse effects on the noise environment. Effects would be due to the incremental changes in noise due to the change in Air Force operations to CV-22s, MC-130H/Js, and HH-60s instead of C-130J and MH-53 aircraft, and the authorized increase in overflights from 90 to 146 per year. Only 56 additional authorized aircraft operations would occur annually (or approximately 1 additional operation weekly). The overall Day-Night Sound Level (DNL) and Onset-Adjusted Monthly DNL would be 38.1 A-weighted decibels (dBA) with all proposed air operations. The resulting noise differential is

inconsequential and below the threshold for reportable effects as defined by Federal Aviation Administration (FAA) Order 1050.1F, *Environmental Impacts: Policies and Procedures*. Here, the change would be 3.1 dBA DNL (i.e., changes from 35 to 38.1 dBA DNL), and the FAA's threshold for reportable effects is 5 decibels (dB) DNL, for actions producing 45 to less than 60 dB DNL. These overall noise levels would be similar to but incrementally greater than existing conditions; orders of magnitude below 65 dBA DNL (the accepted threshold of annoyance); and fully compatible with all land uses, including residential, recreational, commercial, and industrial.

Long-term, minor, adverse impacts from slightly increased health and safety risks would occur following implementation of the Proposed Action. The total number of authorized annual IR-057 and IR-059 training operations would increase approximately 62 percent from currently authorized levels. However, the 5-year Class A mishap rates for C-130 and V-22 aircraft and the H-60 helicopter, which would operate in IR-057 and IR-059, are lower than the Class A mishap rate for all Air Force aircraft in fiscal year 2018. Further, the number of annual low-altitude operations would increase, which could increase the potential for bird/wildlife aircraft strikes. To ensure the safety of military personnel and the public and to reduce the risk of bird/wildlife aircraft strikes during training operations, the Bird/Wildlife Aircraft Strike Hazard (BASH) guidance in Air Force Instruction 91-212 and Air Force operational requirements would be followed.

The Proposed Action would have long-term minor adverse impacts on air quality due to increases in emissions from CV-22, MC-130H/J, and HH-60 operations within IR-057 and IR-059. The total emissions would be below the Prevention of Significant Deterioration thresholds; would not contribute to a violation of any federal, state, or local air regulations; and would not meaningfully contribute to the potential effects of global climate change.

There would be no impacts on land use or recreation as a result of the Proposed Action. More than 99 percent of the land use categories underlying the IRs are forested, agricultural, or open space. Potential changes in the noise environment would be negligible, would not exceed the established threshold for annoyance, and would remain compatible with all land uses. Only 56 additional authorized aircraft operations would occur annually over public lands where recreational activities could occur, and four previously identified noise-sensitive locations beneath the IRs would continue to be avoided under the Proposed Action.

Long-term, minor, adverse impacts on avian species from aircraft movement would occur under the Proposed Action. However, there would be no ground-disturbing activities, and all potential impacts on biological resources would be associated with aircraft operations in IR-057 and IR-059. Therefore, no impacts on plants, mammals, reptiles, amphibians, fish, or invertebrates would occur as a result of the Proposed Action. Since there would be no ground-disturbing activities, no substantial change in the noise environment, and only 56 additional authorized training operations annually (or approximately 1 additional operation weekly) during daytime hours under the Proposed Action, impacts on listed species would be limited to potential startle effects on foraging and nesting birds from low-altitude aircraft movement. Therefore, the Air Force has made a *may affect but not likely to adversely affect* determination on the federally listed red-cockaded woodpecker (*Picoides borealis*) and wood stork (*Mycteria americana*). The

Air Force has made a *no effect* determination for all other federally listed plant and animal species. The Air Force has received concurrence with these determinations from the US Fish and Wildlife Service.

Under the Proposed Action, a total of 73 operations would take place annually in each IR, resulting in overflights of historic properties. At the proposed authorized use, the diversification of aircraft permitted to train within IR-057 and IR-059 would be a negligible change from existing conditions, and any increase in atmospheric impacts on cultural resources would also be negligible. As such, implementation of the Proposed Action would result in no significant impacts on cultural resources. A *no adverse effect on historic properties* determination has been received from the Alabama, Florida, and Georgia State Historic Preservation Officers.

Cumulative Impacts

The EA considered cumulative impacts that could result from the incremental impact of the proposed project when added to other past, present, or reasonably foreseeable future actions. No potentially significant cumulative impacts were identified for the Proposed Action when combined with other actions.

Mitigation

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

Conclusion

Finding of No Significant Impact. After review of the EA prepared in accordance with the requirements of NEPA; CEQ NEPA regulations; and 32 CFR Part 989, *Environmental Impact Analysis Process*, which is hereby incorporated by reference, I have determined that the proposed change in Air Force operations in IR-057 and IR-059, including the 56 additional CV-22, MC-130H/J, and HH-60 authorized operations annually, would not have a significant impact on the quality of the human or natural environment. Accordingly, an Environmental Impact Statement will not be prepared. This decision has been made after considering all submitted information, including a review of public and agency comments submitted during the 30-day public comment period, and considering a full range of practical alternatives that meet project requirements and are within the legal authority of the Air Force.

CHRISTOPHER K. FULLER, Colonel, USAF
Deputy Director, Logistics, Engineering &
Force Protection

____ 10 Mar 21 _____
DATE

FINAL
ENVIRONMENTAL ASSESSMENT (EA)
ADDRESSING THE CHANGE IN AIR FORCE OPERATIONS IN
INSTRUMENT ROUTES IR-057 AND IR-059

PREPARED FOR:
Department of the Air Force

January 2021

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LIST OF ACRONYMS AND ABBREVIATIONS

ADAIR	Adversary Air
AFB	Air Force Base
AFI	Air Force Instruction
AFSC	Air Force Safety Center
AFSOC	Air Force Special Operations Command
AGL	above ground level
Air Force	United States Air Force
AP/1B	Department of Defense Flight Training Information AP/1B Publication
APE	Area of Potential Effects
AQCR	Air Quality Control Region
Army	United States Army
ASN	Aviation Safety Network
ATC	Air Traffic Control
BASH	Bird/Wildlife Aircraft Strike Hazard
°C	degrees Celsius
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CO	carbon monoxide
CO ₂ e	carbon dioxide equivalent
dB	decibel(s)
dBA	A-weighted decibel(s)
DNL	Day-Night Sound Level
DoD	Department of Defense
EA	Environmental Assessment
EIAP	<i>Environmental Impact Analysis Process</i>

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EIS	Environmental Impact Statement
EO	Executive Order
ESA	Endangered Species Act
°F	degrees Fahrenheit
FAA	Federal Aviation Administration
FONSI	Finding of No Significant Impact
ft	foot (feet)
FTU	Formal Training Unit
FY	Fiscal Year
GHG	Greenhouse Gas
IFR	Instrument Flight Rules
IR	Instrument Route
J-	jet route
LATN	low-altitude training and navigation
L _{eq}	Equivalent Sound Level
L _{dnmr}	Onset-Adjusted Monthly Day-Night Sound Level
L _{max}	Maximum Sound Level
µg/m ³	micrograms per cubic meter
MBTA	Migratory Bird Treaty Act
MMT	million metric tons
MOA	Military Operations Area
MOU	Memorandum of Understanding
MR_NMAP	Military Route Noise Model
MSL	mean sea level
MTR	Military Training Route
NAAQS	National Ambient Air Quality Standards

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NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NM	nautical mile
NO ₂	nitrogen dioxide
NO _x	nitrogen oxides
NOA	Notice of Availability
NOTAM	Notice to Airmen
NRHP	National Register of Historic Places
O ₃	ozone
OLF	outlying field
Pb	lead
PM _{2.5}	particulate matter less than 2.5 microns in diameter
PM ₁₀	particulate matter less than 10 microns in diameter
ppb	parts per billion
ppm	parts per million
R-	Restricted Area
RNAV	area navigation (routes)
ROI	region of influence
SEL	Sound Exposure Level
SIP	State Implementation Plan
SO ₂	sulfur dioxide
SO _x	sulfur oxides
SOW	Special Operations Wing
SR	slow route
T-	RNAV route
US	United States

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USC	United States Code
USEPA	United States Environmental Protection Agency
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service
V-	Victor route
VFR	Visual Flight Rules
VOCs	volatile organic compounds
VR	Visual Route

1.0 PURPOSE OF AND NEED FOR THE PROPOSED ACTION

1.1 Introduction

This Environmental Assessment (EA) analyzes the potential environmental consequences associated with the proposed change in United States (US) Air Force (Air Force) operations in Military Training Routes (MTRs), Instrument Route (IR)-057 and IR-59, to include CV-22, MC-130, and HH-60 operations. This EA has been prepared in accordance with the National Environmental Policy Act (NEPA) (42 United States Code [USC] Sections 4321-4347), the Council on Environmental Quality (CEQ) Regulations (40 Code of Federal Regulations [CFR] Parts 1500-1508), and 32 CFR Part 989, et seq., *Environmental Impact Analysis Process* (EIAP).

1.1.1 Project Location

Hurlburt Field is located in the Florida Panhandle between Pensacola and Fort Walton Beach. The installation covers 6,643 acres in southern Okaloosa County (**Figure 1-1**). Hurlburt Field is home to the 1st Special Operations Wing (1 SOW), which is a component of the Air Force Special Operations Command (AFSOC) headquartered at Hurlburt Field. IR-057 and IR-059 are located in Alabama, Florida, and Georgia; are controlled by AFSOC in the vicinity of Hurlburt Field (**Figure 1-1**); and are authorized for use by 1 SOW. IR-057 and IR-059 are analyzed in this EA.

1.1.2 Background

The primary mission of AFSOC is to organize, train, equip, and educate Air Force special operations forces for worldwide deployment and assignment to regional unified commands. The primary mission of 1 SOW is to rapidly plan and execute specialized and contingency operations in support of national priorities. As one of five Air Force active-duty special operations wings, 1 SOW uses specialized aircraft to support operations worldwide, including precision aerospace firepower; specialized aerospace mobility, intelligence, surveillance, and reconnaissance operations; and agile combat support. The 1 SOW and Hurlburt Field also play host to 40 partner units from six major commands, including the 492 SOW, 505th Command and Control Wing, 24 SOW, and 823rd RED HORSE Squadron.

Since being established in 1990, AFSOC has provided special operations forces for rapid worldwide deployment. The requirements and involvement of special operations personnel have continuously increased over the years, particularly for overseas contingency operations. These include specialized mission requirements for flight training operations by 1 SOW for Hurlburt Field-stationed aircrews and aircraft including CV-22s and MC-130s, as well as HH-60s operated by the US Army (Army) in joint training missions with the 1 SOW.

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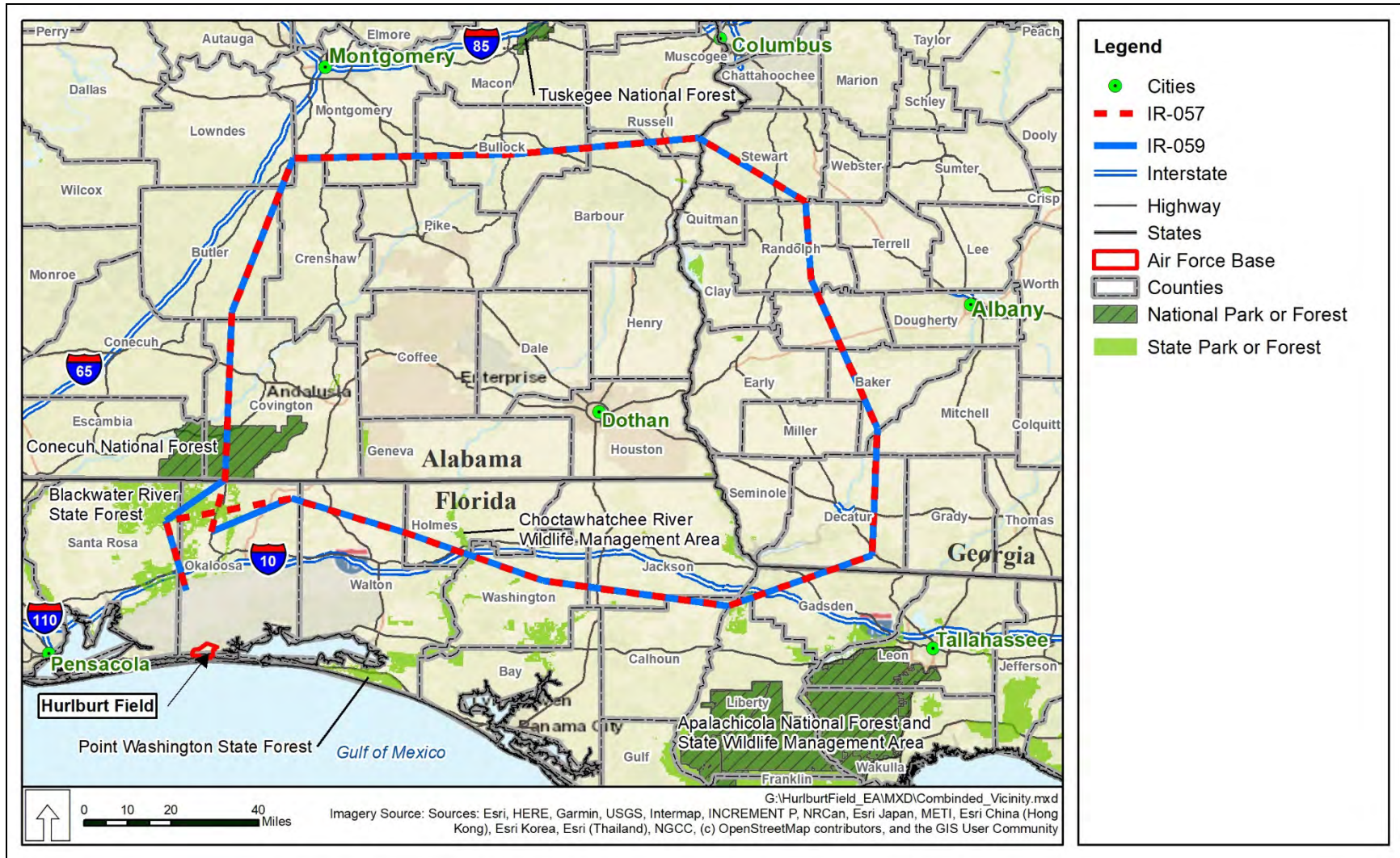


Figure 1-1. Location of Hurlburt Field and Military Training Routes IR-057 and IR-059

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The 1 SOW operates specialized aircraft that support military missions worldwide, including CV-22 Osprey (CV-22) tiltrotor aircraft and MC-130J Commando II (MC-130J) aircraft. The CV-22 blends the vertical flight capabilities of helicopters with the range, altitude, and speed characteristics of fixed-wing turboprop aircraft. The CV-22 takes off vertically and, once airborne, the nacelles (engine and prop-rotor group) on each wing can rotate into a forward position. In a theater of operations, the main function of the CV-22 is supporting long-range infiltration, exfiltration, and resupply of special operations forces in hostile territories. The MC-130 flies clandestine, or low-visibility, single or multiship, low-level air refueling missions for special operations helicopters and tiltrotor aircraft and performs infiltration, exfiltration, and resupply of special operations forces by airdrop or airland, intruding into politically sensitive or hostile territories. The MC-130 primarily flies missions at night to reduce the probability of visual acquisition and intercept by airborne threats. 1 SOW is operating the MC-130H and MC-130J concurrently until the MC-130H is retired in the fourth quarter of fiscal year (FY) 2024. Under the direction of 1 SOW, the Army operates the HH-60 Black Hawk (HH-60) helicopter in IR-057 and IR-059. The HH-60 is a twin-engine medium-lift helicopter primarily used to conduct day or night personnel recovery operations into hostile environments to recover isolated personnel.

The CV-22, MC-130H/J, and HH-60 flight crews regularly conduct flight training to ensure their effectiveness and readiness when deployed. To support the continuing mission of 1 SOW at Hurlburt Field and provide realistic training environments for Air Force and Army pilots and crews, AFSOC proposes changes to the Air Force operations in MTRs designated as IR-057 and IR-059 for flight training by Hurlburt Field-stationed CV-22, MC-130H/J, and Army HH-60 flight crews.

MTRs provide realistic low-level training, conducted below 10,000 feet mean sea level (MSL) at airspeeds of less than 250 knots (288 miles per hour) unless otherwise authorized. To allow the military to conduct training at speeds in excess of 250 knots, as is the case with instrument flight routes, the Federal Aviation Administration (FAA) issued the Department of Defense (DoD) a conditional exemption to 14 CFR Section 91.117, *Aircraft Speed* requirements. All other FAA policy, criteria, administrative, and operating procedures established in FAA JO 7610.4, *Special Aircraft Operations*, and the Aeronautical Information Manual apply to the two basic types of MTRs: Instrument Flight Rule (IFR) routes and Visual Flight Rule (VFR) routes. In addition to the above FAA-coordinated MTRs, the DoD has established slow-speed, low-altitude training routes and low-altitude tactical navigation (LATN) areas. DoD Flight Information Publication AP/1B is the document that records, sets limits, and establishes controls on the use of all MTRs. IRs are subject to FAA IFRs.

IR-057 and IR-059 were established in 1989. They have a corridor width of 2 nautical miles (NM) on either side of the IR centerline, a total length of 380 NM, an altitude floor of 250 feet above ground level (AGL; except for helicopter flight training, which has an altitude floor of 200 feet AGL), and variable-altitude ceilings between 1,300 and 3,000 feet AGL. The IRs support bidirectional air traffic: aircraft fly clockwise on IR-057 and counter-clockwise on IR-059. Although IR-057 and IR-059 occupy the same airspace corridor, they have different alternate

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entry points, primary exit points, and alternate exit points. IR-057 and IR-059 are currently authorized for 12 C-130 operations and 78 MH-53 (helicopter) operations annually.

1.2 Purpose of and Need for the Proposed Action

The purpose of the Proposed Action is to permit 1 SOW flight crews to continue to conduct flight training in IRs that are authorized for use by 1 SOW. The Proposed Action is needed to accommodate upgrades in the design and capabilities in the type of aircraft involved in 1 SOW and Army training operations, to include CV-22s, MC-130H/Js, and HH-60s and a change in operations of these aircraft in IR-057 and IR-059. This will provide adequate training airspace for 1 SOW's flight training operations.

1.3 Decision to Be Made

The Air Force will make one of the following three decisions regarding the Proposed Action:

1. Select the No Action Alternative and not implement the Proposed Action.
2. Prepare a Finding of No Significant Impact (FONSI) and implement the Proposed Action if, based on the analysis in this EA, the Proposed Action would not have a significant environmental impact.
3. Initiate preparation of an Environmental Impact Statement (EIS) if, based on the analysis in this EA, the Proposed Action would have a significant environmental impact.

1.4 Intergovernmental and Stakeholder Coordination and Consultations

1.4.1 Interagency Coordination and Consultation

The environmental analysis process, in compliance with NEPA guidance, includes public and agency review of information pertinent to the Proposed Action. Per the requirements of the Intergovernmental Cooperation Act of 1968 (42 USC Section 4231[a]) and Executive Order (EO) 12372, *Intergovernmental Review of Federal Programs*, as amended, federal, state, and local agencies with jurisdiction that could potentially be affected by the Proposed Action are being notified during the development of this EA. Those intergovernmental and stakeholder coordination letters and responses received are included in **Appendix A**.

1.4.2 Government-to-Government Consultation

Section 106 of the National Historic Preservation Act (NHPA), codified at 54 USC Section 306108 with its implementing regulations at 36 CFR Part 800, require federal agencies to consult with federally recognized tribes regarding properties of cultural and religious significance within the area of potential effects of the agency's action. Consistent with EO 13175, *Consultation and Coordination with Indian Tribal Governments*; DoD Instruction 4710.02, *Department of Defense Interactions with Federally Recognized Tribes*; and Air Force Instruction (AFI) 90-2002, *Air Force Interaction with Federally-Recognized Tribes*, federally recognized tribes that are historically affiliated with lands in the vicinity of the Proposed Action have been invited to consult on all proposed undertakings that have the potential to affect properties of

cultural, historical, or religious significance to the tribes. The tribal consultation process and its timeline is distinct from NEPA consultation or the interagency coordination process and requires separate notification of all relevant tribes. The Installation Commander is the point of contact for consultation with Native American tribes and has delegated authority to conduct consultation with Native American tribes to the Installation Tribal Liaison Officer. Government-to-government consultation is complete, and correspondence is included in **Appendix A**.

1.4.3 Other Agency Consultations

Per the requirements of Section 7 of the Endangered Species Act (ESA) and implementing regulations (50 CFR Part 402), effects determinations and concurrence with the Air Force's findings has been received from the US Fish and Wildlife Service (USFWS). Compliance with Section 106 of the NHPA and implementing regulations (36 CFR Part 800) has been accomplished through tribal coordination as well as consultation with the Alabama, Florida, and Georgia State Historic Preservation Offices. All agency correspondence is included in **Appendix A**.

1.5 Applicable Laws and Environmental Regulations

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

1.5.1 National Environmental Policy Act

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

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

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

1.5.2 The Environmental Impact Analysis Process

The EIAP is the process by which the Air Force facilitates compliance with environmental regulations, including NEPA, which is the primary legislation affecting the agency's decision-making process.

1.6 Public and Agency Review of Environmental Assessment

A Notice of Availability (NOA) of the Draft EA and FONSI was published on 30 August 2020 in *The Dothan Eagle*, *The Ledger-Enquirer*, *The Montgomery Advertiser*, *The Tallahassee Democrat*, and *The Northwest Florida Daily News* announcing the availability of the EA for review (**Appendix B**). The NOA invited the public to review and comment on the Draft EA and the Proposed FONSI. The public and agency review period ended on 30 September 2020. No public comments were received. Agency comments are provided in **Appendix B**.

In consideration of the potential impact of the ongoing coronavirus (COVID-19) pandemic on the usual methods of access to information and ability to communicate, such as the mass closure of local public libraries and challenges with the adequacy of an increasingly overburdened Internet, members of the public and all interested stakeholders were encouraged to contact the Air Force directly by e-mail or telephone to discuss and resolve issues involving access to the Draft EA and proposed FONSI or the ability to comment.

The Draft EA and proposed FONSI were made available to the public on the Hurlburt Field website at <https://www.hurlburt.af.mil/Helpful-Info/Environmental>. Copies of the Draft EA and FONSI were also made available for review at the following locations:

- Fort Walton Beach Library, 185 Miracle Strip Parkway SE, Fort Walton Beach, Florida 32548
- Greenville-Butler Public Library, 309 Fort Dale Road, Greenville, Alabama 36037
- Jackson County Public Library, 2929 Green Street, Marianna, Florida 32446
- Randolph County Library, 106 Pearl Street, Cuthbert, Georgia 39840
- Troy Public Library, 500 E. Walnut Street, Troy, Alabama 36081
- Union Springs Public Library, 103 Prairie Street North, Union Springs, Alabama 36089

2.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

2.1 Proposed Action

The Proposed Action is to change the Air Force operations for the use of IR-057 and IR-059, which are located proximate to Hurlburt Field, by amending the type of aircraft permitted for flight training operations from C-130s and MH-53s to Hurlburt Field-stationed CV-22s, MC-130H/Js, and Army HH-60s. Under the Proposed Action, the IRs would continue to have a ground track of approximately 380 NM, with a corridor width of 2 NM on either side of the IR centerline. The IRs would continue to be used for flight training in conjunction with Military Operations Areas (MOAs) as well as MTRs, slow routes (SRs), and LATNs, enabling 1 SOW to optimize air combat training of military personnel. The route would continue to be flown at 250 knots or less, at floor altitudes as low as 200 feet AGL during daytime and nighttime hours by CV-22s and HH-60s, and at floor altitudes as low as 250 feet AGL during daytime and nighttime hours for MC-130H/Js.

The Proposed Action would not modify the current use of the IRs (i.e., no change in permitted airspeed, altitude floor, avoidance of sensitive areas, or hours of operation) except for amending IR-057 and IR-059 to allow for CV-22, MC-130H/J, and HH-60 training operations. Aircraft would continue to use other MOAs, MTRs, SRs, and LATNs to access the IRs, and existing procedures for identifying areas of concern would continue to be followed. No new entry or exit routes would be added to the existing IRs. Although this appears to be a nonregulatory airspace action, notification to the FAA may be required.

The Proposed Action would not alter the number of aircraft stationed at Hurlburt Field nor would it affect the number of personnel or support facilities needed for training operations. The Proposed Action would not include any new ground operations, nor would it develop any new helicopter landing zones or drop zones. No construction, site alteration, or other ground-disturbing activities are planned as part of the Proposed Action.

2.2 Selection of Alternatives

Considering alternatives helps to avoid unnecessary impacts and allows for an analysis of reasonable ways to achieve the stated purpose. CEQ requires that all reasonable alternatives to proposed actions be examined. To be considered reasonable, an alternative must be suitable for decision making, capable of implementation, and sufficiently satisfactory with respect to meeting the purpose of and need for the action. CEQ NEPA regulations define reasonable alternatives as those that are economically and technically feasible and that show evidence of common sense. Certain requirements must be present or reasonably attainable to meet the purpose of and need for the Proposed Action.

2.2.1 Selection Standards

Selection standards were developed to evaluate potential alternatives for meeting the purpose and need for the Proposed Action. Therefore, an alternative must achieve all four of the following selection standards:

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1. IRs for 1 SOW training operations must be located proximate to Hurlburt Field (i.e., 150 miles) to minimize flight transit time and maximize actual flight training time.
2. Modifications to IR-057 and IR-059 must be able to conform to existing FAA General Operating and Flight Rules included in 14 CFR Part 91, *General Operating and Flight Rules*; AFI 13-201 *Airspace Management*; each affected state's airspace regulations; and local laws and regulations.
3. IRs must be able to support training operations by CV-22, MC-130H/J, and HH-60 aircraft through a series of low-level training missions and allow for operation at all hours of the day and night.
4. IRs must already be established so that CV-22, MC-130H/J, and HH-60 training operations can continue to occur in airspace that has historically been used for military training.

The four selection standards were used to evaluate a set of alternatives. Alternatives that meet the selection standards were carried forward for further detailed analysis in the EA. Of the alternatives evaluated, one meets both (1) the purpose of and need for the Proposed Action and (2) the four selection standards: change the Air Force operations for use of IR-057 and IR-059 by amending the aircraft permitted for training operations to include CV-22, MC-130H/J, and HH-60. There are no other reasonable alternatives that meet the purpose and need and the four selection standards.

2.3 Alternatives Eliminated from Further Consideration

In 2006, AFSOC prepared an *EA for the Proposed Alteration of Existing Instrument Flight Rule Military Training Routes IR-057 and IR-059*. Although a Final EA was prepared, AFSOC did not sign a FONSI associated with this EA. In the 2006 EA, AFSOC and 16 SOW (which was redesignated to 1 SOW on 16 November 2006) proposed to alter IR-057 and IR-059 to permit five different aircraft types on both routes as well as modify and add exit legs to IR-057 and IR-059. The modification of airspace and exit legs were also considered for this proposal.

An alternative for the Proposed Action that was considered would add additional airspace by modifying the IR-057 and IR-059 to add one new alternate exit with a width of 1 NM to the right of centerline and 2 NM to the left of centerline. This alternative would not meet selection standard 4. It was determined that to accommodate CV-22, MC-130H/J, and HH-60 aircraft training operations, new alternate exits and additional airspace would not be required. The IRs currently have exits that are proximate to Hurlburt Field, which have historically been used for military training with rotary- and fixed-wing aircraft. The additional airspace that would be created from the new exit by modifying the IRs would also not allow for the timely implementation of the Proposed Action. Therefore, this alternative was eliminated from further consideration.

Another alternative for the Proposed Action that was considered would modify two existing alternate exits from IR-057 and IR-059 to add an additional 2 NM to the left of the centerline, making the modified exits 2 NM to the right and 4 NM to the left of the centerline. This alternative would not meet selection standard 4. It was determined that to accommodate CV-22,

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MC-130H/J, and HH-60 aircraft training operations, modifying alternate exits to include additional airspace would not be required. The IRs currently have exits that are of sufficient size and have successfully been used in the past for military training by rotary- and fixed-wing aircraft. The additional airspace that would be created from the modified exits would also not allow for the timely implementation of the Proposed Action. Therefore, this alternative was eliminated from further consideration.

No other alternatives meet the purpose of and need for the Proposed Action as well as the four selection standards listed in Section 2.2.1. IR-057 and IR-059 are the only IRs controlled and used exclusively by 1 SOW aircraft and are the only ones that can be used by rotary-wing aircraft at low flight speeds. Due to the slow flight speed of rotary-wing aircraft such as HH-60s, they cannot fly on the other IRs used by high-speed fixed-wing Air Force and Navy aircraft due to safety considerations. Further, even at slow speeds, the round-trip flight time within these two IRs is approximately 3 hours, making them ideal for use by 1 SOW aircraft stationed at Hurlburt Field.

If IR-057 and IR-059 are discontinued, the aircraft would have to utilize other IRs in the US that, due to travel distances from Hurlburt Field, would reduce the available training time as flight crews transit to and from those distant IRs and would not fully achieve pilot training requirements met through using IRs. This would not meet the project's purpose and need to change the Air Force operations in IR-057 and IR-059 and is insufficient to meet 1 SOW mission requirements.

2.4 Detailed Description of the Alternatives

NEPA and CEQ NEPA regulations mandate the consideration of reasonable alternatives to the Proposed Action. "Reasonable alternatives" are those that represent a range that would meet the purpose of and need for the Proposed Action. The NEPA process is intended to support flexible, informed decision making; the analysis provided by this EA and feedback from the public and other agencies will inform decisions made about whether, when, and how to execute the Proposed Action.

One action alternative is considered in this EA. Alternative 1 is to permit the training operations of CV-22, MC-130H/J, and HH-60 aircraft in IR-057 and IR-059. Alternative 1 meets the purpose of and need for the Proposed Action and satisfies the criteria set forth in the selection standards. A detailed description of Alternative 1 is provided below. Alternative 2, the No Action Alternative, is described in Section 2.4.2.

2.4.1 Alternative 1: Change in Air Force Operations in Military Training Routes IR-057 and IR-059

Under Alternative 1, the Air Force would permit the use of CV-22, MC-130H/J, and HH-60 aircraft in IR-057 and IR-059 for training operations. The proposed maximum aircraft operations in IR-057 and IR-059 are provided in **Table 2-1**. Both IRs would include a small number of air operations from CV-22, MC-130H/J, and HH-60 aircraft, with approximately 10 percent of

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aircraft training operations occurring between 2200 and 0700 hours. No jets would use the IRs for training, and no supersonic activities are authorized or conducted in IR-057 and IR-059. The only permitted aircraft to use IR-057 and IR-059 would be CV-22, MC-130H/J, and HH-60 aircraft, which would depart from and return to Hurlburt Field upon completion of training operations.

Table 2-1. Proposed Aircraft Operations in Military Training Routes IR-057 and IR-059

Aircraft Type	Number of Annual Sorties in Each IR	Number of Annual Daytime Operations in Each IR (0700 – 2200 hours)	Number of Annual Nighttime Operations in Each IR (2200 – 0700 hours)	Average Power Setting	Average Airspeed (knots)
CV-22	25	20	5	83%	220
MC-130H/J	24	22	2	85%	230
HH-60	24	22	2	85%	120
Totals	73	64	9	--	--

IR – Instrument Route

Alternative 1 would provide the necessary amendments to the IRs to allow for effective training operations by 1 SOW to meet mission requirements.

2.4.2 Alternative 2: No Action Alternative

The No Action Alternative is to maintain existing conditions. Under the No Action Alternative, additional Air Force operations in IR-057 and IR-059 would not occur, and training operations with CV-22, MC-130H/J, and HH-60 aircraft would not be permitted in the IRs, which would substantially impact the 1 SOW and Army’s ability to meet mission requirements. These aircraft operations would have to occur in other IRs that are not proximate to Hurlburt Field, increasing transit time while reducing training time, and would not meet the project’s purpose and need.

3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

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

The criteria for evaluating impacts and assumptions for the analyses are presented for each resource area. Evaluation criteria for most potential impacts were obtained from standard criteria; federal, state, or local agency guidelines and requirements; and/or legislative criteria. Impacts may be direct or indirect and are described in terms of type, context, duration, and intensity, which is consistent with the CEQ NEPA regulations. “Direct effects” are caused by an action and occur at the same time and place as the action. “Indirect effects” are caused by the action and occur later in time or are farther removed from the place of impact but are reasonably foreseeable.

It was determined that the Proposed Action would not have the potential for direct, indirect, or cumulative impacts associated with changing the annual authorized training operations in IR-057 and IR-059 from 90 C-130 and MH-53 operations to 146 CV-22, MC-130H/J, and HH-60 operations on the following resource areas. Therefore, these have not been carried forward for detailed analysis in this EA.

- **Earth Resources.** The Proposed Action would change only the Air Force operations for IR-057 and IR-059, and there would be no proposed ground-disturbing activities that would interact with the local or regional geology or soils.
- **Infrastructure.** There are no proposed infrastructure changes or activities associated with this proposed airspace action that would interact with infrastructure.
- **Hazardous Materials and Hazardous or Solid Waste.** There would be no new or additional hazardous materials used under the Proposed Action, and no new or additional hazardous or solid waste would be generated.
- **Water Resources.** The Proposed Action would not change any ground operations, and no on-the-ground activities associated with the proposed change in Air Force operations in IR-057 and IR-059 would interact with water resources.
- **Socioeconomics.** The Proposed Action would not change the local or regional population, alter levels of employment, or affect income or spending in areas beneath IR-057 and IR-059 where the Air Force proposes a change in operations.
- **Environmental Justice.** In accordance with EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations*, all federal agencies must identify and address disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations

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and low-income populations. Per EO 13045, *Protection of Children from Environmental Health Risks and Safety Risks*, all federal agencies must assess potential environmental health and safety risks that may disproportionately affect children. The Proposed Action would not affect housing, community resources, or community services in the region. Any impacts on air quality would be less than significant and not affect human populations. There would be no substantial changes to the overall noise environment under the Proposed Action and no significant impacts from noise on sensitive receptors or residential areas. Although there is the potential for human populations to become annoyed by noise during overflights, noise impacts associated with the change in number of overflights under the Proposed Action would be minor. Therefore, no human populations, including low income, minority, or youth populations, would be disproportionately impacted.

The resource areas with the potential to be affected by the proposed change in aircraft operations in IR-057 and IR-059 that are discussed in this chapter are:

- 3.1 Airspace Management
- 3.2 Noise
- 3.3 Safety
- 3.4 Air Quality
- 3.5 Land Use
- 3.6 Biological Resources
- 3.7 Cultural Resources

3.1 Airspace Management

3.1.1 Definition of the Resource

Airspace management is defined by the Air Force as the coordination, integration, and regulation of the use of airspace that overlies the borders of the United States and its territories. Airspace management procedures assist in preventing potential conflicts of aircraft accidents associated with aircraft using designated airspace in the United States, including restricted military airspace. The objective of military airspace management is to meet operational requirements through the safe and efficient use of available navigable airspace in a peacetime environment while minimizing the impact on other aviation users and the public (AFI 13-201, *Airspace Management*). The FAA has the responsibility to manage all airspace over the United States and created the National Airspace System to establish a safe and efficient airspace environment for civil, commercial, and military aviation. The National Airspace System is made up of a network of air navigation facilities, Air Traffic Control (ATC) facilities, airports, technology, and appropriate rules and regulations.

The FAA has designated US airspace into the following four types: controlled, uncontrolled, special use, and other. **Figure 3-1** shows the altitude ranges and airspace relationship of the controlled and uncontrolled airspace classes.

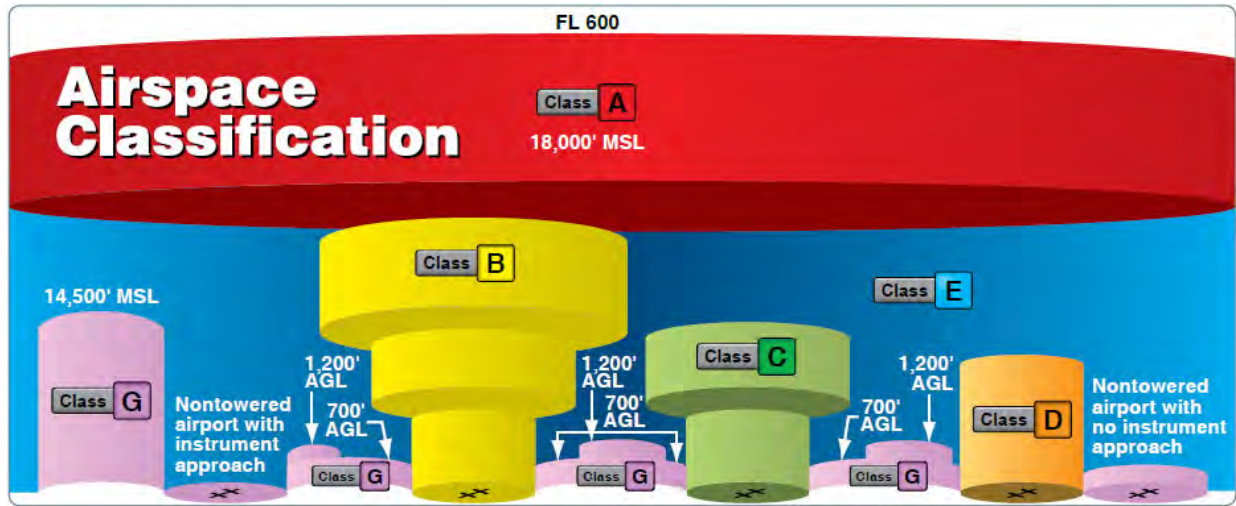


Figure 3-1. Relationship of Airspace Classes

MSL – mean sea level; AGL – above ground level
Source: FAA 2016b

- Controlled airspace encompasses different classifications of airspace where ATC service is provided. Class A is the most restrictive, and Classes B, C, D, and E are the least restrictive. The altitudes associated with the controlled airspace classes vary. FAA JO 7400.11D, *Airspace Designations and Reporting Points* (August 2019) specifies the airspace ranges for airspaces designated for public and military airports.
- Uncontrolled (Class G) airspace is the portion of airspace that has not been given a controlled airspace designation and is therefore not subject to FAA or ATC control. Generally, Class G airspace extends from the surface up to but not including the Class E airspace floor (**Figure 3-1**).
- Special use airspace is the designation for airspace in which certain activities must be confined, or where limitations may be imposed on aircraft operations that are not part of those activities. Special use airspace generally consists of prohibited areas, Restricted Areas (R-), warning areas, MOAs, alert areas, and controlled firing areas.
- Other airspace refers to the majority of the remaining airspace including, but not limited to, MTRs, temporary flight restrictions, published VFR routes, national security areas, and flight restricted zones (FAA 2016a).
- MTRs include visual routes (VRs), IRs, and SRs used by military aircraft to maintain proficiency in tactical flying. These routes are usually established below 10,000 feet MSL for operations at speeds in excess of 250 knots.
 - IRs are routes that must be flown following IFR, which require pilots to use onboard navigation systems and coordination with ATCs to avoid obstacles in the airspace.
 - VRs are airspace routes that may be flown following VFR wherein pilots would use visual cues to see and avoid obstacles. These routes are generally lower-altitude than IRs (FAA 2016a).

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- SRs are those routes that are flown VFR, at altitudes below 1,500 feet AGL at 250 knots or less, without prior notice.
- MTRs above 1,500 feet AGL are developed to be flown, to the maximum extent possible, under IFR, while routes below 1,500 feet AGL are generally developed to be flown under VFR (FAA 2020a).

Federal airways, such as Victor (V-) routes, support enroute flight operations of aircraft from the termination of a departure procedure from an airport to completion of an arrival procedure at another airport. V- routes are low- to mid-altitude enroutes that range from 1,200 feet AGL up to 18,000 feet MSL (FAA 2020b). Area navigation (RNAV) routes (designated with “T-” or “Q-”) are low- to mid-altitude routes that can be used only by aircraft equipped with an RNAV system (i.e., navigation computer that allows the real-time continuous tracking of the aircraft along a prescribed flight path). As with federal enroute airways, an RNAV route has protected airspace out to a width of 4 NM on each side of its centerline. Jet routes (designated with “J-“) are high-altitude enroutes established at and above 18,000 feet MSL. Because IR-057 and IR-059 do not reach altitudes higher than 3,000 feet MSL, J- routes are not considered further in this EA.

The DoD Flight Training Information AP/1B Publication (hereafter, AP/1B) provides descriptions and operating instructions for all existing IFR, VFR, and slow-speed, low-altitude MTRs (i.e., IRs, VRs, and SRs) and refueling tracks/anchors (DoD 2020). Complete and more comprehensive information relative to policy and procedures for IRs and VRs is published in the FAA JO 7610.4 series, *Special Operations*, which is agreed to by DoD and therefore directive for all military flight operations. The AP/1B is the official source of route data for military users and is updated every 56 days to maintain accurate information and air safety.

14 CFR Section 91.119, *Minimum Safe Altitudes*, states that aircraft operating in the National Airspace System must abide by the following standard altitude restrictions to avoid hazards to persons or property damage. Specifically, no matter where within the National Airspace System an aircraft is flown, it may not be flown below an altitude allowing, if a power unit fails, an emergency landing without undue hazard to persons or property on the surface. For aircraft flying over any congested area of a city, town, or settlement, or over any open-air assembly of persons, the pilot must maintain an altitude of 1,000 feet above the highest obstacle within a horizontal radius of 2,000 feet of the aircraft. For aircraft flying over uncongested areas, aircraft must maintain an altitude of 500 feet above the surface, except over open water or sparsely populated areas. In those cases, the aircraft may not be operated closer than 500 feet to any person, vessel, vehicle, or structure. DoD installation operational commanders may also establish additional obstacle avoidance restrictions for low-level or terrain-following (e.g., mountainous terrain) flight operations along MTRs.

The region of influence (ROI) for this airspace analysis encompasses the IR-057 and IR-059 airspace out to a distance of 5 miles on either side of the IRs. Because these IRs already exist and historically supported the same types of military flight operations proposed, the Air Force determined this would be a sufficient area within which to assess the potential for effects on airspace resources.

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3.1.2 Affected Environment

Airfield. Hurlburt Field (FAA identifier HRT) is 35 miles east of Pensacola, Florida, and is adjacent to Eglin Air Force Base (AFB). The installation’s one runway, Runway 18/36, is 9,600 feet long and runs north to south with a parallel taxiway. Airfield operations facilities are located on either side of the runway. Hurlburt Field airspace extends upwards from the surface to and including an altitude 2,500 feet MSL within a 5.3 NM radius of the center of the airfield. Conventional flight patterns in Hurlburt Field airspace are flown at altitudes ranging between 1,200 and 1,700 feet MSL with a 3-mile visibility. Hurlburt Field averages 181 operations (individual takeoffs and landings) per day, or approximately 66,065 air operations per year (AirNav.com 2020). IR-057 and IR-059 are currently authorized for 12 C-130 operations and 78 MH-53 (helicopter) operations annually.

Airspace Management. The FAA and the Atlanta and Jacksonville Air Route Traffic Control Centers control flight activities in IR-057 and IR-059. The IRs are scheduled by 1 SOW at Hurlburt Field and are operated under parameters specified in AFI 13-201. The IRs have a corridor width of 2 NM on either side of the IR centerline, a total length of 380 NM, an altitude floor of 250 feet AGL for fixed-wing aircraft and 200 feet AGL for rotary-wing aircraft, and variable-altitude ceilings between 1,300 and 3,000 feet AGL. IR-057 and IR-059 overlie portions of 23 counties in Florida, Georgia, and Alabama.

Airsaces and Airspace Users. IR-057 and IR-059 originate in Florida from the northern portion of the Eglin Reservation north of Hurlburt Field (**Figure 3-2**). Along the entire route, these IRs cross through or proximate to several restricted areas and MOAs in the southern airspace region. Aircraft transiting from Hurlburt Field to the IRs transect MOAs overlying the Eglin Reservation. This includes Eglin A East, Eglin A West, Eglin B, Eglin C, and Eglin E MOAs and R-2915. The IRs also transit through the Tyndall B and Tyndall C MOAs associated with Tyndall AFB in Florida. In Georgia, the IRs transect inside the eastern boundary of the Moody 3 MOA associated with Moody AFB. IR-057 and IR-059 segments in Alabama do not intersect but are near other active special use airspaces. IR-057 and IR-059 intersect with 26 other MTRs, 8 federal airways (V-routes), and 1 RNAV route (see **Table 3-1** and **Figure 3-2**).

Table 3-1. Military Training Routes, Airways, and Area Navigation Routes Intersecting IR-057 and IR-059

Route	Altitude Floor	Altitude Ceiling	Route Width
Military Training Routes			
IR-015	300 ft AGL	2,000 ft to 6,000 ft MSL	10 NM
IR-017	500 ft AGL	2,000 ft to 3,000 ft MSL	7 NM to 10 NM
IR-030	500 ft AGL to 4,000 ft MSL	4,000 ft to 6,000 ft MSL	7 NM to 10 NM
IR-031	500 ft AGL to 4,000 ft MSL	4,000 ft to 6,000 ft MSL	7 NM to 10 NM
SR-038	300 ft AGL day, 1,000 ft AGL night	None	10 NM
SR-039	300 ft AGL day, 1,000 ft AGL night	None	10 NM
SR-071	300 ft to 500 ft AGL	1,500 ft AGL	2 NM to 10 NM
SR-072	300 ft AGL	1,500 ft AGL	2 NM to 10 NM
SR-101	250 ft AGL to 3,000 ft MSL	None	4 NM

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Route	Altitude Floor	Altitude Ceiling	Route Width
Military Training Routes			
SR-102	250 ft AGL to 1,500 ft AGL	None	4 NM
SR-103	250 ft AGL to 1,700 ft AGL	None	4 NM
SR-104	250 ft AGL	1,000 ft to 3,000 ft AGL	4 NM
SR-119	250 ft AGL to 1,700 ft AGL	None	4 NM
VR-1001	200 ft AGL	1,500 ft AGL	4 NM to 10 NM
VR-1005	200 ft to 1,000 ft AGL	1,500 ft AGL	4 NM to 10 NM
VR-1017	500 ft AGL	1,500 ft AGL	6 NM to 10 NM
VR-1020	1,000 ft to 1,500 ft AGL	1,500 ft AGL	10 NM
VR-1054	100 ft to 1,500 ft AGL	1,500 ft AGL	10 NM
VR-1065	100 ft to 1,000 ft AGL	1,500 ft AGL	4 NM to 12 NM
VR-1070	500 ft to 1,500 ft AGL	1,500 ft AGL	4 NM to 10 NM
VR-1082	100 ft to 1,500 ft AGL	1,500 ft AGL	4 NM to 10 NM
VR-1083	100 ft to 1,500 ft AGL	1,500 ft AGL	10 NM
VR-1084	100 ft AGL to 1,500 ft AGL	1,500 ft AGL	4 NM to 10 NM
VR-1085	100 ft AGL to 1,500 ft AGL	1,000 ft to 1,500 ft AGL	4 NM to 10 NM
Federal Airways			
V-323	1,200 ft AGL	up to but not including 18,000 ft MSL	8 NM
V-454	1,200 ft AGL	up to but not including 18,000 ft MSL	8 NM
V-115	1,200 ft AGL	up to but not including 18,000 ft MSL	8 NM
V-70	1,200 ft AGL	up to but not including 18,000 ft MSL	8 NM
V-241	1,200 ft AGL	up to but not including 18,000 ft MSL	8 NM
V-198	1,200 ft AGL	up to but not including 18,000 ft MSL	8 NM
V-7	1,200 ft AGL	up to but not including 18,000 ft MSL	8 NM
V-159	1,200 ft AGL	up to but not including 18,000 ft MSL	8 NM
V-168	1,200 ft AGL	up to but not including 18,000 ft MSL	8 NM
V-521	1,200 ft AGL	up to but not including 18,000 ft MSL	8 NM
Area Navigation Routes			
T-239	1,200 ft AGL	up to but not including 18,000 ft MSL	8 NM

Sources: DoD 2020, FAA 2020c, VFRMap.com 2020

IR – instrument route; **ft** – feet; **AGL** – above ground level; **MSL** – mean sea level; **NM** – nautical mile; **SR** – slow-speed route (below 250 knots); **VR** – visual route; **V** – Victor route; **T** – RNAV route

The AP/1B identifies IR-057 and IR-059 and their altitude restrictions, turn points, entry and exit points, hours of operation, special operating procedures, and operational requirements (DoD 2020). Because FAA monitors activity in the IRs, no overall mechanism exists to inform military or civilian aviators that an IR is active (i.e., currently in use). To ensure deconfliction of airspace, Notices to Airmen (NOTAMs) are issued for flight operations planned in IRs located within the vertical and/or horizontal limits of a Restricted Area or MOA; otherwise, training missions are coordinated with Hurlburt Field. Nonmilitary pilots are responsible for coordinating with the appropriate scheduling authorities to determine whether IR-057 or IR-059, if along their planned flight route(s), is active.

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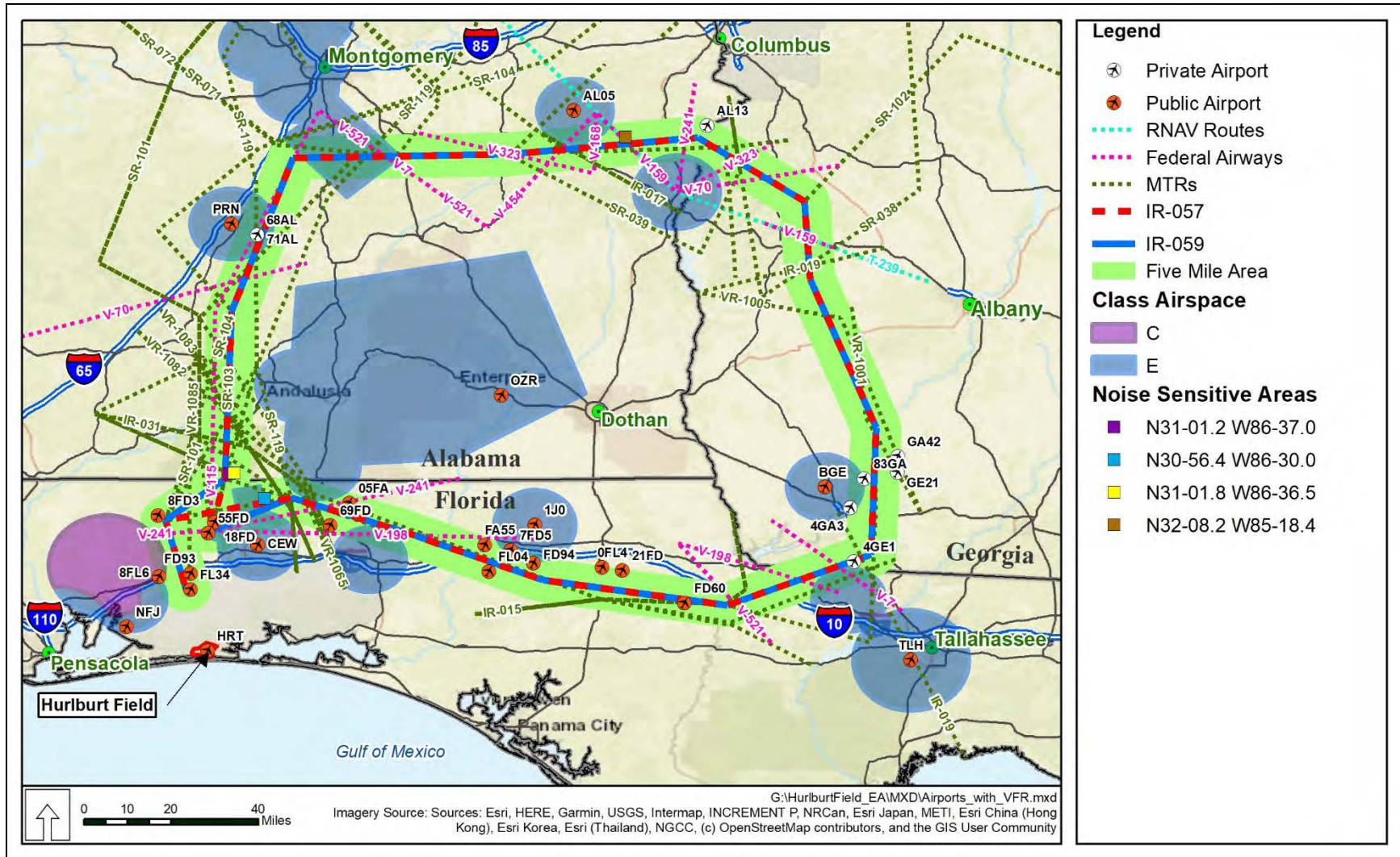


Figure 3-2. Airports, Military Training Routes, Airways, and Area Navigation Routes Intersecting IR-057 and IR-059

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Additionally, the AP/1B identifies other special operations procedures for aircraft on IR-057 and IR-059 to avoid the following noise-sensitive agricultural and forested areas (see **Figure 3-2**):

- Conecuh National Forest, Alabama, at N31-01.2 W86-37.0: US Forest Service-managed area approximately 40 miles north of Hurlburt Field.
- Conecuh National Forest, Alabama, at N31-01.8 W86-36.5 by 1,500 feet AGL or 2 NM: US Forest Service-managed area and lake approximately 40 miles north of Hurlburt Field.
- Blackwater River State Forest, Florida, at N30-56.4 W86-30.0 by 1,000 feet AGL or 1 NM: Florida Forest Service-managed area approximately 36 miles northeast of Hurlburt Field.
- Cody Hill Aviary, Alabama, at N32-08.2 W85-18.4 by 1,000 feet AGL or 0.25 NM: forested area approximately 140 miles northeast of Hurlburt Field.

Route surveys and evaluations, conducted annually, are used to document uncharted and/or undocumented obstacles, environmentally sensitive areas, and other potential flight safety hazards, to include planning deficiencies and potential flight conflicts with other routes and Class A, B, C, and D airspace and air traffic service procedures. Aircrews are briefed to report any observed construction (e.g., temporary cranes, mines, and temporary helipads) or uncharted obstructions/hazards to the scheduling activity/airspace manager. Information includes latitude and longitude coordinates and estimated height and description of obstructions/hazards.

Table 3-2 lists the airports (including 7 public and 25 private) that either directly underlie or have designated airspace that overlaps the IR-057 and IR-059 (see **Figure 3-2**). No public airports are within the ROI. Other potentially affected airspace includes overlapping Class C, D, and E controlled airspace associated with public and military airports located within the airspace ROI. Per FAA JO 7400.2M, *Procedures for Handling Airspace Matters*, public airports have an area of protected airspace from the surface up to 1,500 feet AGL and out to a distance of 3 NM surrounding the airport to accommodate aircraft approaches and departures. Although no exclusion zone is designated, access rights for private airports are also specified in the FAA Order JO 7400.2M.

Table 3-2. Airports and Associated Airspaces in the Region of Influence

Airport (FAA Identifier) ^a	Airspace Class ^b	Airspace Altitude Range	Airspace Area
Alabama			
Public Airports			
Mac Crenshaw Memorial Airport (PRN) Greenville, AL	E5	700 ft AGL up to 18,000 ft MSL	7-mile radius
Sehoy Airport (AL05) Hurtsboro, AL	E5	700 ft AGL up to 18,000 ft MSL	6.4-mile radius
Cairns Army Airfield Fort Rucker, AL	E2	Surface area airspace	5-mile radius
	E5	700 ft AGL up to 18,000 ft MSL	5-mile radius
	D	Surface to 2,800 ft MSL	5-mile radius

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Airport (FAA Identifier) ^a	Airspace Class ^b	Airspace Altitude Range	Airspace Area
Private Airports			
Westrock Mahrt Mill Airport (AL13) Cottonton, AL	Class G extending from the surface up to but not including the floor of Class E airspace.		
Sells (71AL) Greenville, AL	Class G extending from the surface up to but not including the 700 ft AGL airspace floor of the Mac Crenshaw Memorial Airport Class E airspace.		
Heart of Dixie Aero Estates (68AL) * Greenville, AL	Class G extending from the surface up to but not including the 700 ft AGL airspace floor of the Mac Crenshaw Memorial Airport Class E airspace.		
Florida			
Public Airports			
Bob Sikes Airport (CEW) Crestview, FL	E5	700 ft AGL up to 18,000 ft MSL	6.7-mile radius
Tallahassee Regional Airport Tallahassee, FL	E2 E5	Surface extending upward 700 ft AGL up to 18,000 ft MSL	5-mile radius 10-mile radius
Tri-County Airport Bonifay, FL	C E5	Surface to 4,100 ft AGL 700 ft AGL up to 18,000 ft MSL	5-mile radius 7-mile radius
Private Airports			
Choctaw Naval OLF Milton, FL	E2 E5 D	Surface upward 700 ft AGL up to 18,000 ft MSL Surface to 2,500 ft AGL	2.5-mile radius of OLF 6.7-mile radius of OLF 2.5-mile radius of OLF
Hurlburt Field (KHRT) Hurlburt, FL	D	Surface to 2,500 ft AGL	5.3 mile radius
Jackson Heliport (0FL4) Alford, FL	Class G extending from the surface up to but not including the floor of Class E airspace.		
Hartzog Field (FD94) Chipley, FL	Class G from the surface up to but not including the 700 ft AGL floor of the Tri-County Airport Class E airspace.		
Unicorn Place (69FD) Defuniak Springs FL	Class G extending from the surface up to but not including the floor of Class E airspace.		
Garner Field (FA55) Bonifay, FL	Class G extending from the surface up to but not including the floor of Class E airspace.		
Doctor's Hospital (7FD5) Bonifay, FL	Class G extending from the surface up to but not including the floor of Class E airspace.		
Melanie's Airport (05FA) Floral, FL	Class G extending from the surface up to but not including the floor of Class E airspace.		
George T. McCutchan Airfield (8FL6) Harold, FL	Class G from the surface up to but not including the 700 ft AGL floor of the Whiting Naval Air Station Class E airspace.		
Land's Field Airport 21FD) Marianna, FL	Class G extending from the surface up to but not including the floor of Class E airspace.		
Calhoun Sheriff's Heliport (FD60) * Altha, FL	Class G extending from the surface up to but not including the floor of Class E airspace.		
SkyPark Estates Owners Association Airport (18FD) * Baker, FL	Class G extending from the surface up to but not including the floor of Class E airspace.		
Dotson Airfield (55FD) * Baker, FL	Class G extending from the surface up to but not including the floor of Class E airspace.		
Pate Lake (FL04) * Caryville, FL	Class G extending from the surface up to but not including the floor of Class E airspace.		
Yellow River Airstrip (FD93) * Holt, FL	Class G extending from the surface up to but not including the floor of Class E airspace.		

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Airport (FAA Identifier) ^a	Airspace Class ^b	Airspace Altitude Range	Airspace Area
Blackwater Airfield (8FD3) * Munson, FL	Class G extending from the surface up to but not including the floor of Class E airspace.		
Eglin Test Site B6 Airport (FL34) * Valparaiso, FL	Class G extending from the surface up to but not including the floor of Class E airspace.		
Georgia			
Public Airports			
Decatur County Industrial Air Park (KBGE) Bainbridge, GA	E5	700 ft AGL up to 18,000 ft MSL	6.5-mile radius
Private Airports			
Memorial Hospital (4GA3) Bainbridge, GA	Class G extending from the surface up to but not including the floor of Class E airspace.		
Vada Airport (GA42) Bainbridge, GA	Class G extending from the surface up to but not including the floor of Class E airspace.		
Anderson Airport (GE21) Bainbridge, GA	Class G extending from the surface up to but not including the floor of Class E airspace.		
Viola Farm Airfield (4GE1) * Attapulcus, GA	Class G extending from the surface up to but not including the floor of Class E airspace.		
Brock Airpark (83GA) * Bainbridge, GA	Class G extending from the surface up to but not including the floor of Class E airspace.		

^a Airport data from AirNav.com 2020

^b All airspace class designations for public airports as currently published in FAA JO 7400.11D

* Located directly under the IR-057 and IR-059 where the change in Air Force operations is proposed

FAA – Federal Aviation Administration; **AL** – Alabama; **ft** – feet; **AGL** – above ground level; **MSL** – mean sea level; **FL** – Florida; **OLF** – outlying field; **GA** – Georgia

3.1.3 Environmental Consequences

Any impact on airspace would be considered significant if implementation of a proposed action were to substantially increase risks associated with flying activities, safety of personnel, contactors, military personnel, or the local community; significantly limit airspace access to a large number of users; or require major modifications to ATC systems.

3.1.3.1 Proposed Action

The Proposed Action would result in negligible impacts on airspace management. Under the Proposed Action, the Air Force operations for IR-057 and IR-059 would be changed, and the types of aircraft permitted for the low- to mid-altitude flight training would be amended to include Hurlburt Field-stationed CV-22s, MC-130H/Js, and Army HH-60s.

There would be a slight increase in presence of air traffic along the IRs. Authorized aircraft operations in IR-057 and IR-059 would increase approximately 62 percent from 90 annual C-130 and MH-53 operations to 146 CV-22, MC-130H/J, and HH-60 operations. On average, this could mean one flight along the route every few days in a given year, which is approximately one more flight per week than at currently authorized levels.

The increase in annual operations in the IRs would require increased but limited additional ATC coordination and airspace deconfliction measures in areas where consistent air traffic occurs, such as within areas overlying private airports, or where IR-057 and IR-059 transect airspaces associated with public airports across the southeast region, or intersect with other MTRs (see

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Table 3-1). To minimize these impacts, Hurlburt Field and 1 SOW would coordinate with the Jacksonville and Atlanta Air Route Traffic Control Centers and all potentially affected airports to determine impacts and establish new appropriate ATC and approach procedures to ensure safe operations within the airspace. This would be documented in letters of agreement with the airports, as appropriate. MTRs would continue to be scheduled through 1 SOW, and NOTAMs would be issued to inform civilian pilots of IR activation. Civilian pilots would be responsible for coordinating with the appropriate scheduling authorities to determine if an IR along their planned flight route(s) would be active.

The increase in authorized annual flight operations would have a minor effect on airspace traffic that result in added ATC effort to deconflict air traffic in the airspace. Given that IR-057 and IR-059 already support terrain-following flight operations of military aircraft, and the proposed operations would be consistent with the type and manner as currently supported, these impacts on airspace management would be minor over the long term.

Given the following best management practices and conditions, impacts from these changes in airspace use would be minor:

- The Atlanta and Jacksonville Air Route Traffic Control Centers would continue to be the FAA controlling centers for the region.
- No modifications to the airspace configuration or flight procedures along the routes are proposed.
- The type and conduct of training operations proposed along the routes would be consistent with those already authorized.
- Airspace controlling agencies for the IRs would be unchanged from existing conditions.
- Pilots using the IRs would adhere to the lateral and vertical confines of the published routes at all times.
- Pilots would only use established entries and exits for access to the IRs.
- Pilots would maintain obstacle clearance, terrain avoidance, and compliance with special procedures during operations within the IRs.
- An MTR route evaluation would be conducted to identify and document any uncharted/undocumented obstacles, environmentally sensitive areas, and other potential flight safety hazards, to include planning deficiencies and potential flight conflicts with other routes and Class A, B, C, and D airspace and air traffic service procedures. This type of MTR survey would be conducted annually to identify and address any areas of concern along the route necessary to support safe flight operations.
- No impacts on emergency service flight operations, including medical evacuation flights, would be expected. The Air Route Traffic Control Centers and Air Force would prioritize these flights so that they would be unimpeded, when operating in the area.

3.1.3.2 No Action Alternative

Under the No Action Alternative, the aircraft using IR-057 and IR-059 would not be changed and the proposed CV-22, MC-130H/J, and HH-60 operations in the two IRs would not be authorized.

Flight training operations for these aircraft out of Hurlburt Field would need to transit out of the region to other MTRs. This would result in long-term, minor, adverse impacts from added air traffic, requirement for airspace deconfliction, and training conflicts with other military users with planned training in those airspaces.

3.2 Noise

3.2.1 Definition of the Resource

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

Sound varies by both intensity and frequency. Sound pressure level, described in decibels (dB), is used to quantify sound intensity. The dB is a logarithmic unit that expresses the ratio of a sound pressure level to a standard reference level. Hertz are used to quantify sound frequency. The human ear responds differently to different frequencies. "A-weighting," measured in A-weighted decibels (dBA), approximates a frequency response expressing the perception of sound by humans. Sounds encountered in daily life and their dBA levels are listed in **Table 3-3**.

Table 3-3. Common Sounds and Their Levels

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

Source: Harris 1998

dBA – A-weighted decibel

The sound-pressure-level noise metric describes discrete noise levels during a sound event, and the level varies with the intensity of the sound. Since few sound events are steady (with a single-sound pressure level that describes the noise), additional noise metrics have been developed to describe noise, including:

- Maximum Sound Level (L_{max}) – L_{max} is the maximum sound level in dB.
- Equivalent Sound Level (L_{eq}) – L_{eq} is the average sound level over a specific period of time in dB.

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- Sound Exposure Level (SEL) – SEL is a measure of the total energy of an acoustic event. It represents the level of a 1-second-long constant sound that would generate the same energy as the actual time-varying noise event such as an aircraft overflight. SEL provides a measure of the net effect of a single acoustic event, but it does not directly represent the sound level at any given time.
- Day-Night Sound Level (DNL) – DNL is the average sound energy in a 24-hour period with a 10 dB penalty added to the nighttime levels. DNL is a useful descriptor for noise because (1) it averages ongoing yet intermittent noise and (2) it measures total sound energy over a 24-hour period. DNL provides a measure of the overall acoustical environment, but as with SEL, it does not directly represent the sound level at any given time.
- Onset-Adjusted Monthly DNL (L_{dnmr}) is the average sound energy in a 24-hour period with a 10 dB penalty added to the nighttime levels with up to an additional 11 dB penalty for acoustical events with onset rates greater than 15 dB per second, such as high-speed jets operating near the ground. L_{dnmr} is assessed for the month with the highest number of events, and as with DNL and SEL, it does not directly represent the sound level at any given time. Because of the penalties for rapid onset, L_{dnmr} is always equal to or greater than DNL.

The Noise Control Act of 1972 directs federal agencies to comply with applicable federal, state, and local noise control regulations. The Noise Control Act specifically exempts both aircraft and military training activities from state and local noise ordinances. There are no federal, state, or local noise regulations directly applicable to the Proposed Action.

AFI 32-7063, *Air Installations Compatible Use Zones Program*, and AFI 32-7070, *Air Force Noise Program*, provide land use compatibility guidance for aircraft noise, essentially the same as those in the Federal Interagency Committee on Urban Noise, *Guidelines for Considering Noise in Land-Use Planning and Control* (Federal Interagency Committee on Urban Noise 1980). These guidelines stem from the US Environmental Protection Agency (USEPA) 1974 “Levels Document,” which suggests continuous and long-term noise in excess of 65 dBA DNL is normally incompatible with noise-sensitive land uses such as residences, schools, churches, and hospitals (USEPA 1974). **Table 3-4** provides a general overview of recommended noise limits from aircraft operations for land use planning purposes. Air Force land use compatibility guidelines are in **Appendix C**.

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Table 3-4. Recommended Noise Ranges for Compatible Land Use Planning

General Level of Noise	Aircraft Noise (DNL)	Compatibility with Noise Sensitive Land Use
Low	<65 dBA	Compatible
Moderate	65–75 dBA	Normally not compatible
High	>75 dBA	Not compatible

Source: Air Force 2015

DNL – day-night sound level; **dBA** – A-weighted decibel

3.2.2 Affected Environment

3.2.2.1 Background Noise

IR-057 and IR-059 are routed through nine counties in Florida, eight counties in Alabama, and six counties in Georgia. Land use categories beneath them are primarily rural or undeveloped but do include some suburban areas. Existing sources of noise in these areas include military aircraft overflights, commercial and private aircraft overflights, road traffic, and other noises such as lawn maintenance equipment and construction noise. Background noise levels without aircraft operations (L_{eq} and DNL) were estimated for the range of land uses along the routes using the techniques specified in the *American National Standard Institute – Quantities and Procedures for Description and Measurement of Environmental Sound, Part 3: Short-Term Measurements with an Observer Present*. **Table 3-5** outlines the land use categories and the estimated background noise levels for areas under the proposed MTRs.

Table 3-5. Estimated Background Noise Levels

Land Use Category	Average Residential Intensity (people per acre)	DNL	L_{eq} (dBA)	
			Daytime	Nighttime
Rural or Undeveloped Areas	<2	<49	<48	<42
Quiet Suburban Residential	2	49	48	42
	4	52	53	47
	4.5	52	53	47
Quiet Urban Residential	9	55	56	50

Source: American National Standard Institute 2013

DNL – day-night noise level; L_{eq} – equivalent noise level; **dBA** – A-weighted decibel

3.2.2.2 Existing Aircraft Noise

Existing aircraft noise is discussed in the context of both (1) the overall average noise under IR-057 and IR-059 and the potential for incompatible land use, and (2) noise from individual overflights and the potential to interfere with communication and sleep.

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Overall Noise under IR-057 and IR-059. This noise analysis uses the Military Route Noise Model (MR_NMAP, v. 7.3) as part of the NoiseMAP computer program suite to predict overall noise levels (L_{dnmr} /DNL) associated with aircraft operations beneath IR-057 and IR-059. The parameters considered in the modeling include aircraft type, airspeed, power settings, and aircraft operations (Air Force 2013). L_{dnmr} is the accepted noise metric when determining noise levels from aircraft operations within MTRs. L_{dnmr} is used in this analysis of potential noise effects as a conservative surrogate for DNL. Due to the onset penalty associated with the L_{dnmr} metric, L_{dnmr} always equals or exceeds DNL; thus, the L_{dnmr} metric used for quantifying noise levels in MTRs can be compared to DNL thresholds (e.g., 65 dBA DNL).

The number of authorized operations in IR-057 and IR-059 is limited. Currently, 12 C-130J operations and 78 MH-53 operations are authorized annually. The overall L_{dnmr} and DNL are less than 35 dBA DNL with current air operations. These overall noise levels are orders of magnitude below (i.e., about 1,000 times less than) 65 dBA DNL and are fully compatible with all land uses, including residential, recreational, commercial, and industrial (Air Force 2015).

Individual Overflights. The Air Force encourages the inclusion of supplemental noise metrics in the assessment of noise. The sole use of DNL and land use compatibility does not fully describe the nature and effects from aircraft noise because they are used for planning purposes and do not consider other effects such as hearing loss, sleep and speech interference, and structural damage. MR_NMAP was also used to calculate L_{max} and SEL for individual overflights within IR-057 and IR-059. These metrics were used to assess the potential for disturbance to speech and sleep and to provide the public with a better understanding of the specific effects (Air Force 2016).

Figure 3-3 and **Table 3-6** show the L_{max} and SEL for a person on the ground of a single overflight while operating at less than 3,000 feet AGL. The L_{max} of a single C-130J at 250 feet AGL is 100 dBA, and the SEL is 102 dBA. The L_{max} of a single MH-53 at 200 feet AGL is 96 dBA, and the SEL is 100 dBA. These levels are relatively loud and are comparable to a motorcycle at approximately 50 feet. The maximum noise level is only experienced briefly at the closest point of approach with the noise level rising and falling as the aircraft flies over. The C-130Js and MH-53s fly at speeds that make their presence audible from a distance, and individuals would be aware of their approach and experience little startle effect, unlike fast-moving fighter aircraft where receptors are often not aware of the aircraft until it is nearly over them.

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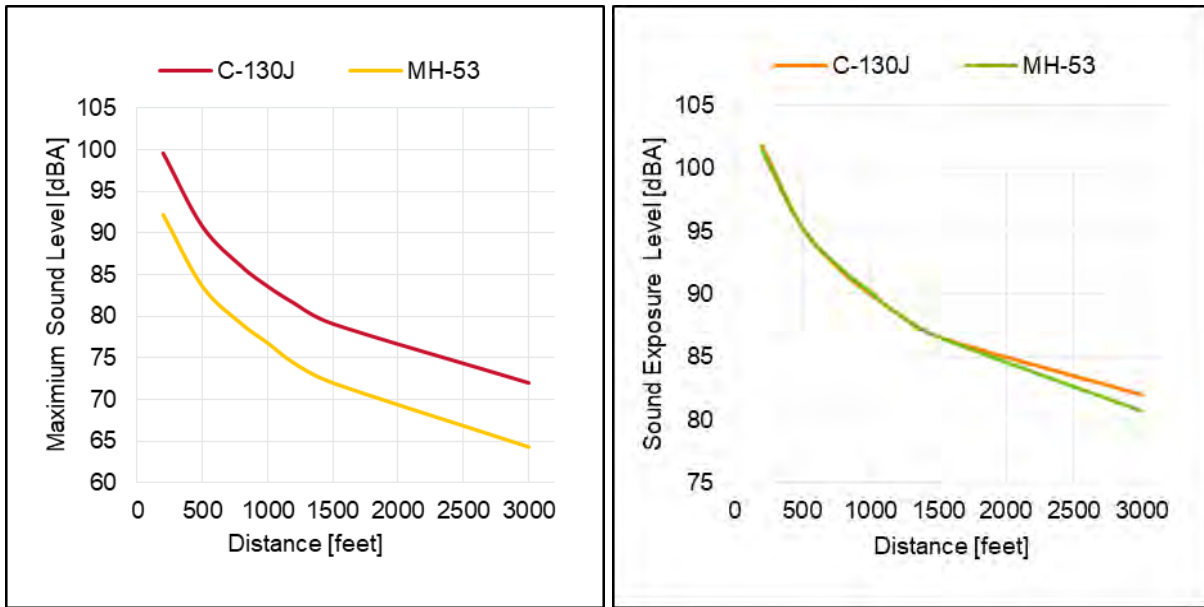


Figure 3-3. Sound Levels for Existing C-130J and MH-53 Overflights

Source: Air Force 2013, 2019

Although operational noise levels are too low to result in incompatibility with existing land uses, noise from individual overflights generates distinct acoustical events and has the potential to occasionally annoy individuals directly under the flight path. A good predictor of annoyance for individual overflights is the maximum sound level (Rylander et al. 1974, Rylander and Bjorkman 1988). The maximum sound levels for the C-130Js and MH-53s and the percent of individuals typically annoyed are listed in **Table 3-6**. In general, overflights operating at the lowest authorized altitudes in IR-057 and IR-059 typically annoy less than 4 percent of individuals directly under their flight paths.

Table 3-6. Sound Levels for Existing C-130J and MH-53 Overflights

Altitude/Distance (feet AGL)	Maximum Sound Level (dBA)		Sound Exposure Level (dBA)		Percent Annoyed from Individual Overflights
	C-130J	MH-53	C-130J	MH-53	
200 (250) ^a	100	96	102	100	Less than 4%
500	91	87	95	94	Less than 2%
1,000	84	81	90	89	Less than 1%
1,500	79	76	87	85	Less than 1%
3,000	72	68	82	80	Less than 1%

Sources: Air Force 2013, Rylander et al. 1974, Rylander and Bjorkman 1988

^a The lowest altitude C-130Js would operate is 250 feet AGL.

AGL – above ground level; **dBA** – A-weighted decibel

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Low-altitude aircraft overflights can interfere with communication on the ground and in homes, schools, or other buildings. The disruption of routine activities in the home, such as radio or television listening, telephone use, or family conversation, can give rise to frustration and irritation. The quality of speech communication is also important in classrooms, offices, and industrial settings. The threshold at which aircraft noise may begin to interfere with speech and communication is 75 dBA (DoD 2019). This level is consistent with, and more conservative than, the thresholds outlined in the 2002 American National Standard Institute standard for classroom noise (American National Standard Institute 2013). The maximum sound level for MC-130H/J's and MH-53s operating below 1,500 feet exceeds 75 dBA (**Table 3-6**), the threshold for speech interference. Individuals directly under the flight path would briefly pause during conversation when the aircraft was overhead. The number of current authorized overflights is 90 annually, which may generate one acoustical event every 4 days that interferes with speech on the ground, depending on the aircraft's altitude.

Sleep interference is another source of annoyance associated with low-altitude aircraft overflights. This is especially true because of the intermittent nature of aircraft noise, which can be more disturbing than continuous noises. Sleep disturbance can be caused not only by loudness but also by the duration of each noise event; therefore, sleep disturbance is best reflected with the SEL metric, which captures the total energy (i.e., level and duration) of each noise event. The threshold at which aircraft noise would interfere with sleep with 1 percent of the population is 90 dBA SEL (DoD 2019). The SEL for primary aircraft using IR-057 and IR-059 below 1,000 feet AGL would exceed 90 dBA SEL (**Table 3-6**). About 10 percent of the overflights are currently conducted at night, accounting for about nine aircraft operations annually. This authorized level of operations generates one acoustical event every month or two that may interfere with sleep with 1 percent of the individuals directly under the flight path, depending on the aircraft's altitude.

3.2.3 Environmental Consequences

The effects of the Proposed Action would be considered significant if any alternative were to create appreciable areas where overall noise from aircraft operations would be greater than 65 dBA DNL. In addition, supplemental noise metrics were used to examine and quantify other effects associated with individual CV-22, MC-130H/J, and HH-60 overflights.

3.2.3.1 Proposed Action

The Proposed Action would have long-term, negligible to minor, adverse effects on the noise environment. Effects would be due to the incremental changes in noise due to the conversion to CV-22, MC-130H/J, and HH-60s instead of C-130J and MH-53 aircraft, and the authorized increase in overflights from 90 to 146 per year. Although each aircraft sounds unique, the overall levels of noise would not be perceptibly different. With the Proposed Action's maximum authorized operational tempo, the overall noise from aircraft activities would be too low to result in incompatibility with land uses under IR-057 and IR-059. Noise from individual overflights would, however, continue to generate distinct acoustical events that would have the potential to

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periodically but briefly annoy individuals directly under the flight path, interfere with speech on the ground, and on rare occasions, interfere with sleep.

Overall Noise under IR-057 and IR-059. The number of proposed aircraft operations in IR-057 and IR-059 would continue to be limited. As outlined in **Table 2-1**, there would be 25 CV-22 operations, 24 MC-130H/J operations, and 24 HH-60 operations authorized annually in both IR-057 and IR-059. Only 56 additional authorized aircraft operations would occur annually (or approximately 1 additional operation weekly). The overall L_{dnmr} and DNL would be 38.1 dBA DNL with all proposed air operations. Given the faster average airspeeds of additional MC-130H/J operations and the new CV-22 operations (230 and 220 knots, respectively) in the IRs versus the slower speeds of prior MH-53s (120 knots), the period of sound exposure on the ground would be reduced compared to prior operations. The resulting noise differential is inconsequential and below the threshold for reportable effects as described by FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*. The change is 3.1 dBA DNL (changes from 35 to 38.1 dBA DNL), and the FAA threshold for reportable effects is 5 dB DNL for actions producing 45 to less than 60 dB DNL. These overall noise levels would be similar to but incrementally greater than existing conditions, orders of magnitude below 65 dBA, and fully compatible with all land uses, including residential, recreational, commercial, and industrial (Air Force 2015). These effects would be negligible.

Individual Overflights. Although operational noise levels would be too low to result in incompatibility with any land uses, noise from individual overflights would continue to generate distinct acoustical events and would have the potential to occasionally annoy individuals directly under the flight path. The maximum sound levels for the CV-22, MC-130H/J, and HH-60, and percent of individuals potentially annoyed are listed in **Table 3-7**. In general, overflights operating at the lowest authorized altitudes in IR-057 and IR-059 would annoy less than 4 percent of individuals directly under the flight paths. This is comparable to the existing authorized aircraft operations. The maximum number of authorized overflights conducted would increase from 90 to 146 annually, which may annoy a small percentage of the population, depending on the aircraft's altitude. This is about twice as often when compared to existing conditions. These effects would be minor.

CV-22s and HH-60s would generally train in double formation, whereas MC-130H/Js often train alone. **Figure 3-4** and **Table 3-7** compare the L_{max} and SEL of a double formation CV-22s and HH-60s and a single MC-130H/J operating between 200 and 3,000 feet AGL. It should be noted MC-130H/Js would not be authorized to fly at less than 250 feet AGL in IR-057 and IR-059. Double-formation CV-22s have similar levels of noise, but are marginally louder than, a single MC-130H/J at all distances. HH-60s are quieter than both the CV-22s and MC-130H/Js.

The maximum sound level for CV-22, MC-130H/J, and HH-60 aircraft operating below 1,500 feet would exceed 75 dBA (**Table 3-7**), the threshold for speech interference. Individuals directly under the flight path would briefly pause during conversation when the aircraft was overhead. The maximum number of authorized overflights conducted would increase from 90 to 146 annually, which may generate one acoustical event every 2 to 3 days that interferes with speech

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on the ground, depending on the aircraft's altitude. This is about twice as often when compared to existing conditions. These effects would be minor.

Table 3-7. Sound Levels for Proposed CV-22, MC-130H/J, and HH-60 Overflights

Altitude/Distance (feet AGL)	Maximum Sound Level (dBA)			Sound Exposure Level (dBA)			Percent Annoyed from Individual Overflights
	CV-22 ^a	MC-130H/J	HH-60 ^a	CV-22 ^a	MC-130H/J	HH-60 ^a	
200(250) ^b	101	99	96	105	101	100	Less than 4%
500	92	90	87	100	95	94	Less than 2%
1,000	85	83	81	96	89	89	Less than 1%
1,500	81	78	76	93	85	85	Less than 1%
3,000	74	70	68	89	79	80	Less than 1%

Sources: Air Force 2013, 2019; Rylander et al. 1974; Rylander and Bjorkman 1988

^a CV-22 and HH-60 modeled as double-formation overflights.

^b The lowest altitude at which MC-130H/Js would operate is 250 feet AGL.

AGL – above ground level; **dBA** – A-weighted decibel

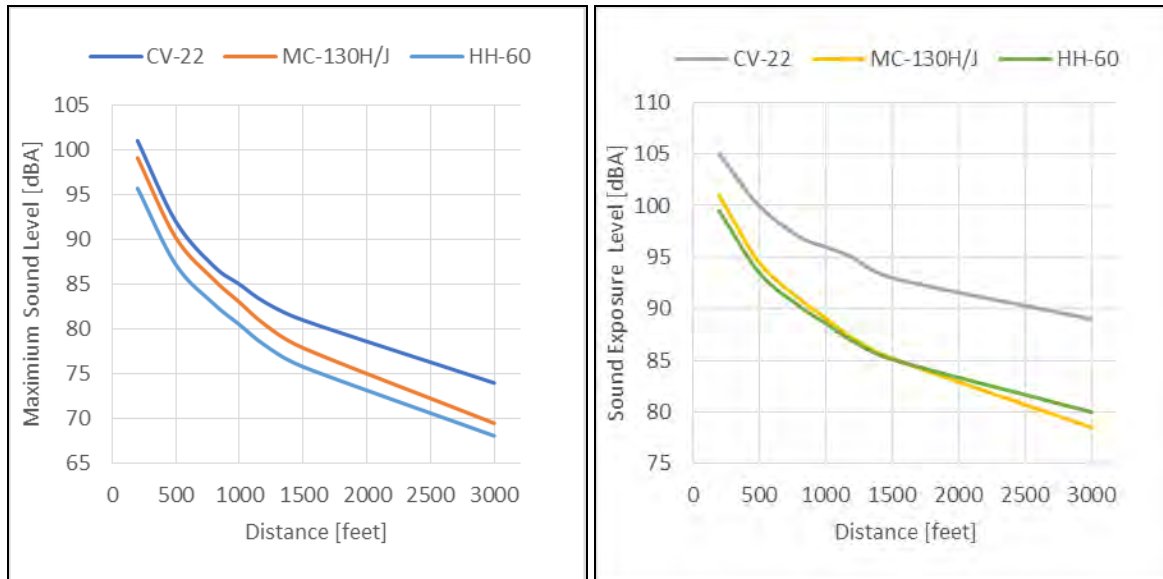


Figure 3-4. Sound Levels for Proposed CV-22, MC-130H/J, and HH-60 Overflights

Sources: Air Force 2013, 2019

The SEL for CV-22 below 1,500 feet AGL and MC-130H/J and HH-60 below 1,000 feet AGL would exceed 90 dBA SEL (**Table 3-7**). About 18 overflights per year would be conducted at night. This level of operations could generate one acoustical event every 3 weeks that may interfere with sleep with 1 percent of individuals directly under the flight path, depending on the

aircraft's altitude. This is about twice as often when compared to existing conditions. These effects would be minor.

3.2.3.2 No Action Alternative

Under the No Action Alternative, IR-057 and IR-059 would not be changed and the proposed CV-22, MC-130H/J, and HH-60 operations in the two IRs would not be authorized. Flight training operations for these aircraft out of Hurlburt Field would need to transit out of the region to other MTRs. Selecting the No Action Alternative would result in no effect on the noise environment of IR-057 and IR-059.

3.3 Safety

3.3.1 Definition of the Resource

A safe environment is one in which there is no, or an optimally reduced, potential for death, serious injury, or illness. The elements of an accident-prone environment include the presence of unnecessary hazards and an exposed population at risk of encountering hazards. This section addresses the current conditions for military personnel and civilian safety, as well as health and safety following the implementation of the Proposed Action.

Aircraft safety is based on the physical risks associated with aircraft flight. All military aircraft fly in accordance with 14 CFR Part 91, *FAA General Operating and Flight Rules*, which addresses aircraft operations that include, but are not limited to, aircraft operations near other aircraft, right-of-way rules, and aircraft speed. AFI 11-202V3, *General Flight Rules*, prescribes general flight rules that govern the operation of Air Force aircraft and includes regulations regarding aircrew readiness, maximum flying time, right-of way, minimum aircraft altitudes, aircraft speed, hazard avoidance, aircraft movement on the ground, procedures for aviation safety reporting, and other health and safety regulations. This regulation also has precise requirements for the use of airports, heliports, and other landing areas; local flying rules; and special use airspace. Additionally, there are a number of directives, instructions, and manuals that provide guidance on maintaining Air Force health and safety standards including, but not limited to, the identification and mitigation of safety hazards, investigation of reportable mishaps, and required safety training.

Obstructions to flights, which include tall buildings and power transmission lines, represent safety concerns for aircrews, especially those engaged in low-altitude (below 10,000 feet AGL) flight training. The avoidance of obstructions and obstruction analysis is guided by 14 CFR Part 77, *Safe, Efficient Use, and Preservation of the Navigable Airspace*. Hazardous weather conditions can pose safety hazards and influence a pilot to alter a flight. Pilots consult the National Weather Service or weather services at local airports to obtain preflight weather information. Adverse weather conditions of concern in Florida, Georgia, and Alabama include hurricanes, tornadoes, thunderstorms, severe turbulence, and wind shear. The evaluation of potential weather hazards rests in a pilot's sound discretion based on knowledge of available information, experience, and the operational limits of the aircraft.

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Air Force Policy Directive 91-2, *Safety Programs*, establishes (1) safety programs to identify and mitigate hazards and (2) guidelines for necessary safety training. Air Force Manual 91-203, *Air Force Occupational Safety and Health Standards*, defines the minimum safety, fire protection, and occupational health standards; assigns responsibilities to individuals or functions to help Commanders manage their safety and health programs to ensure they comply with Occupational Safety and Health Administration and Air Force guidance; and applies to all Air Force activities. AFI 91-202, *The US Air Force Mishap Prevention Program*, implements Air Force Policy Directive 91-2 and establishes a mishap prevention program, assigns responsibilities for program elements, and contains program management information. The purpose of AFI 91-202 is to minimize loss of Air Force resources and to protect Air Force personnel from occupational deaths, injuries, or occupation illnesses by managing risks on and off duty.

The Air Force defines aircraft accidents (mishaps) as unplanned occurrences, or a series of occurrences, that result in damage to DoD property, occupational illness, or property damage and may occur as the result of mid-air collisions, collisions with manmade structures or terrain, weather-related accidents, mechanical failure, pilot error, or bird/wildlife-aircraft strikes. The Air Force defines five categories of aircraft mishaps: Classes A, B, C, D, and E:

- Class A mishaps result in a fatality or permanent disability; have a total minimum cost of \$2 million for injury, occupational illness, or property damage; or cause the destruction of, or damage beyond repair to, military aircraft.
- Class B mishaps result in a permanent partial disability, have a total cost between \$500,000 and \$2 million, or involve hospitalization of five or more personnel.
- Class C mishaps result in damages totaling between \$50,000 and \$500,000.
- Class D mishaps result in damages totaling between \$20,000 and \$50,000.
- Class E mishaps do not meet reportable classification criteria; however, it is important to investigate and report them for future mishap prevention.

AFI 91-212, *Bird/Wildlife Aircraft Strike Hazard (BASH) Management Program*, provides policy guidance, establishes program requirements, assigns responsibilities, and contains management information for implementing an effective BASH management program for Air Force activities. AFI 91-212 defines BASH as wildlife, habitat, or conservation efforts that pose a risk to flight operations, and it provides a number of techniques (including radar detection, warning, and use of wildlife data) to reduce the potential for bird or wildlife strikes by allowing aircrews to schedule or maneuver to avoid wildlife concentrations. Bird and wildlife strikes are an aircraft safety concern due to the potential damage that a strike might have on the aircraft or possible injury to aircrews. AFI 32-7064, *Integrated Natural Resources Management*, requires review of an installation's natural resources for potential wildlife hazards to aircraft operations, and management of land adjacent to aircraft operations to minimize attractions to wildlife. The ROI for safety includes IR-057 and IR-059.

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3.3.2 Affected Environment

IR-057 and IR-059 have been used for aircraft training operations since 1989. Military aircraft training in MTRs are subject to potential aircraft mishaps of various types and degrees, including bird/wildlife strikes and inclement weather. IR-057 and IR-059 are currently authorized for a total of 90 aircraft operations annually.

Aircraft mishap rates are based on the estimated flying time that an aircraft is expected to be in the airspace, the accident rate per 100,000 flying hours for a specific aircraft, and the annual flying hours for that aircraft. The majority of aircraft mishaps occur at takeoff or landing near the airfield. The existing Class A mishap rates for V-22, C-130, and H-60 aircraft (which are equivalent to the proposed CV-22, MC-130H/J, and HH-60) are listed in **Table 3-8**. The table reflects Air Force-wide data for all phases of flight, missions and operation, and aircraft models for each aircraft type. The overall Class A mishap rate for all Air Force aircraft was 1.51 for FY 2018, 0.75 for FY 2017, and 0.74 for FY 2016 (Air Force Safety Center [AFSC] 2019a, 2018, 2017b).

Table 3-8. Class A Mishap Rates for Selected Aircraft

Aircraft	5-Year Average Class A Rate ^a (FY15 to FY19)	10-Year Average Class A Rate ^a (FY09 to FY19)	Lifetime Average Class A Rate ^a
C-130	1.20	0.90	2.49
V-22	0.60	0.50	0.30
H-60	0.40	0.50	0.68

Source: AFSC 2019a, 2019b, 2019c, 2019d

^a“Rate” refers to the number of mishaps per 100,000 flight hours.

FY – fiscal year

The Aviation Safety Network (ASN) Safety Database contains descriptions of airliner (aircraft capable of carrying at least 12 passengers), military transport aircraft, and corporate jet aircraft safety occurrences worldwide. Aviation safety reports indicate that a total of 370 mishaps occurred in Florida between August 1931 and April 2020, where 227 (61 percent) were Class A mishaps in which a total loss of the plane resulted. Of the total mishaps in Florida, 86 (23 percent) were associated with military flight activities. A total of 88 mishaps occurred in Georgia between January 1935 and February 2020, where 71 (81 percent) were Class A mishaps in which a total loss of the plane resulted. Of the total mishaps in Georgia, 25 (28 percent) were associated with military flight activities. A total of 51 mishaps occurred in Alabama between December 1929 and March 2019, where 42 (82 percent) were Class A mishaps in which a total loss of the plane resulted. Of the total mishaps in Alabama, 23 (45 percent) were associated with military flight activities (ASN 2020).

The ASN Wikibase is a database that contains descriptions of aircraft mishaps where each entry is submitted independently by a user and is not verified by ASN or the Flight Safety Foundation. The following are the two Hurlburt Field-affiliated Class A mishaps listed in the ASN Wikibase records:

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- On 13 June 2012, a CV-22B Osprey crashed while flying in formation with another CV-22 during a training exercise north of Navarre, Florida. Five injuries and no fatalities were recorded (ASN 2017).
- On 6 May 1994, a Fairchild C-123 Provider crashed during touch-and-go landings. Four fatalities were recorded (ASN 2015).

The Air Force devotes considerable attention to avoiding the possibility of bird/wildlife aircraft strikes. It has conducted a worldwide program for decades to study bird migrations bird flight patterns, and past strikes to develop predictions of where and when bird/wildlife strikes might occur as to avoid such incidents. IR-057 and IR-059 overlie areas where BASH may be increased due to the presence of wildlife and vegetation. The Air Force Avian Hazard Advisory System is used for flight planning to reduce the risk of bird collisions with aircraft. The Avian Hazard Advisory System presents hourly BASH risk levels for various airspace segments and provides a list of potential hazard areas underlying the selected airspace segment. Areas underlying IR-057 and IR-059 that possess a higher BASH risk include dams, landfills, golf courses, and federal- and state-protected natural areas (Avian Hazard Advisory System 2020).

Bird/wildlife strike risk increases substantially as altitude decreases. Although birds can be encountered at altitudes of 30,000 feet AGL and higher, between FY 1995 and FY 2016, approximately 52 percent of recorded bird/wildlife aircraft strikes with reportable mishap data have been at altitudes lower than 400 feet AGL, and 95 percent of recorded strikes have occurred below 3,000 feet. IR-057 and IR-059 have an altitude floor of 250 feet AGL (200 feet AGL for helicopter flight training) and altitude ceilings between 1,300 and 3,000 feet AGL. From FY 1995 to FY 2016, approximately 52 percent of Air Force-reported mishaps with altitudes provided in the reports occurred between 200 feet AGL and 3,000 feet AGL (AFSC 2017a).

3.3.3 Environmental Consequences

An impact on health and safety would be considered significant if implementation of a proposed action were to substantially increase risks associated with flying activities, safety of personnel, or introduce new health or safety risks for which the Air Force or the surrounding community is not prepared or does not have adequate management and response plans in place.

3.3.3.1 Proposed Action

Long-term, minor, adverse impacts from slightly increased health and safety risks would occur following implementation of the Proposed Action. A total of 146 annual aircraft operations in IR-057 and IR-059 would be authorized, which includes 25 annual CV-22 operations, 24 annual MC-130H/J operations, and 24 annual HH-60 operations in each IR. The total number of authorized annual IR-057 and IR-059 training operations would increase approximately 62 percent from currently authorized levels. The 5-year Class A mishap rates for V-22 and C-130 aircraft, and H-60 helicopter, which are equivalent to the CV-22, MC-130H/J, and HH-60 that would operate in IR-057 and IR-059, are lower than the Class A mishap rate for all Air Force aircraft in FY 2018. The Air Force is committed to continue following and implementing the requirements of AFI 91-202 to ensure that aircraft mishaps are minimized to the greatest extent

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practicable. Additionally, 14 CFR Part 91 and AFI 11-202V3 would continue to be followed by all military aircraft operating in IR-057 and IR-059.

Long-term, minor, adverse impacts on health and safety would be anticipated from potential bird/wildlife aircraft strikes. Nearly all bird/wildlife strikes occur at low altitudes (below 3,000 feet AGL), and BASH risk increases during dawn and dusk operations. Under the Proposed Action, there would be no change to the altitude ceilings or floors of IR-057 and IR-059; however, the number of annual low-altitude operations would increase, which could increase the potential for bird/wildlife aircraft strikes. To ensure the safety of military personnel and the public and to reduce the risk of bird/wildlife aircraft strikes during training operations, the BASH guidance in AFI 91-212 and Air Force operational requirements would be followed. The Air Force would also continue to monitor the Avian Hazard Advisory System for hourly BASH risk levels for applicable airspace segments.

3.3.3.2 No Action Alternative

Under the No Action Alternative, IR-057 and IR-059 would not be changed, and the annual number of CV-22, MC-130H/J, and HH-60 training operations would not be affected. Therefore, no changes to health and safety from existing conditions in IR-057 and IR-059 would be expected, and no impacts would occur. However, these training operations would be shifted to other distant MTRs out of the region where additional transit time and low- and mid-altitude operations would have a similar BASH risk as the Proposed Action.

3.4 Air Quality

3.4.1 Definition of the Resource

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

3.4.2 Affected Environment

The Clean Air Act (42 USC Sections 7401-7671q), as amended, assigns the USEPA responsibility to establish the primary and secondary National Ambient Air Quality Standards (NAAQS) (40 CFR Part 50) that specify acceptable concentration levels of six criteria pollutants: particulate matter (measured as both particulate matter less than 10 microns in diameter [PM_{10}] and particulate matter less than 2.5 microns in diameter [$PM_{2.5}$]), sulfur dioxide (SO_2), carbon monoxide (CO), nitrogen dioxide (NO_2), ozone (O_3), and lead (**Table 3-9**). Short-term NAAQS (1-, 8-, and 24-hour periods) have been established for pollutants contributing to acute health effects while long-term NAAQS (annual averages) have been established for pollutants

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contributing to chronic health effects. While each state has the authority to adopt standards stricter than those established under the federal program, Florida, Alabama, and Georgia accept the federal standards.

Table 3-9. National Ambient Air Quality Standards

Pollutant	Air Quality Standard	
	Level	Averaging Period
Carbon Monoxide (CO)		
1-Hour (ppm)	35	Not to be exceeded more than once per year
8-Hour (ppm)	9	
Nitrogen Oxide (NO₂)		
1-Hour (ppb)	100	98th percentile of 1-hour daily maximum concentrations, averaged over 3 years
Ozone (O₃)		
8-Hour (ppm)	0.070	3-year average of the fourth highest daily maximum
Sulfur Dioxide (SO₂)		
1-Hour (ppm)	75	98th percentile, averaged over 3 years
3-Hour (ppb)	0.5	Not to be exceeded more than once per year
Particulate Matter – 2.5 Microns (PM_{2.5})		
24-Hour (µg/m ³)	35	98th percentile, averaged over 3 years
Annual Mean (µg/m ³)	12	Averaged over 3 years
Particulate Matter – 10 Microns (PM₁₀)		
24-Hour (µg/m ³)	150	Not to be exceeded more than once per year over 3 years
Lead (Pb)		
Rolling 3-Month Average (µg/m ³)	0.15	Not to be exceeded

Source: USEPA 2020a

ppm - parts per million; **ppb** = parts per billion; **µg/m³** = micrograms per cubic meter

Federal regulations designate Air Quality Control Regions (AQCRs) in violation of the NAAQS as *nonattainment* areas. Federal regulations designate AQCRs with levels below the NAAQS as *attainment* areas. Hurlburt Field is in Okaloosa County and within the Mobile (Alabama) – Pensacola – Panama City (Florida) – Southern Mississippi Interstate AQCR (40 CFR Section 81.68). The USEPA has designated Okaloosa County as in attainment for all criteria pollutants (USEPA 2020b). IR-057 and IR-059 are routed through nine counties in Florida, eight counties in Alabama, and six counties in Georgia. USEPA has designated all counties under IR-057 and IR-059 as attainment areas (**Table 3-10**) (USEPA 2020a).

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Table 3-10. Attainment Status for Counties beneath IR-057 and IR-059

County	State	Attainment Status
Barbour, Bullock, Butler, Covington, Crenshaw, Lowndes, Montgomery, Russell	Alabama	Unclassifiable/attainment
Calhoun, Gadsden, Holmes, Jackson, Liberty, Okaloosa, Santa Rosa, Walton, Washington	Florida	Unclassifiable/attainment
Baker, Calhoun, Decatur, Mitchell, Randolph, Stewart	Georgia	Unclassifiable/attainment

Source: USEPA 2020b

3.4.2.1 Regulatory Overview

The Florida Department of Environmental Protection oversees programs for permitting the construction and operation of new or modified stationary source air emissions in Florida. The Florida Department of Environmental Protection air permitting is required for many industries and facilities that emit regulated pollutants. These requirements include, but are not limited to, Title V permitting of major sources, New Source Review, Prevention of Significant Deterioration, New Source Performance Standards for selected categories of industrial sources, and the National Emission Standards for Hazardous Air Pollutants. Based on the size of the emission units and type of pollutants, the Florida Department of Environmental Protection sets permit rules and standards for emissions sources.

Hurlburt Field holds a synthetic minor operating permit (#0910064-011-AF) that expires 17 October 2022 (Florida Department of Environmental Protection 2020a). The permit requirements include annual inventories of all significant stationary sources of air emissions for criteria pollutants, as well as monitoring and recordkeeping requirements. Primary stationary sources of air emissions include paint booths, fuel storage areas, an aircraft engine test stand, and backup generators. **Table 3-11** outlines the 2018 air emissions from Hurlburt Field's Annual Operating Report. The report does not include emissions from mobile sources like cars, trucks, and aircraft.

Table 3-11. 2018 Annual Emissions for Significant Sources at Hurlburt Field

Pollutant	Emissions (tons per year)
Carbon Monoxide (CO)	2.1
Nitrogen Oxides (NO _x)	3.9
Volatile Organic Compounds (VOCs)	1.2
Fine Particulate Matter (PM ₁₀ /PM _{2.5})	0.7
Sulfur Dioxide (SO ₂)	0.7

Source: Florida Department of Environmental Protection 2020b

Clean Air Act Conformity. The 1990 amendments to the Clean Air Act require federal agencies to ensure that their actions conform to the State Implementation Plan (SIP) in a nonattainment area. The USEPA has developed two distinctive sets of conformity regulations:

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one for transportation projects and one for nontransportation projects. Nontransportation projects are governed by general conformity regulations (40 CFR Part 93 Subpart B). Because the counties are in attainment for the NAAQS, the general conformity rules do not apply.

3.4.2.2 Greenhouse Gases and Climate Change

Historically, the average high temperature at Hurlburt Field is 91.3 degrees Fahrenheit (°F) (32.9 degrees Celsius [°C]) in the hottest month (July), and the average low temperature is 36.7°F (2.6°C) in the coldest month (January). The region has an average annual precipitation of 69.2 inches (175.8 centimeters) per year. The wettest month of the year is July, with an average rainfall of 9.4 inches (23.9 centimeters) (Idcide 2020).

EO 13834, *Efficient Federal Operations*, outlines policies intended to ensure that federal agencies meet such statutory requirements in a manner that increases efficiency, optimizes performance, eliminates unnecessary use of resources, and protects the environment. The EO specifically requires agencies within the DoD to measure, report, and reduce their greenhouse gas (GHG) emissions from both their direct and indirect activities. The DoD has committed to reduce GHG emissions from noncombat activities by 22.3 percent when compared to 2008 levels (DoD 2019).

3.4.3 Environmental Consequences

The environmental impacts on air quality are determined based on increases in emissions of regulated pollutants when compared to existing conditions.

Effects on air quality would be considered significant if the action would create emissions greater than Prevention of Significant Deterioration threshold values in attainment areas, or if the action contributes to a violation of any federal, state, or local air regulation. Effects on climate change would be significant if the action meaningfully contributed to the potential effects of global climate change.

The Proposed Action would have long-term minor adverse impacts. Long-term effects on air quality would be due to increases in emissions from CV-22, MC-130H/J, and HH-60 operations in the IRs. The total emissions would be below the Prevention of Significant Deterioration thresholds; would not contribute to a violation of any federal, state, or local air regulations; and would not meaningfully contribute to the potential effects of global climate change.

3.4.3.1 Direct and Indirect Emissions

The Air Conformity Applicability Model was used to estimate emissions and to assess the potential air-quality impacts associated with the action in accordance with the general conformity rule (40 CFR Part 93 Subpart B). The area around Hurlburt Field and all of the counties under the IRs are in attainment for the NAAQS, and the general conformity rule does not apply; therefore the Prevention of Significant Deterioration thresholds have been used as a surrogate to determine the level of impacts under NEPA.

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Table 3-12 lists the net change in direct and indirect emissions resulting from the aircraft operations under the Proposed Action. Estimates include emissions from aircraft in flight in the IRs. This would constitute a reasonable upper bound of effects. Emissions would be below the Prevention of Significant Deterioration thresholds of 250 tons per year for all pollutants and within an attainment area; therefore, the level of effect would be less than significant. Emission estimations are in **Appendix D**.

Table 3-12. Estimated Air Emissions Compared to Prevention of Significant Deterioration Thresholds

Activity/Source	CO	NO _x	VOC	SO _x	PM ₁₀	PM _{2.5}	Pb
Air Operations in Any/All Counties under IRs ^a	1.0	3.8	0.2	0.5	0.4	0.3	0.0
Prevention of Significant Deterioration Threshold ^b	250	250	250	250	250	250	250
Exceeds Prevention of Significant Deterioration Threshold?	No	No	No	No	No	No	No

Source: Air Force 2018

^a Reflects the total in-flight emissions. Emissions in individual counties would be less than those shown herein

^b No counties have been designated nonattainment; therefore, a Prevention of Significant Deterioration threshold of 250 tons per year has been carried forward to determine the level of effect under NEPA.

CO – carbon monoxide; **NO_x** – nitrous oxides; **VOCs** – volatile organic compounds; **SO_x** – sulfur oxides; **PM₁₀** – particulate matter – 10 microns; **PM_{2.5}** – particulate matter, 2.5 microns; **Pb** – lead; **IR** – Instrument Route

These emissions reflect the maximum aircraft training (both aircraft types and hours of training) that would take place under the Proposed Action for all counties combined. It is likely that only some of the operations would take place, and the net effects would be somewhat less than is shown herein. These effects would be less than significant under NEPA.

3.4.3.2 Regulatory Review

There are no new stationary sources of air emissions as part of the Proposed Action at this time; therefore, no air permitting requirements have been identified. It is possible that a minor new stationary source of emissions may become necessary such as heating boilers or backup generators. Any new stationary sources of air emissions would fully comply with Florida Department of Environmental Protection permitting requirements.

No heavy construction or associated sources of air emissions are part of the Proposed Action at this time.

3.4.3.3 Greenhouse Gases and Climate Change

This EA examines GHGs as a category of air emissions. It also looks at issues of temperature and precipitation trends to determine whether the Proposed Action would be affected by climate change. However, this EA does not attempt to measure the actual incremental effects of GHG emissions from the Proposed Action because there is a lack of consensus on how to measure

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such effects. Existing climate models have substantial variation in output and do not have the ability to measure the actual incremental effects of a project on the environment. There are also no established criteria identifying monetized values that are to be considered significant for NEPA purposes.

Small increases in GHG emissions from the Proposed Action would primarily come from CV-22, MC-130H/J, and HH-60 operations in the IRs. **Table 3-13** compares the estimated annual GHG emissions from the Proposed Action to the annual global, nationwide, and statewide GHG emissions. The estimated operational GHG emissions from the Proposed Action would be relatively small in comparison to global, national, and state GHG emissions, so the effects would be negligible.

Table 3-13. Greenhouse Gas Emissions – Proposed Action

Scale	CO ₂ e Emissions (MMT)	Change from Proposed Action
Global	43,125	0.000007%
United States	6,870	0.00004%
Florida	231.4	0.001%
Alabama	119.8	0.003%
Georgia	137.1	0.002%
Proposed Action	0.003	—

Sources: Air Force 2018, USEPA 2020c, US Energy Information Administration 2018
CO₂e – carbon dioxide equivalent; **MMT** – million metric tons

Table 3-14 outlines potential climate stressors and their effects on the Proposed Action. The aircraft operational activities along the IRs in and of themselves are only indirectly dependent on any of the elements associated with future climate scenarios (e.g., meteorological changes). At this time, no future climate scenario or potential climate stressor would have appreciable effects on any element of the Proposed Action.

Table 3-14. Effects of Potential Climate Stressors on the Proposed Action

Potential Climate Stressor	Effects on the Proposed Action
Changing Stream Flow	Negligible
Longer Fire Seasons and More Severe Wildfires	Negligible
Changes in Precipitation Patterns	Negligible
Increases in Temperature	Negligible
Harm to Water Resources, Agriculture, Wildlife, Ecosystems	Negligible

Source: National Climate Assessment 2018

3.4.4 No Action Alternative

Under the No Action Alternative, IR-057 and IR-059 would not be changed, and the annual number of CV-22, MC-130H/J, and HH-60 training operations would not be affected. Therefore, no effects on air quality would occur. Ambient air quality in the IRs would remain unchanged when compared to existing conditions. Training operations would otherwise be shifted to other special use airspace that could accommodate the training, and the effects on air quality would occur in other regions.

3.5 Land Use

3.5.1 Definition of the Resource

Land use describes ownership and management of land that underlies the airspace affected by the Proposed Action and alternatives. This section examines any conflicts that may exist between the Proposed Action and land use plans and policies for the area potentially affected. The compatibility of existing and planned land use with aviation is usually associated with noise, which is described in **Section 3.2**. Land use planning ensures orderly growth and compatibility between nearby property parcels or land areas. In many cases, land use descriptions are codified in master planning and local zoning laws; however, there is no nationally recognized land use naming convention or terminology. Land use descriptions, labels, and definitions often vary by jurisdiction. Land use planning in the Air Force is guided by AFI 32-1015, *Integrated Installation Planning*. This document sets forth the responsibilities and requirements for comprehensive planning and describes procedures for developing, implementing, and integrating an Installation Development Plan with Activity Management Plans. In addition, land use guidelines are established by the US Department of Housing and Urban Development and are based on findings of the Federal Interagency Committee on Urban Noise.

Common types of recreation that occur on the land beneath IR-057 and IR-059 include hiking; viewing natural features, wildlife, and historic sites; camping; fishing; hunting; driving for pleasure; bicycling; horseback riding; and water activities. Recreational activities can occur on both public and private lands. The majority of lands under the proposed airspace are private; however, a small portion of land is managed by multiple federal and state agencies. The recreation analysis focuses on public lands and major areas of outdoor recreation beneath the affected airspace.

The ROI for this resource is the land underneath IR-057 and IR-059, including a 5-mile-wide buffer on either side of the IRs, and is located in Alabama, Georgia, and Florida (**Figure 3-5**). The ROI includes the land, land managers, and land users under IR-057 and IR-059.

3.5.2 Affected Environment

The majority (97 percent) of the land underlying the IRs is owned and managed by private individuals and parties. **Table 3-15** and **Figure 3-5** present the land use categories underlying IR-057 and IR-059. The majority of land uses underlying the IRs are forested and agricultural. Developed lands compose less than 1 percent of all the land uses beneath the IRs (**Table 3-15**).

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Table 3-15. Land Use Categories Underlying IR-057 and IR-059

Land Use Category	Area under IR-057 and IR-059 (Acres)	Percent of Total
Barren Land	2,668.7	0.10%
Cultivated Crops	374,359.4	13.35%
Deciduous Forest	156,477.0	5.58%
Developed, Low Intensity	511.6	0.02%
Developed, Medium Intensity	16,572.5	0.59%
Developed, High Intensity	2,219.5	0.08%
Developed, Open Space	98,337.4	3.51%
Emergent Herbaceous Wetlands	9,733.8	0.35%
Evergreen Forest	1,025,670.9	36.59%
Hay/Pasture	136,491.1	4.87%
Herbaceous	134,988.9	4.82%
Mixed Forest	217,063.4	7.74%
Open Water	23,797.8	0.85%
Shrub/Scrub	210,794.0	7.52%
Woody Wetlands	393,491.2	14.04%

IR – Instrument Route

There are 14 recreational areas that underlie the ROI (**Figure 3-6**). Recreational areas include seven state parks and recreation areas, one state forest, one national forest, four wildlife management areas, and one regional park:

- Blackwater River State Forest
- Blackwater River State Park
- Blackwater Wildlife Management Area
 - Carr Unit
 - Hutton Unit
- Bluff Creek State Park
- Choctawhatchee River Wildlife Management Area
- Conecuh National Forest
- Econfina Creek Wildlife Management Area
- Falling Waters State Recreation Area
- Florence Marina State Park
- Forever Wild Wehle Tract
- Ponce de Leon Springs State Park
- Providence Canyon State Outdoor Recreation Area
- Torreya State Park
- Yellow River Wildlife Management Area

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The Coastal Zone Management Act requires direct federal agency activities to be fully consistent with a state's approved coastal management program unless full consistency is prohibited by federal law. In Florida, the Florida Coastal Management Program consists of a network of 24 Florida statutes administered by nine state agencies and five water management districts. All of Florida's 67 counties and its territorial seas are in the Florida coastal zone.

3.5.3 Environmental Consequences

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

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

3.5.3.1 Proposed Action

There would be no impacts on land use or recreation as a result of the Proposed Action. Over 99 percent of the land uses underlying the IRs is forested, agricultural, or open space. Changes in the noise setting can affect land use compatibility. However, potential changes in the noise environment would be negligible, would remain compatible with all existing land uses, and would not exceed the established threshold for annoyance. Only 56 additional authorized annual aircraft operations would occur over public lands where recreational activities are more likely to occur. The noise environment would not change substantially as a result of the increased operations and would be compatible with all recreational activities. Further, the four previously identified noise-sensitive locations would continue to be avoided (see **Section 3.2**) under the Proposed Action.

Although the proposed change in Air Force operations in IR-057 and IR-059 is within the state of Florida and all counties in the state of Florida are in the coastal zone, no activities are proposed that would be subject to review under the Coastal Zone Management Act Section 307 and 15 CFR Part 930, and the Proposed Action would be in accordance with the state of Florida's approved Coastal Management Program. The Proposed Action would not affect coastal uses or resources, including beach and shore preservation, growth policy, state and regional planning, emergency management, state lands, state parks and preserves, land acquisition for conservation or recreation, the Florida Greenways and Trails program, historical resources, commercial development and capital improvements, transportation, water resources, outdoor recreation and conservation land, pollutant discharge prevention and removal, energy resources, land and water management, public health, mosquito control, environmental control, building and construction standards, soil and water conservation, or aquaculture.

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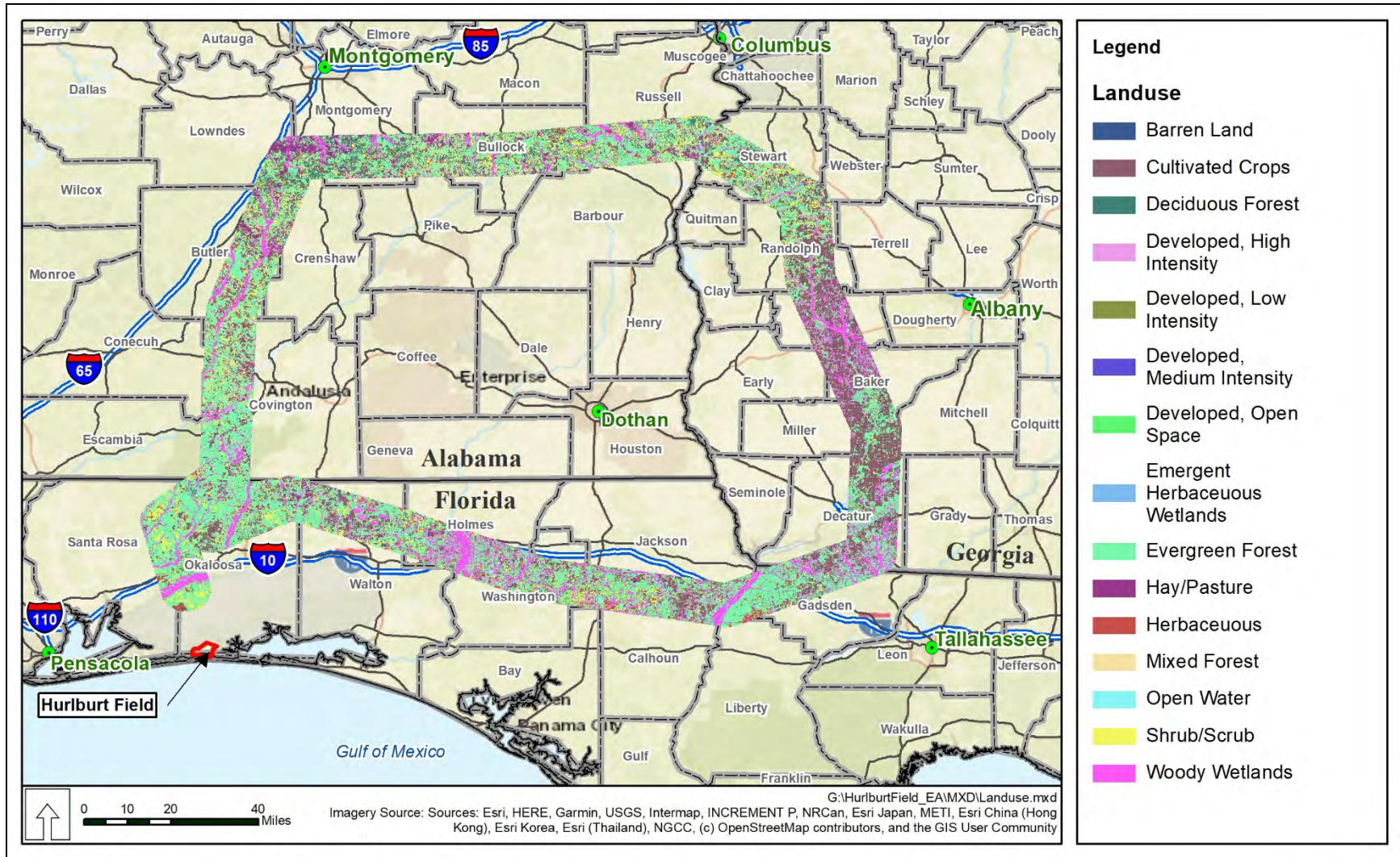


Figure 3-5. Land Uses Underlying IR-057 and IR-059

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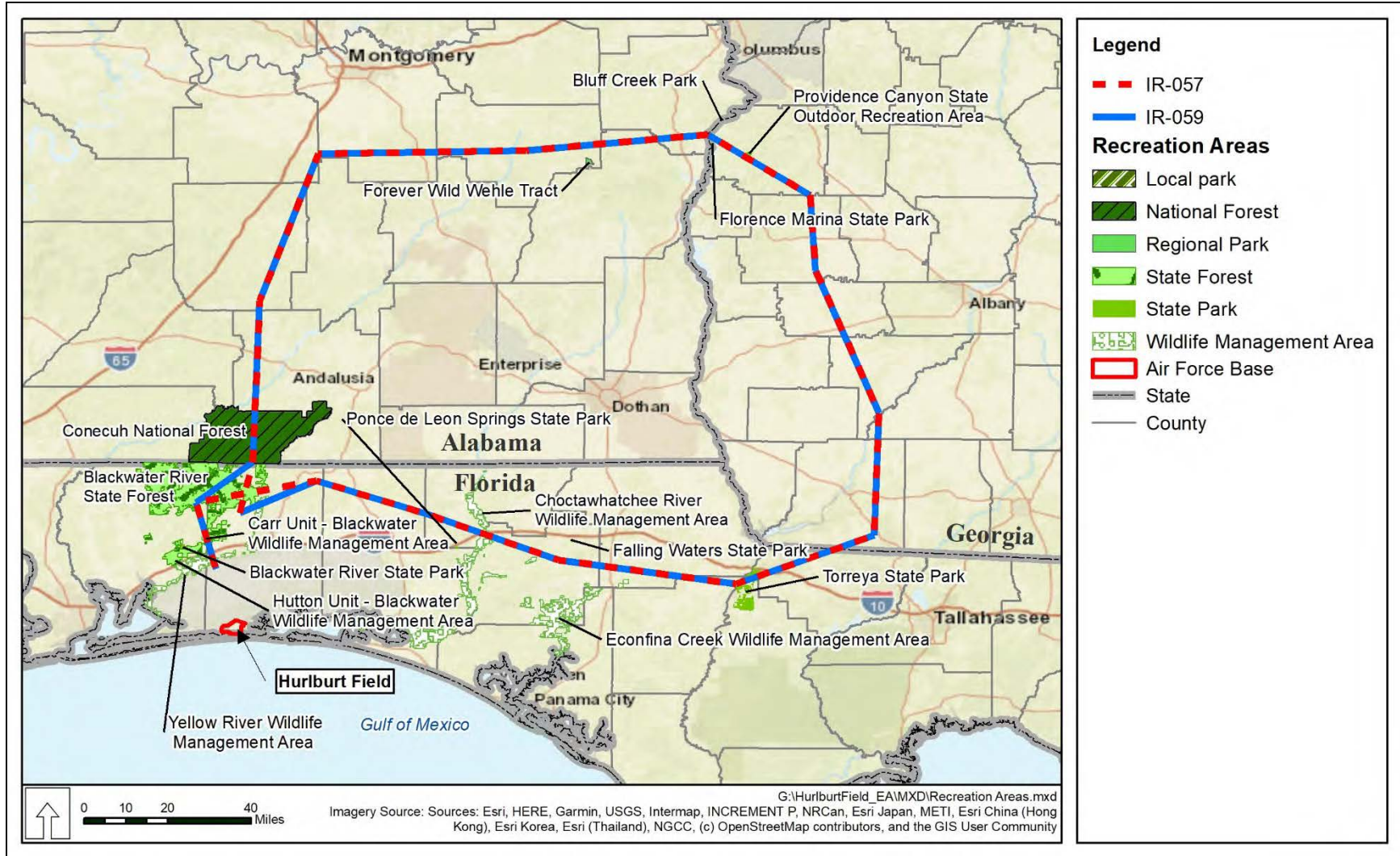


Figure 3-6. Recreational Areas Underlying IR-057 and IR-05

3.5.3.2 No Action Alternative

Under the No Action Alternative, IR-057 and IR-059 would not be changed, and no additional aircraft operations would occur; therefore, there would be no impacts on land use or recreational activities beneath the IRs.

3.6 Biological Resources

3.6.1 Definition of the Resource

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

The ROI for biological resources includes the underlying land and airspace within IR-057 and IR-059 and a 5-mile buffer on either side of the IRs.

Endangered Species Act. The ESA of 1973 (16 USC Section 1531, et seq.) establishes protection over and conservation of threatened and endangered species and the ecosystems upon which they depend. Sensitive and protected biological resources include plant and animal species listed as threatened, endangered, or special status by the USFWS and National Marine Fisheries Service. Under the ESA (16 USC Section 1536), an “endangered species” is defined as any species in danger of extinction throughout all, or a large portion, of its range. A “threatened species” is defined as any species likely to become an endangered species in the foreseeable future. The USFWS maintains a list of species considered to be candidates for possible listing under the ESA. The ESA also allows the designation of geographic areas as critical habitat for threatened or endangered species. Although candidate species receive no statutory protection under the ESA, the USFWS has attempted to advise government agencies, industry, and the public that these species are at risk and may warrant protection under the ESA. Section 9 of the ESA prohibits the take of federally listed species. “Take” as defined under the ESA means “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.”

Migratory Bird Treaty Act. The Migratory Bird Treaty Act (MBTA) of 1918 makes it unlawful for anyone to take migratory birds or their parts, nests, or eggs unless permitted to do so by regulations. Per the MBTA, “take” is defined as “to pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to pursue, hunt, shoot, wound, kill, trap, capture, or collect pursue, hunt, shoot, wound, kill, trap, capture, or collect” (50 CFR Section 10.12). Migratory birds include nearly all species in the United States, with the exception of some upland game birds and nonnative species. The MBTA list was updated by the USFWS on 18 May 2020, and there are 1,093 species of birds in the United States protected by the MBTA (USFWS 2020).

EO 13186, *Responsibilities of Federal Agencies to Protect Migratory Birds*, requires all federal agencies undertaking activities that may negatively impact migratory birds to follow a prescribed

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set of actions to further implement the MBTA. EO 13186 directs federal agencies to develop a Memorandum of Understanding (MOU) with the USFWS that promotes the conservation of migratory birds. On 5 September 2014, the DoD signed a 5-year MOU with the USFWS. In accordance with the MOU, and to the extent possible per law and budgetary considerations, EO 13186 encourages agencies to implement a series of conservation measures aimed at reinforcing and strengthening the MBTA.

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

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

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

3.6.2 Affected Environment

3.6.2.1 Ecoregions

Ecoregions are used to describe areas of similar type, quality, and quantity of environmental and biological resources. Ecoregions are assigned hierarchical levels to delineate ecosystems spatially based on different levels of planning and reporting needs ranging from Level I (broadest) to Level IV (USEPA 2019). IR-057 and IR-059 are located within 2 Level III ecoregions (Southeastern Plains to the west and Southern Coastal Plain to the east) and 10 Level IV ecoregions (**Figure 3-7**). Ecoregion descriptions for the lands beneath IR-057 and IR-059 are directly adapted from Griffith et al. (2001).

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The Southeastern Plains ecoregion consists of irregular plains with broad areas between streams having a mosaic of cropland, pasture, woodland, and forest. Native vegetation is mostly oak-hickory-pine and southern mixed forest. The Cretaceous or Tertiary-age sands, silts, and clays of the region contrast geologically with the Paleozoic limestone, shale, and sandstone and even older metamorphic and igneous rocks of other nearby ecoregions. Streams in this ecoregion are relatively low gradient and sandy bottomed (Griffith et al. 2001).

The Southern Coastal Plain ecoregion extends from South Carolina and Georgia through much of central Florida and along the Gulf Coast lowlands of the Florida Panhandle, Alabama, and Mississippi. Although it appears to be mostly flat plains, it is a diverse area containing barrier islands, coastal lagoons, marshes, and lowlands along the Gulf and Atlantic coasts. In Florida, an area of discontinuous highlands contains numerous lakes. Historically, this ecoregion was covered by a variety of forest communities dominated by longleaf pine (*Pinus palustris*), slash pine (*Pinus elliottii*), pond pine (*Pinus serotina*), American beech (*Fagus grandifolia*), sweetgum (*Liquidambar styraciflua*), southern magnolia (*Magnolia grandiflora*), white oak (*Quercus alba*), and laurel oak (*Quercus hemisphaerica*). The land cover in this ecoregion is now mostly slash pine and loblolly pine (*Pinus taeda*) with oak-gum-cypress forest in some low-lying areas, row crops, and urban development (Griffith et al. 2001).

While Level III ecoregion descriptions provide a regional perspective, Level IV ecoregions are more specifically oriented for environmental monitoring, assessment and reporting, and decision making (Commission for Environmental Cooperation Working Group 1997). The following are the Level IV ecoregions and their corresponding hierarchical codes occurring beneath the IRs; detailed descriptions of these ecoregions can be found in Griffith et al. (2001).

Blackland Prairie (65a). The Blackland Prairie ecoregion consists of undulating irregular plains, which are nearly level to strongly sloping; and low-gradient streams with chalk, clay, sand, and silt substrates. Forests are dominated by sweetgum, hackberry (*Celtis occidentalis*), oak (*Quercus* spp.), and cedar (*Juniperus* spp.), with patches of bluestem (*Andropogon* spp.) prairie.

Flatwoods/Blackland Prairie Margins (65b). This ecoregion has smooth lowland plains and undulating irregular plains, and sluggish, low-gradient, clay- and sand-bottomed streams. Vegetation consists of oak-hickory-pine forest.

Southern Hilly Gulf Coastal Plain (65d). This ecoregion includes dissected irregular plains, northward-facing hills or ridges, low hills with broad tops; some wide floodplains and broad, level to undulating terraces; and low- to moderate-gradient, mostly sandy-bottomed streams. The natural vegetation of oak-hickory-pine forest grades into southern mixed forest to the south.

Southern Pine Plains and Hills (65f). The physiography of this ecoregion has southward-sloping, dissected irregular plains, some open low hills, mostly broad gently sloping ridgetops with steeper side slopes near drainages; low- to moderate-gradient sand- and clay-bottomed streams; and some sinkholes in the eastern areas. The vegetation is primarily southern mixed forest, oak-hickory-pine forest, and some southern floodplain forest. Loblolly and slash pine plantations now cover substantial portions of this ecoregion.

Dougherty Plain (65g). This ecoregion consists of irregular plains, some flat plains, lightly dissected, and mostly low-gradient with some moderate-gradient sandy-bottomed streams. The dominant vegetation is southern mixed forest.

Tifton Upland (65h). The Tifton Upland ecoregion has irregular plains, some flat plains, lightly dissected, and mostly low-gradient with some moderate-gradient sandy-bottomed streams. The vegetation is predominantly southern mixed forest.

Coastal Plain Red Uplands (65k). This ecoregion has dissected irregular plains; mostly broad, gently sloping ridges and interstream divides, some more dissected with steeper slopes; and low- to moderate-gradient sandy-bottomed streams. The vegetation is dominated by southern mixed forest and oak-hickory-pine forest.

Southeastern Floodplains and Low Terraces (65p). This ecoregion contains major river floodplains and associated low terraces, low-gradient streams with sandy and silty substrates, oxbow lakes, ponds, and swamps. The dominant vegetation is southern floodplain forest.

Buhrstone/Lime Hills (65q). The rugged terrain of this ecoregion consists of rolling to strongly dissected open hills and open low hills, cuestas with a north-facing steep slope; and moderate- or higher-gradient streams with sand, gravel, cobble, and bedrock substrates. The dominant vegetation is oak-hickory-pine forest and southern mixed forest.

Floodplains and Low Terraces (75i). This ecoregion is a continuation of the Southeastern Floodplains and Low Terraces (65p) ecoregion across the Southern Coastal Plain. The ecoregion includes major river floodplains and associated low terraces; and low-gradient streams with sandy and silty substrates, oxbow lakes, ponds, and swamps. The dominant vegetation is southern floodplain forest.

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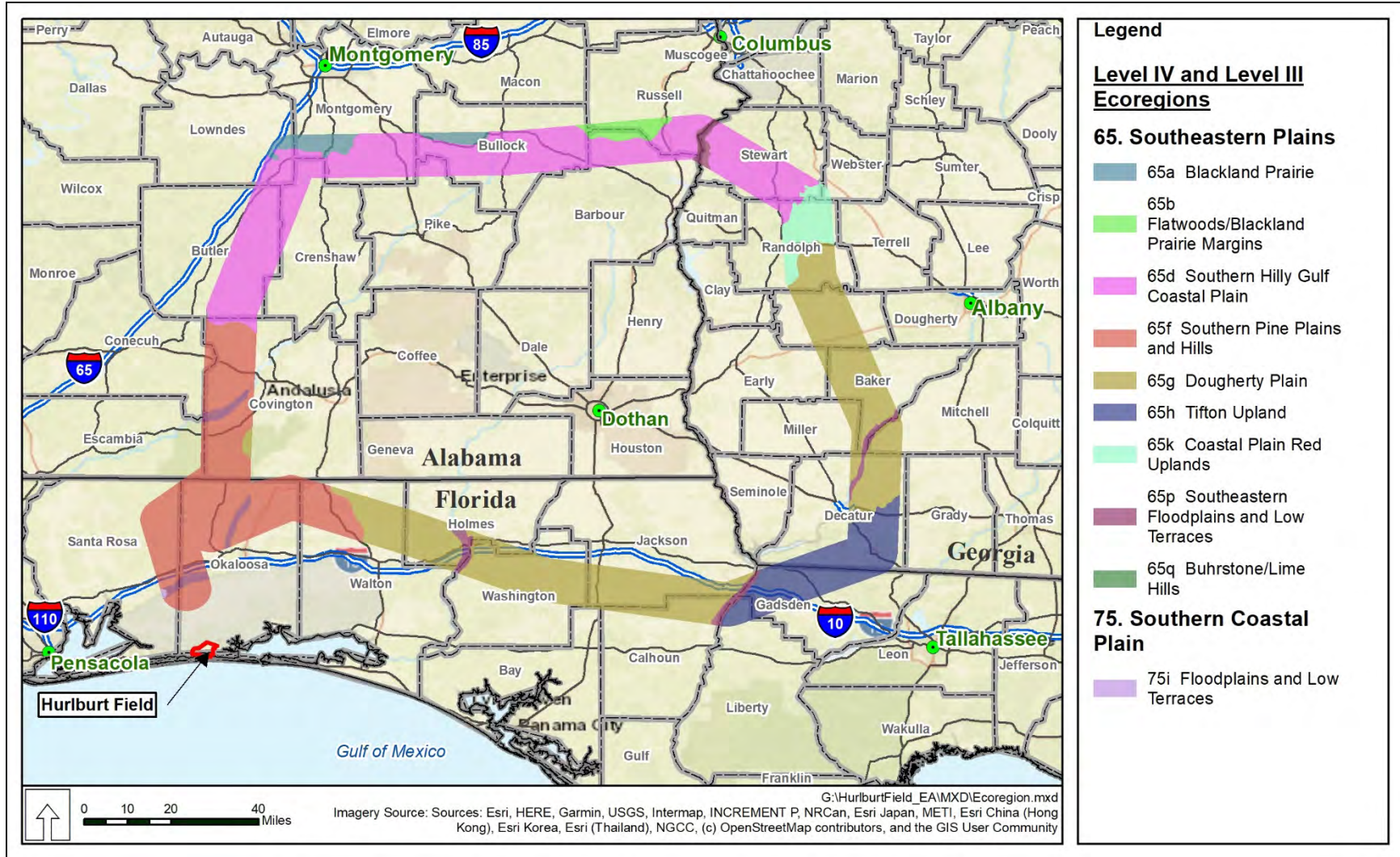


Figure 3-7. Ecoregions Located beneath IR-057 and IR-059

3.6.2.2 Wildlife

Nearly all of the land underlying IR-057 and IR-059 is either undeveloped or used for agricultural practices such as forestry and row crops (e.g., cotton and soybeans). Therefore, these lands support a rich diversity of game and nongame wildlife due to the diversity of habitats over such a broad area. Representative mammal species include white-tailed deer (*Odocoileus virginianus*), fox squirrel (*Sciurus niger*), cottontail (*Sylvilagus floridanus*), red fox (*Vulpes vulpes*), and gray fox (*Urocyon cinereoargenteus*). Representative bird species include northern bobwhite (*Colinus virginianus*), red-winged blackbird (*Agelaius phoeniceus*), great blue heron (*Ardea herodias*), belted kingfisher (*Megaceryle alcyon*), red-shouldered hawk (*Buteo lineatus*), and great horned owl (*Bubo virginianus*). Reptiles and amphibians commonly observed are the green anole (*Anolis carolinensis*), garter snake (*Thamnophis sirtalis*), American alligator (*Alligator mississippiensis*), diamondback rattlesnake (*Crotalus adamanteus*), six-lined racerunner (*Cnemidophorus sexlineatus*), bullfrog (*Lithobates catesbeianus*), green treefrog (*Hyla cinerea*), spring peeper (*Pseudacris crucifer*), and tiger salamander (*Ambystoma tigrinum*). Common fish include largemouth bass (*Micropterus salmoides*), bluegill (*Lepomis macrochirus*), spotted sunfish (*Lepomis punctatus*), black crappie (*Pomoxis nigromaculatus*), and golden topminnow (*Fundulus chrysotus*).

3.6.2.3 Threatened and Endangered Species

A list of species that could potentially be found in the ROI was obtained from the USFWS Information for Planning and Consultation website (USFWS 2020). That list is provided in **Appendix E**. Lists of state-listed species potentially found in the ROI were obtained from the Florida Fish and Wildlife Commission (2018), the Alabama Department of Conservation and Natural Resources (2020a), and the Georgia Department of Natural Resources (2020).

The movement of aircraft and aircraft noise at altitudes of 200 feet AGL and higher would not impact federally listed plants, fish, crustaceans, clams, amphibians, or reptiles or their designated critical habitat which could occur in the ROI. Therefore, these listed species are not considered further. Therefore, of the listed species with the potential to occur in the ROI, only those potentially affected by aircraft movement and aircraft noise were included for further evaluation. These were limited to three federally listed species: the gray bat (*Myotis grisescens*), red-cockaded woodpecker (*Picoides borealis*), and wood stork (*Mycteria americana*). No designated critical habitat occurs in the ROI for any of these three species.

Gray Bat. The gray bat is federally endangered and is a cave specialist, roosting only in cave systems, and is closely associated with water. The gray bat has a very restricted range in Florida, only occurring in a single county in the northwest Panhandle. Gray bat occurrence in Alabama is mostly restricted to areas near the Tennessee River in northern Alabama with small populations in central and southern Alabama. They are year-round residents and hibernate in caves in the winter. The gray bat primarily feeds on small insects (Alabama Department of Conservation and Natural Resources 2020b). The gray bat could be present in IR-057 and IR-059.

Red-Cockaded Woodpecker. The red-cockaded woodpecker is federally listed as endangered and could potentially occur in low numbers within mature pine forest habitat with sparse understory vegetation beneath the IRs. However, there is very little mature pine forest habitat beneath the IRs, and most pine forest is managed for timber and is harvested before it can reach a size and age class suitable to support the red-cockaded woodpecker. Populations of red-cockaded woodpeckers are known to occur proximate to the IRs and Hurlburt Field in the Eglin Reservation, within longleaf pine forests of the Conecuh National Forest, Blackwater Wildlife Management Area, and the Blackwater River State Forest (Eglin AFB 2017).

Wood Stork. The wood stork is a federally threatened wading bird that occurs in the southeastern United States and across the Caribbean and into South America. They nest colonially in rookeries. Wood storks forage fish, frogs, crabs, and crustaceans in shallow water. Wood storks are known to breed in southern and central Georgia and north Florida. Wood storks move north following breeding and can occur throughout the southeastern United States, including Alabama, during the nonbreeding season (USFWS 2013).

The state-listed bird and mammal species with the potential to occur in the ROI and potentially be affected by the Proposed Action include the following:

- American kestrel (*Falco sparverius paulus*) – Florida State Threatened
- Bald eagle – Georgia State Threatened and Bald and Golden Eagle Protection Act-Protected
- Least tern (*Sternula antillarum*) – Florida State Threatened
- Little blue heron (*Egretta caerulea*) – Florida State Threatened
- Little brown bat (*Myotis lucifugus*) – Alabama State Highest Conservation Concern
- Marian's marsh wren (*Cistothorus palustris marianae*) – Florida State Threatened
- Rafinesque's big-eared bat (*Corynorhinus rafinesquii*) – Alabama State Highest Conservation Concern and Georgia State Rare Species
- Roseate spoonbill (*Platalea ajaja*) – Florida State Threatened
- Southeastern bat (*Myotis austroriparius*) – Alabama State Highest Conservation Concern
- Tri-colored bat (*Perimyotis subflavus*) – Alabama State Lowest Conservation Concern
- Tricolored heron (*Egretta tricolor*) – Florida State Threatened

3.6.3 Environmental Consequences

The level of impact on biological resources is based on the following:

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

Impacts on biological resources would be significantly adverse if species or habitats of high concern (i.e., federally listed threatened and endangered species, marine mammals, designated

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critical habitat, and Essential Fish Habitat) are negatively affected over relatively large areas. Impacts are also considered adverse if disturbances cause reductions in population size or distribution of a species of high concern.

As a requirement under the ESA, federal agencies must provide documentation that ensures that agency actions do not adversely affect the existence of any threatened or endangered species. The ESA requires that all federal agencies avoid unauthorized “take” of federally threatened or endangered species or avoid adverse modification of designated critical habitat. Section 7 of the ESA establishes a consultation process with USFWS that ends with USFWS concurrence, a biological opinion with an incidental take statement, or a biological opinion with a jeopardy determination.

3.6.3.1 Proposed Action

Minor adverse long-term impacts on avian species from aircraft movement would occur under the Proposed Action. However, there would be no ground-disturbing activities, and all potential impacts on biological resources would be associated with aircraft operations in IR-057 and IR-059. Therefore, there would be no impacts on plants, mammals, reptiles, amphibians, fish, or invertebrates as a result of the Proposed Action.

Vegetation

Because there would be no ground-disturbing activities, there would be no impacts on vegetation under the Proposed Action.

Wildlife

Minor adverse impacts on avian species would occur as a result of increased aircraft operations within the IRs. No adverse impacts would occur on any other wildlife species. Aircraft operations always have the potential for bird and other wildlife strikes. This can occur during takeoff and landing on and near active runways, as well as during flight at altitude. With an increase in air operations in IR-057 and IR-059 at low altitude, there is an increased risk of BASH; however, the Air Force maintains a BASH prevention program specifically to manage BASH risk and implements measures to greatly reduce the likelihood for BASH incidents (see **Section 3.3**). The outcome of the BASH program is both increased safety for pilots and military aircraft as well as less incidents of injury or death to birds and other wildlife. As such, with the limited number of additional operations proposed annually in the IRs (i.e., an increase of 56 authorized operations annually, which is an average of approximately one additional operation per week), the potential impacts on birds from aircraft strikes during training activities as a result of the proposed change in Air Force operations in IR-057 and IR-059 would be minor. This includes an increased risk of aircraft strikes to bald eagles actively foraging and breeding beneath or proximate to the IRs. Military training activities are exempt from the MBTA, and operations within the IRs that would adversely impact migratory birds listed under the MBTA would not be considered take.

Aircraft movement in the IRs would not impact any mammals (except for bats), reptiles, or amphibians. Although bats do migrate at higher altitudes, most insectivorous bats feed at low

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altitudes and are nocturnal. However, only nine authorized operations annually are proposed at night, none of which would be new nighttime operations, and the likelihood that these night operations would encounter a migrating bat is discountable. Further, the noise environment would not change substantially as a result of the Proposed Action. Therefore, there would be no impacts on wildlife from aircraft noise.

Threatened and Endangered Species

Under the Proposed Action, there would be no ground-disturbing activities, and all potential impacts on biological resources would be associated with aircraft operations in IR-057 and IR-059. Because there would be no ground-disturbing activities, there would be no impacts on federally listed plant species, reptiles, amphibians, fish, or invertebrates.

Effects on listed bird and mammal species could occur from flight training associated with the change in Air Force operations in IR-057 and IR-059. These aircraft operations could affect biological resources from aircraft movement, noise, and bird and animal aircraft strikes. For listed bird species, given the large area and very low number of annual operations in the two IRs (i.e., 146 authorized annual operations), along with the very low altitudes in which wood storks and red-cockaded woodpeckers typically fly during breeding and foraging, the risk of aircraft operations interacting with these species is discountable. Aircraft movement at low-altitudes could potentially startle nesting and foraging red-cockaded woodpeckers and wood storks beneath the IRs. There would be a 3.1 dBA DNL increase in the noise environment beneath the IRs; however, sound levels would be 38.1 dBA DNL with all aircraft operations as a result of the Proposed Action, which would not cause disturbance to breeding and foraging birds. Therefore, the increased aircraft operations in IR-057 and IR-059 may affect but are not likely to adversely affect the red-cockaded woodpecker and wood stork.

The increased aircraft operations under the Proposed Action would not likely lead to aircraft interactions with the gray bat as no additional night operations are proposed. Only nine annual operations would occur at night when gray bats would be actively foraging or migrating, and the proposed nine annual night operations is the same number of night operations as currently authorized. Further, gray bats would primarily forage at very low altitudes, typically less than 200 feet AGL and over water (USFWS 1982), while aircraft operations at night would be above 200 feet AGL. There would be no substantial change in the noise environment as a result of the Proposed Action. Therefore, the change in Air Force operations in IR-057 and IR-059 would have no effect on the gray bat.

Concurrence with the Air Force's determination of *may affect but not likely to adversely affect* the red-cockaded woodpecker and wood stork and *no effect* on any other listed species has been received from the USFWS (**Appendix A**).

3.6.3.2 No Action Alternative.

Under the No Action Alternative, IR-057 and IR-059 would not be changed, and there would be no additional aircraft operations in these MTRs. As such, there would be no impact on biological resources.

3.7 Cultural Resources

3.7.1 Definition of the Resource

Cultural resources are historic sites, buildings, structures, objects, or districts considered important to a culture, subculture, or community for scientific, traditional, religious, or other purposes. They include archaeological resources, historic architectural or engineering resources, and traditional cultural resources. Federal laws and EOs that pertain to cultural resources management include the NHPA (1966) (and implementing regulations at 36 CFR Part 800), the Archeological and Historic Preservation Act (1974), the American Indian Religious Freedom Act (1978), the Archaeological Resources Protection Act (1979), and the Native American Graves Protection and Repatriation Act (1990). AFSOC and Hurlburt Field are required to comply with Air Force regulations and instructions, including the Hurlburt Field Integrated Cultural Resources Management Plan (Hurlburt Field 2015); AFI 32-7065, *Cultural Resources Management*, and AFI 90-2002, *Interactions with Federally Recognized Tribes*.

The NHPA defines historic properties as buildings, structures, sites, districts, or objects listed in or eligible for listing in the National Register of Historic Places (NRHP). Resources found significant under criteria established in the NHPA are considered eligible for listing in the NRHP. Historic properties are generally 50 years of age or older, are historically significant, and retain sufficient integrity to convey their historic significance. Archaeological resources comprise areas where human activity has measurably altered the earth or where deposits of physical remains are found (e.g., projectile points and bottles) but standing structures do not remain. Architectural resources include standing buildings, structures (e.g., bridges and dams), landscapes, and districts composed of one or more of those resource types.

Generally, architectural resources must be more than 50 years old to warrant consideration for the NRHP; resources constructed more recently may meet the criteria for designation if they are of exceptional importance or have the potential to gain significance in the future. Resources of traditional, religious, or cultural significance can include archaeological resources, sacred sites, structures, districts, prominent topographic features, habitat, plants, animals, or minerals considered essential for the preservation of traditional culture (National Park Service 1997).

Under Section 106 of the NHPA, federal agencies must consider the effect of their undertakings on historic properties. Under this process, the federal agency evaluates the NRHP eligibility of resources within the proposed undertaking's Area of Potential Effect (APE) and assesses the possible effects of the proposed undertaking on historic properties in consultation with the State Historic Preservation Officer and other parties.

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The APE is defined as the geographic area or areas within which an undertaking (project) may directly or indirectly cause changes in the character or use of historic properties, if any such properties exist. The APE for the Proposed Action is defined as a 2 NM (2.3 statute mile) buffer on each side of IR-057 and IR-059. The APE includes areas where visual, noise, and vibration effects on historic properties may occur.

3.7.2 Affected Environment

A search of the NRHP geospatial dataset provided by the National Park Service reveals that, within the APE, 33 historic properties are listed in the NRHP (National Park Service 2020). Of that number, 22 of the properties are historic buildings, 10 are historic districts, and 1 is a historic site. Cultural resources that may be eligible for listing in the NRHP exist in all states. Considering that the Proposed Action would not involve any ground-disturbing activity and have no potential effect on intact archaeological deposits and/or NRHP-listed archaeological resources, searches of state-specific digital survey files were limited to identifying architectural resources determined eligible for listing in the NRHP.

3.7.3 Environmental Consequences

Under Section 106 of the NHPA and its implementing regulations, an adverse effect is found when an undertaking (or project) may alter, directly or indirectly, any of the characteristics of a historic property that qualify it for NRHP eligibility in a manner that would diminish the property's historic integrity of location, setting, feeling, association, design, materials, or workmanship. Examples of adverse effects on cultural resources under Section 106 can include physically altering, damaging, or destroying all or part of a resource; altering characteristics of the surrounding environment that contribute to the resource's significance; introducing visual or audible elements that are out of character with the property or that alter its setting; neglecting the resource to the extent that it deteriorates or is destroyed; or the sale, transfer, or lease of the property out of agency ownership (or control) without adequate legally enforceable restrictions or conditions to ensure preservation of the property's historic significance. Adverse effects determined under Section 106 may or may not be considered significant impacts under NEPA and considerations include the type, duration, and severity of the impacts as well as mitigation measures developed through Section 106 consultation.

3.7.3.1 Proposed Action

Potential impacts on cultural resources deriving from the Proposed Action are limited to atmospheric impacts, including visual, noise, and vibration impacts generated by overflights. The Proposed Action would not include any new ground operations, nor would it develop any new helicopter landing zones or drop zones. No construction, site alteration, or other ground-disturbing activities that could physically alter, damage, or destroy a resource are planned as part of the Proposed Action.

Under the Proposed Action, a total of 73 operations would take place annually in each IR, resulting in overflights of historic properties. At the proposed authorized use, the diversification

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of aircraft permitted to train within IR-057 and IR-059 would be a negligible change from existing conditions, and any increase in atmospheric impacts on cultural resources would also be negligible. As such, implementation of the Proposed Action would result in no significant impacts on cultural resources.

Section 106 compliance for this project was accomplished through the State Historic Preservation Officers (see **Appendix A** for interagency coordination). AFSOC has consulted with the Georgia, Alabama, and Florida State Historic Preservation Officers and the various consulting parties that may have an interest in cultural resources potentially affected by this project. No sensitive cultural resources were identified through Section 106 consultation and concurrence that the Proposed Action would have no adverse effect on historic properties in the APE was received from the Alabama, Florida, and Georgia State Historic Preservation Officers. AFSOC also consulted with federally recognized tribes and the appropriate Tribal Historic Preservation Officers regarding the Proposed Action, as required under Section 106 of the NHPA; EO 13175; AFI 90-2002; AFI 32-7065; DoD Instruction 4710.02; and as specified in the Hurlburt Field Integrated Cultural Resources Management Plan.

3.7.3.2 No Action Alternative

The No Action Alternative would be to maintain existing conditions. Under the No Action Alternative, the change in Air Force operations in IR-057 and IR-059 would not occur and training operations with CV-22, MC-130H/J, and HH-60 aircraft would not be permitted in the IRs. No impacts on cultural resources would be expected under the No Action Alternative from continued existing military training missions in the IRs.

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4.0 CUMULATIVE EFFECTS AND OTHER ENVIRONMENTAL CONSIDERATIONS

This section includes an analysis of the potential cumulative impacts by considering past, present, and reasonably foreseeable future actions; potential unavoidable adverse impacts; the relationship between short-term uses of resources and long-term productivity; and irreversible and irretrievable commitment of resources.

4.1 Projects Considered for Potential Impacts

Past, present, and reasonably foreseeable actions by the Air Force at Hurlburt Field, within IR-057 and IR-059, and regionally were considered (**Table 4-1**). A review of the available information from federal, state, and regional agencies indicated that there are no proposed projects directly beneath the IRs that would interact with airspace use by 1 SOW operations. These current and foreseeable future activities have the potential to result in a cumulative effect.

Table 4-1. Past, Present, and Reasonably Foreseeable Future Projects in the Region

Scheduled Project	Project Summary	Implementation Date	Relevance to Proposed Action	Resource Potentially Affected
<i>Past Actions</i>				
F-35 Beddown at Eglin AFB, Florida	Beddown location and flight training operations alternatives for the 59 F-35 aircraft at either Eglin Main Base, Duke Field, and Choctaw Field on the Eglin Reservation. A Supplemental EIS was prepared as directed in the F-35 EIS Record of Decision.	2014	F-35 aircraft would utilize special use airspace associated with the Eglin Reservation.	Airspace Management, Noise, Air Quality
Gulf Regional Airspace Strategic Initiative	The Gulf Regional Airspace Strategic Initiative provides military units with compatible nonmilitary locations and airspace that can serve as an outlet for training and nonhazardous missions when existing rangelands and range areas are otherwise unavailable.	2015	Increased aircraft operations from Hurlburt Field.	Airspace Management, Noise, and Safety
<i>Present Actions</i>				
Remotely Piloted Aircraft Mission Expansion at Hurlburt Field	Project expands seven existing missions at Hurlburt Field.	2020	Five additional operational aircraft were located at Hurlburt Field increasing aircraft operations by 1.6 percent annually.	Airspace Management and Noise
Emergency Beddown of the F-22 Formal Training Unit and Associated T-38 Aircraft from	Project includes special environmental review of the temporary beddown of F-22 aircraft and associated T-38 aircraft from Tyndall AFB to Eglin AFB resulting from the Hurricane Michael devastation.	2020	Aircraft temporarily were relocated from Tyndall AFB to Eglin AFB.	Airspace Management and Noise

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Scheduled Project	Project Summary	Implementation Date	Relevance to Proposed Action	Resource Potentially Affected
Tyndall AFB to Eglin AFB, Florida				
Future Actions				
Addition of Landing Zones for CV-22 Operations	The 1 SOW proposes to obtain USFS special use permits for additional helicopter landing zones in Apalachicola National Forest, Florida.	2020	Project would create new helicopter landing zones for use by CV-22s stationed at Hurlburt.	Airspace Management
Combat Air Forces Adversary Air Eglin AFB	Project includes contract ADAIR sorties for Combat Air Forces training at Eglin AFB. Approximately 2,320 contracted sorties would be added to perform training activities within Warning Area W-151, the Rose Hill MOA, and the Eglin E MOA.	2021	Project would increase aircraft operations in special use airspace associated with the Eglin Reservation.	Airspace Management, Air Quality, Noise
Transition to the AC-130J at Hurlburt Field	AFSOC proposes to replace the AC-130U with AC-130J aircraft in phases at Hurlburt Field. This includes an increase in the number of AC-130 aircraft at Hurlburt Field and an associated increase in air operations.	2017 through 2024	Project would increase the number AC-130s at Hurlburt Field including increasing overall AC-130 operations.	Airspace Management, Safety, Noise, Air Quality
CV-22 Military Training Routes for Hurlburt Field Operations	Hurlburt Field proposes to modify SRs to support the 1 SOW low-level CV-22 training activities.	2021	Project would lower the minimum elevation of select slow routes from 250 feet to 200 feet AGL and establish alternate entry and exit points.	Airspace Management
Fifth Generation Fighter Training Optimization	Permanent beddown of the F-22 FTU at Langley AFB; includes analysis of moving the F-22 FTU and T-38 (displaced from Tyndall AFB due to Hurricane Michael) currently at Eglin AFB, Florida, to Langley AFB, Virginia, and bedding down a second F-35A FTU squadron at Eglin AFB.	2021	Beddown implementation could occur within the same timeframe as the proposed change in Air Force operations in the IRs and use special use airspace in the Eglin Reservation.	Airspace Management, Noise, Air Quality

AFB – Air Force Base; **EIS** – Environmental Impact Statement; **1 SOW** – 1st Special Operations Wing; **USFS** – United States Forest Service; **ADAIR** – Adversary Air; **MOA** – Military Operations Area; **AFSOC** – Air Force Special Operations Command; **SR** – slow route **AGL** – above ground level; **FTU** – Formal Training Unit; **IR** – Instrument Route

4.2 Cumulative Effects on Resource Areas

The following analysis considers how projects identified in **Table 4-1** could cumulatively result in potential environmental consequences with the Proposed Action.

4.2.1 Airspace Management

Cumulative impacts on airspace management from the proposed change in Air Force operations in IR-057 and IR-059, in addition to past, present, and reasonably foreseeable future actions, are expected to be negligible. The addition of 56 aircraft operations would increase the entrance and exits by aircraft from the Eglin Reservation from the IRs. The departure and permanent beddown of the F-22 Formal Training Unit (FTU) and supporting T-38s from Eglin AFB to Joint Base Langley-Eustis, Langley AFB, in combination with the beddown of F-35A aircraft at Eglin AFB would result in no change on the overall operational sorties at Eglin AFB, and the combined actions would have no effect on airspace management. Therefore, the addition of CV-22, MC-130H/J, and HH-60 operations would potentially result in a negligible cumulative effect when considered with past, present, and reasonably foreseeable future projects.

4.2.2 Noise

The Proposed Action would have long-term minor effects on the noise environment. Effects would be due to the incremental changes in noise due to the conversion to CV-22s, MC-130H/Js, and HH-60s instead of C-130J and MH-53 aircraft, and the increase in annual overflights from 90 to 146. No other aircraft operations are proposed in IR-057 and IR-059; therefore, when the Proposed Action is combined with other proposed military aircraft operations in the region, there would only be minor cumulative adverse effects from noise. No project has been identified that when combined with the Proposed Action would have greater than significant effects.

4.2.3 Safety

The Proposed Action, in addition to past, present, and reasonably foreseeable future actions that interact with IR-057 and IR-059, would follow existing safety procedures and policies for ground and flight operations. Pilots would be trained and required to follow safety procedures in accordance with established aircraft flight manuals and Air Force requirements. Only 56 additional training operations would occur annually in the IRs under the Proposed Action. This increase could pose an increased risk to flight safety; however, through compliance with BASH requirements and flight safety rules, the potential cumulative impact would be minimized. Furthermore, the overall number of sorties in the Eglin Reservation would be slightly less than the baseline in the future due to the departure of the F-22 FTU and supporting T-38s, even with the potential beddown of up to four F-35A aircraft. As such, no cumulative impacts on flight safety are expected with implementation of the Proposed Action.

4.2.4 Air Quality

The states of Florida, Alabama, and Georgia consider the impacts of all past, present, and reasonably foreseeable emissions during the development of their SIPs. The states account for all significant stationary, area, and mobile emission sources in the development of these plans. Estimated emissions generated by the Proposed Action would be below the Prevention of Significant Deterioration threshold, and it is understood that activities of this limited size and nature would not contribute appreciably to adverse cumulative impacts on air quality.

4.2.5 Land Use

The Proposed Action, in addition to past, present, and reasonably foreseeable future actions that interact with IR-057 and IR-059, would not change land use or land use compatibility. More than 99 percent of the land uses underlying IR-057 and IR-059 are undeveloped and are primarily forest and agriculture; these land uses are compatible with up to 146 aircraft operations annually. Noise increases would be negligible and not exceed the threshold for annoyance beneath the IRs, and no other proposed projects have been identified that would change the noise environment beneath or proximate to the IRs. Therefore, no significant cumulative effects on land use are expected.

4.2.6 Biological Resources

The Proposed Action, in addition to past, present, and reasonably foreseeable future actions that interact with IR-057 and IR-059, would potentially result in less than significant cumulative impacts on biological resources. Since no ground-disturbing activities are proposed, there could be no cumulative impacts on vegetation. Over the long-term, noise-generating operations associated with the Proposed Action would not appreciably add to noise associated with the other identified cumulative actions (F-22 FTU and T-38 operations and subsequent departure, and anticipated arrival and operation of up to four F-35 aircraft) adversely affecting wildlife or birds. When added to past, present, and foreseeable future action, the Proposed Action would result in an increased risk of aircraft bird and other wildlife strikes. Compliance with BASH regulations would reduce the potential cumulative risk of military aircraft operations and bird and other wildlife conflicts. No cumulative effects on federal or state listed plant species, terrestrial reptiles, amphibians, fish, or invertebrates are anticipated because there would be no ground-disturbing activities from the Proposed Action. Further, no cumulative impacts on threatened and endangered species are anticipated. The Air Force has made a no effect determination for several federally listed species for the Proposed Action.

4.2.7 Cultural Resources

No actions have been identified that have the potential to adversely impact historic resources. Therefore, the Proposed Action, as well as past, present, and reasonably foreseeable future actions that interact with IR-057 and IR-059, would not have a significant cumulative impact on cultural resources regionally.

4.2.8 Environmental Justice

The Proposed Action, as well as past, present, and reasonably foreseeable future actions that interact with IR-057 and IR-059, are not expected to have a disproportionate cumulative impact on minority and low-income populations or children.

4.3 Unavoidable Adverse Effects

Unavoidable adverse effects would result from implementation of the Proposed Action, but none of these impacts would be considered significant. The proposed change in Air Force operations in IR-057 and IR-059 would require the continued use of fossil fuels, a nonrenewable natural resource, during training operations. Energy supplies, although relatively small, would be committed to the Proposed Action. The use of nonrenewable resources is an unavoidable occurrence, although not considered significant.

4.4 Compatibility of Proposed Action with the Objectives of Federal, Regional, State, and Local Land Use Plans, Policies, and Controls

The Proposed Action would occur within limited airspace and would be authorized for no more than 146 operations annually across north Florida, south-central Alabama, and western Georgia; all operations would be in accordance with pertinent regulations and air traffic controlling authorities. The type of aircraft operations under the Proposed Action would not differ substantially from current uses of these areas. The Proposed Action is a continuation of similar training conducted by the Air Force in IR-057 and IR-059 for several decades.

4.5 Relationship between Short-Term Uses of the Human Environment and Maintenance and Enhancement of Long-Term Productivity

CEQ NEPA regulations (Section 1502.16) specify that analysis must address “the relationship between short-term uses of man’s environment and the maintenance and enhancement of long-term productivity.” Attention should be given to impacts that narrow the range of beneficial uses of the environment in the long term or pose a long-term risk to human health or safety. This section evaluates the short-term benefits of the proposed project compared to the long-term productivity derived from not pursuing the Proposed Action or No Action Alternative.

Short-term effects on the environment are generally defined as a direct consequence of a project in its immediate vicinity. For example, short-term effects could include localized disruptions from construction. The best management practices in place for each project should reduce potential impacts or disruptions.

The Proposed Action involves a change in Air Force operations in IR-057 and IR-059. There would be no short-term effects on the airspace used by 1 SOW activities; therefore, the Proposed Action would not adversely affect the long-term productivity and future use of IR-057 and IR-059 for 1 SOW. No negative effects are expected for short-use or long-term productivity due to the Proposed Action.

4.6 Irreversible and Irretrievable Commitment of Resources

Irreversible and irretrievable resource commitments are related to the use of nonrenewable resources and the effects that the uses of these resources have on future generations. Irreversible effects result primarily 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.

The Proposed Action would change the Air Force operations in existing airspace to conduct up to 146 aircraft operations annually and would not result in an irreversible and irretrievable commitment of airspace resources. The Proposed Action would, however, increase the authorized annual operations by 56. As such, flight operations and training would result in the consumption of additional fuel, increasing the irreversible and irretrievable commitment of fuels. Consumption of fuel associated with the Proposed Action, in addition to the total use of available fuels, is expected to result in a potential negligible decrease to the overall supply of regional petroleum resources. No significant irreversible or irretrievable commitment of resources is anticipated from implementing the Proposed Action.

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Addressing the Change in Air Force Operations in IR-057 and IR-059

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**Appendix A. Interagency/Intergovernmental Coordination for Environmental Planning,
Government-to-Government, and Other Agency Letters and Responses**

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A-1. Interagency Distribution List

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**Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059**

**ENVIRONMENTAL ASSESSMENT
ADDRESSING THE CHANGE IN AIR FORCE OPERATIONS IN IR-057 AND IR-059
AGENCY AND TRIBAL COORDINATION LIST**

Federal Agencies

Ntale Kajumba
Acting Chief, NEPA Program Office
US Environmental Protection Agency
Region 4
61 Forsyth Street, SW
Atlanta, GA 30303-8960

Mr. Bill Pearson, Field Supervisor
US Fish and Wildlife Service
Alabama Ecological Services Field Office
1208 Main Street
Daphne, AL 36526

Mr. Leopoldo "Leo" Miranda, Southeast
Regional Director
US Fish and Wildlife Service Region 4
1875 Century Boulevard NE, Suite 400
Atlanta, GA 30345

Mr. Tim Mersmann, District Ranger
Conecuh National Forest
Conecuh Ranger District
24481 Alabama Highway 55
Andalusia, AL 36420

Mr. John Doresky, Supervisory Biologist
US Fish and Wildlife Service
West Georgia Sub-Office
P.O. Box 52560
Ft. Benning, GA 31995-2560

Apalachicola Ranger District
Apalachicola National Forest
US Forest Service
11152 NW State Route 20
Bristol, FL 32321

Dr. Sean Blomquist
Office Supervisor and Project Leader
US Fish and Wildlife Service
Panama City Ecological Services Field Office
1601 Balboa Avenue
Panama City, FL 32405

Ms. Cherie Hamilton, Alabama Forest
Supervisor
US Forest Service
2946 Chestnut Street
Montgomery, AL 36107

State Agencies

Mr. Chris Stahl, Coordinator
Florida Department of Environmental Protection
Florida State Clearinghouse
3900 Commonwealth Blvd, M.S. 47
Tallahassee, FL 32399-3000

Alabama Department of Environmental
Management
Montgomery Office
1400 Coliseum Boulevard
Montgomery, AL 36110-2400

Dr. Timothy A. Parsons, RPA, Director
State Historic Preservation Officer
Florida Division of Historical Resources
R.A. Gray Building, Room 305
500 S. Bronough Street
Tallahassee, FL 32399-0250

Ms. Lisa D. Jones, Executive Director & State
Historic Preservation Officer
Alabama Historical Commission
468 South Perry Street
P.O. Box 300900
Montgomery, AL 36130-0900

Mr. Christopher M. Blankenship
Commissioner of Conservation
Alabama Department of Conservation and
Natural Resources
64 North Union Street, Suite 468
Montgomery, AL 36130

Mr. Greg Lein, Director
Alabama State Parks Division
64 North Union Street, Room 538
Montgomery, AL 36130

Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059

Georgia Department of Natural Resources
Environmental Protection Division
2 Martin Luther King Jr. Drive
Suite 1456, East Tower
Atlanta, GA 30334

Dr. David Crass, Division Director & Deputy
State Historic Preservation Officer
Georgia Department of Natural Resources
Historic Preservation Division
Jewett Center for Historic Preservation
2610 GA Highway 155, SW
Stockbridge, GA 30281

Ms. Becky Kelley, Director
Georgia Department of Natural Resources
Georgia State Parks & Historic Sites Division
2600 GA Highway 155 SW
Stockbridge, GA 30281

Georgia Department of Natural Resources
Wildlife Resources Division
Headquarters Office
2070 US Highway 278, SE
Social Circle, GA 30025

Local Agencies

Mr. Scott Farmer, Executive Director
Southeast Alabama Regional Planning and
Development Commission
P.O. Box 1406
Dothan, AL 36302

Mr. Tyson Howard, Executive Director
South Central Alabama Development
Commission
5900 Carmichael Place
Montgomery, AL 36117

Mr. Jim Livingston, Executive Director
River Valley Regional Commission
710 Front Avenue, Suite A
Columbus, GA 31901

Ms. Suzanne Angell, Executive Director
Southwest Georgia Regional Commission
P.O. Box 346
Camilla, GA 31730

Mr. Austin Mount, CEO
Emerald Coast Regional Council
P.O. Box 11399
Pensacola, FL 32524

Mr. Josh Adams
Regional Planner – Environmental Planning
Apalachee Regional Planning Council
2507 Callaway Road, Suite 200
Tallahassee, FL 32303

Tribal Contacts

Seminole Tribe of Florida

Mr. Marcellus W. Osceola, Chairman
Seminole Tribe of Florida
6300 Stirling Road
Hollywood, FL 33024

Dr. Paul N. Backhouse, Sr. Director
Heritage and Environmental Office (HERO)
30290 Josie Billie Highway, PMB 1004
Clewiston, FL 33440

Anne Mullins, Director
Heritage and Environmental Office (HERO)
30290 Josie Billie Highway, PMB 1004
Clewiston, FL 33440

Alabama-Coushatta Tribe of Texas

Cecilia Flores, Chairperson
571 State Park Road 56
Livingston, TX 77351

Bryant Celestine, THPO
571 State Park Road 56
Livingston, TX 77351

Muscogee (Creek) Nation

James Floyd, Principal Chief
P.O. Box 580
Okmulgee, OK 74447

RaeLynn Butler, THPO
P.O. Box 580
Okmulgee, OK 74447

Choctaw Nation of Oklahoma

Ian Thompson, THPO
P.O. Drawer 1210
Durant, OK 74702

Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059

Gary Batton, Chief
P.O. Box 1210
Durant, OK 74702

Jena Band of Choctaw Indians

Alina Shively, THPO
P.O. Box 14
Jena, Louisiana 71342

Cheryl Smith, Chief
P.O. Box 14
Jena, Louisiana 71342

Coushatta Tribe of Louisiana

Lovelin Poncho, Chairman
P.O. Box 10
Elton, LA 70532

Linda Langley, THPO
P.O. Box 10
Elton, LA 70532

Jonas John, Director
P.O. Box 10
Elton, LA 70532

Kassie Dawsey, Section 106 Coordinator
P.O. Box 10
Elton, LA 70532

Micosukee Tribe of Indians

Fred Dayhoff, THPO
HC61SR68 Old Loop Rd
Ochopee, FL 34141

Billy Cypress, Chairperson
Miccosukee Tribe of Indians of Florida
Tamiami Station
P.O. Box 440021
Miami, FL 33144

Kevin Donaldson, Environmental Specialist
P.O. Box 440021
Miami, FL 33144

Mississippi Band of Choctaw Indians

Cyrus Ben, Chief
101 Industrial Road
Choctaw, MS 39350

Mr. Kenneth H. Carleton, THPO
Mississippi Band of Choctaw Indians
P.O. Box 6257
101 Industrial Road
Choctaw, MS 39350

Alabama-Quassarte Tribal Town

Nelson Harjo, Chief
101 E. Broadway
Wetumka, OK 74883

Samantha Robison, THPO
P.O. Box 187
Wetumka, OK 74883

Eastern Shawnee Tribe of Oklahoma

Robin Dushane, THPO
P.O. Box 350
Seneca, MO 64865

Glenna Wallace, Chief
P.O. Box 350
Seneca, MO 64865

Absentee Shawnee Tribe of Oklahoma

Edwina Butler-Wolfe, Governor
2025 S. Gordon Cooper Dr.
Shawnee, OK 74801

Suhaila Newport, Cultural Preservation Director
2025 S. Gordon Cooper Dr.
Shawnee, OK 74801

Devon Frazier, THPO
2025 S. Gordon Cooper Dr.
Shawnee, OK 74801

Poarch Band of Creek Indians

Larry Haikey, THPO
5811 Jack Springs Road
Atmore, AL 36502-5025

Stephanie Bryan, Chairperson
5811 Jack Springs Road
Atmore, AL 36502-5025

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A-2. Interagency Correspondence

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**Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059**



**DEPARTMENT OF THE AIR FORCE
1 SPECIAL OPERATIONS CIVIL ENGINEER SQUADRON
HURLBURT FIELD, FLORIDA**

MEMORANDUM FOR: ALL INTERESTED GOVERNMENT AGENCIES, INDIVIDUALS,
AND ORGANIZATIONS

FROM: 1 SOCES/CEN

SUBJECT: Renewal of Instrument Route-057 and Instrument Route-059, Hurlburt Field,
Florida Environmental Assessment

1. The United States Air Force (Air Force), is preparing an Environmental Assessment (EA) to evaluate the potential environmental impacts associated with the Renewal of Instrument Route (IR)-057 and IR-059, Hurlburt Field, Florida. The EA is being prepared in accordance with the National Environmental Policy Act (NEPA) of 1969, the Council on Environmental Quality regulations implementing NEPA, and the Air Force NEPA regulations.
2. The Air Force is proposing the renewal of military training routes (MTRs) IR-057 and IR-059 (Figure 1) for Hurlburt Field, Florida. Air Force Special Operations Command utilizes designated special use airspace and MTRs to sustain pilot proficiency in air combat tactics and to accomplish special operations activities such as unconventional warfare, direct action, special reconnaissance, counterterrorism, foreign internal defense, personnel recovery, and information operations. MTRs are aerial corridors in which military aircraft can operate and where all other aircraft are restricted from operating.
3. IR-057 and IR-059 were created in 1989; are located in Alabama, Florida, and Georgia; have a width of 2 nautical miles on either side of the centerline; are 380 nautical miles long; and were originally created for C-130 operations. An EA was completed in March 1994 that modified IR-057 and IR-059 by adding MH-53 (helicopter) operations to the IRs and lowered the floor of the IRs from 250 feet to 200 feet above ground level for helicopter operations. Due to an upgrade in aircraft design and capabilities, an EA is currently required for the IR-057 and IR-059 renewal. The renewal would include MC-130J, CV-22, and HH-60 aircraft operations.
4. The EA for the renewal of IR-057 and IR-059 assesses the potential environmental impacts associated with this Proposed Action, and examines the cumulative effects when combined with past, present, and any future proposals. As part of the Air Force's Environmental Impact Analysis Process, we request your input in identifying general or specific issues or areas of concern you feel should be addressed in the environmental analysis.

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Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059

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5. To ensure the Air Force has sufficient time to consider your input in the preparation of the Draft EA, please forward written issues or concerns within 30 days of receipt of this memorandum to Mr. Derek Adkins at derek.adkins@us.af.mil or by postal mail to Derek Adkins, 1 SOCES/CEN, 415 Independence Road, Building 90053, Hurlburt Field, FL 32544.


JOHN P. CONNER, Lt Col, USAF
Commander, 1st Spec Ops Civil Engineer Sq

Attachment:
1, Figure 1, Location of IR-057 and IR-059

**Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059**

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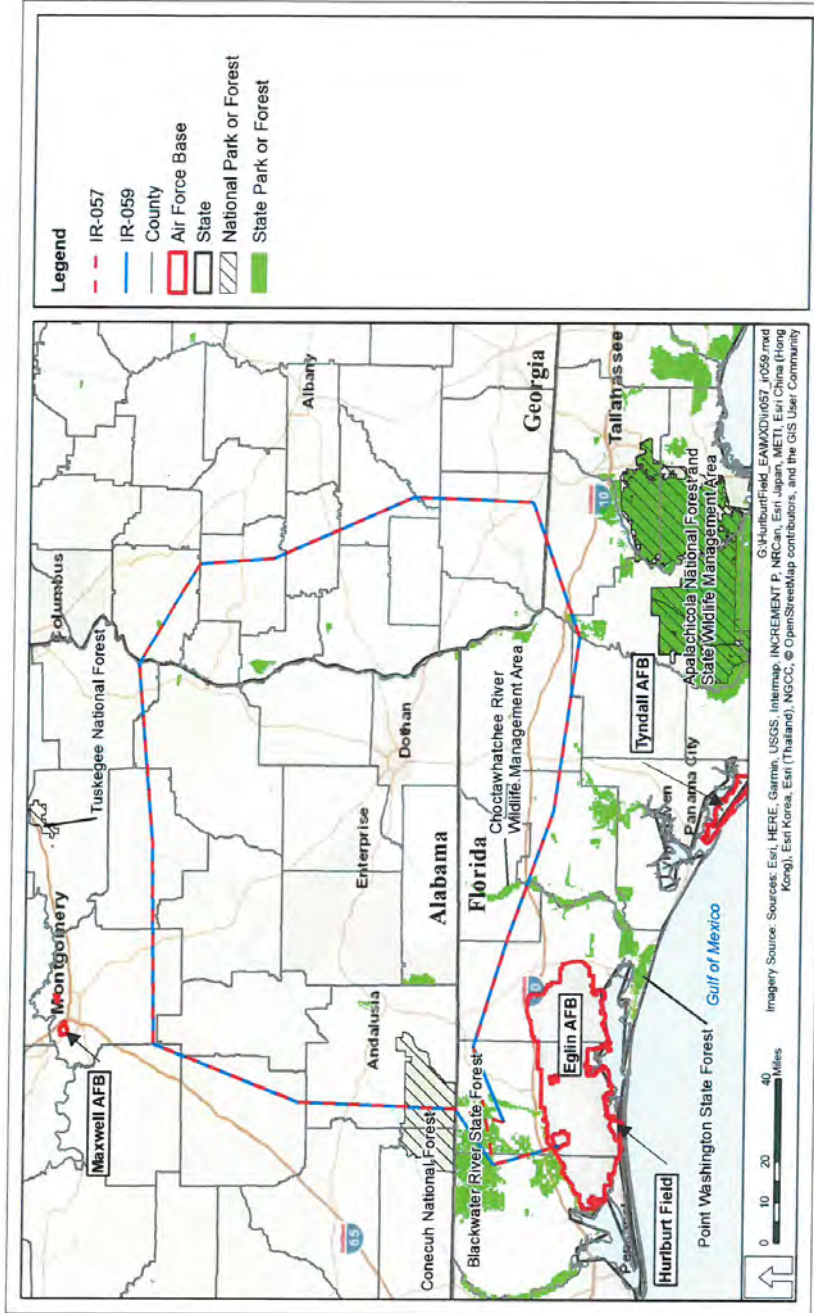


Figure 1. Location of Instrument Route-057 and Instrument Route-059

Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059



DEPARTMENT OF THE AIR FORCE
1ST SPECIAL OPERATIONS WING (AFSOC)
HURLBURT FIELD FLORIDA

MEMORANDUM FOR: FEDERAL AVIATION ADMINISTRATION
ATTN: MR. MAURICE HOFFMAN
DIRECTOR, AIRSPACE SERVICES (AJV-1)
800 INDEPENDENCE AVENUE SW, ROOM 400 EAST
WASHINGTON, DC 20591

FROM: 1 SOCES/CC

SUBJECT: Notification of Renewal of Instrument Route-057 and Instrument Route-059,
Hurlburt Field, Florida Environmental Assessment

1. The United States Air Force (Air Force) is providing notification of the preparation of an Environmental Assessment (EA) to evaluate the potential environmental impacts associated with the Renewal of Instrument Route (IR)-057 and IR-059, Hurlburt Field, Florida. The EA is being prepared in accordance with the National Environmental Policy Act (NEPA) of 1969, the Council on Environmental Quality regulations implementing NEPA, and the Air Force NEPA regulations.
2. The Air Force is proposing the renewal of military training routes (MTRs) IR-057 and IR-059 (Figure 1) for Hurlburt Field, Florida. Air Force Special Operations Command utilizes designated special use airspace and MTRs to sustain pilot proficiency in air combat tactics and to accomplish special operations activities such as unconventional warfare, direct action, special reconnaissance, counterterrorism, foreign internal defense, personnel recovery, and information operations. MTRs are aerial corridors in which military aircraft can operate and where all other aircraft are restricted from operating.
3. IR-057 and IR-059 were created in 1989; are located in Alabama, Florida, and Georgia; have a width of 2 nautical miles on either side of the centerline; are 380 nautical miles long; and were originally created for C-130 operations. The IRs support bidirectional air traffic: aircraft fly clockwise on IR-057 and counter-clockwise on IR-059. An EA was completed in March 1994 that modified IR-057 and IR-059 by adding MH-53 (helicopter) operations to the IRs and lowered the floor of the IRs from 250 feet to 200 feet above ground level for helicopter operations. Due to an upgrade in aircraft design and capabilities, an EA is currently required for the IR-057 and IR-059 renewal. The renewal would include CV-22, MC-130H/J, and HH-60 aircraft operations. The Proposed Action would not modify the current use of the IRs (i.e., no change in permitted airspeed, altitude, floor, avoidance of sensitive areas, or hours of operation) except for amending IR-057 and IR-059 to allow for CV-22, MC-130H/J, and HH-60 training operations. Aircraft would continue to use other Military Operations Areas, MTRs, slow routes, and Low-Altitude Training and Navigation areas to access the IRs, and existing procedures for identifying areas of concern would continue to be followed. No new entry or exit routes would be added to the existing IRs.

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Addressing the Change in Air Force Operations in IR-057 and IR-059

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4. The EA for the renewal of IR-057 and IR-059 assesses the potential environmental impacts associated with this Proposed Action, and examines the cumulative effects when combined with past, present, and any future proposals. As part of the Air Force's Environmental Impact Analysis Process, we request your input in identifying general or specific issues or areas of concern you feel should be addressed in the environmental analysis.

5. Should you or your staff have any questions or information to provide concerning this proposal to renew IR-057 and IR-059, our point of contact is Mr. Derek Adkins, 1 SOCES/CENP, at (850) 884-1360 or derek.adkins@us.af.mil. Please forward written issues or concerns within 30 days of receipt of this notification memorandum to Mr. Adkins via email or by postal mail to Derek Adkins, 1 SOCES/CENP, 415 Independence Road, Building 90053, Hurlburt Field, FL 32544.

CONNER, JOHN.P. Digitally signed by
AUL 1244109574 CN=CONNER JOHN PAUL, 12441085
/c=US
Date: 2020.05.01 11:46:59 -0500

JOHN P. CONNER, Lt Col, USAF
Commander, 1st Spec Ops Civil Engineer Sq

Attachment:

1. Figure 1. Location of Instrument Route-057 and Instrument Route-059

Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059



Figure 1. Location of Instrument Route-057 and Instrument Route-059

A-3. Tribal Correspondence

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**Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059**

EXAMPLE LETTER



**DEPARTMENT OF THE AIR FORCE
1ST SPECIAL OPERATIONS WING (AFSOC)
HURLBURT FIELD FLORIDA**

Colonel Michael D. Curry, USAF
Vice Commander, 1st Special Operations Wing
212 Lukasik Ave
Hurlburt Field, FL 32544

Chairman Marcellus W. Osceola
Seminole Tribe of Florida
6300 Stirling Road
Hollywood, FL 33024

Dear Chairman Osceola:

In accordance with the National Environmental Policy Act (NEPA) of 1969, the Council of Environmental Quality regulations, and the United States Air Force (Air Force) NEPA regulations, the Air Force is preparing an Environmental Assessment (EA) for the renewal of military training routes (MTRs) Instrument Route (IR)-057 and IR-059. Air Force Special Operations Command utilizes designated special use airspace and MTRs to sustain pilots proficiency in air combat tactics and to accomplish special operations activities such as unconventional warfare, direct action, special reconnaissance, counterterrorism, foreign internal defense, personnel recovery, and information operations. MTRs are aerial corridors in which military aircraft can operate and where all other aircraft are restricted from operating. The Air Force is proposing the renewal of MTRs IR-057 and IR-059 (Figure 1) for Hurlburt Field, Florida.

IR-057 and IR-059 were created in 1989; are located in Alabama, Florida, and Georgia; have a width of 2 nautical miles on either side of the centerline; are 380 nautical miles long; and were originally created for C-130 operations. An EA was completed in March 1994 that modified IR-057 and IR-059 by adding MH-53 (helicopter) operations to the IRs and lowered the floor of the IRs from 250 feet to 200 feet Above Ground Level for helicopter operations. Due to the upgrade in aircraft design and capabilities, an EA is currently required for the IR-057 and IR-059 renewal. The renewal would include MC-130J, CV-22, and HH-60 aircraft operations.

In accordance with Executive Order 13175, Consultation with Indian Tribal Governments, and Section 106 of the National Historic Preservation Act and its implementing regulations at 36 Code of Federal Regulations Part 800, the Air Force would like to initiate government-to-government consultation regarding the IR-057 and IR-059 renewal proposal. The Air Force requests your input in identifying any issues or areas of concern you feel should be addressed in the environmental analysis. Additionally, please let us know if you believe this proposal might adversely affect any traditional cultural properties, including those of religious significance to the tribe.

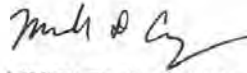
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Addressing the Change in Air Force Operations in IR-057 and IR-059

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To ensure the Air Force has sufficient time to consider your input in the preparation of the Draft EA, please forward written issues or concerns within 30 days of receipt of this letter to Mr. Derek Adkins, NEPA Coordinator, 1 SOCES/CENP, 415 Independence Road, Building 90053, Hurlburt Field, FL 32544, or by email to derek.adkins@us.af.mil. Comments are encouraged to be sent directly via email to derek.adkins@us.af.mil. Thank you in advance for your assistance in this effort.

FOR THE COMMANDER



MICHAEL D. CURRY, Colonel, USAF
Vice Commander

Attachments:

1. *Figure 1. Location of IR-057 and IR-059*

**Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059**

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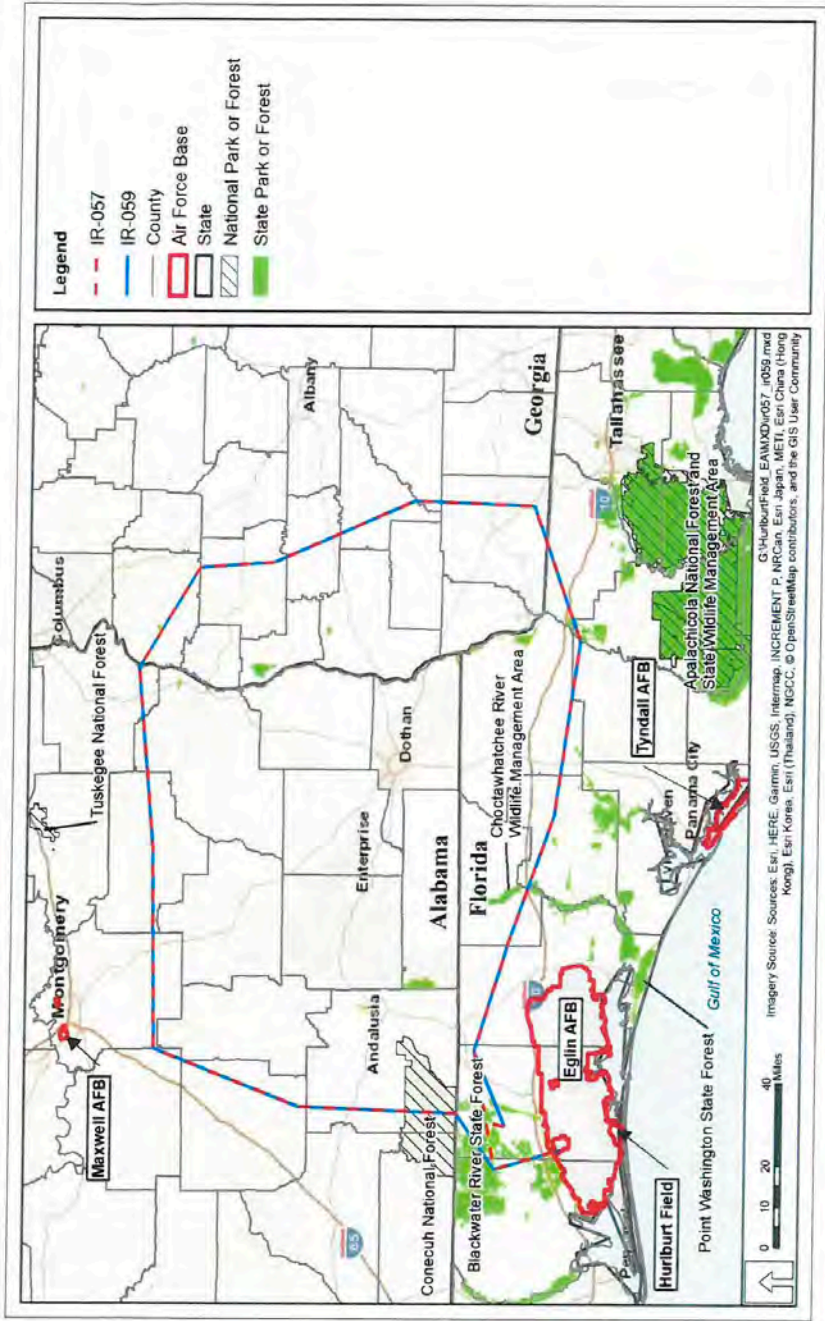


Figure 1. Location of Instrument Route-057 and Instrument Route-059

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A-4. National Historic Preservation Act Section 106 Consultation Letters

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**Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059**



DEPARTMENT OF THE AIR FORCE
1ST SPECIAL OPERATIONS CIVIL ENGINEER SQUADRON
HURLBURT FIELD, FLORIDA

17 August 2020

Ms. Dana J. McIntyre
Deputy Base Civil Engineer
1st Special Operations Civil Engineer Squadron
415 Independence Road, Building 90053
Hurlburt Field, FL 32544

Ms. Lisa D. Jones, Executive Director & State Historic Preservation Officer
Alabama Historical Commission
468 South Perry Street
P.O. Box 300900
Montgomery, AL 36130 0900

Dear Ms. Jones

In accordance with the National Environmental Policy Act (NEPA) of 1969, the Council of Environmental Quality regulations, and the United States Air Force (Air Force) NEPA regulations, the Air Force is preparing an Environmental Assessment (EA) for the renewal of military training routes (MTRs) Instrument Route (IR)-057 and IR-059. The Air Force is initiating consultation with you under Section 106 of the National Historic Preservation Act (NHPA) and requests your concurrence on the determined Area of Potential Effects (APE), the approach to identify historic properties within the APE, and the Air Force's determination of effects for this undertaking.

Air Force Special Operations Command utilizes designated special use airspace and MTRs to sustain pilots' proficiency in air combat tactics and to accomplish special operations activities such as unconventional warfare, direct action, special reconnaissance, counterterrorism, foreign internal defense, personnel recovery, and information operations. MTRs are aerial corridors in which military aircraft can operate and where all other aircraft are restricted from operating. The Air Force is proposing the renewal of MTRs IR-057 and IR-059 (Figure 1) for Hurlburt Field, Florida.

IR-057 and IR-059 were created in 1989; are located in Alabama, Florida, and Georgia; have a width of 2 nautical miles (NM) on either side of the centerline; are 380 NM long; and were originally created for C-130 operations. An EA was completed in March 1994 that modified IR-057 and IR-059 by adding MH-53 (helicopter) operations to the IRs and lowered the floor of the IRs from 250 feet to 200 feet above ground level (AGL) for helicopter operations. Due to an upgrade in aircraft design and capabilities, an EA is currently required for the IR-057 and IR-059 renewal.

The undertaking under Section 106 to renew the use of IR-057 and IR-059 would amend the type of aircraft permitted for flight training operations from C-130s and MH-53s to Hurlburt

Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059

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Field-stationed CV-22s, MC-130H/J, and US Army HH-60s. The IRs would continue to have a ground track of approximately 380 NM, with a corridor width of 2 NM on either side of the IR centerline. The IRs would continue to be used for flight training in conjunction with military operations areas (MOAs) as well as MTRs, slow routes, and low-altitude training and navigation (LATN) areas, enabling 1st Special Operations Wing to optimize air combat training of military personnel. The route would continue to be flown at 250 knots or less, at floor altitudes as low as 200 feet AGL during daytime and nighttime hours by CV-22s and HH-60s, and at floor altitudes as low as 250 feet AGL during daytime and nighttime hours for MC-130H/J.

The undertaking would not modify the current use of the IRs (i.e., no change in permitted airspeed, altitude, floor, avoidance of sensitive areas, or hours of operation) except for amending IR-057 and IR-059 to allow for CV-22, MC-130H/J, and HH-60 training operations. Aircraft would continue to use other MOAs, MTRs, slow routes, and LATN areas to access the IRs, and existing procedures for identifying areas of concern would continue to be followed. No new entry or exit routes would be added to the existing IRs.

The undertaking would not alter the number of aircraft stationed at Hurlburt Field nor would it affect the number of personnel or support facilities needed for training operations. The Proposed Action would not include any new ground operations, nor would it develop any new helicopter landing zones or drop zones. No construction, site alteration, or other ground-disturbing activities are planned as part of the Proposed Action.

The APE is defined as the geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties, if any such properties exist. Taking into account the scale and nature of the undertaking, the Air Force has defined the APE for this undertaking as a 2 NM (2.3-mile) buffer on each side of the MTRs IR-057 and IR-059. The APE includes areas where visual, noise, and vibration effects to historic properties may occur (Figure 2).

The project APE involves a large geographic region in portions of Alabama, Florida, and Georgia. Due to the large geographic area, nature of the undertaking, and minimal to negligible anticipated effects on historic properties, the Air Force proposes the identification of historic properties be limited to a search of the National Park Service's National Register of Historic Places (NRHP) geospatial dataset. A desktop analysis using the NRHP geospatial dataset was conducted in May 2020 to identify historic properties within the APE. The search identified 10 historic properties (including buildings and districts) located within the APE in Alabama (see Table 1 for an inventory of the search results).

Anticipated potential effects on historic properties would be limited to visual, noise, and vibration effects as the project would not involve construction, demolition, or any other ground-disturbing activity that would have the potential to directly affect archaeological resources or other historic properties. Under the proposed undertaking, training missions would continue to occur in areas subjected to military aircraft overflights for the last 31 years, and no more than 73 overflights per year would occur in each of the IRs. The proposed operations would be transient and not permanently alter the surrounding environment, limiting the range and duration of anticipated effects on the eligibility of historic properties within the APE. Based on the nature of


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Addressing the Change in Air Force Operations in IR-057 and IR-059

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the undertaking and the scope and duration of anticipated effects, the Air Force has determined the undertaking will have no adverse effect on historic properties.

We respectfully request that you provide your written questions or comments or concurrence with the Air Force's determined APE and finding of no adverse effect at your earliest convenience, but no later than 30 days from the date of receipt of this correspondence. Please address all questions and comments to Mr. Derek Adkins, 1 SOCES/CENP, 415 Independence Road, Building 90053, Hurlburt Field, FL 32544, or by email to derek.adkins@us.af.mil. Comments are encouraged to be sent directly via email to derek.adkins@us.af.mil. Thank you in advance for your assistance in this effort.


DANA J. MCINTYRE, P.E., GS-14, DAF
Deputy Base Civil Engineer, 1st Spec Ops Civil
Engineer Sq

Attachments:

1. Figure 1. Location of IR-057 and IR-059
2. Figure 2. Location of Area of Potential Effects within the State of Alabama
3. Table 1. National Park Service National Register of Historic Properties Geospatial Dataset Search Results

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Addressing the Change in Air Force Operations in IR-057 and IR-059**

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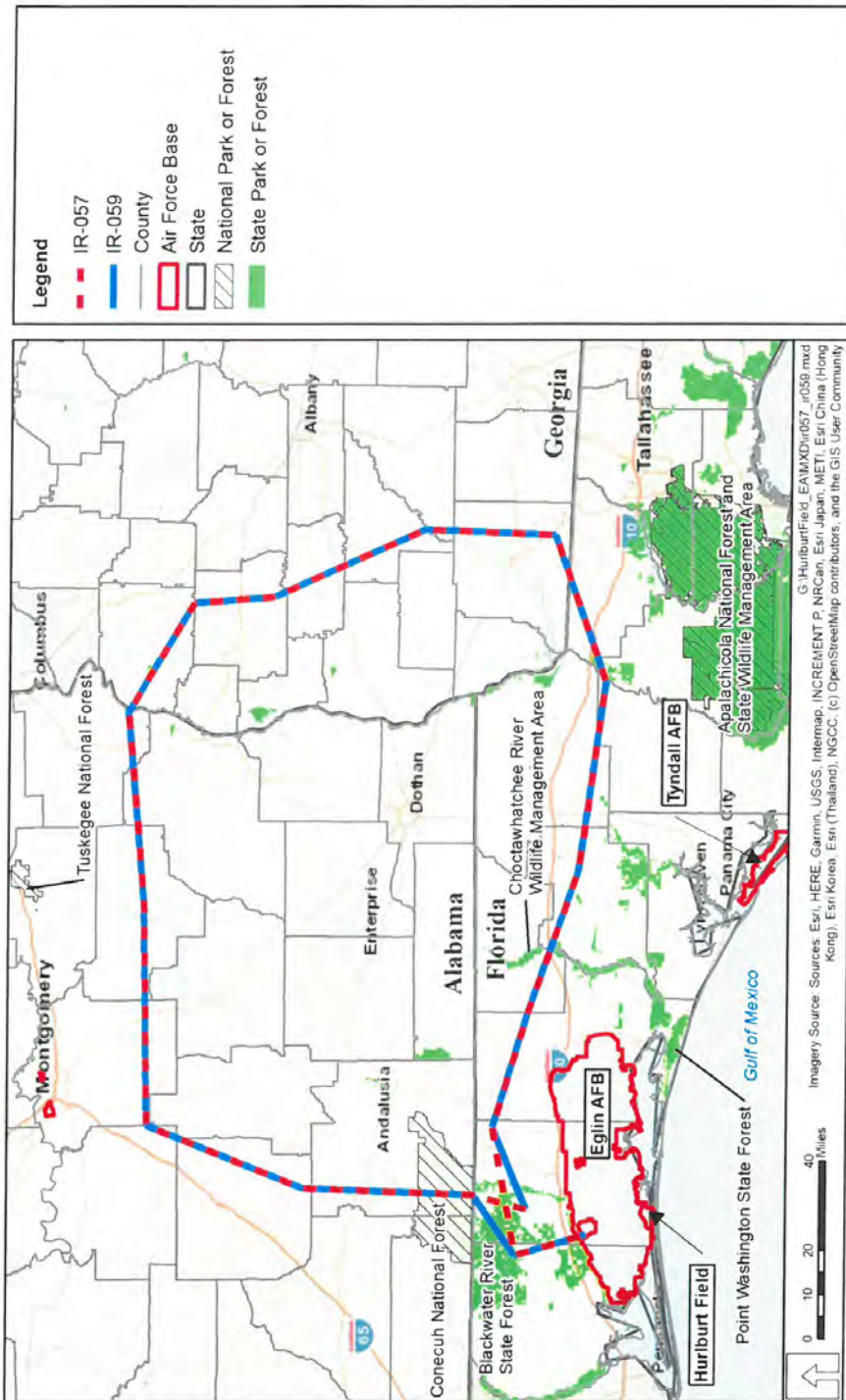


Figure 1. Location of Instrument Route-057 and Instrument Route-059

**Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059**

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Table 1. National Park Service National Register of Historic Places Geospatial Dataset Search Results

Name	Reference Number	Resource Type	Address	City	County	State	Certification Date
Howard, John W., House and Outbuildings	92001090	Building	AL 10E	Greenville	Butler	AL	19920904
Tankersley Rosenwald School	8001332	Building	10 miles south of Montgomery on US 31 to Pettus Rd. to School Spur on west side	Hope Hull	Montgomery	AL	20090122
Sardis Baptist Church	1001299	Building	AL 223S at Junction County Rd. 22	Union Springs	Bullock	AL	20011129
Foster House	98001021	Building	201 Kennon St.	Union Springs	Bullock	AL	19980814
Merritt School	98000110	Building	Old Troy Rd., 0.5 mile south of US 82	Midway	Bullock	AL	19980220
Spring Hill Methodist Church	96000110	Building	County Rd. 89, south side, approximately 750 feet west of junction with County Rd. 49	Spring Hill	Barbour	AL	19960216
Glenn-Thompson Plantation	80000735	Building	South of Pittsview on US 431	Pittsview	Russell	AL	19800409
Bullock County Courthouse Historic District	76000312	District	N. Prairie St.	Union Springs	Bullock	AL	19761008
Pitts, Samuel R., Plantation	92000819	District	East of US 431, south of southern RR tracks	Pittsview	Russell	AL	19920625
Glennville Historic District	79000402	District	South of Pittsview	Pittsview	Russell	AL	19790807

Rd. – road; **St.** – street; **RR** – railroad

**Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059**



DEPARTMENT OF THE AIR FORCE
1ST SPECIAL OPERATIONS CIVIL ENGINEER SQUADRON
HURLBURT FIELD, FLORIDA

17 August 2020

Ms. Dana J. McIntyre
Deputy Base Civil Engineer
1st Special Operations Civil Engineer Squadron
415 Independence Road, Building 90053
Hurlburt Field, FL 32544

Dr. David Crass, Division Director & Deputy State Historic Preservation Officer
Georgia Department of Natural Resources Historic Preservation Division
Jewett Center for Historic Preservation
2610 GA Highway 155, SW
Stockbridge, GA 30281

Dear Dr. Crass,

In accordance with the National Environmental Policy Act (NEPA) of 1969, the Council of Environmental Quality regulations, and the United States Air Force (Air Force) NEPA regulations, the Air Force is preparing an Environmental Assessment (EA) for the renewal of military training routes (MTRs) Instrument Route (IR)-057 and IR-059. The Air Force is initiating consultation with you under Section 106 of the National Historic Preservation Act (NHPA) and requests your concurrence on the determined Area of Potential Effects (APE), the approach to identify historic properties within the APE, and the Air Force's determination of effects for this undertaking.

Air Force Special Operations Command utilizes designated special use airspace and MTRs to sustain pilots' proficiency in air combat tactics and to accomplish special operations activities such as unconventional warfare, direct action, special reconnaissance, counterterrorism, foreign internal defense, personnel recovery, and information operations. MTRs are aerial corridors in which military aircraft can operate and where all other aircraft are restricted from operating. The Air Force is proposing the renewal of MTRs IR-057 and IR-059 (Figure 1) for Hurlburt Field, Florida.

IR-057 and IR-059 were created in 1989; are located in Alabama, Florida, and Georgia; have a width of 2 nautical miles (NM) on either side of the centerline; are 380 NM long; and were originally created for C-130 operations. An EA was completed in March 1994 that modified IR-057 and IR-059 by adding MH-53 (helicopter) operations to the IRs and lowered the floor of the IRs from 250 feet to 200 feet above ground level (AGL) for helicopter operations. Due to an upgrade in aircraft design and capabilities, an EA is currently required for the IR-057 and IR-059 renewal.

The undertaking under Section 106 to renew the use of IR-057 and IR-059 would amend the type of aircraft permitted for flight training operations from C-130s and MH-53s to Hurlburt

Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059

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Field-stationed CV-22s, MC-130H/J, and US Army HH-60s. The IRs would continue to have a ground track of approximately 380 NM, with a corridor width of 2 NM on either side of the IR centerline. The IRs would continue to be used for flight training in conjunction with military operations areas (MOAs) as well as MTRs, slow routes, and low-altitude training and navigation (LATN) areas, enabling 1st Special Operations Wing to optimize air combat training of military personnel. The route would continue to be flown at 250 knots or less, at floor altitudes as low as 200 feet AGL during daytime and nighttime hours by CV-22s and HH-60s, and at floor altitudes as low as 250 feet AGL during daytime and nighttime hours for MC-130H/J.

The undertaking would not modify the current use of the IRs (i.e., no change in permitted airspeed, altitude, floor, avoidance of sensitive areas, or hours of operation) except for amending IR-057 and IR-059 to allow for CV-22, MC-130H/J, and HH-60 training operations. Aircraft would continue to use other MOAs, MTRs, slow routes, and LATN areas to access the IRs, and existing procedures for identifying areas of concern would continue to be followed. No new entry or exit routes would be added to the existing IRs.

The undertaking would not alter the number of aircraft stationed at Hurlburt Field nor would it affect the number of personnel or support facilities needed for training operations. The Proposed Action would not include any new ground operations, nor would it develop any new helicopter landing zones or drop zones. No construction, site alteration, or other ground-disturbing activities are planned as part of the Proposed Action.

The APE is defined as the geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties, if any such properties exist. Taking into account the scale and nature of the undertaking, the Air Force has defined the APE for this undertaking as a 2 NM (2.3-mile) buffer on each side of the MTRs IR-057 and IR-059. The APE includes areas where visual, noise, and vibration effects to historic properties may occur (Figure 2).

The project involves a large geographic region that includes portions of Alabama, Florida, and Georgia. Anticipated potential effects on historic properties would be limited to visual, noise, and vibration effects as the project would not involve construction, demolition, or any other ground-disturbing activity that would have the potential to directly affect archaeological resources or other historic properties. Under the proposed undertaking, training missions would continue to occur in areas subjected to military aircraft overflights for the last 31 years, and no more than 73 overflights per year would occur in each of the IRs. The proposed operations would be transient and not permanently alter the surrounding environment, limiting the range and duration of anticipated effects on the eligibility of historic properties within the APE.

Due to the large geographic area, nature of the undertaking, and minimal to negligible effects anticipated on historic properties, a preliminary desktop analysis was conducted using the National Register of Historic Places (NRHP) geospatial dataset provided by the National Park Service (NPS). The preliminary search identified 22 historic properties (including buildings, districts, and sites) located within the APE that are listed in the NPS' NRHP (see Table 1 for an inventory of the search results). We recognize that this preliminary search may need to be

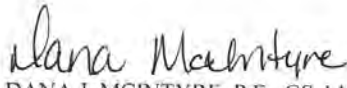
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Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059

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supplemented using state-curated data. Considering that the undertaking will not involve any ground-disturbing activity and would have no potential effect on intact archaeological deposits and/or NRHP-listed archaeological resources, we propose to conduct a search of Georgia's Natural, Archaeological, and Historic Resources (GNAHRGIS) Geographic Information System database to identify architectural resources within the APE previously determined to be NRHP-eligible. We request your concurrence on this approach for identification efforts under Section 106.

Please advise Hurlburt Field of any concerns or suggestions you may have regarding the Proposed Action. Your comments will help us develop the scope of our environmental review. The Air Force anticipates publishing the Draft EA in the summer of 2020. We respectfully request that you provide your written questions or comments or concurrence with the Air Force's determined APE and proposed approach to identify historic properties at your earliest convenience, but no later than 30 days from the date of receipt of this correspondence. Please address all questions and comments to Mr. Derek Adkins, 1 SOCES/CENP, 415 Independence Road, Building 90053, Hurlburt Field, FL 32544, or by email to derek.adkins@us.af.mil. Comments are encouraged to be sent directly via email to derek.adkins@us.af.mil. Thank you in advance for your assistance in this effort.


DANA J. MCINTYRE, P.E., GS-14, DAF
Deputy Base Civil Engineer, 1st Spec Ops Civil
Engineer Sq

Attachments:

1. Figure 1. Location of IR-057 and IR-059
2. Figure 2. Location of the Area of Potential Effect within the State of Georgia
3. Table 1. National Park Service National Register of Historic Places Geospatial Dataset Search Results

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**Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059**

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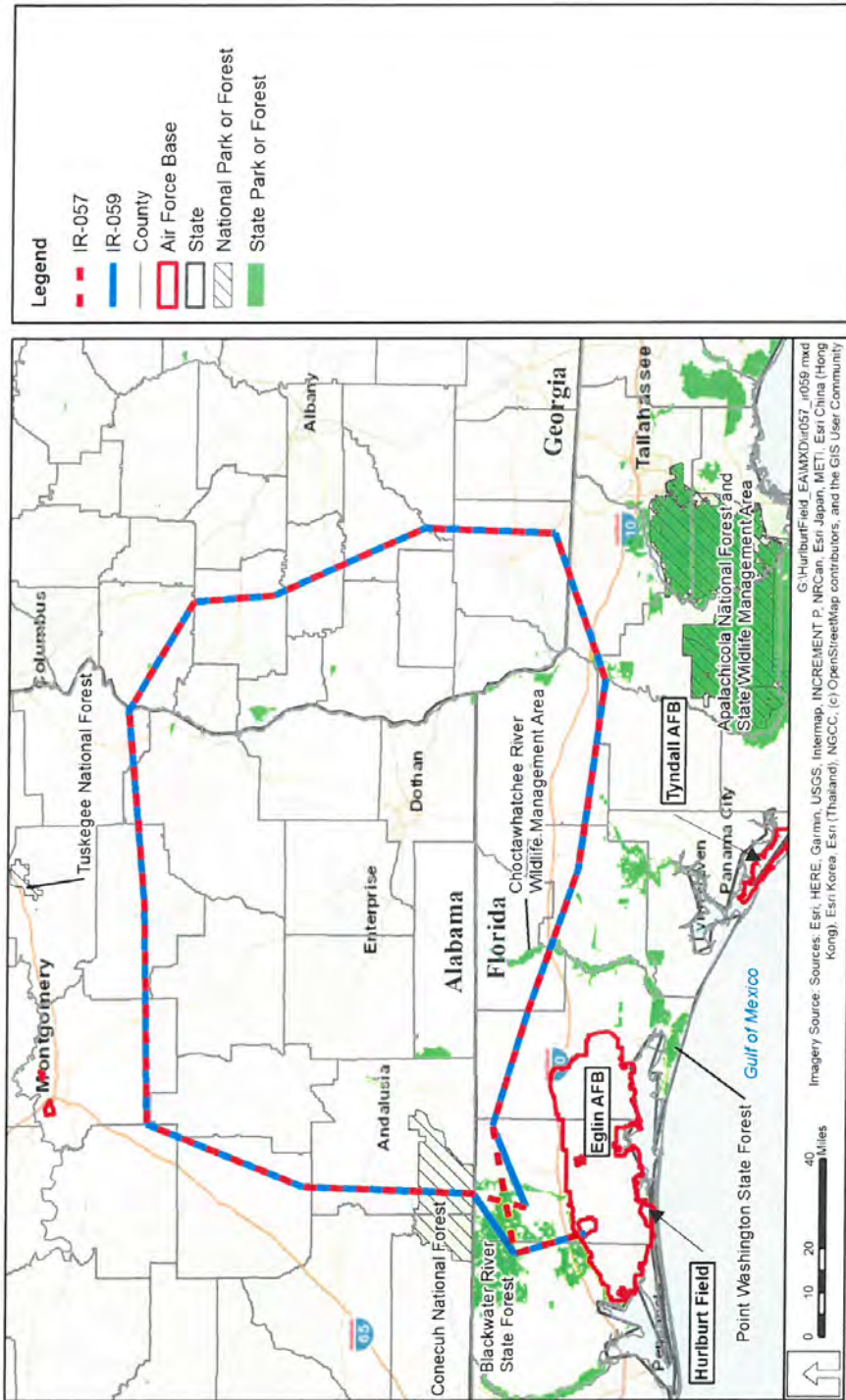


Figure 1. Location of Instrument Route-057 and Instrument Route-059

**Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059**

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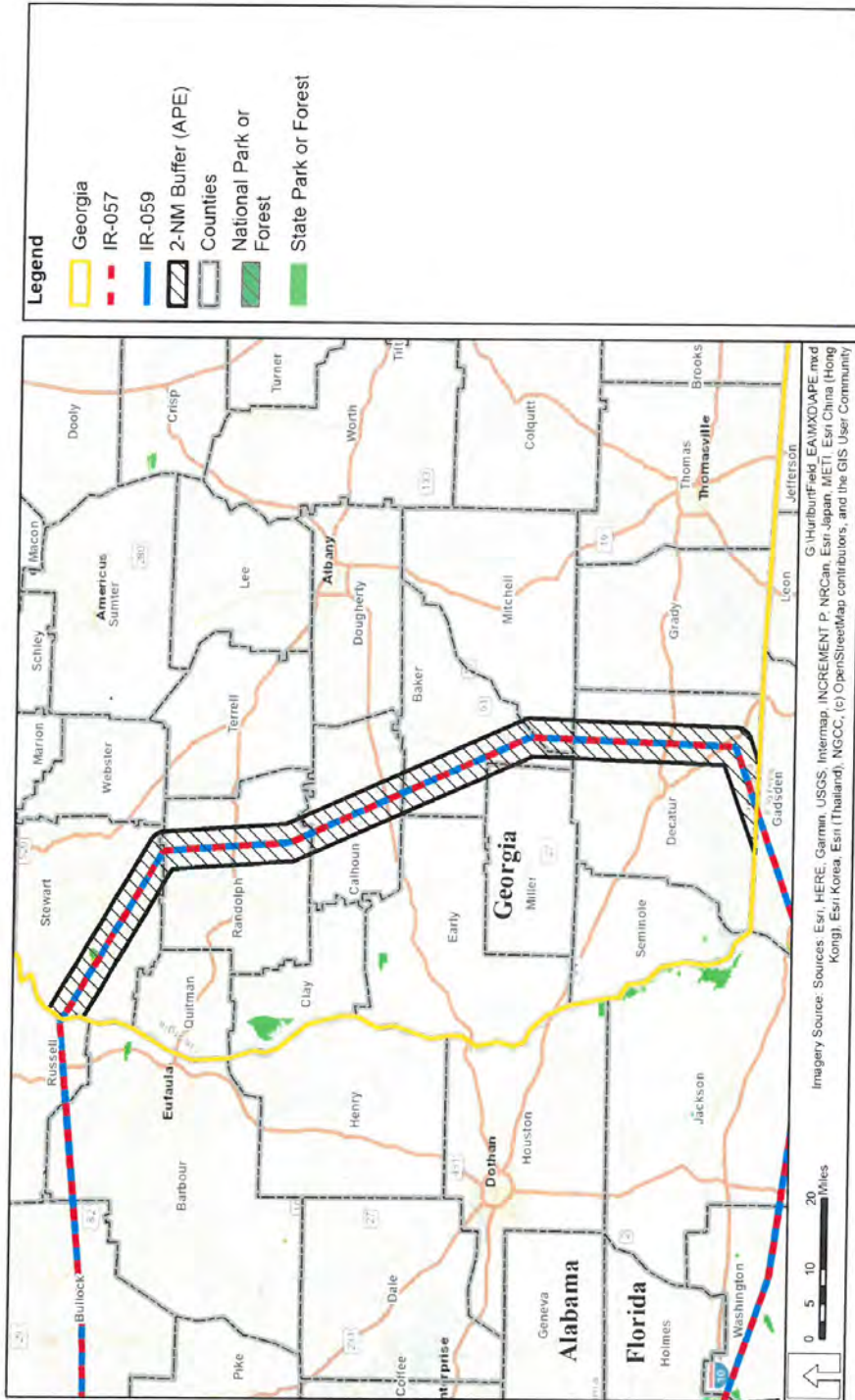


Figure 2. Area of Potential Effects within the State of Georgia

**Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059**

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Table 1. National Park Service National Register of Historic Places Geospatial Dataset Search Results

Name	Reference Number	Resource Type	Address	City	County	State	Certification Date
Grier, Dr. R. L., House	82002470	Building	Broad St.	Lumpkin	Stewart	GA	19820629
Harrell, George Y., House	82002471	Building	Broad St.	Lumpkin	Stewart	GA	19820629
Usher House	82002480	Building	Florence St.	Lumpkin	Stewart	GA	19820629
Tucker, John A., House	82002478	Building	Florence St.	Lumpkin	Stewart	GA	19820629
Rockwell, Stoddard, House	82002476	Building	Rockwell St.	Lumpkin	Stewart	GA	19820629
Bedingfield Inn	73000643	Building	Cotton St.	Lumpkin	Stewart	GA	19730507
Stewart County Courthouse	80001234	Building	Courthouse Square	Lumpkin	Stewart	GA	19800918
Armstrong House	82002466	Building	Broad St.	Lumpkin	Stewart	GA	19820629
Dr. Miller's Office	82002468	Building	E. Main St.	Lumpkin	Stewart	GA	19820629
Irwin, Jared, House	82002472	Building	E. Main St.	Lumpkin	Stewart	GA	19820629
Mathis House	82002474	Building	E. Main St.	Lumpkin	Stewart	GA	19820629
Bush-Usher House	82002467	Building	E. Main St.	Lumpkin	Stewart	GA	19820629
Second Methodist Church	82002477	Building	Mulberry St.	Lumpkin	Stewart	GA	19820629
West Hill	78001006	Building	South of Lumpkin on US 27	Lumpkin	Stewart	GA	19780918
Davis, Joshua, House	75000554	Building	2.5 miles northwest of Mt. Pleasant on US 90	Mt. Pleasant	Gadsden	GA	19750521
Green Grove Church, School, and Cemetery	95000734	District	Old Lumpkin-Eufaula Rd.	Lumpkin	Stewart	GA	19950620
Pigtail Alley Historic District	82002475	District	Old Chestnut Rd.	Lumpkin	Stewart	GA	19820629
Uptown Residential Historic District	82002479	District	Broad and Main Streets	Lumpkin	Stewart	GA	19820629

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Addressing the Change in Air Force Operations in IR-057 and IR-059**

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Name	Reference Number	Resource Type	Address	City	County	State	Certification Date
Lumpkin Commercial Historic District East Main Street	82002473	District	Main, Broad, Cotton, and Mulberry Streets	Lumpkin	Stewart	GA	19820629
Residential Historic District	82002469	District	E. Main St.	Lumpkin	Stewart	GA	19820629
Shellman Historic District	85001935	District	Roughly bounded by Dean, Church, Mary Lou, Ward, Pecan and Pine Streets	Shellman	Randolph	GA	19850829
Roods Landing Site	75000609	Site	South of Omaha at confluence of Rood Creek and the Chattahoochee River	Omaha	Stewart	GA	19750819

St. – street; **Mt.** – mount; **Rd.** – road

**Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059**



**DEPARTMENT OF THE AIR FORCE
1ST SPECIAL OPERATIONS CIVIL ENGINEER SQUADRON
HURLBURT FIELD, FLORIDA**

Dana McIntyre, P.E., DAF
Civil Engineer Tribal Liaison Officer
1st Special Operations Civil Engineer Squadron
415 Independence Road, Building 90053
Hurlburt Field, FL 32544

Governor Edwina Butler-Wolfe
Absentee Shawnee Tribe of Oklahoma
2025 S. Gordon Cooper Drive
Shawnee, OK 74801

Dear Governor Butler-Wolfe:

In accordance with the National Environmental Policy Act (NEPA) of 1969, the Council of Environmental Quality regulations, and the United States Air Force (Air Force) NEPA regulations, the Air Force is preparing an Environmental Assessment (EA) for the renewal of military training routes (MTRs) Instrument Route (IR)-057 and IR-059. The Air Force is initiating government-to-government consultation with you under Section 106 of the National Historic Preservation Act (NHPA) and requests your concurrence on the determined Area of Potential Effects (APE) and the Air Force's determination of effects for this undertaking.

Air Force Special Operations Command utilizes designated special use airspace and MTRs to sustain pilots' proficiency in air combat tactics and to accomplish special operations activities such as unconventional warfare, direct action, special reconnaissance, counterterrorism, foreign internal defense, personnel recovery, and information operations. MTRs are aerial corridors in which military aircraft can operate and where all other aircraft are restricted from operating. The Air Force is proposing the renewal of MTRs IR-057 and IR-059 (Figure 1) for Hurlburt Field, Florida.

IR-057 and IR-059 were created in 1989; are located in portions of Alabama, Florida, and Georgia; have a width of 2 nautical miles on either side of the centerline; are 380 nautical miles long; and were originally created for C-130 operations. An EA was completed in March 1994 that modified IR-057 and IR-059 by adding MH-53 (helicopter) operations to the IRs and lowered the floor of the IRs from 250 feet to 200 feet Above Ground Level (AGL) for helicopter operations. Due to an upgrade in aircraft design and capabilities, an EA is currently required for the IR-057 and IR-059 renewal.

The undertaking under Section 106 is to renew the use of IR-057 and IR-059 and would amend the type of aircraft permitted for flight training operations from C-130s and MH-53s to Hurlburt Field-stationed CV-22s, MC-130H/Js, and Army HH-60s. The IRs would continue to have a ground track of approximately 380 NM, with a corridor width of 2 NM on either side of the IR centerline. The IRs would continue to be used for flight training in conjunction with

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Addressing the Change in Air Force Operations in IR-057 and IR-059

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military operations areas (MOAs) as well as MTRs, slow routes and Low Altitude Tactical Navigation (LATN) areas, enabling the 1st Special Operations Wing to optimize air combat training of military personnel. The route would continue to be flown at 250 knots or less, at floor altitudes as low as 200 feet AGL during daytime and nighttime hours by CV-22s and HH-60s, and at floor altitudes as low as 250 feet AGL during daytime and nighttime hours for MC-130H/J.

The undertaking would not modify the current use of the IRs (i.e., no change in permitted airspeed, altitude, floor, avoidance of sensitive areas, or hours of operation) except for amending IR-057 and IR-059 to allow for CV-22, MC-130H/J, and HH-60 training operations. Aircraft would continue to use other MOAs, MTRs, slow routes, and LATNs to access the IRs, and existing procedures for identifying areas of concern would continue to be followed. No new entry or exit routes would be added to the existing IRs.

The undertaking would not alter the number of aircraft stationed at Hurlburt Field nor would it affect the number of personnel or support facilities needed for training operations. The Proposed Action would not include any new ground operations, nor would it develop any new helicopter landing zones or drop zones. No construction, site alteration, or other ground-disturbing activities are planned as part of the Proposed Action.

The APE is defined as the geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties, if any such properties exist. Taking into account the scale and nature of the undertaking, the Air Force has defined the APE for this undertaking as a 2-nautical mile (2.3-mile) buffer on each side of the MTRs IR-057 and IR-059. The APE includes areas where visual, noise, and vibration effects to historic properties may occur.

The project APE involves a large geographic region in portions of Alabama, Florida, and Georgia (Figure 2, Figure 3, and Figure 4). Anticipated potential effects to historic properties and properties of religious or cultural significance would be limited to visual, noise, and vibration effects as the project would not involve construction, demolition, or any other ground-disturbing activity that would have the potential to directly affect archaeological resources or other historic properties. Under the proposed undertaking, training missions would continue to occur in areas subjected to military aircraft overflights for the last 31 years, and no more than 73 overflights would occur in each of the IRs annually. The proposed operations would be transient and not permanently alter the surrounding environment, limiting the range and duration of anticipated effects on the eligibility of historic properties within the APE.

A scoping letter was sent to you in March 2020 requesting your assistance in identifying any properties of religious and cultural significance to your tribe within the project's APE. No properties of religious or cultural significance were identified during the scoping period. Based on the nature of the undertaking and the scope and duration of anticipated effects, the Air Force has determined the undertaking will have *no adverse effect on historic properties under Section 106, including properties of religious and cultural significance.*

In accordance with Executive Order 13175, Consultation with Indian Tribal Governments, and Section 106 of the National Historic Preservation Act and its implementing regulations at 36 CFR Part 800, the Air Force respectfully requests that you provide your written questions or comments on or your concurrence with the Air Force's determination of *no adverse effect* within 30 days of receipt of this letter; however, if you need additional time to evaluate the

Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059

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Proposed Action, the Air Force will consider all matters submitted.. Please address all questions and comments to Mr. Derek Adkins, NEPA Coordinator, 1 SOCES/CENP, 415 Independence Road, Building 90053, Hurlburt Field, FL 32544; or by email at derek.adkins@us.af.mil. Comments are encouraged to be sent directly via email to derek.adkins@us.af.mil. Thank you in advance for your assistance in this effort.



DANA MCINTYRE, P.E., DAF
Civil Engineer Tribal Liaison Officer

Attachments:

1. *Figure 1. Location of IR-057 and IR-059*
2. *Figure 2. Location of Area of Potential Effects within the State of Alabama*
3. *Figure 3. Location of Area of Potential Effects within the State of Florida*
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Addressing the Change in Air Force Operations in IR-057 and IR-059**

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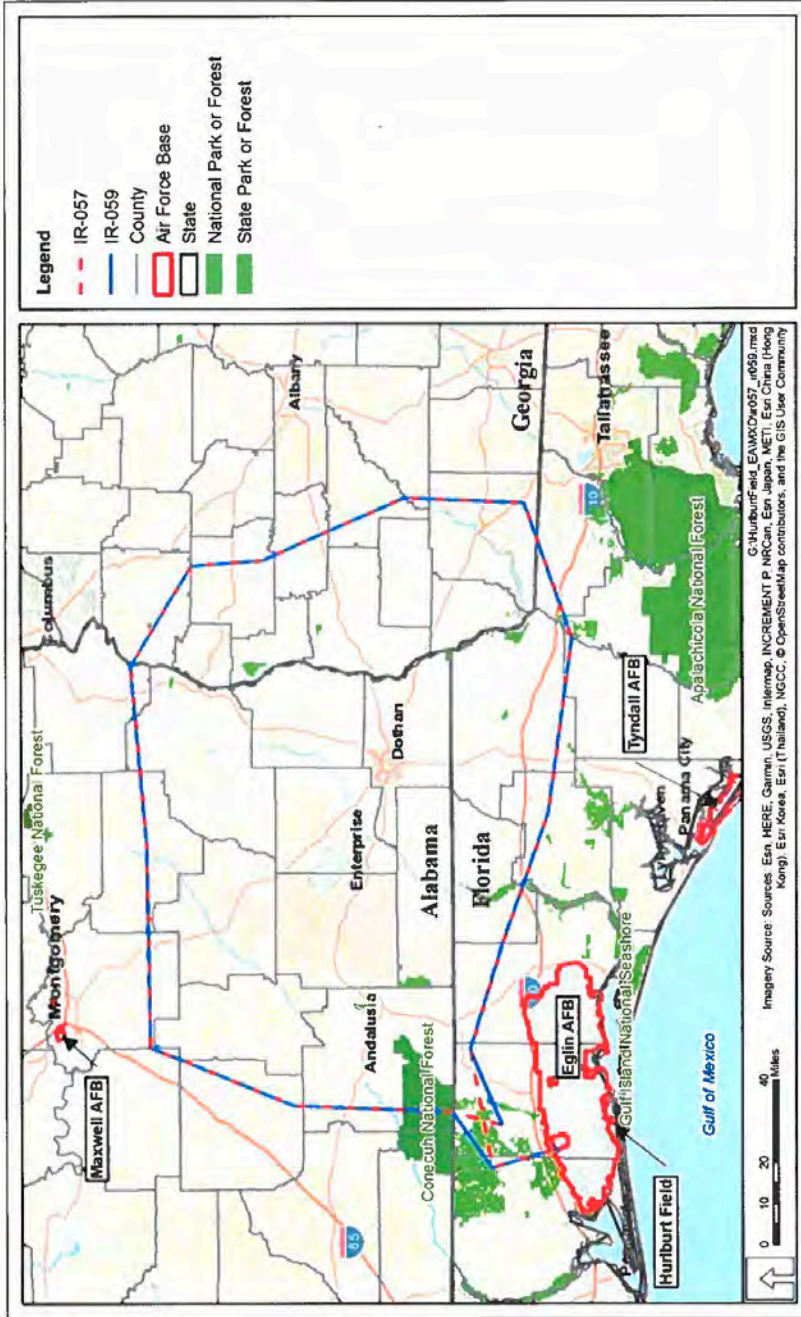
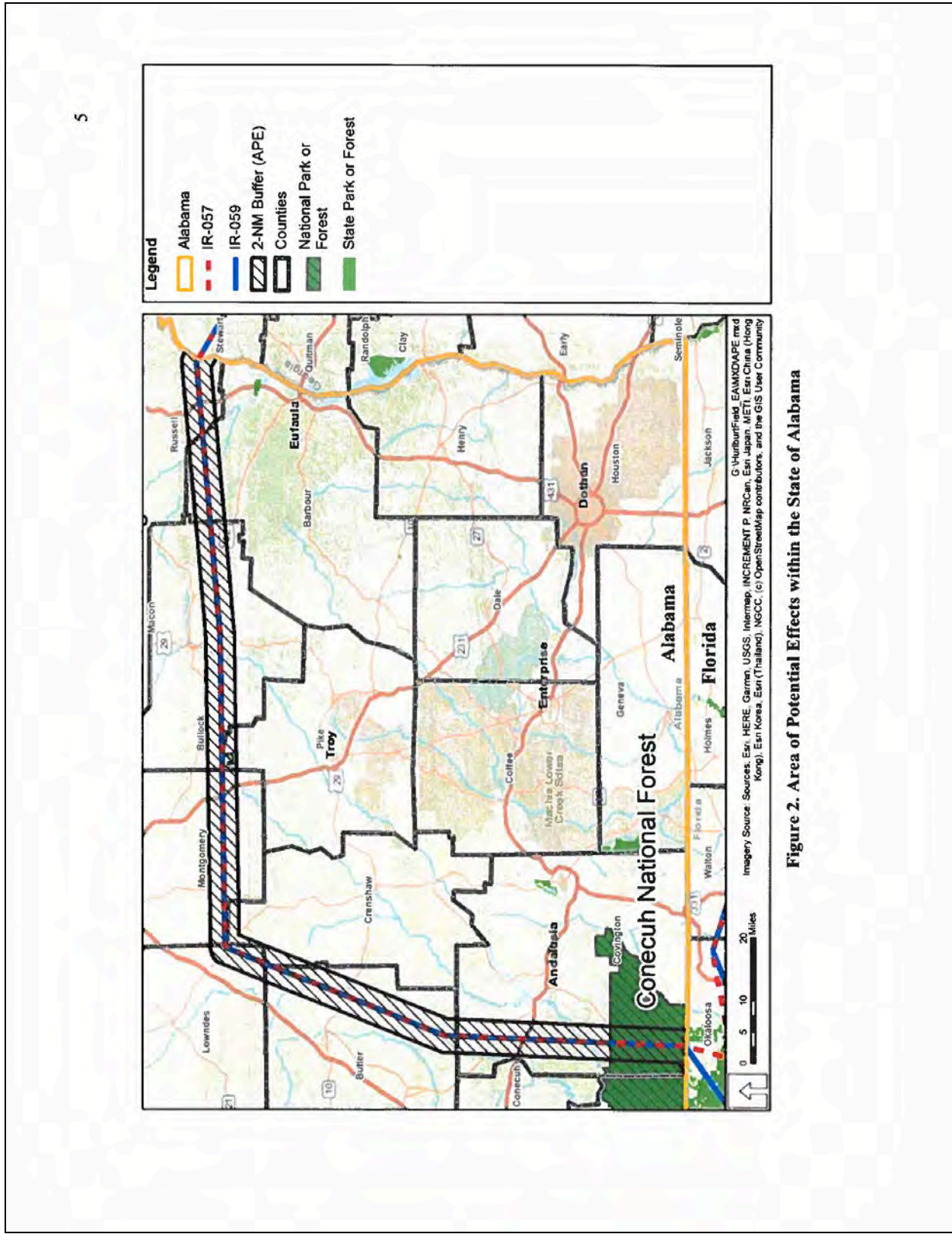


Figure 1. Location of Instrument Route-057 and Instrument Route-059

Final Environmental Assessment
 Addressing the Change in Air Force Operations in IR-057 and IR-059



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**Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059**

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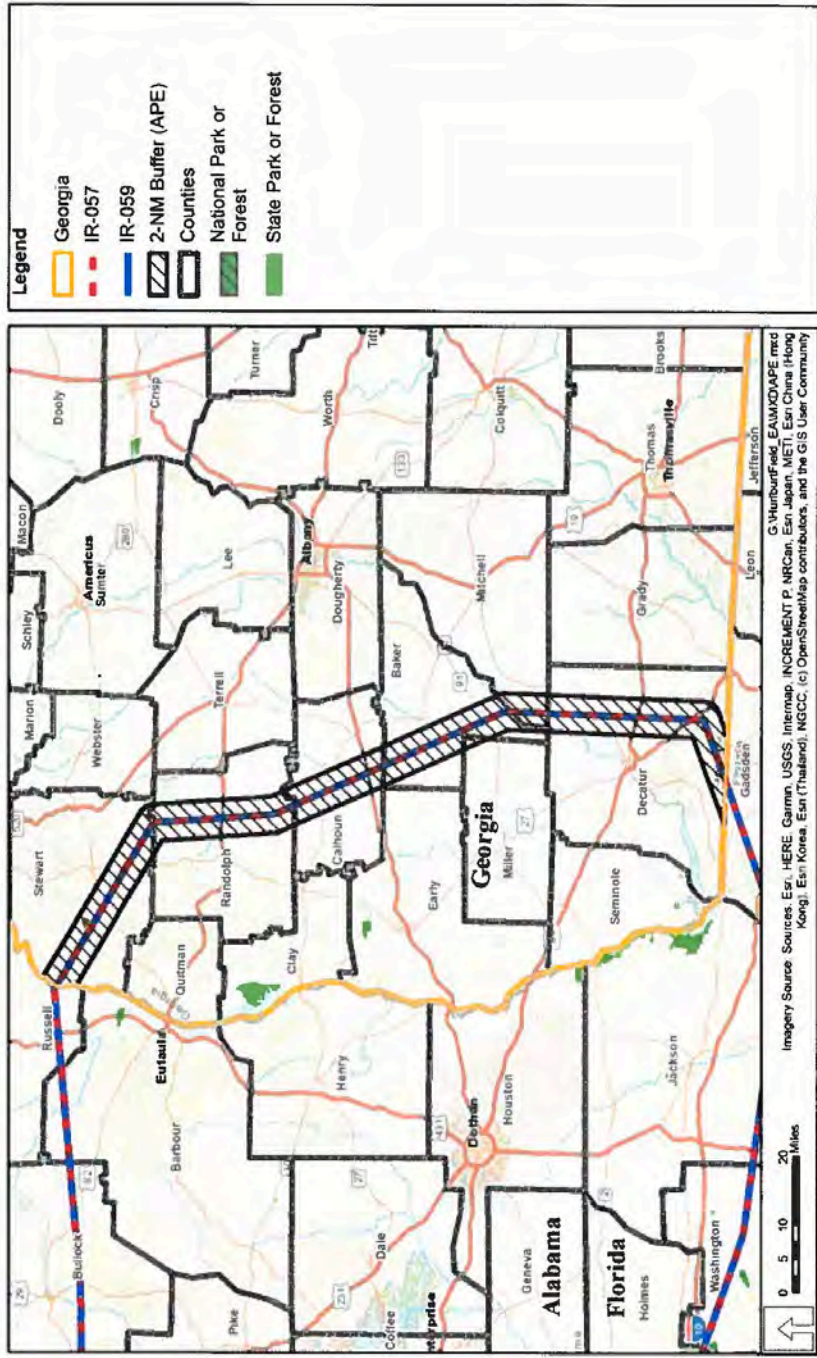


Figure 4. Area of Potential Effects within the State of Georgia

**Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059**



**DEPARTMENT OF THE AIR FORCE
1ST SPECIAL OPERATIONS CIVIL ENGINEER SQUADRON
HURLBURT FIELD, FLORIDA**

Dana McIntyre, P.E., DAF
Civil Engineer Tribal Liaison Officer
1st Special Operations Civil Engineer Squadron
415 Independence Road, Building 90053
Hurlburt Field, FL 32544

Chairperson Cecilia Flores
Alabama-Coushatta Tribe of Texas
571 State Park Road 56
Livingston, TX 77351

Dear Chairperson Flores:

In accordance with the National Environmental Policy Act (NEPA) of 1969, the Council of Environmental Quality regulations, and the United States Air Force (Air Force) NEPA regulations, the Air Force is preparing an Environmental Assessment (EA) for the renewal of military training routes (MTRs) Instrument Route (IR)-057 and IR-059. The Air Force is initiating government-to-government consultation with you under Section 106 of the National Historic Preservation Act (NHPA) and requests your concurrence on the determined Area of Potential Effects (APE) and the Air Force's determination of effects for this undertaking.

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The undertaking under Section 106 is to renew the use of IR-057 and IR-059 and would amend the type of aircraft permitted for flight training operations from C-130s and MH-53s to Hurlburt Field-stationed CV-22s, MC-130H/Js, and Army HH-60s. The IRs would continue to have a ground track of approximately 380 NM, with a corridor width of 2 NM on either side of the IR centerline. The IRs would continue to be used for flight training in conjunction with

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Addressing the Change in Air Force Operations in IR-057 and IR-059

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Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059

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DANA MCINTYRE, P.E., DAF
Civil Engineer Tribal Liaison Officer

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Addressing the Change in Air Force Operations in IR-057 and IR-059**

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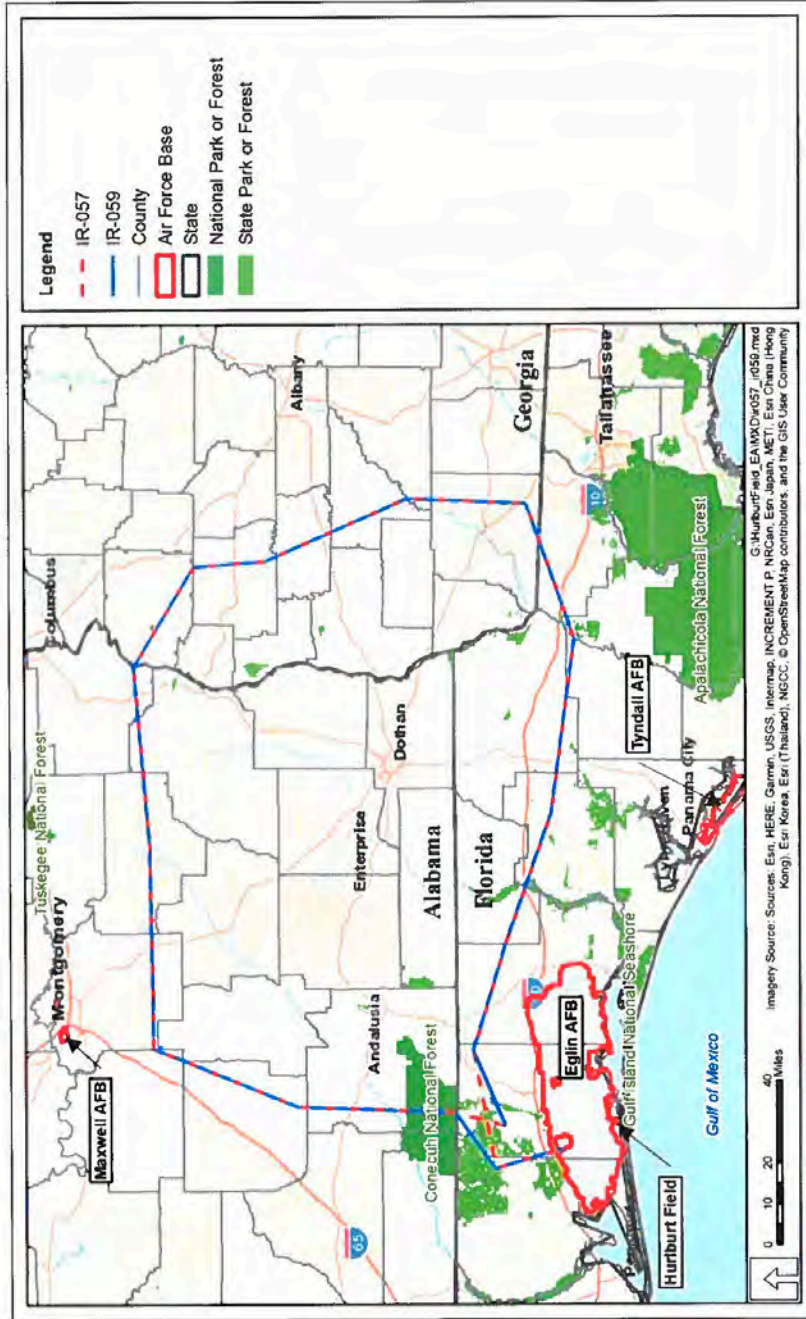


Figure 1. Location of Instrument Route-057 and Instrument Route-059

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Addressing the Change in Air Force Operations in IR-057 and IR-059**

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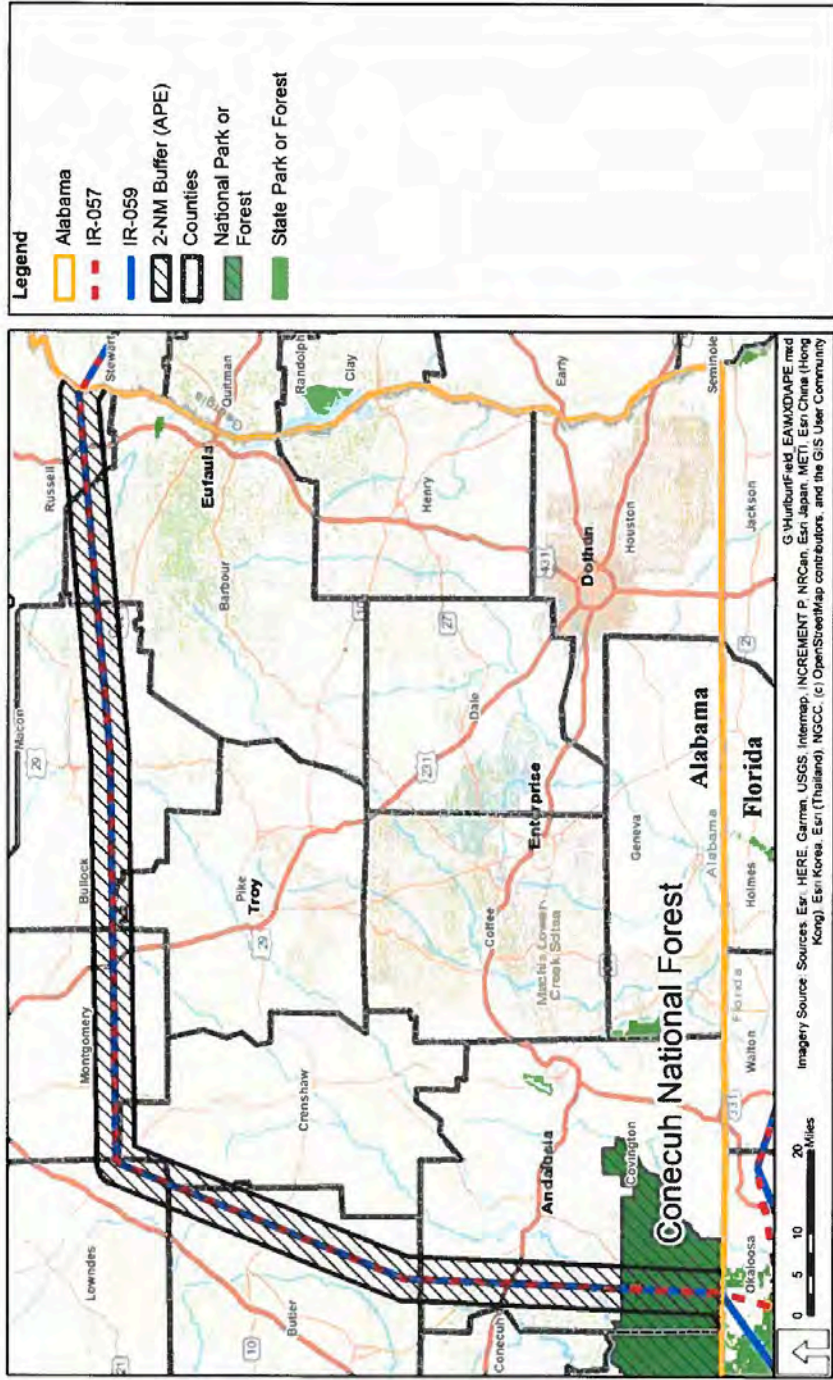
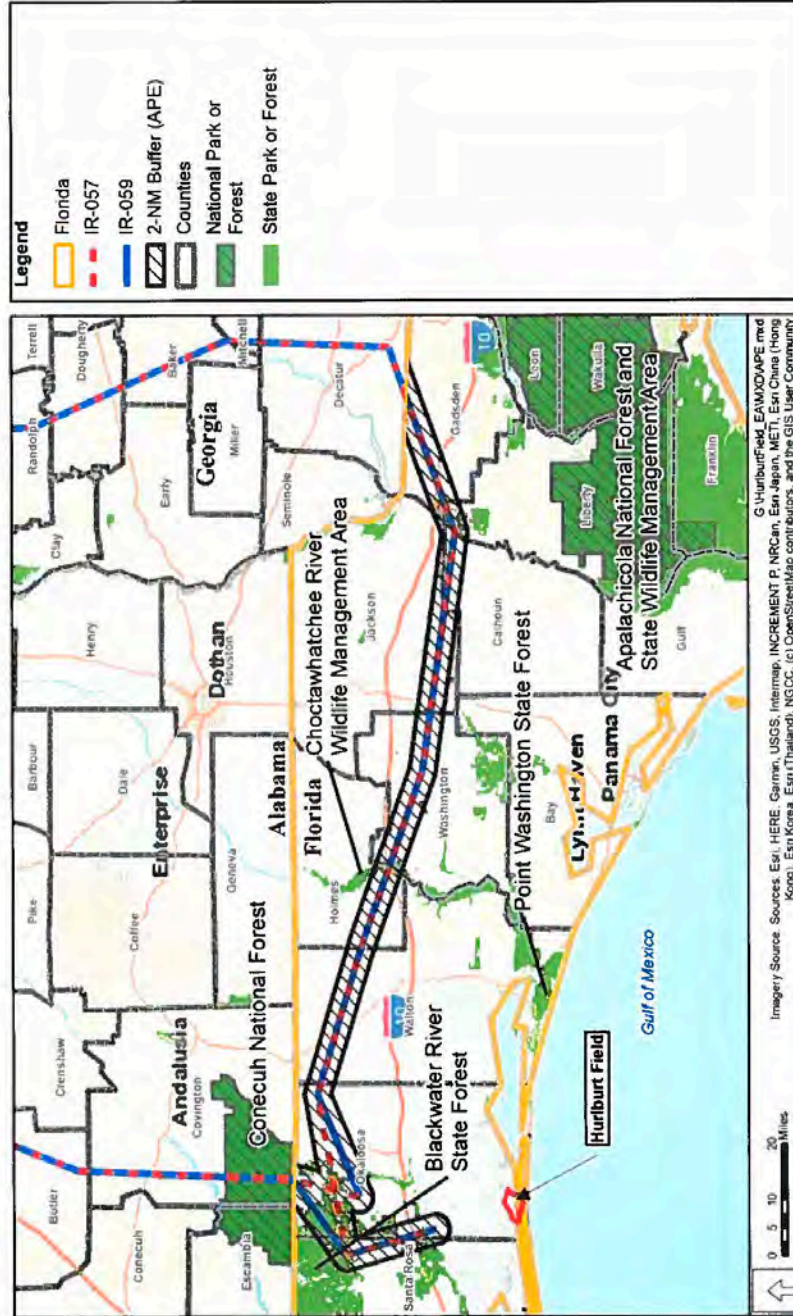


Figure 2. Area of Potential Effects within the State of Alabama

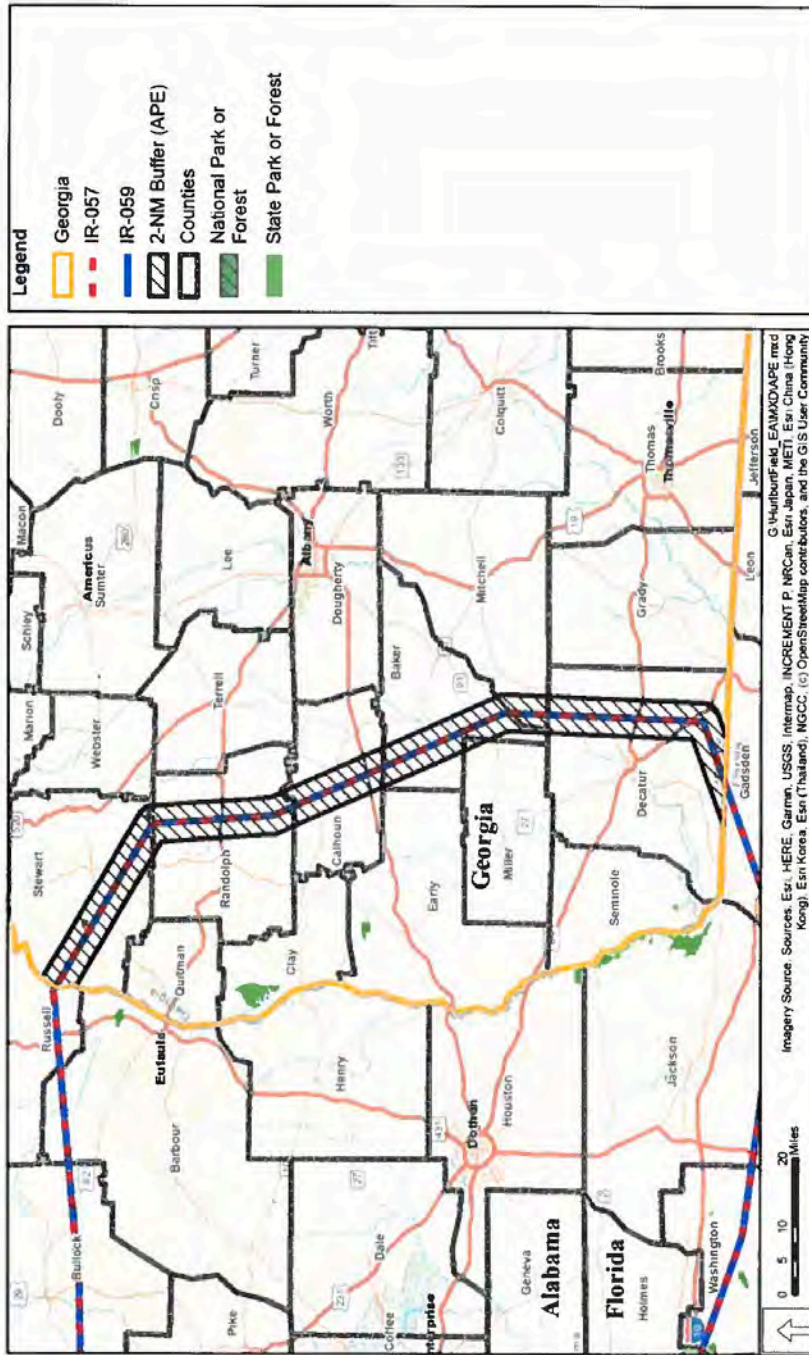
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Addressing the Change in Air Force Operations in IR-057 and IR-059**

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Addressing the Change in Air Force Operations in IR-057 and IR-059**

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**Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059**



**DEPARTMENT OF THE AIR FORCE
1ST SPECIAL OPERATIONS CIVIL ENGINEER SQUADRON
HURLBURT FIELD, FLORIDA**

Dana McIntyre, P.E., DAF
Civil Engineer Tribal Liaison Officer
1st Special Operations Civil Engineer Squadron
415 Independence Road, Building 90053
Hurlburt Field, FL 32544

Chief Nelson Harjo
Alabama-Quassarte Tribal Town
101 E. Broadway
Wetumka, OK 74883

Dear Chief Harjo:

In accordance with the National Environmental Policy Act (NEPA) of 1969, the Council of Environmental Quality regulations, and the United States Air Force (Air Force) NEPA regulations, the Air Force is preparing an Environmental Assessment (EA) for the renewal of military training routes (MTRs) Instrument Route (IR)-057 and IR-059. The Air Force is initiating government-to-government consultation with you under Section 106 of the National Historic Preservation Act (NHPA) and requests your concurrence on the determined Area of Potential Effects (APE) and the Air Force's determination of effects for this undertaking.

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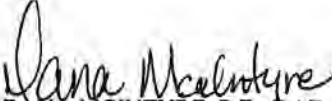
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Addressing the Change in Air Force Operations in IR-057 and IR-059

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Civil Engineer Tribal Liaison Officer

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Addressing the Change in Air Force Operations in IR-057 and IR-059**

4

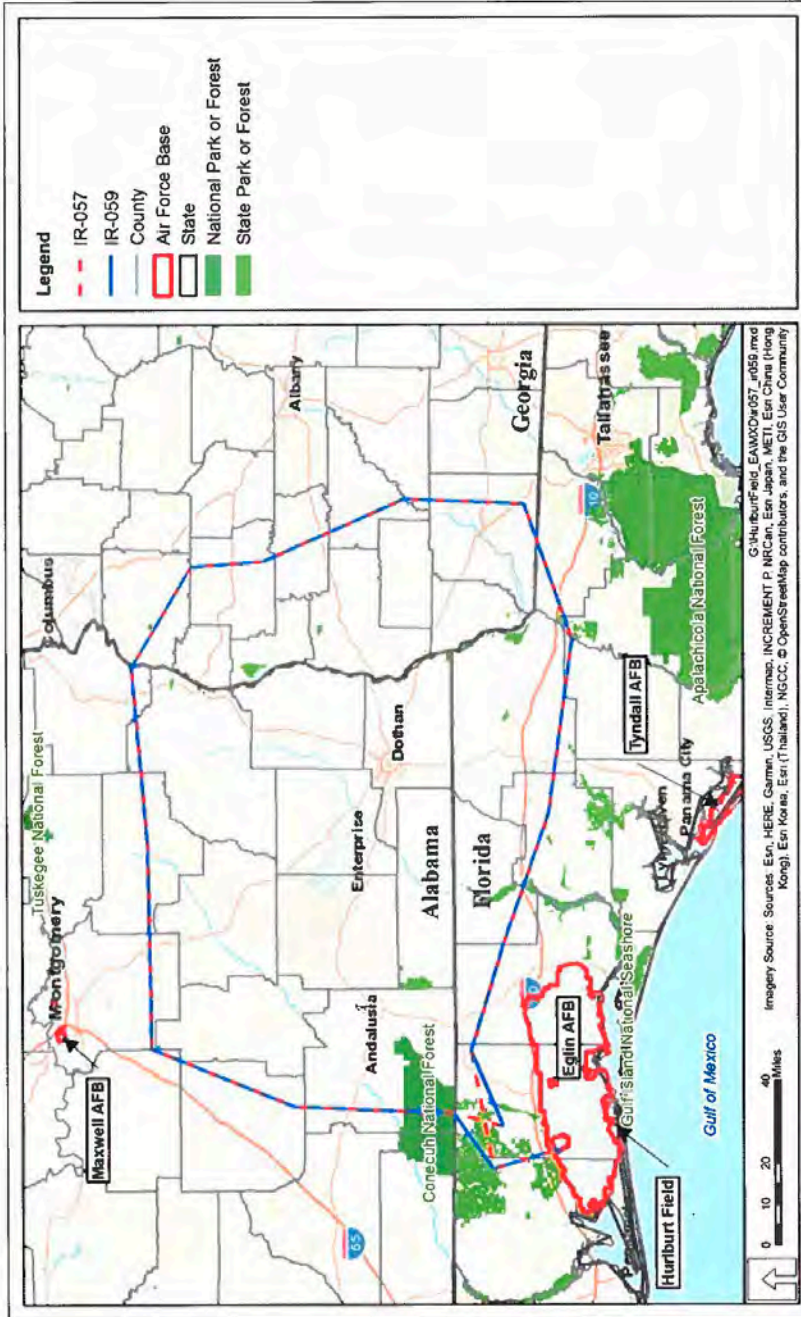
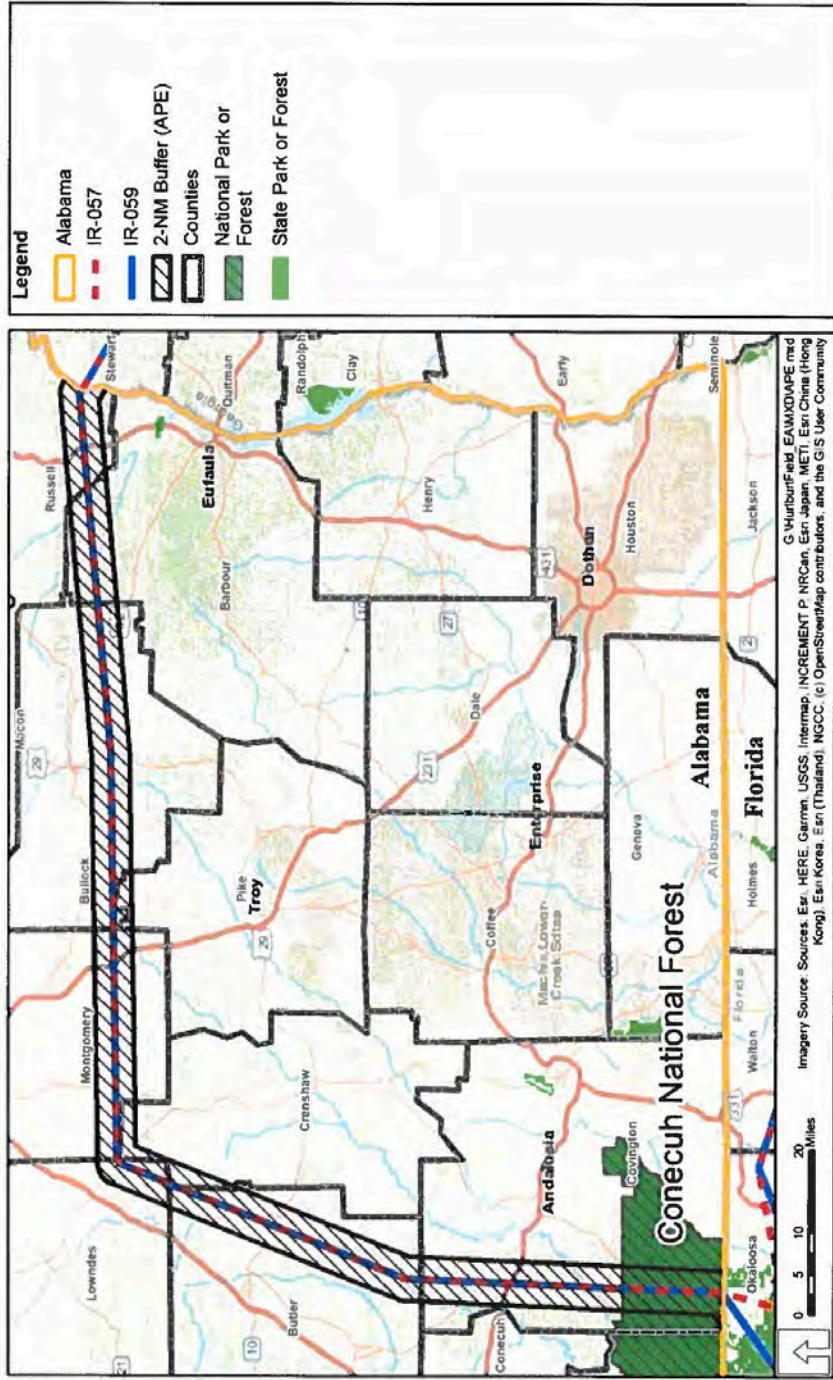


Figure 1. Location of Instrument Route-057 and Instrument Route-059

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Addressing the Change in Air Force Operations in IR-057 and IR-059**

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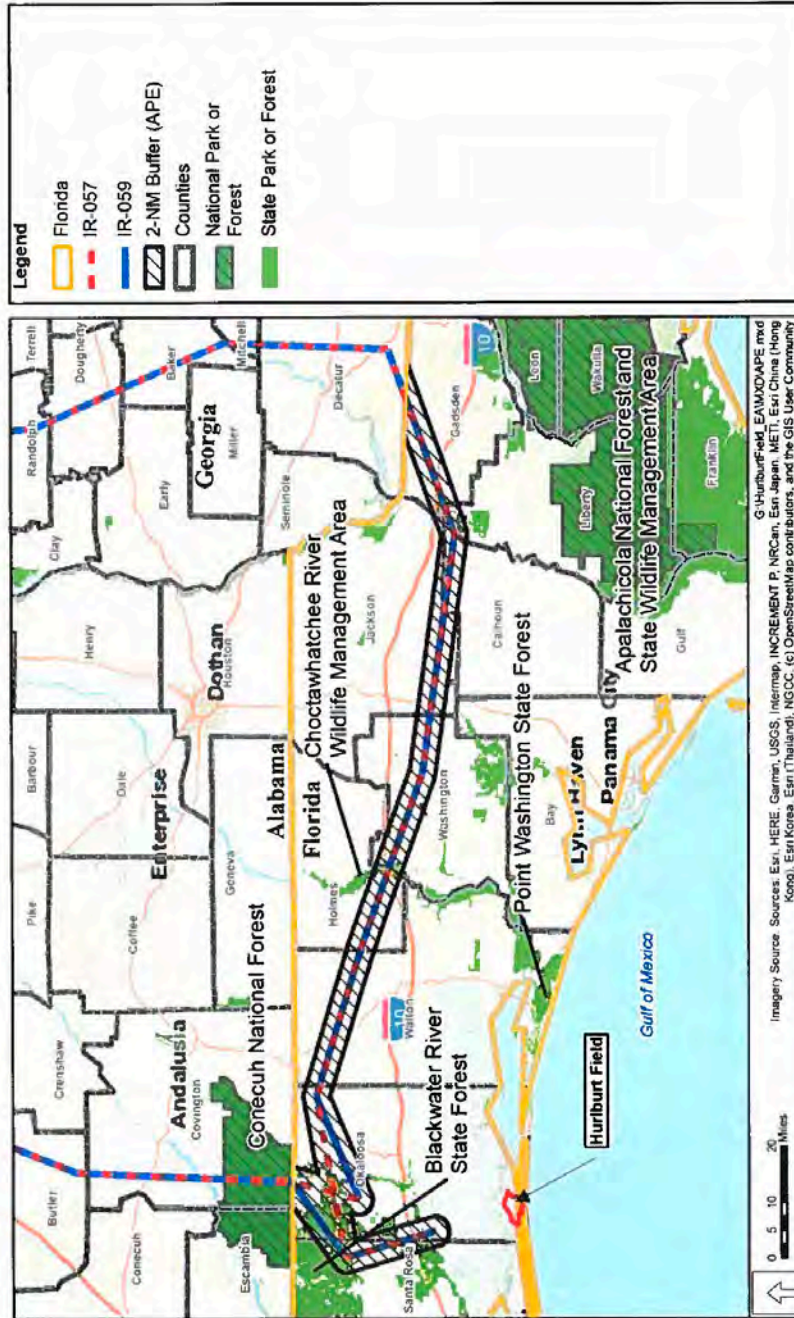


Figure 3. Area of Potential Effects within the State of Florida

**Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059**



**DEPARTMENT OF THE AIR FORCE
1ST SPECIAL OPERATIONS CIVIL ENGINEER SQUADRON
HURLBURT FIELD, FLORIDA**

Dana McIntyre, P.E., DAF
Civil Engineer Tribal Liaison Officer
1st Special Operations Civil Engineer Squadron
415 Independence Road, Building 90053
Hurlburt Field, FL 32544

Chief Gary Batton
Choctaw Nation of Oklahoma
PO Drawer 1210
Durant, OK 74702

Dear Chief Batton:

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Addressing the Change in Air Force Operations in IR-057 and IR-059**

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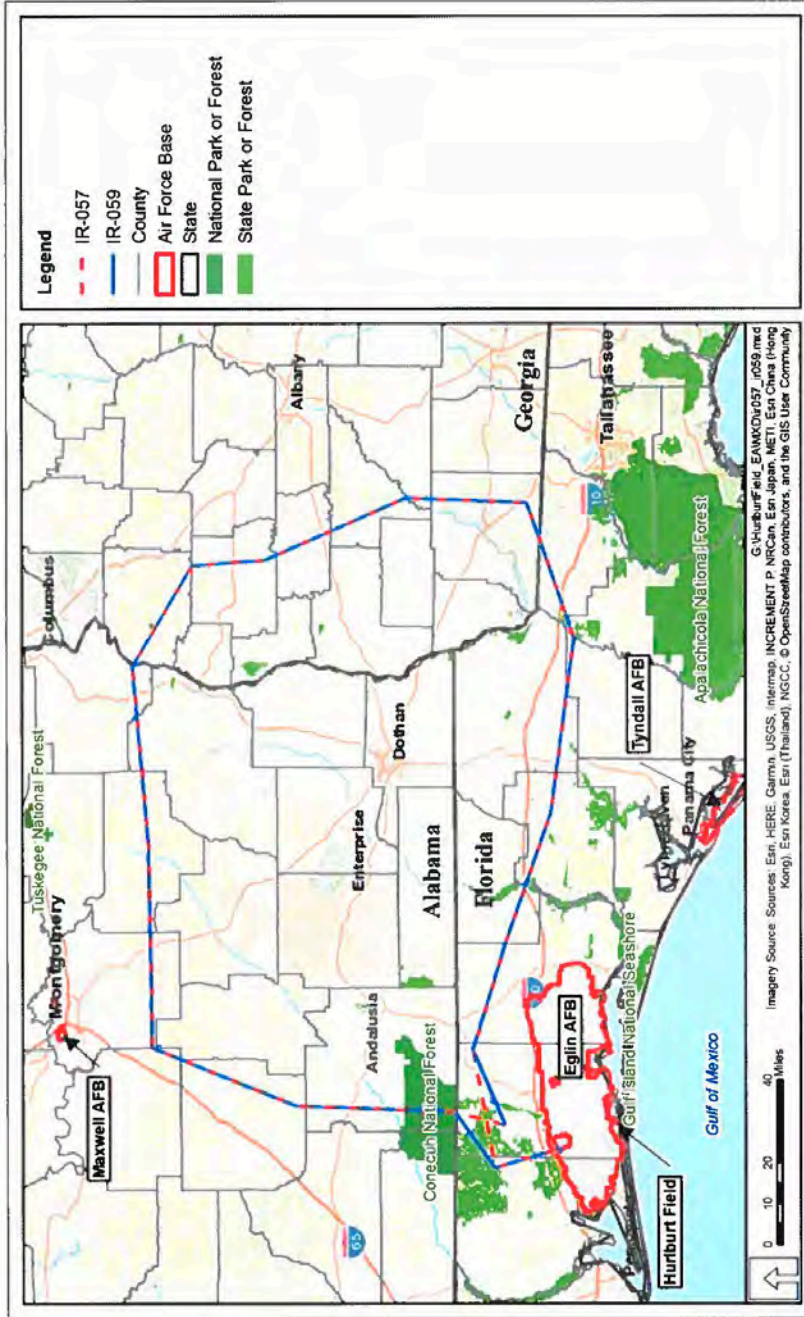
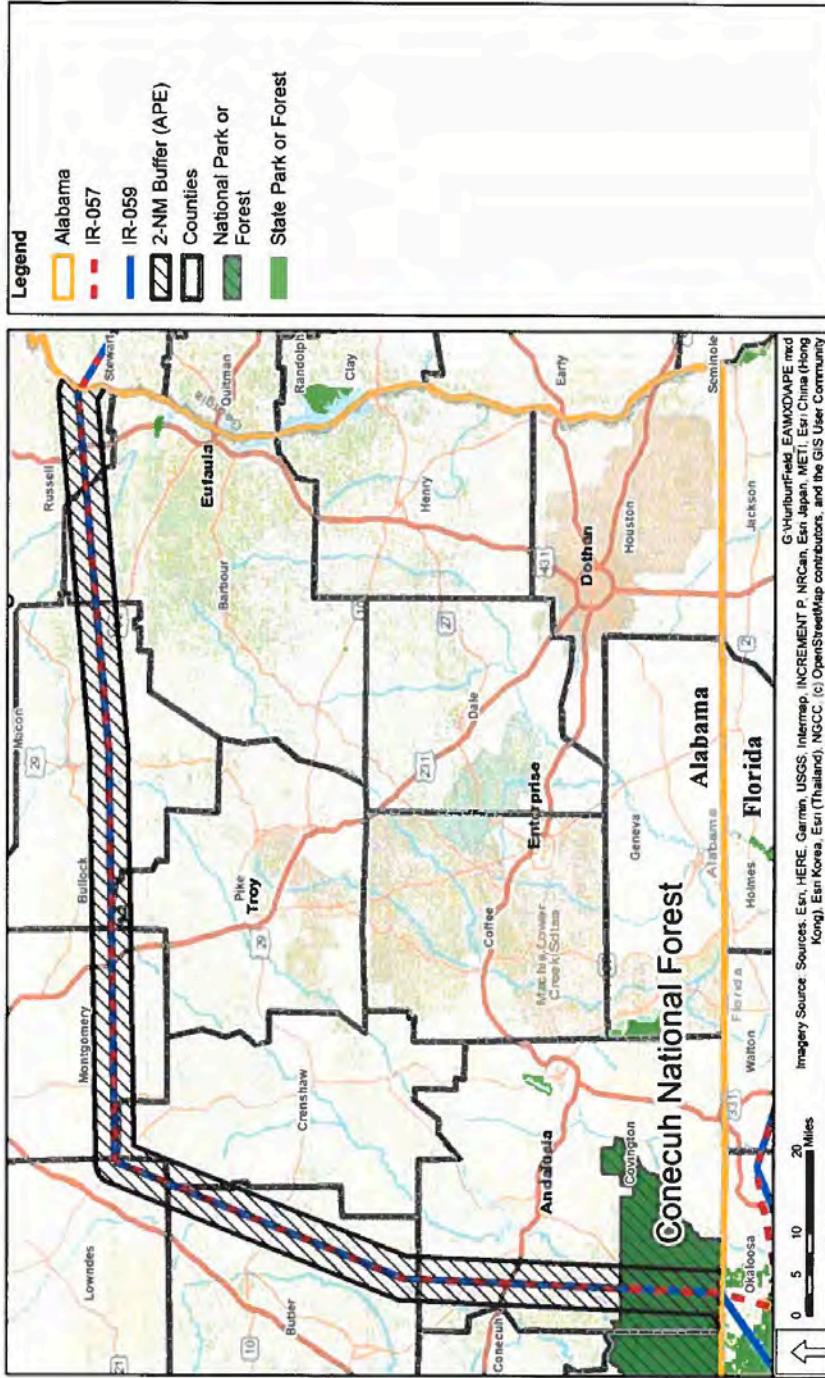


Figure 1. Location of Instrument Route-057 and Instrument Route-059

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Addressing the Change in Air Force Operations in IR-057 and IR-059**

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**Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059**



**DEPARTMENT OF THE AIR FORCE
1ST SPECIAL OPERATIONS CIVIL ENGINEER SQUADRON
HURLBURT FIELD, FLORIDA**

Dana McIntyre, P.E., DAF
Civil Engineer Tribal Liaison Officer
1st Special Operations Civil Engineer Squadron
415 Independence Road, Building 90053
Hurlburt Field, FL 32544

Chairman Lovelin Poncho
Coushatta Tribe of Louisiana
PO Box 10
Elton, LA 70532

Dear Chairman Poncho:

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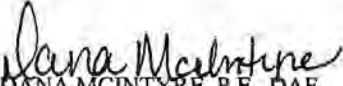
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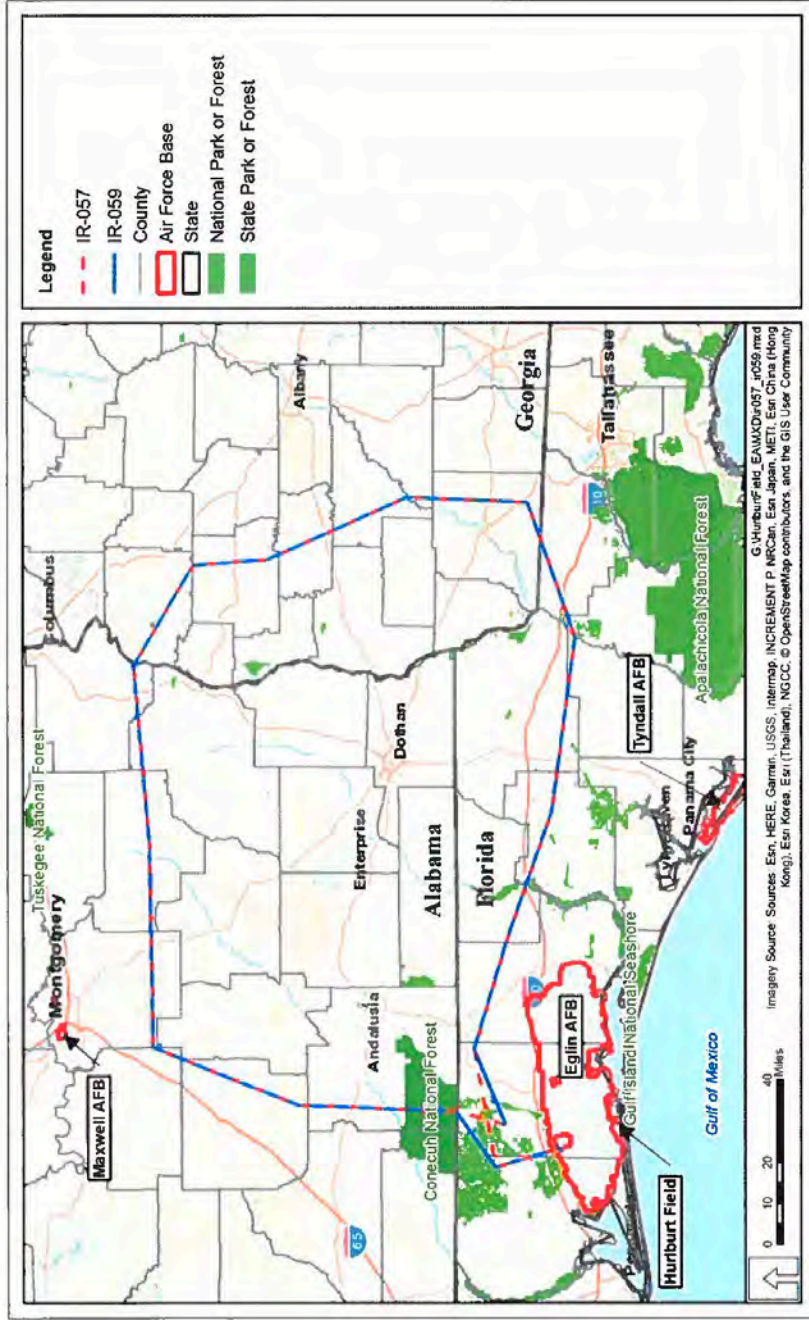
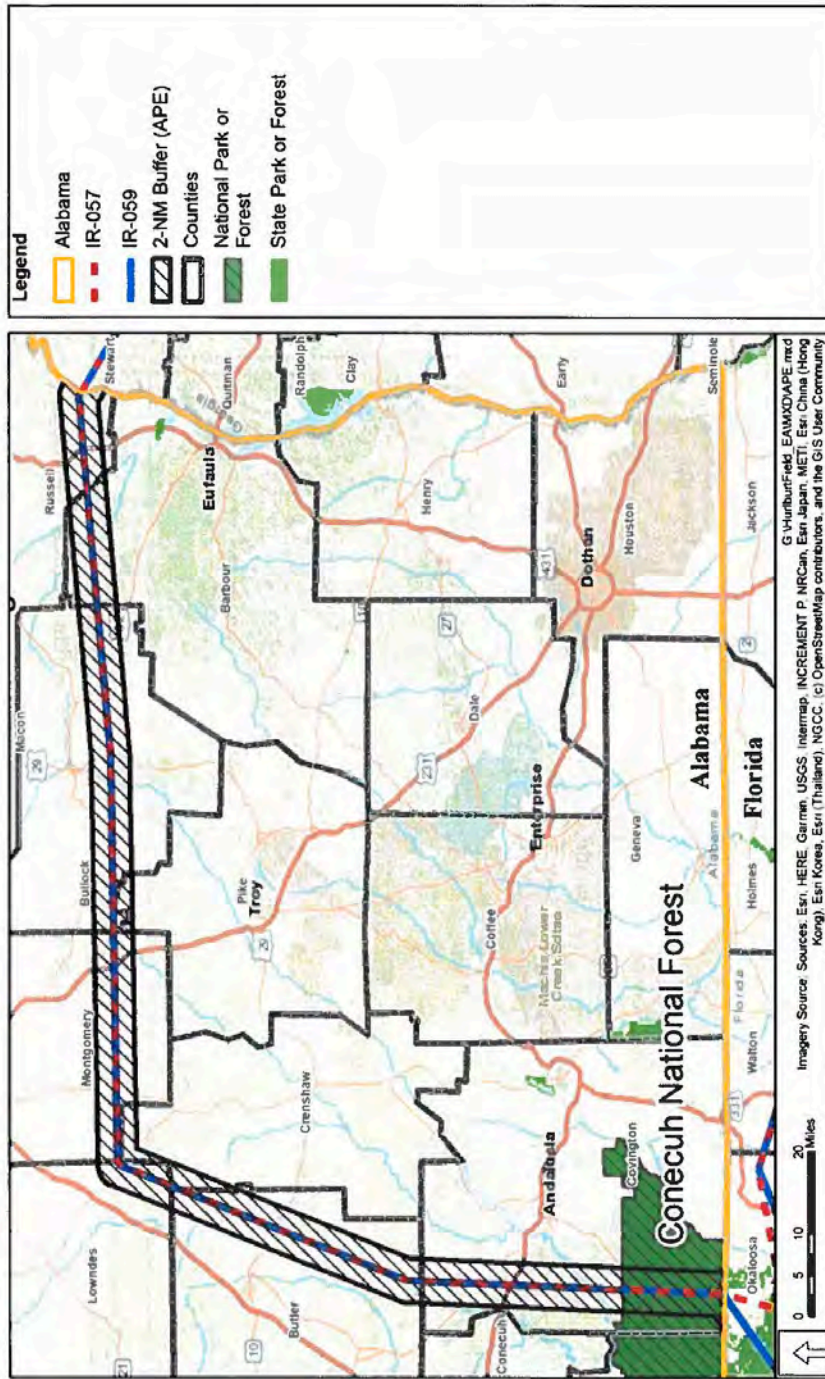


Figure 1. Location of Instrument Route-057 and Instrument Route-059

**Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059**

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**Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059**

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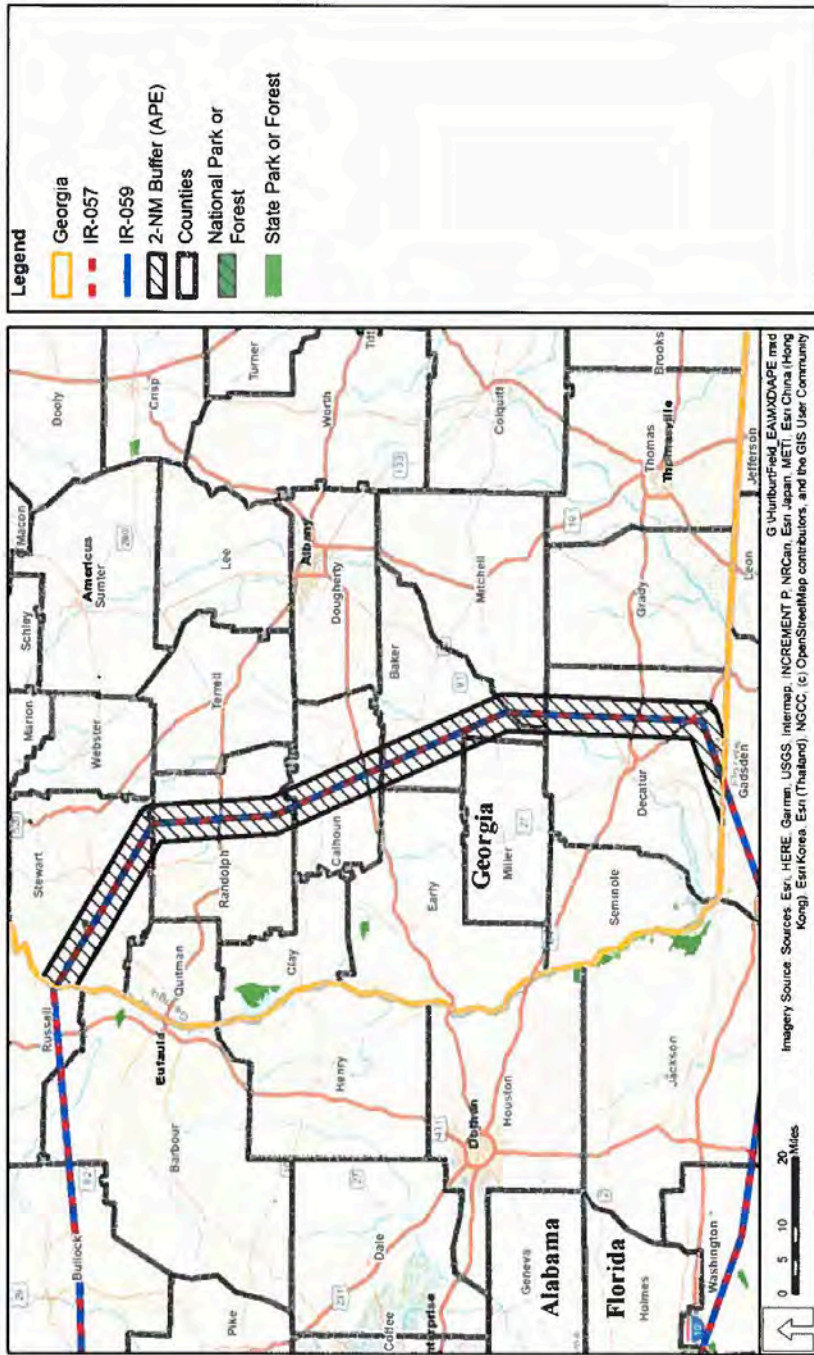


Figure 4. Area of Potential Effects within the State of Georgia

**Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059**



**DEPARTMENT OF THE AIR FORCE
1ST SPECIAL OPERATIONS CIVIL ENGINEER SQUADRON
HURLBURT FIELD, FLORIDA**

Dana McIntyre, P.E., DAF
Civil Engineer Tribal Liaison Officer
1st Special Operations Civil Engineer Squadron
415 Independence Road, Building 90053
Hurlburt Field, FL 32544

Chief Glenna Wallace
Eastern Shawnee Tribe of Oklahoma
PO Box 350
Seneca, MO 64865

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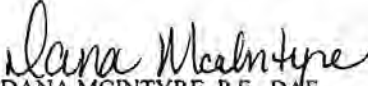
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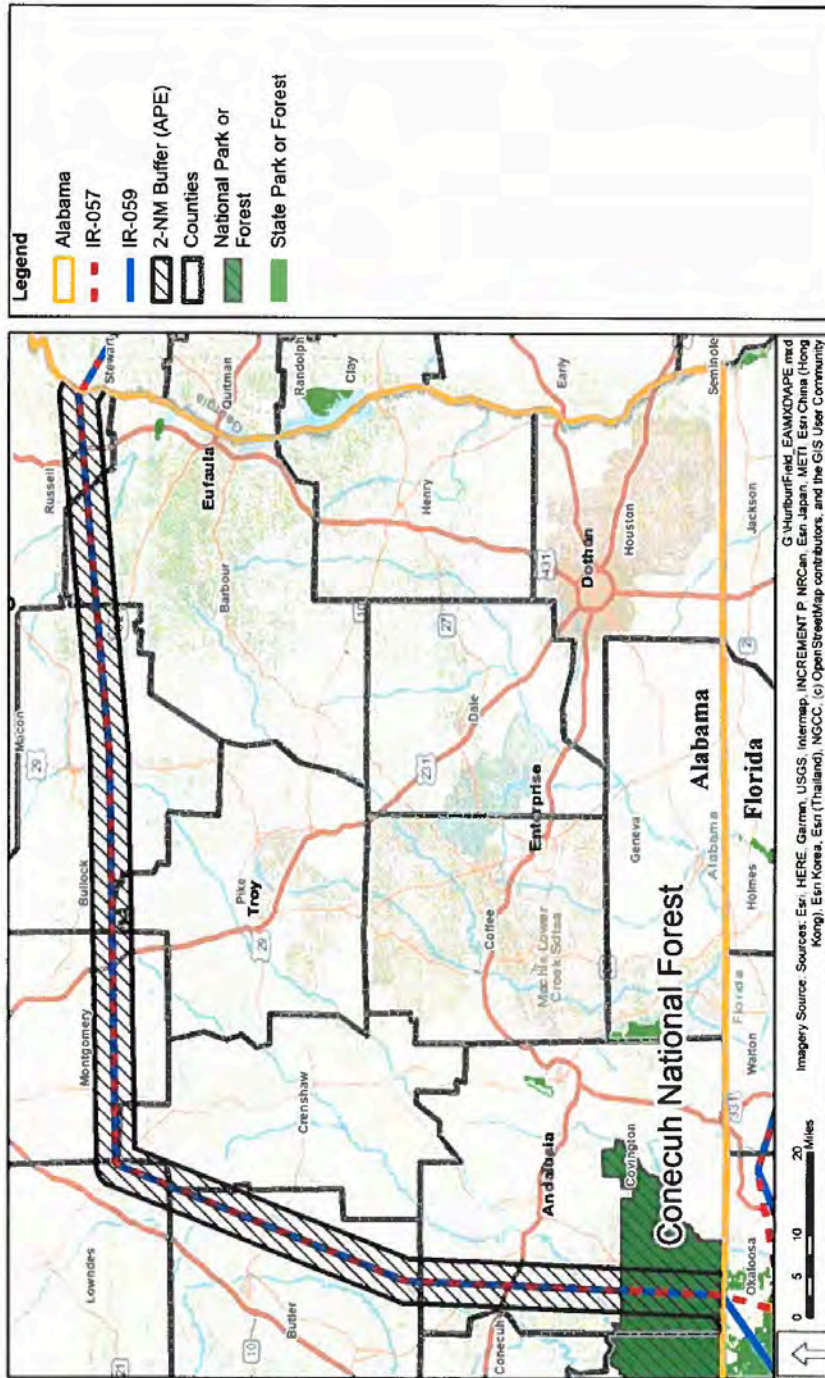


Figure 2. Area of Potential Effects within the State of Alabama

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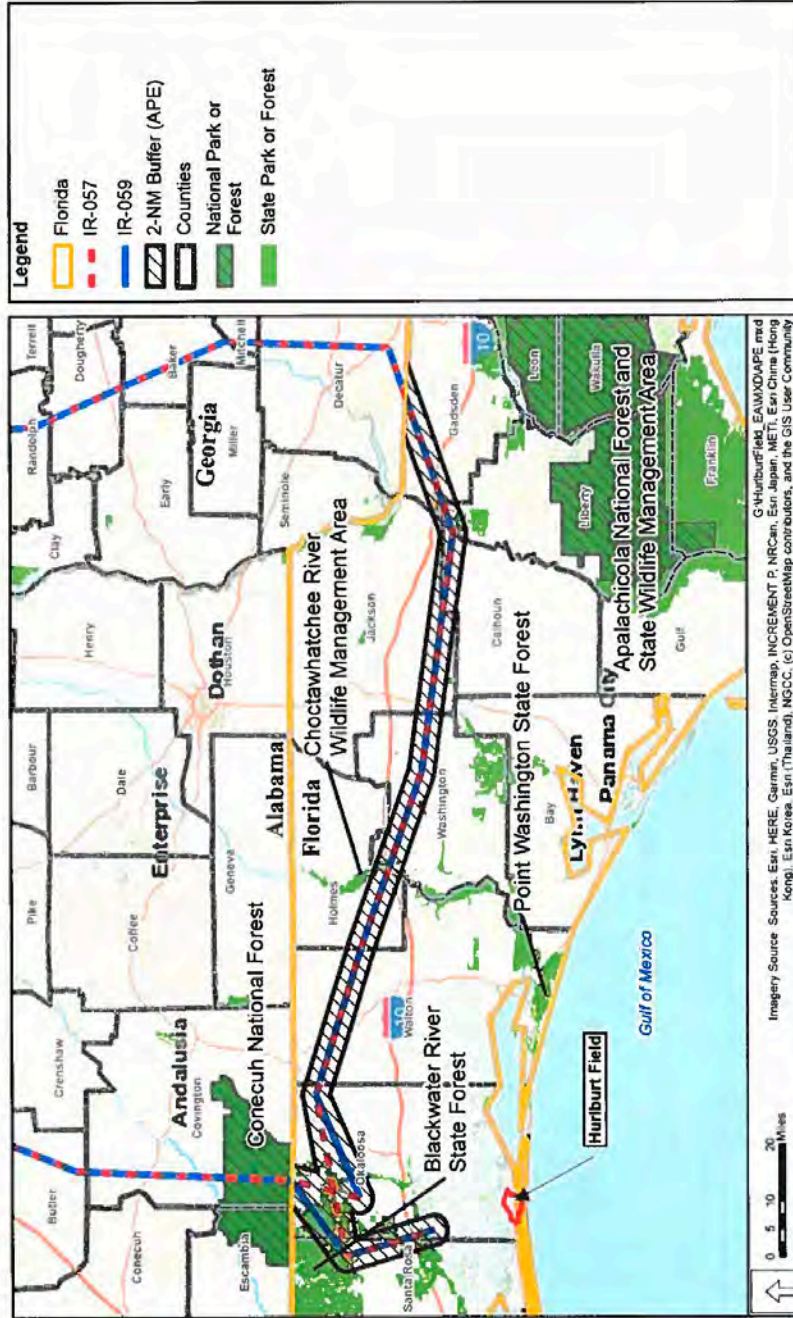
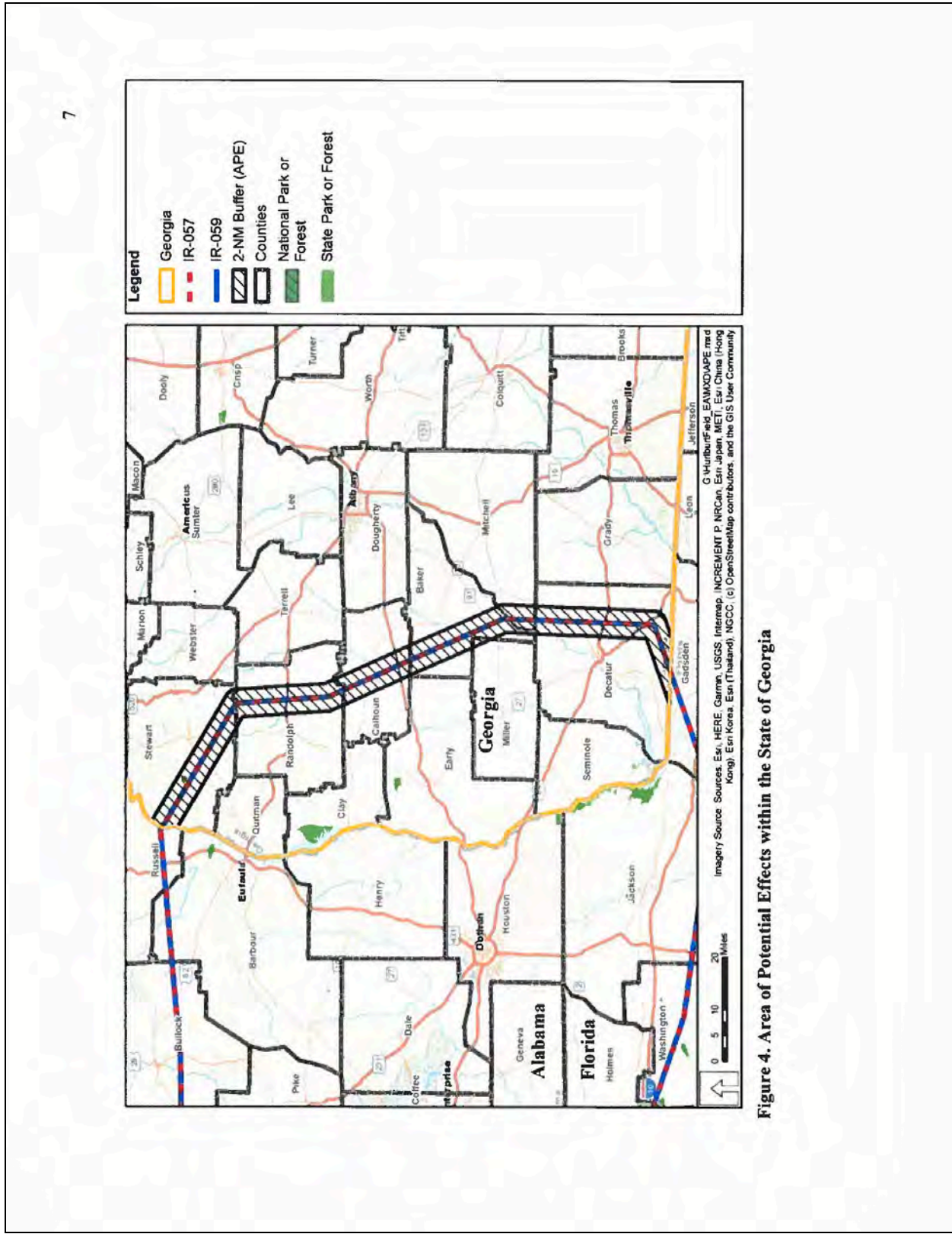


Figure 3. Area of Potential Effects within the State of Florida

**Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059**



**Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059**



**DEPARTMENT OF THE AIR FORCE
1ST SPECIAL OPERATIONS CIVIL ENGINEER SQUADRON
HURLBURT FIELD, FLORIDA**

Dana McIntyre, P.E., DAF
Civil Engineer Tribal Liaison Officer
1st Special Operations Civil Engineer Squadron
415 Independence Road, Building 90053
Hurlburt Field, FL 32544

Chief Cheryl Smith
Jena Band of Choctaw Indians
PO Box 14
Jena, Louisiana 71342

Dear Chief Smith:

In accordance with the National Environmental Policy Act (NEPA) of 1969, the Council of Environmental Quality regulations, and the United States Air Force (Air Force) NEPA regulations, the Air Force is preparing an Environmental Assessment (EA) for the renewal of military training routes (MTRs) Instrument Route (IR)-057 and IR-059. The Air Force is initiating government-to-government consultation with you under Section 106 of the National Historic Preservation Act (NHPA) and requests your concurrence on the determined Area of Potential Effects (APE) and the Air Force's determination of effects for this undertaking.

Air Force Special Operations Command utilizes designated special use airspace and MTRs to sustain pilots' proficiency in air combat tactics and to accomplish special operations activities such as unconventional warfare, direct action, special reconnaissance, counterterrorism, foreign internal defense, personnel recovery, and information operations. MTRs are aerial corridors in which military aircraft can operate and where all other aircraft are restricted from operating. The Air Force is proposing the renewal of MTRs IR-057 and IR-059 (Figure 1) for Hurlburt Field, Florida.

IR-057 and IR-059 were created in 1989; are located in portions of Alabama, Florida, and Georgia; have a width of 2 nautical miles on either side of the centerline; are 380 nautical miles long; and were originally created for C-130 operations. An EA was completed in March 1994 that modified IR-057 and IR-059 by adding MH-53 (helicopter) operations to the IRs and lowered the floor of the IRs from 250 feet to 200 feet Above Ground Level (AGL) for helicopter operations. Due to an upgrade in aircraft design and capabilities, an EA is currently required for the IR-057 and IR-059 renewal.

The undertaking under Section 106 is to renew the use of IR-057 and IR-059 and would amend the type of aircraft permitted for flight training operations from C-130s and MH-53s to Hurlburt Field-stationed CV-22s, MC-130H/Js, and Army HH-60s. The IRs would continue to have a ground track of approximately 380 NM, with a corridor width of 2 NM on either side of the IR centerline. The IRs would continue to be used for flight training in conjunction with

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Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059

2

military operations areas (MOAs) as well as MTRs, slow routes and Low Altitude Tactical Navigation (LATN) areas, enabling the 1st Special Operations Wing to optimize air combat training of military personnel. The route would continue to be flown at 250 knots or less, at floor altitudes as low as 200 feet AGL during daytime and nighttime hours by CV-22s and HH-60s, and at floor altitudes as low as 250 feet AGL during daytime and nighttime hours for MC-130H/Js.

The undertaking would not modify the current use of the IRs (i.e., no change in permitted airspeed, altitude, floor, avoidance of sensitive areas, or hours of operation) except for amending IR-057 and IR-059 to allow for CV-22, MC-130H/J, and HH-60 training operations. Aircraft would continue to use other MOAs, MTRs, slow routes, and LATNs to access the IRs, and existing procedures for identifying areas of concern would continue to be followed. No new entry or exit routes would be added to the existing IRs.

The undertaking would not alter the number of aircraft stationed at Hurlburt Field nor would it affect the number of personnel or support facilities needed for training operations. The Proposed Action would not include any new ground operations, nor would it develop any new helicopter landing zones or drop zones. No construction, site alteration, or other ground-disturbing activities are planned as part of the Proposed Action.

The APE is defined as the geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties, if any such properties exist. Taking into account the scale and nature of the undertaking, the Air Force has defined the APE for this undertaking as a 2-nautical mile (2.3-mile) buffer on each side of the MTRs IR-057 and IR-059. The APE includes areas where visual, noise, and vibration effects to historic properties may occur.

The project APE involves a large geographic region in portions of Alabama, Florida, and Georgia (Figure 2, Figure 3, and Figure 4). Anticipated potential effects to historic properties and properties of religious or cultural significance would be limited to visual, noise, and vibration effects as the project would not involve construction, demolition, or any other ground-disturbing activity that would have the potential to directly affect archaeological resources or other historic properties. Under the proposed undertaking, training missions would continue to occur in areas subjected to military aircraft overflights for the last 31 years, and no more than 73 overflights would occur in each of the IRs annually. The proposed operations would be transient and not permanently alter the surrounding environment, limiting the range and duration of anticipated effects on the eligibility of historic properties within the APE.


A scoping letter was sent to you in March 2020 requesting your assistance in identifying any properties of religious and cultural significance to your tribe within the project's APE. No properties of religious or cultural significance were identified during the scoping period. Based on the nature of the undertaking and the scope and duration of anticipated effects, the Air Force has determined the undertaking will have *no adverse effect on historic properties under Section 106, including properties of religious and cultural significance.*

In accordance with Executive Order 13175, Consultation with Indian Tribal Governments, and Section 106 of the National Historic Preservation Act and its implementing regulations at 36 CFR Part 800, the Air Force respectfully requests that you provide your written questions or comments on or your concurrence with the Air Force's determination of *no adverse effect* within 30 days of receipt of this letter; however, if you need additional time to evaluate the

Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059

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Proposed Action, the Air Force will consider all matters submitted.. Please address all questions and comments to Mr. Derek Adkins, NEPA Coordinator, 1 SOCES/CENP, 415 Independence Road, Building 90053, Hurlburt Field, FL 32544; or by email at derek.adkins@us.af.mil. Comments are encouraged to be sent directly via email to derek.adkins@us.af.mil. Thank you in advance for your assistance in this effort.


DANA MCINTYRE, P.E., DAF
Civil Engineer Tribal Liaison Officer

Attachments:

1. *Figure 1. Location of IR-057 and IR-059*
2. *Figure 2. Location of Area of Potential Effects within the State of Alabama*
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**Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059**

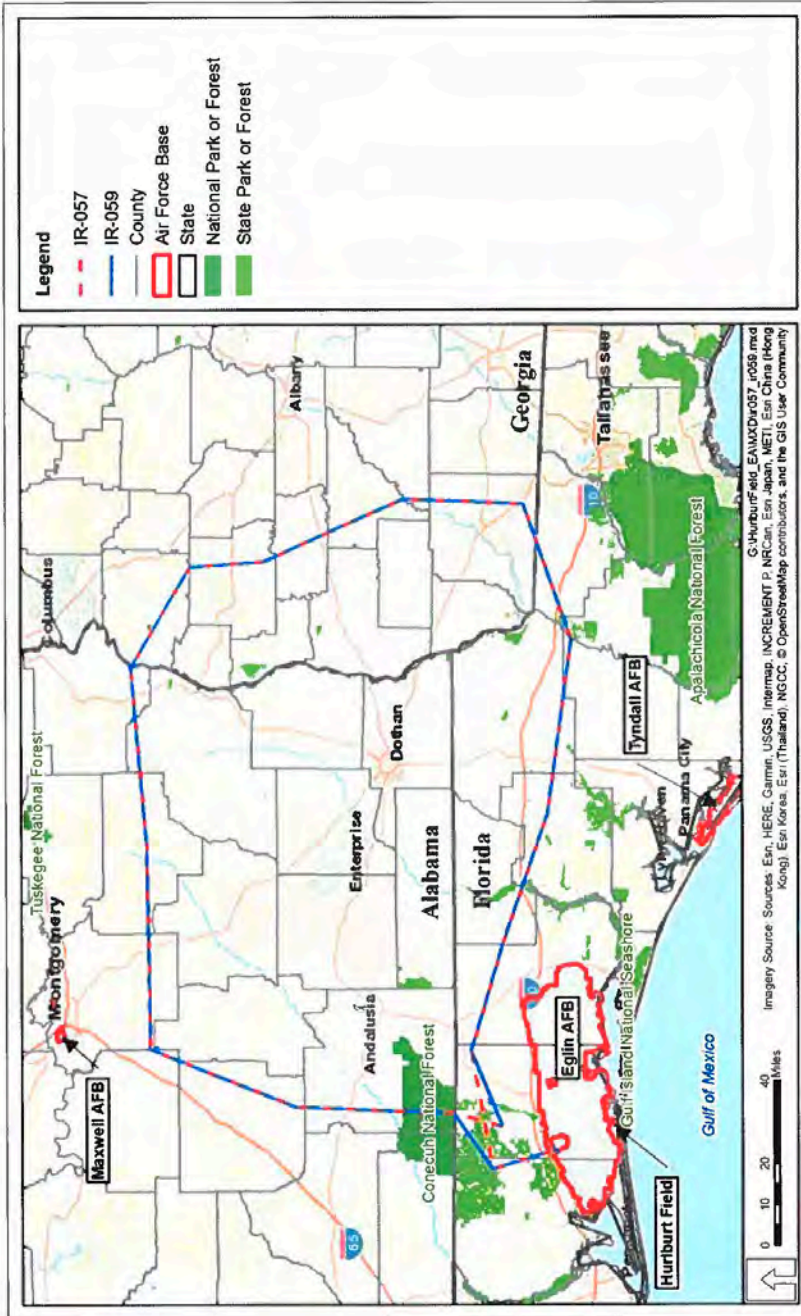


Figure 1. Location of Instrument Route-057 and Instrument Route-059

Final Environmental Assessment
 Addressing the Change in Air Force Operations in IR-057 and IR-059

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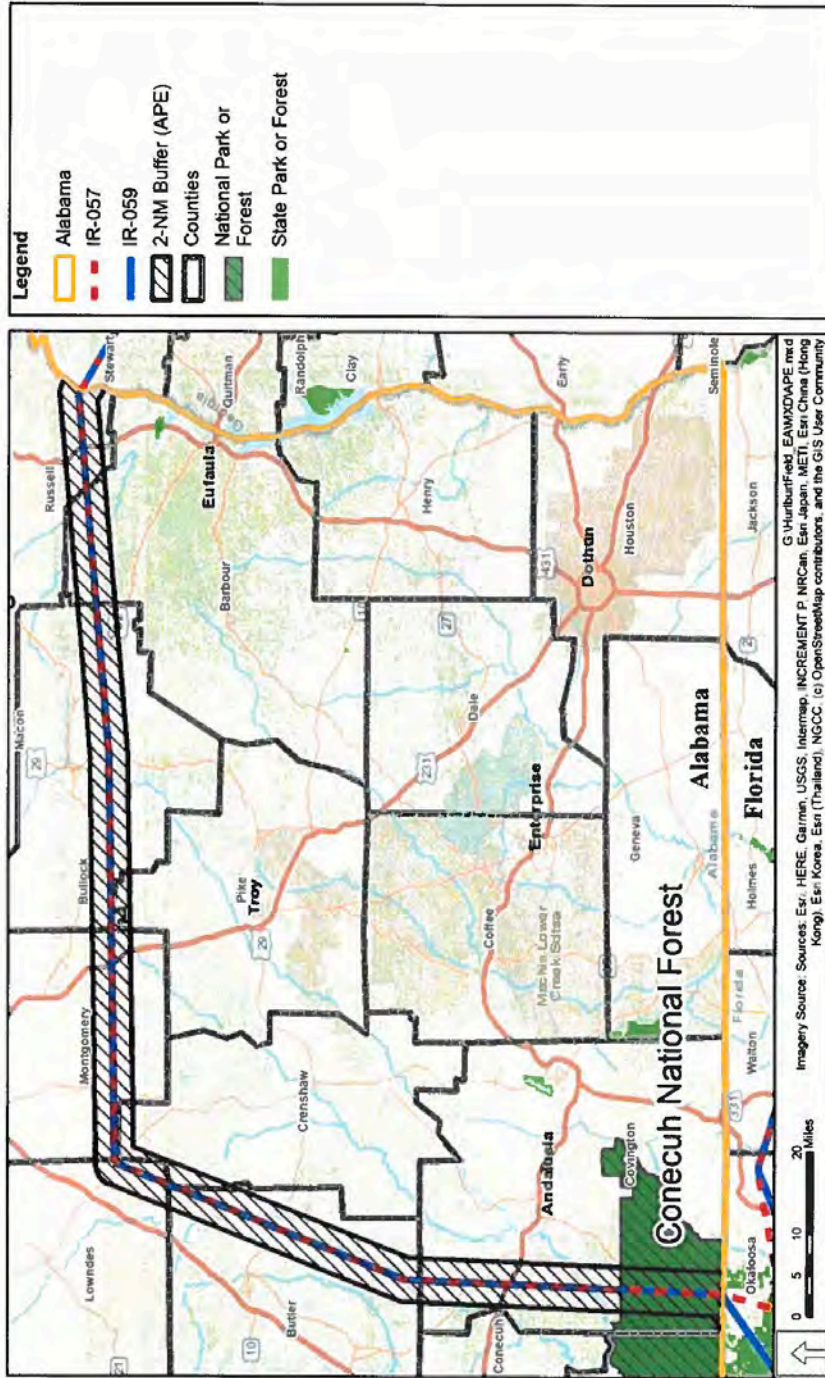


Figure 2. Area of Potential Effects within the State of Alabama

Final Environmental Assessment
 Addressing the Change in Air Force Operations in IR-057 and IR-059

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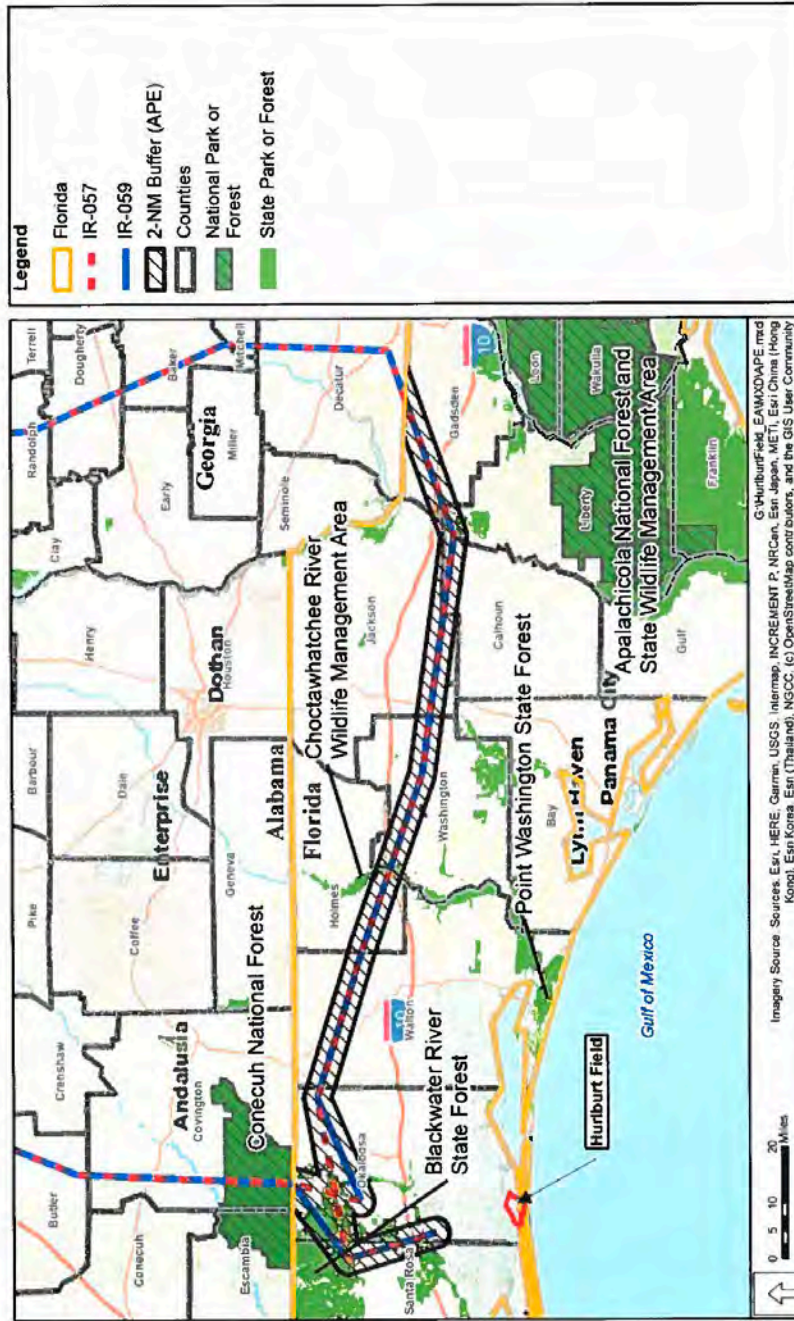
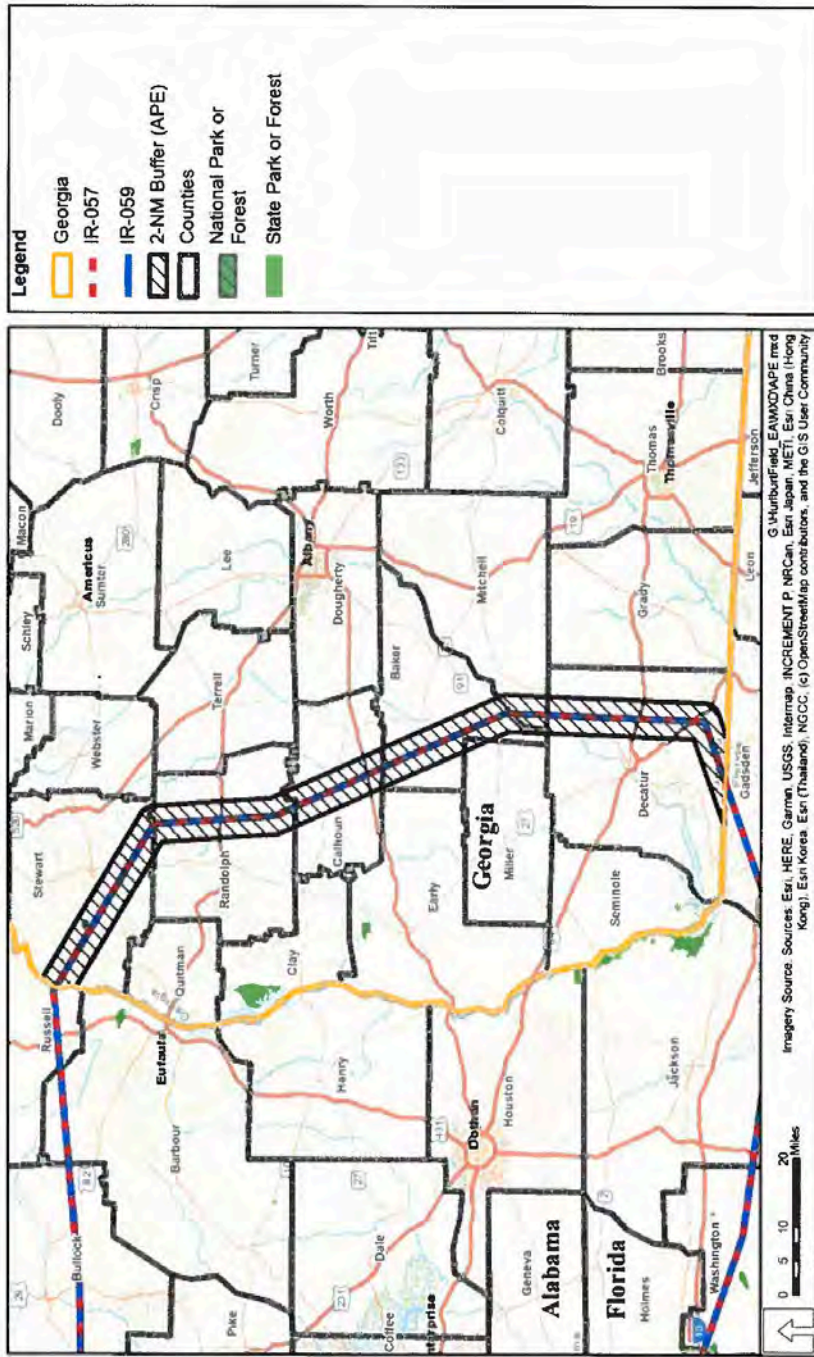


Figure 3. Area of Potential Effects within the State of Florida

**Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059**

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**Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059**



**DEPARTMENT OF THE AIR FORCE
1ST SPECIAL OPERATIONS CIVIL ENGINEER SQUADRON
HURLBURT FIELD, FLORIDA**

Dana McIntyre, P.E., DAF
Civil Engineer Tribal Liaison Officer
1st Special Operations Civil Engineer Squadron
415 Independence Road, Building 90053
Hurlburt Field, FL 32544

Chairperson Billy Cypress
Miccosukee Tribe of Indians of Florida
Tamiami Station
PO Box 440021
Miami, FL 33144

Dear Chairperson Cypress:

In accordance with the National Environmental Policy Act (NEPA) of 1969, the Council of Environmental Quality regulations, and the United States Air Force (Air Force) NEPA regulations, the Air Force is preparing an Environmental Assessment (EA) for the renewal of military training routes (MTRs) Instrument Route (IR)-057 and IR-059. The Air Force is initiating government-to-government consultation with you under Section 106 of the National Historic Preservation Act (NHPA) and requests your concurrence on the determined Area of Potential Effects (APE) and the Air Force's determination of effects for this undertaking.

Air Force Special Operations Command utilizes designated special use airspace and MTRs to sustain pilots' proficiency in air combat tactics and to accomplish special operations activities such as unconventional warfare, direct action, special reconnaissance, counterterrorism, foreign internal defense, personnel recovery, and information operations. MTRs are aerial corridors in which military aircraft can operate and where all other aircraft are restricted from operating. The Air Force is proposing the renewal of MTRs IR-057 and IR-059 (Figure 1) for Hurlburt Field, Florida.

IR-057 and IR-059 were created in 1989; are located in portions of Alabama, Florida, and Georgia; have a width of 2 nautical miles on either side of the centerline; are 380 nautical miles long; and were originally created for C-130 operations. An EA was completed in March 1994 that modified IR-057 and IR-059 by adding MH-53 (helicopter) operations to the IRs and lowered the floor of the IRs from 250 feet to 200 feet Above Ground Level for helicopter operations. Due to an upgrade in aircraft design and capabilities, an EA is currently required for the IR-057 and IR-059 renewal.

The undertaking under Section 106 is to renew the use of IR-057 and IR-059 and would amend the type of aircraft permitted for flight training operations from C-130s and MH-53s to Hurlburt Field-stationed CV-22s, MC-130H/Js, and Army HH-60s. The IRs would continue to have a ground track of approximately 380 NM, with a corridor width of 2 NM on either side of

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Addressing the Change in Air Force Operations in IR-057 and IR-059

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the IR centerline. The IRs would continue to be used for flight training in conjunction with military operations areas (MOAs) as well as MTRs, slow routes and Low Altitude Tactical Navigation (LATN) areas, enabling the 1st Special Operations Wing to optimize air combat training of military personnel. The route would continue to be flown at 250 knots or less, at floor altitudes as low as 200 feet AGL during daytime and nighttime hours by CV-22s and HH-60s, and at floor altitudes as low as 250 feet AGL during daytime and nighttime hours for MC-130H/J.

The undertaking would not modify the current use of the IRs (i.e., no change in permitted airspeed, altitude, floor, avoidance of sensitive areas, or hours of operation) except for amending IR-057 and IR-059 to allow for CV-22, MC-130H/J, and HH-60 training operations. Aircraft would continue to use other MOAs, MTRs, slow routes, and LATNs to access the IRs, and existing procedures for identifying areas of concern would continue to be followed. No new entry or exit routes would be added to the existing IRs.

The undertaking would not alter the number of aircraft stationed at Hurlburt Field nor would it affect the number of personnel or support facilities needed for training operations. The Proposed Action would not include any new ground operations, nor would it develop any new helicopter landing zones or drop zones. No construction, site alteration, or other ground-disturbing activities are planned as part of the Proposed Action.

The APE is defined as the geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties, if any such properties exist. Taking into account the scale and nature of the undertaking, the Air Force has defined the APE for this undertaking as a 2-nautical mile (2.3-mile) buffer on each side of the MTRs IR-057 and IR-059. The APE includes areas where visual, noise, and vibration effects to historic properties may occur.

The project APE involves a large geographic region in portions of Alabama, Florida, and Georgia (Figure 2, Figure 3, and Figure 4). Anticipated potential effects to historic properties and properties of religious or cultural significance would be limited to visual, noise, and vibration effects as the project would not involve construction, demolition, or any other ground-disturbing activity that would have the potential to directly affect archaeological resources or other historic properties. Under the proposed undertaking, training missions would continue to occur in areas subjected to military aircraft overflights for the last 31 years, and no more than 73 overflights would occur in each of the IRs annually. The proposed operations would be transient and not permanently alter the surrounding environment, limiting the range and duration of anticipated effects on the eligibility of historic properties within the APE.


A scoping letter was sent to you in March 2020 requesting your assistance in identifying any properties of religious and cultural significance to your tribe within the project's APE. No properties of religious or cultural significance were identified during the scoping period. Based on the nature of the undertaking and the scope and duration of anticipated effects, the Air Force has determined the undertaking will have *no adverse effect on historic properties under Section 106, including properties of religious and cultural significance.*

In accordance with Executive Order 13175, Consultation with Indian Tribal Governments, and Section 106 of the National Historic Preservation Act and its implementing regulations at 36 CFR Part 800, the Air Force respectfully requests that you provide your written questions or comments on or your concurrence with the Air Force's determination of *no adverse*

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Addressing the Change in Air Force Operations in IR-057 and IR-059

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effect within 30 days of receipt of this letter; however, if you need additional time to evaluate the Proposed Action, the Air Force will consider all matters submitted.. Please address all questions and comments to Mr. Derek Adkins, NEPA Coordinator, 1 SOCES/CENP, 415 Independence Road, Building 90053, Hurlburt Field, FL 32544; or by email at derek.adkins@us.af.mil. Comments are encouraged to be sent directly via email to derek.adkins@us.af.mil. Thank you in advance for your assistance in this effort.


DANA MCINTYRE, P.E., DAF
Civil Engineer Tribal Liaison Officer

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**Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059**

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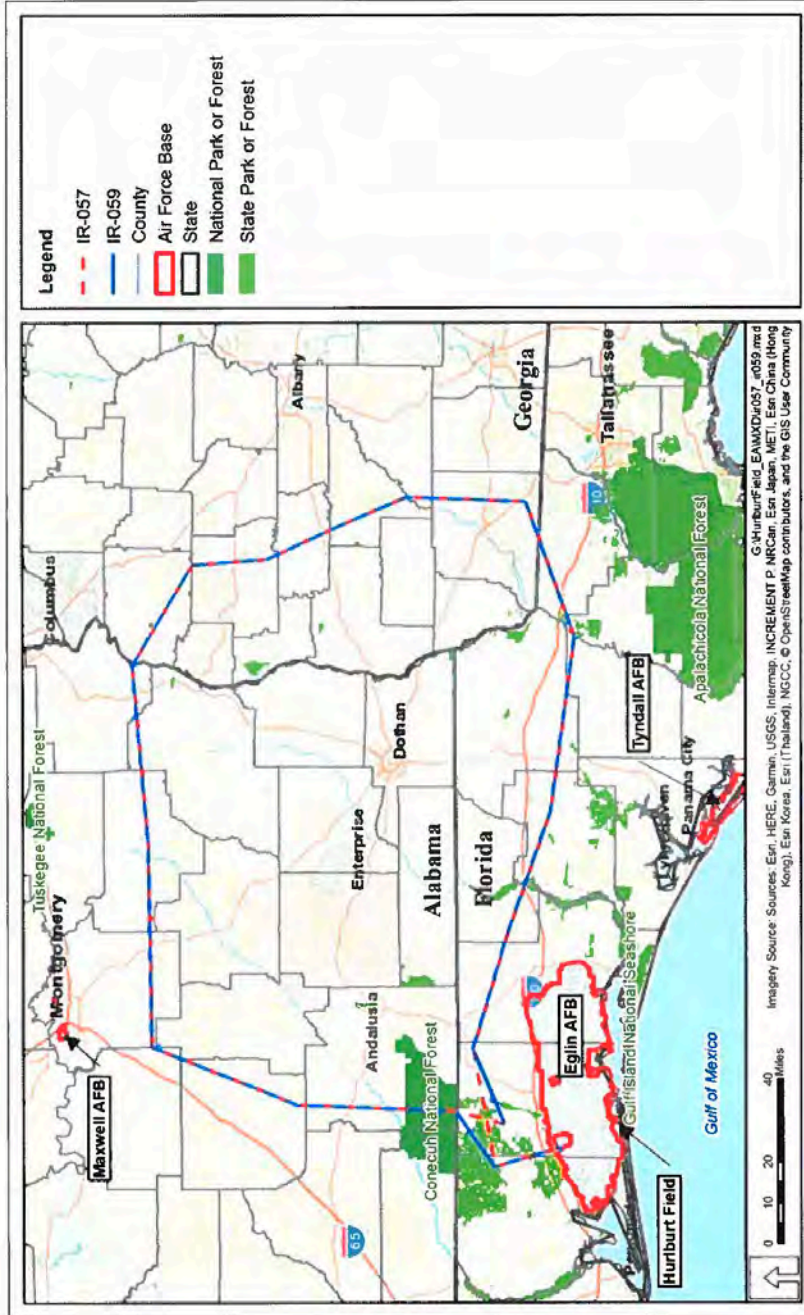
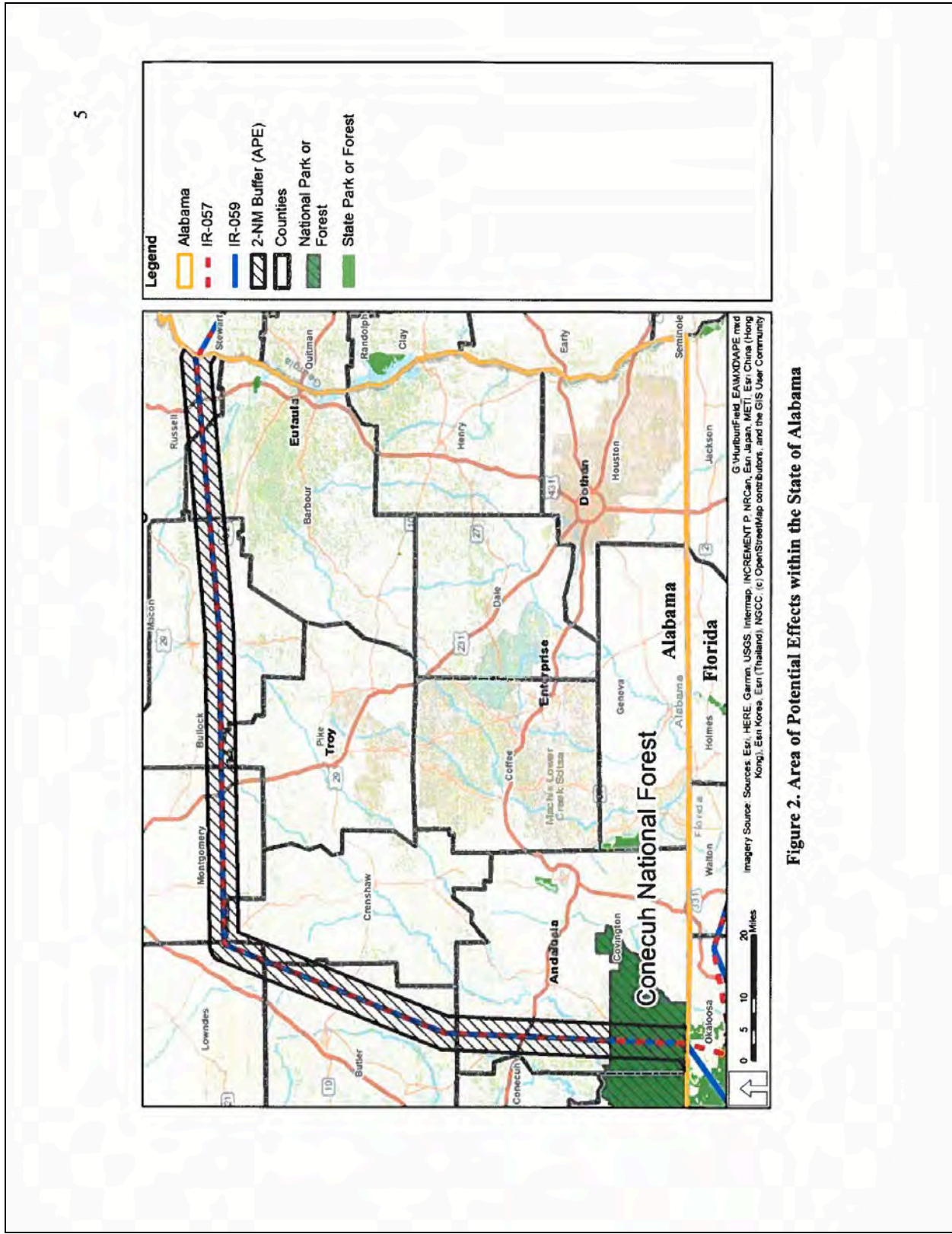


Figure 1. Location of Instrument Route-057 and Instrument Route-059

Final Environmental Assessment
 Addressing the Change in Air Force Operations in IR-057 and IR-059



**Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059**

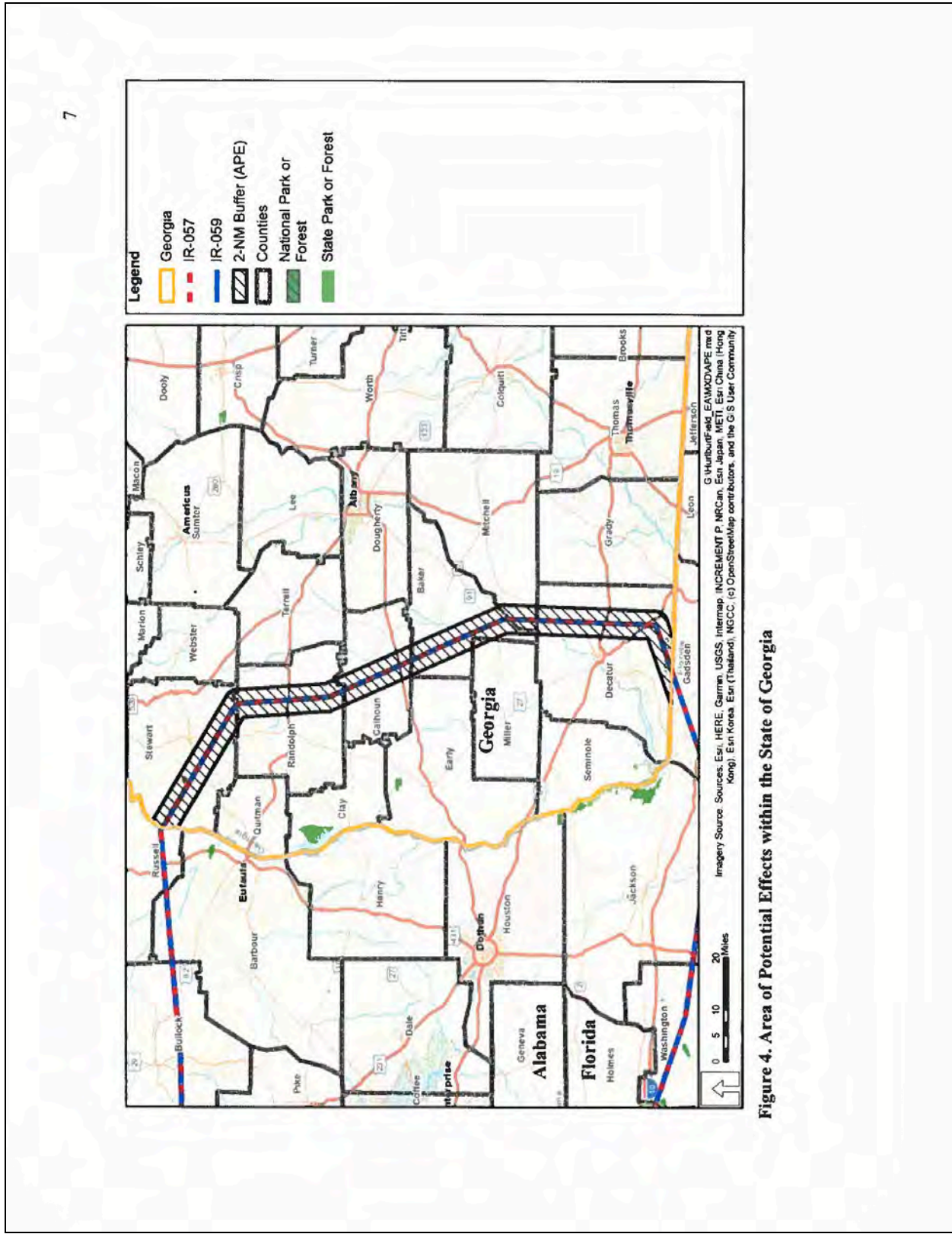


Figure 4. Area of Potential Effects within the State of Georgia

**Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059**



**DEPARTMENT OF THE AIR FORCE
1ST SPECIAL OPERATIONS CIVIL ENGINEER SQUADRON
HURLBURT FIELD, FLORIDA**

Dana McIntyre, P.E., DAF
Civil Engineer Tribal Liaison Officer
1st Special Operations Civil Engineer Squadron
415 Independence Road, Building 90053
Hurlburt Field, FL 32544

Chief Cyrus Ben
Mississippi Band of Choctaw Indians
101 Industrial Road
Choctaw, MS 39350

Dear Chief Ben:

In accordance with the National Environmental Policy Act (NEPA) of 1969, the Council of Environmental Quality regulations, and the United States Air Force (Air Force) NEPA regulations, the Air Force is preparing an Environmental Assessment (EA) for the renewal of military training routes (MTRs) Instrument Route (IR)-057 and IR-059. The Air Force is initiating government-to-government consultation with you under Section 106 of the National Historic Preservation Act (NHPA) and requests your concurrence on the determined Area of Potential Effects (APE) and the Air Force's determination of effects for this undertaking.

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Addressing the Change in Air Force Operations in IR-057 and IR-059

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Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059

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DANA MCINTYRE, P.E., DAF
Civil Engineer Tribal Liaison Officer

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**Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059**

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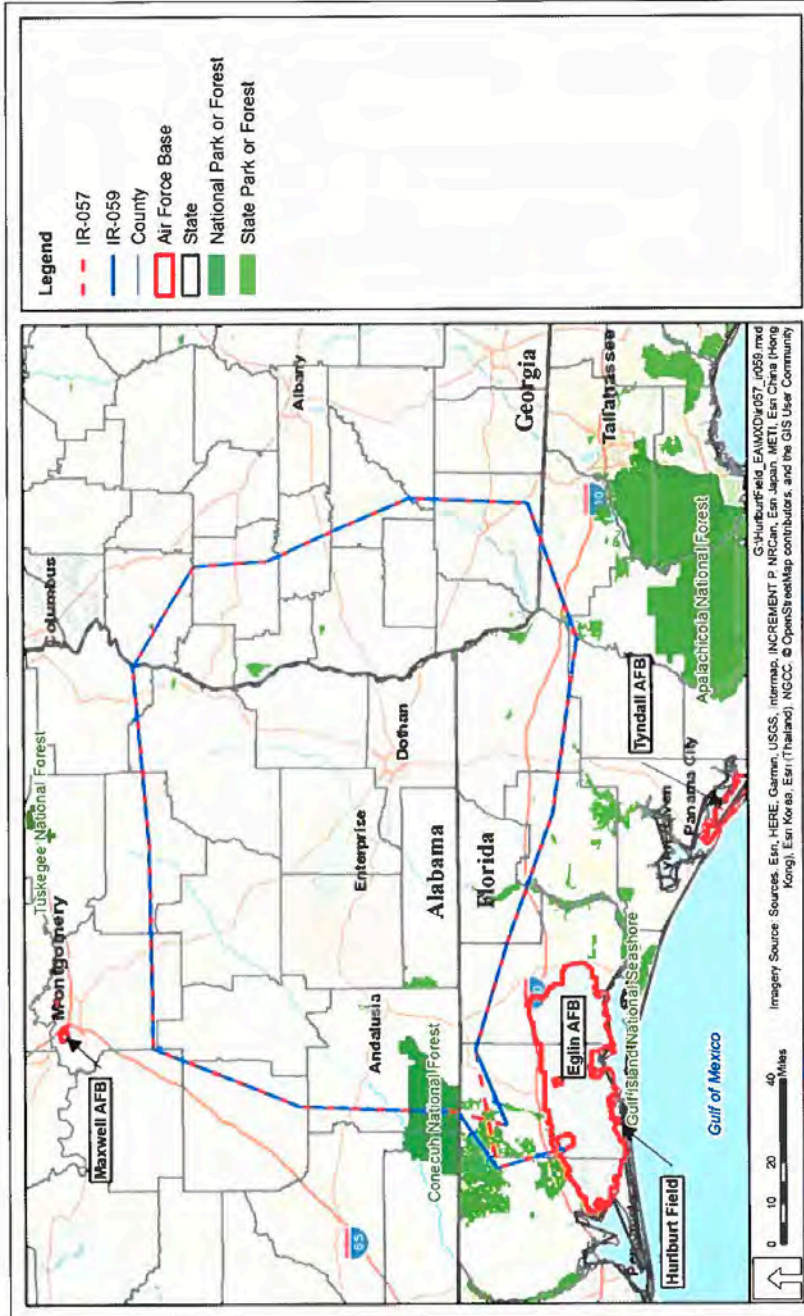


Figure 1. Location of Instrument Route-057 and Instrument Route-059

Final Environmental Assessment
 Addressing the Change in Air Force Operations in IR-057 and IR-059

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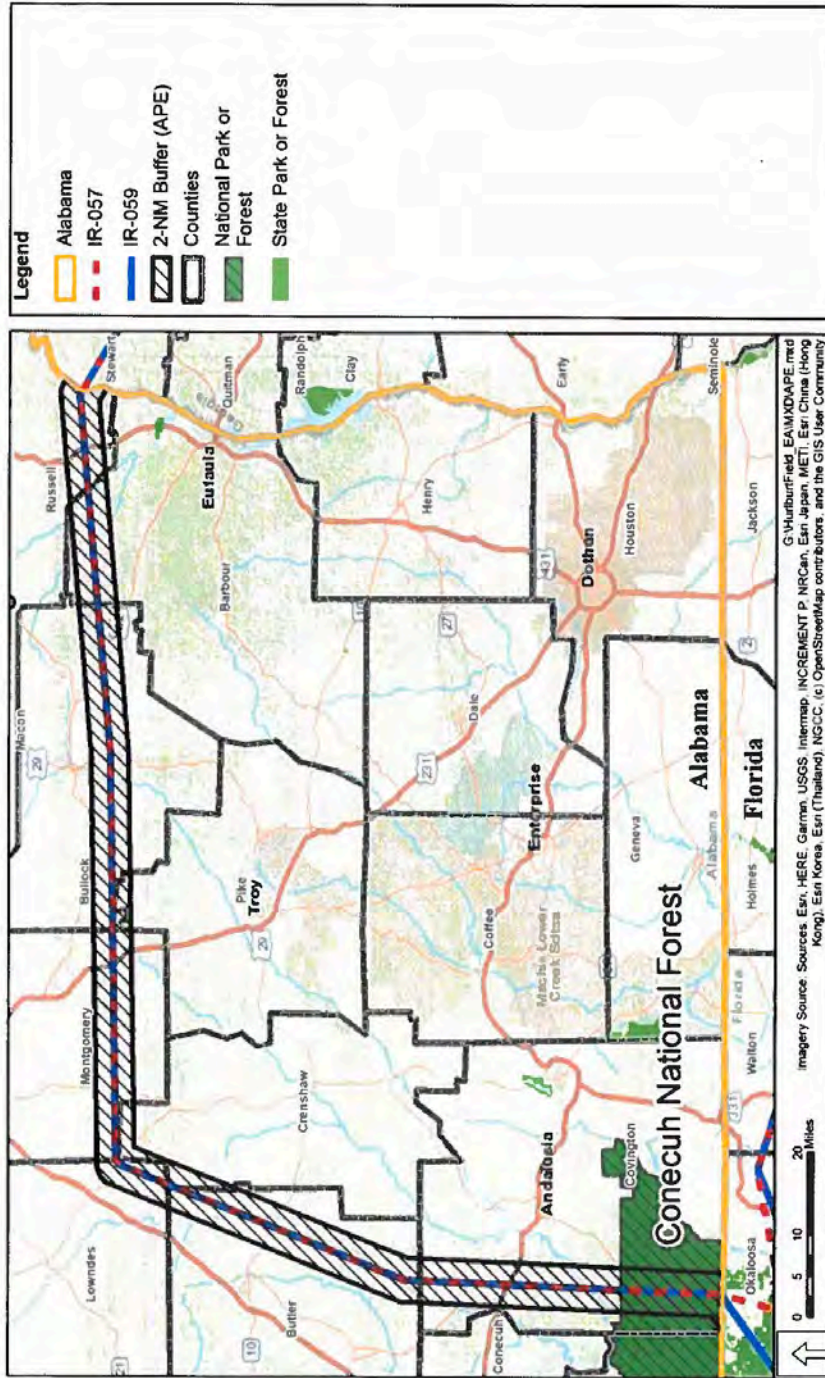


Figure 2. Area of Potential Effects within the State of Alabama

Final Environmental Assessment
 Addressing the Change in Air Force Operations in IR-057 and IR-059

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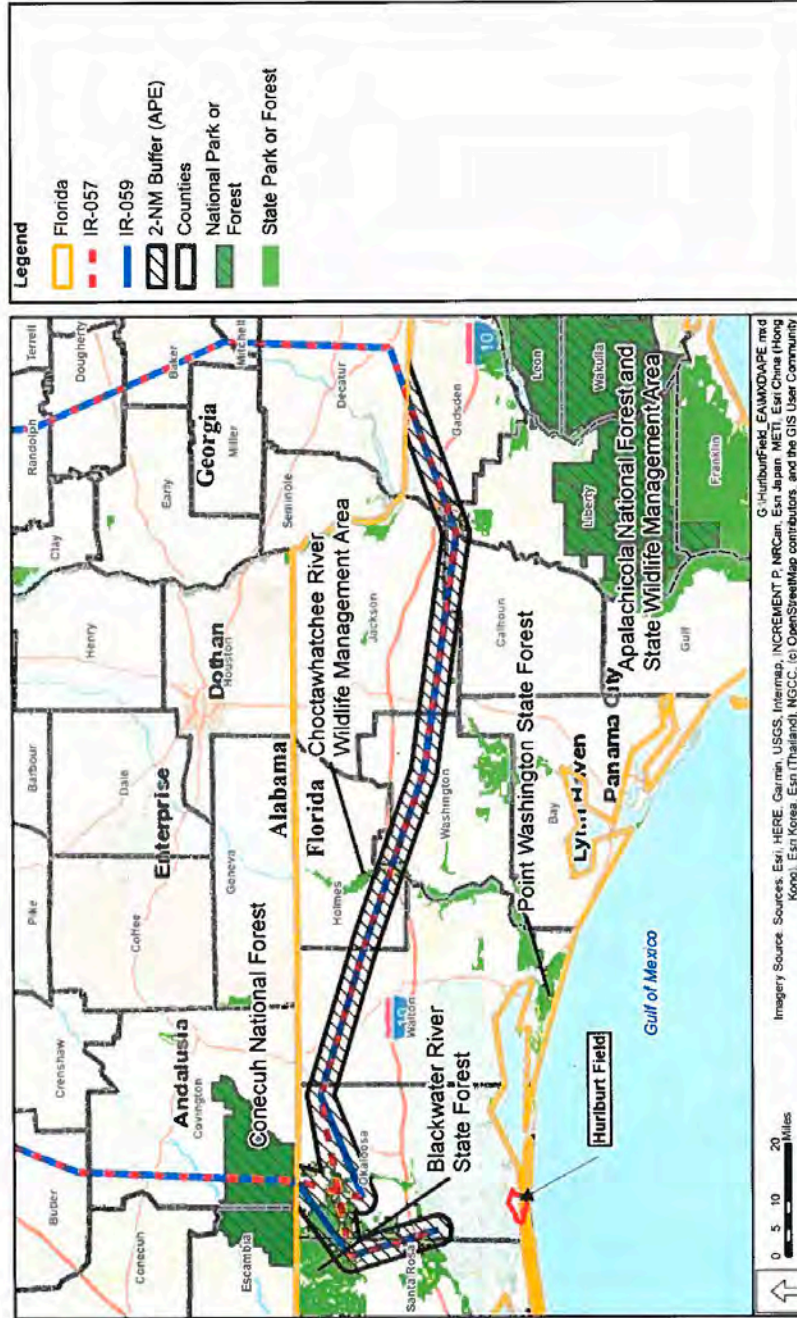


Figure 3. Area of Potential Effects within the State of Florida

**Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059**

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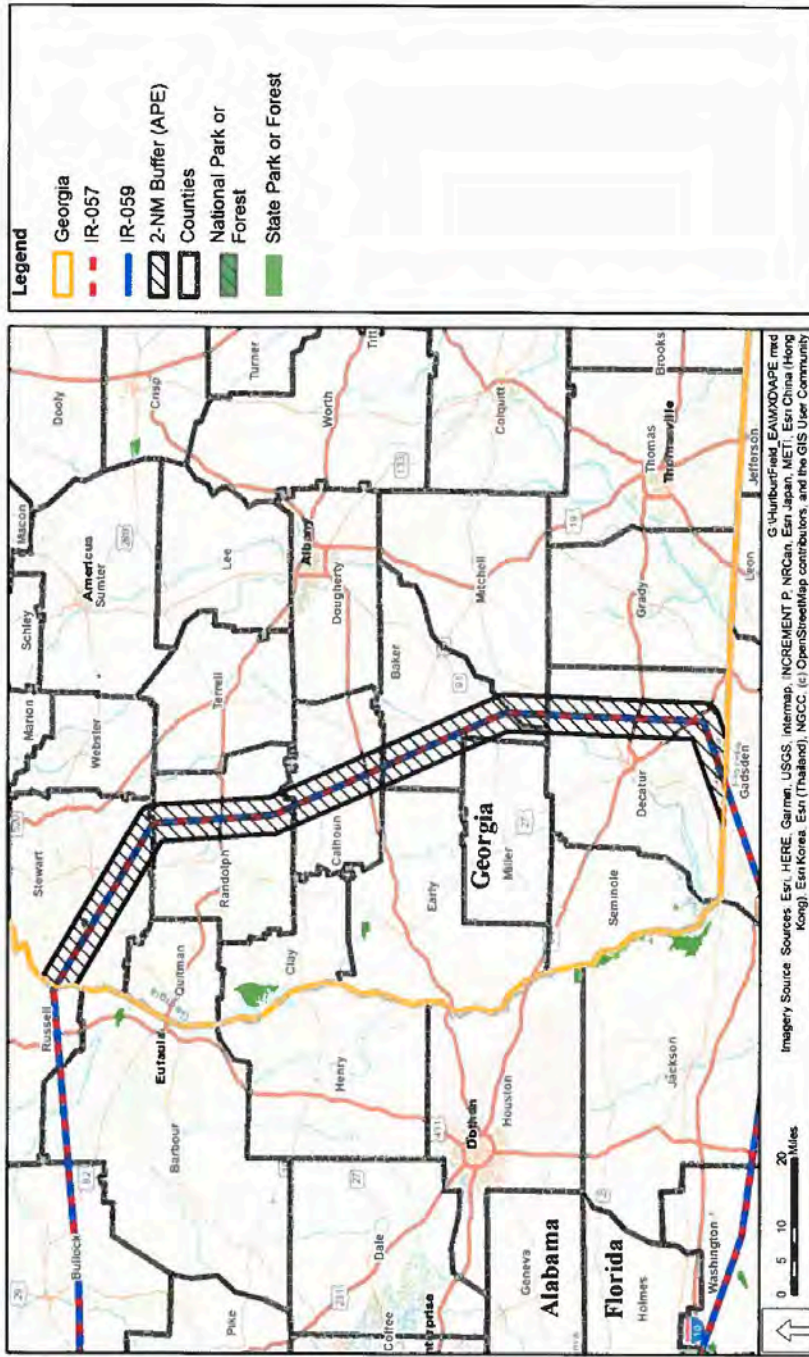


Figure 4. Area of Potential Effects within the State of Georgia

**Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059**



**DEPARTMENT OF THE AIR FORCE
1ST SPECIAL OPERATIONS CIVIL ENGINEER SQUADRON
HURLBURT FIELD, FLORIDA**

Dana McIntyre, P.E., DAF
Civil Engineer Tribal Liaison Officer
1st Special Operations Civil Engineer Squadron
415 Independence Road, Building 90053
Hurlburt Field, FL 32544

Chairperson Stephanie Bryan
Poarch Band of Creeks
5811 Jack Springs Road
Atmore, AL 36502-5025

Dear Chairperson Bryan:

In accordance with the National Environmental Policy Act (NEPA) of 1969, the Council of Environmental Quality regulations, and the United States Air Force (Air Force) NEPA regulations, the Air Force is preparing an Environmental Assessment (EA) for the renewal of military training routes (MTRs) Instrument Route (IR)-057 and IR-059. The Air Force is initiating government-to-government consultation with you under Section 106 of the National Historic Preservation Act (NHPA) and requests your concurrence on the determined Area of Potential Effects (APE) and the Air Force's determination of effects for this undertaking.

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Addressing the Change in Air Force Operations in IR-057 and IR-059

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The undertaking would not modify the current use of the IRs (i.e., no change in permitted airspeed, altitude, floor, avoidance of sensitive areas, or hours of operation) except for amending IR-057 and IR-059 to allow for CV-22, MC-130H/J, and HH-60 training operations. Aircraft would continue to use other MOAs, MTRs, slow routes, and LATNs to access the IRs, and existing procedures for identifying areas of concern would continue to be followed. No new entry or exit routes would be added to the existing IRs.

The undertaking would not alter the number of aircraft stationed at Hurlburt Field nor would it affect the number of personnel or support facilities needed for training operations. The Proposed Action would not include any new ground operations, nor would it develop any new helicopter landing zones or drop zones. No construction, site alteration, or other ground-disturbing activities are planned as part of the Proposed Action.

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The project APE involves a large geographic region in portions of Alabama, Florida, and Georgia (Figure 2, Figure 3, and Figure 4). Anticipated potential effects to historic properties and properties of religious or cultural significance would be limited to visual, noise, and vibration effects as the project would not involve construction, demolition, or any other ground-disturbing activity that would have the potential to directly affect archaeological resources or other historic properties. Under the proposed undertaking, training missions would continue to occur in areas subjected to military aircraft overflights for the last 31 years, and no more than 73 overflights would occur in each of the IRs annually. The proposed operations would be transient and not permanently alter the surrounding environment, limiting the range and duration of anticipated effects on the eligibility of historic properties within the APE.


A scoping letter was sent to you in March 2020 requesting your assistance in identifying any properties of religious and cultural significance to your tribe within the project's APE. No properties of religious or cultural significance were identified during the scoping period. Based on the nature of the undertaking and the scope and duration of anticipated effects, the Air Force has determined the undertaking will have *no adverse effect on historic properties under Section 106, including properties of religious and cultural significance*.

In accordance with Executive Order 13175, Consultation with Indian Tribal Governments, and Section 106 of the National Historic Preservation Act and its implementing regulations at 36 CFR Part 800, the Air Force respectfully requests that you provide your written questions or comments on or your concurrence with the Air Force's determination of *no adverse effect* within 30 days of receipt of this letter; however, if you need additional time to evaluate the

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Addressing the Change in Air Force Operations in IR-057 and IR-059

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Proposed Action, the Air Force will consider all matters submitted.. Please address all questions and comments to Mr. Derek Adkins, NEPA Coordinator, 1 SOCES/CENP, 415 Independence Road, Building 90053, Hurlburt Field, FL 32544; or by email at derek.adkins@us.af.mil. Comments are encouraged to be sent directly via email to derek.adkins@us.af.mil. Thank you in advance for your assistance in this effort.


DANA MCINTYRE, P.E., DAF
Civil Engineer Tribal Liaison Officer

Attachments:

1. *Figure 1. Location of IR-057 and IR-059*
2. *Figure 2. Location of Area of Potential Effects within the State of Alabama*
3. *Figure 3. Location of Area of Potential Effects within the State of Florida*
4. *Figure 4. Location of Area of Potential Effects within the State of Georgia*

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Addressing the Change in Air Force Operations in IR-057 and IR-059**

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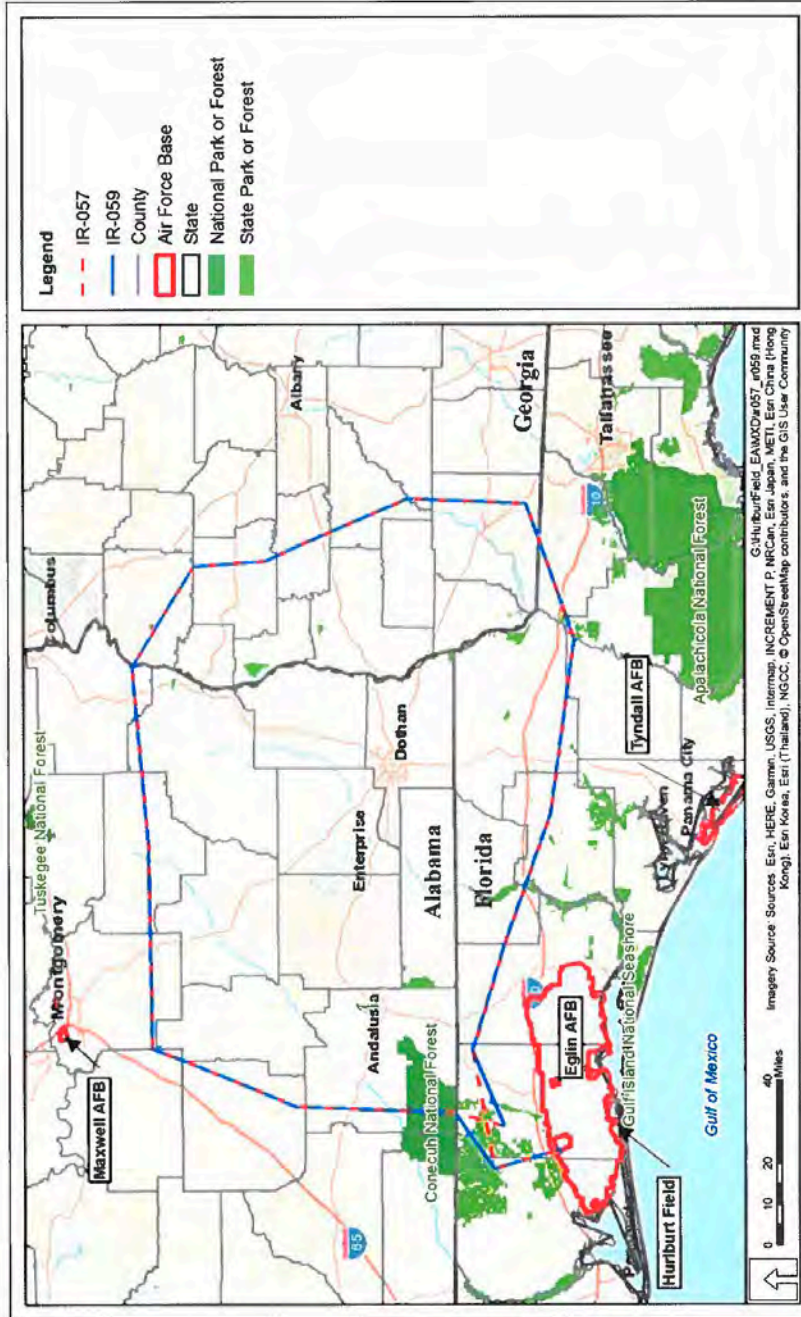


Figure 1. Location of Instrument Route-057 and Instrument Route-059

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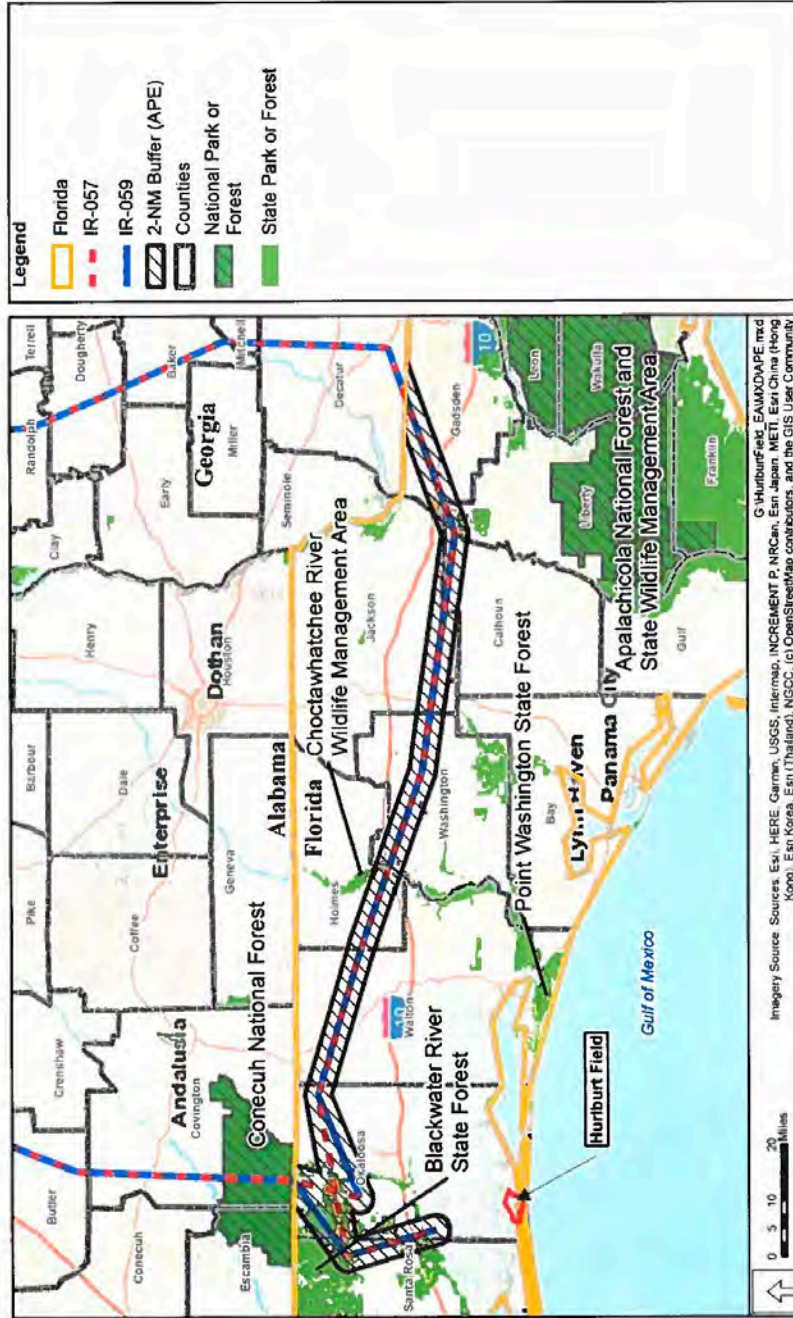
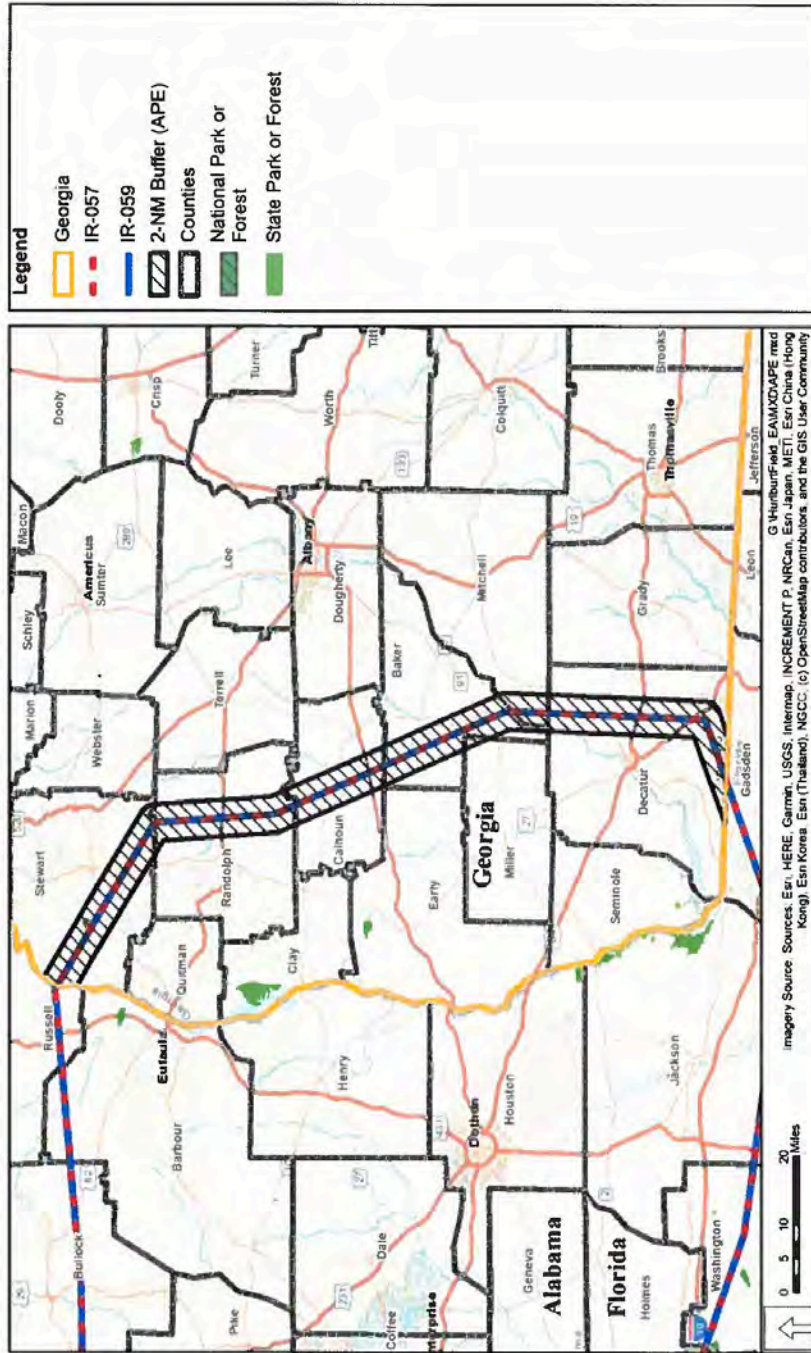


Figure 3. Area of Potential Effects within the State of Florida

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Addressing the Change in Air Force Operations in IR-057 and IR-059**

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**Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059**



**DEPARTMENT OF THE AIR FORCE
1ST SPECIAL OPERATIONS CIVIL ENGINEER SQUADRON
HURLBURT FIELD, FLORIDA**

Dana McIntyre, P.E., DAF
Civil Engineer Tribal Liaison Officer
1st Special Operations Civil Engineer Squadron
415 Independence Road, Building 90053
Hurlburt Field, FL 32544

Chairman Marcellus W. Osceola
Seminole Tribe of Florida
6300 Stirling Road
Hollywood, FL 33024

Dear Chairman Osceola:

In accordance with the National Environmental Policy Act (NEPA) of 1969, the Council of Environmental Quality regulations, and the United States Air Force (Air Force) NEPA regulations, the Air Force is preparing an Environmental Assessment (EA) for the renewal of military training routes (MTRs) Instrument Route (IR)-057 and IR-059. The Air Force is initiating government-to-government consultation with you under Section 106 of the National Historic Preservation Act (NHPA) and requests your concurrence on the determined Area of Potential Effects (APE) and the Air Force's determination of effects for this undertaking.

Air Force Special Operations Command utilizes designated special use airspace and MTRs to sustain pilots' proficiency in air combat tactics and to accomplish special operations activities such as unconventional warfare, direct action, special reconnaissance, counterterrorism, foreign internal defense, personnel recovery, and information operations. MTRs are aerial corridors in which military aircraft can operate and where all other aircraft are restricted from operating. The Air Force is proposing the renewal of MTRs IR-057 and IR-059 (Figure 1) for Hurlburt Field, Florida.

IR-057 and IR-059 were created in 1989; are located in portions of Alabama, Florida, and Georgia; have a width of 2 nautical miles on either side of the centerline; are 380 nautical miles long; and were originally created for C-130 operations. An EA was completed in March 1994 that modified IR-057 and IR-059 by adding MH-53 (helicopter) operations to the IRs and lowered the floor of the IRs from 250 feet to 200 feet Above Ground Level (AGL) for helicopter operations. Due to the upgrade in aircraft design and capabilities, an EA is currently required for the IR-057 and IR-059 renewal.

The undertaking under Section 106 is to renew the use of IR-057 and IR-059 and would amend the type of aircraft permitted for flight training operations from C-130s and MH-53s to Hurlburt Field-stationed CV-22s, MC-130H/Js, and Army HH-60s. The IRs would continue to have a ground track of approximately 380 NM, with a corridor width of 2 NM on either side of the IR centerline. The IRs would continue to be used for flight training in conjunction with

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military operations areas (MOAs) as well as MTRs, slow routes and Low Altitude Tactical Navigation (LATN) areas, enabling the 1st Special Operations Wing to optimize air combat training of military personnel. The route would continue to be flown at 250 knots or less, at floor altitudes as low as 200 feet AGL during daytime and nighttime hours by CV-22s and HH-60s, and at floor altitudes as low as 250 feet AGL during daytime and nighttime hours for MC-130H/J.

The undertaking would not modify the current use of the IRs (i.e., no change in permitted airspeed, altitude, floor, avoidance of sensitive areas, or hours of operation) except for amending IR-057 and IR-059 to allow for CV-22, MC-130H/J, and HH-60 training operations. Aircraft would continue to use other MOAs, MTRs, slow routes, and LATNs to access the IRs, and existing procedures for identifying areas of concern would continue to be followed. No new entry or exit routes would be added to the existing IRs.

The undertaking would not alter the number of aircraft stationed at Hurlburt Field nor would it affect the number of personnel or support facilities needed for training operations. The Proposed Action would not include any new ground operations, nor would it develop any new helicopter landing zones or drop zones. No construction, site alteration, or other ground-disturbing activities are planned as part of the Proposed Action.

The APE is defined as the geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties, if any such properties exist. Taking into account the scale and nature of the undertaking, the Air Force has defined the APE for this undertaking as a 2-nautical mile (2.3-mile) buffer on each side of the MTRs IR-057 and IR-059. The APE includes areas where visual, noise, and vibration effects to historic properties may occur.

The project APE involves a large geographic region in portions of Alabama, Florida, and Georgia (Figure 2, Figure 3, and Figure 4). Anticipated potential effects to historic properties and properties of religious or cultural significance would be limited to visual, noise, and vibration effects as the project would not involve construction, demolition, or any other ground-disturbing activity that would have the potential to directly affect archaeological resources or other historic properties. Under the proposed undertaking, training missions would continue to occur in areas subjected to military aircraft overflights for the last 31 years, and no more than 73 overflights would occur in each of the IRs annually. The proposed operations would be transient and not permanently alter the surrounding environment, limiting the range and duration of anticipated effects on the eligibility of historic properties within the APE.

A scoping letter was sent to you in March 2020 requesting your assistance in identifying any properties of religious and cultural significance to your tribe within the project's APE. No properties of religious or cultural significance were identified during the scoping period. Based on the nature of the undertaking and the scope and duration of anticipated effects, the Air Force has determined the undertaking will have *no adverse effect on historic properties under Section 106, including properties of religious and cultural significance.*

In accordance with Executive Order 13175, Consultation with Indian Tribal Governments, and Section 106 of the National Historic Preservation Act and its implementing regulations at 36 CFR Part 800, the Air Force respectfully requests that you provide your written questions or comments on or your concurrence with the Air Force's determination of *no adverse effect* within 30 days of receipt of this letter; however, if you need additional time to evaluate the

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Addressing the Change in Air Force Operations in IR-057 and IR-059

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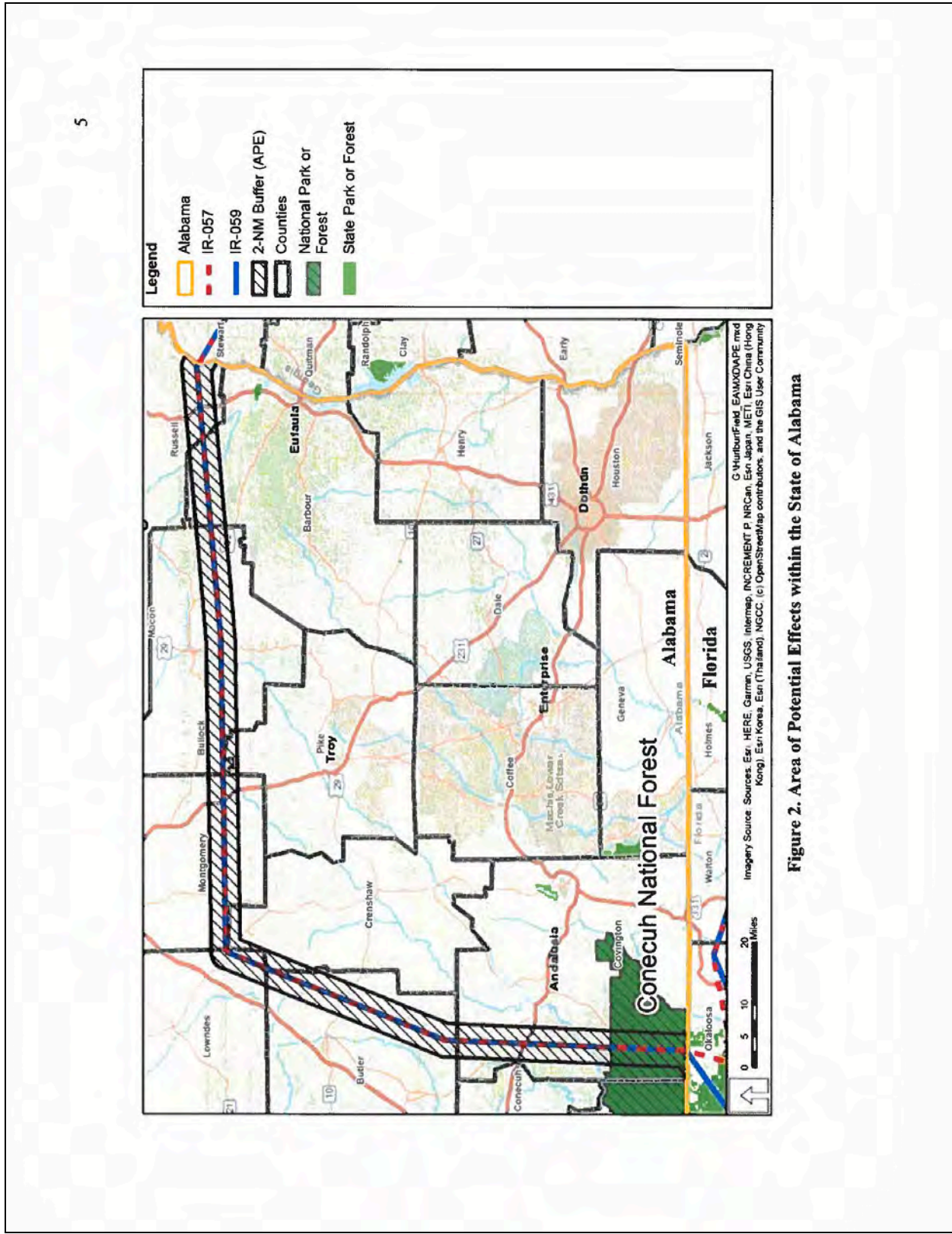
Proposed Action, the Air Force will consider all matters submitted. Please address all questions and comments to Mr. Derek Adkins, NEPA Coordinator, 1 SOCES/CENP, 415 Independence Road, Building 90053, Hurlburt Field, FL 32544; or by email at derek.adkins@us.af.mil. Comments are encouraged to be sent directly via email to derek.adkins@us.af.mil. Thank you in advance for your assistance in this effort.


DANA MCINTYRE, P.E., DAF
Civil Engineer Tribal Liaison Officer

Attachments:

1. *Figure 1. Location of IR-057 and IR-059*
2. *Figure 2. Location of Area of Potential Effects within the State of Alabama*
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Addressing the Change in Air Force Operations in IR-057 and IR-059**



A-5. Endangered Species Act Section 7 Consultation Letters

FORMAT PAGE

Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059



DEPARTMENT OF THE AIR FORCE
1ST SPECIAL OPERATIONS CIVIL ENGINEER SQUADRON
HURLBURT FIELD, FLORIDA

17 August 2020

Ms. Dana J. McIntyre
Deputy Base Civil Engineer
1st Special Operations Civil Engineer Squadron
415 Independence Road, Building 90053
Hurlburt Field, FL 32544

Ms. Gail Martinez
US Fish and Wildlife Service
Georgia Ecological Services Field Office
4980 Wildlife Drive NE
Townsend GA 31331

Dear Ms. Martinez

The United States Air Force (Air Force) requests informal Section 7 consultation under the Endangered Species Act for the proposed renewal of military training routes (MTRs) Instrument Route (IR)-057 and IR-059. A total of 37 federally listed threatened or endangered species have the potential to occur beneath, within, and proximate to these IRs (Table 1, attached). As discussed below, the proposal may have a startle effect on nesting and foraging red-cockaded woodpeckers (*Picoides borealis*) and wood storks (*Mycteria americana*), even though the likelihood of this occurring is low. Therefore, the Air Force has determined that the proposal may affect, but is not likely to adversely affect, the red-cockaded woodpecker and wood stork and will have no effect on the other 35 species. Hurlburt Field requests your concurrence with these determinations.

In accordance with the National Environmental Policy Act (NEPA) of 1969, the Council of Environmental Quality regulations, and the Air Force NEPA regulations, the Air Force is preparing an Environmental Assessment (EA) for the renewal of IR-057 and IR-059. Air Force Special Operations Command utilizes designated special use airspace and MTRs to sustain pilots' proficiency in air combat tactics and to accomplish special operations activities such as unconventional warfare, direct action, special reconnaissance, counterterrorism, foreign internal defense, personnel recovery, and information operations. MTRs are aerial corridors in which military aircraft can operate and where all other aircraft are restricted from operating. The Air Force is proposing the renewal of MTRs IR-057 and IR-059 (Figure 1) for Hurlburt Field, Florida.

IR-057 and IR-059 were created in 1989; are located in Alabama, Florida, and Georgia; have a width of 2 nautical miles (NM) on either side of the centerline; are 380 NM long; and were originally created for C-130 operations. An EA was completed in March 1994 that modified IR-057 and IR-059 by adding MH-53 (helicopter) operations to the IRs and lowered the floor of the IRs from 250 feet to 200 feet above ground level (AGL) for helicopter operations.

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Due to an upgrade in aircraft design and capabilities, an EA is currently required for the IR-057 and IR-059 renewal.

The Proposed Action is to renew the use of IR-057 and IR-059, which would amend the type of aircraft permitted for flight training operations from C-130s and MH-53s to Hurlburt Field-stationed CV-22s, MC-130H/Js, and US Army HH-60s. The IRs would continue to have a ground track of approximately 380 NM, with a corridor width of 2 NM on either side of the IR centerline. The IRs would continue to be used for flight training in conjunction with military operations areas (MOAs) as well as MTRs, slow routes, and low-altitude training and navigation (LATN) areas, enabling 1st Special Operations Wing to optimize air combat training of military personnel. The route would continue to be flown at 250 knots or less, at floor altitudes as low as 200 feet AGL during daytime and nighttime hours by CV-22s and HH-60s, and at floor altitudes as low as 250 feet AGL during daytime and nighttime hours for MC-130H/Js.

The Proposed Action would not modify the current use of the IRs (i.e., no change in permitted airspeed, altitude, floor, avoidance of sensitive areas, or hours of operation) except for amending IR-057 and IR-059 to allow for CV-22, MC-130H/J, and HH-60 training operations. Aircraft would continue to use other MOAs, MTRs, slow routes, and LATN areas to access the IRs, and existing procedures for identifying areas of concern would continue to be followed. No new entry or exit routes would be added to the existing IRs.

The Proposed Action would not alter the number of aircraft stationed at Hurlburt Field nor would it affect the number of personnel or support facilities needed for training operations. The Proposed Action would not include any new ground operations, nor would it develop any new helicopter landing zones or drop zones. No construction, site alteration, or other ground-disturbing activities are planned as part of the Proposed Action.

The area evaluated for potential effects on listed species includes the IR-057 and IR-059 corridors and a 5-mile buffer on each side of IR-057 and IR-059. A list of species that could potentially be found in this corridor was obtained from the US Fish and Wildlife Service (USFWS) Information for Planning and Consultation website (USFWS 2020). That list is provided in Table 1. Of the 37 listed species with the potential to occur in the action area, only those potentially affected by aircraft movement and aircraft noise were included for further evaluation. These were limited to three federally listed species: gray bat (*Myotis grisescens*), red-cockaded woodpecker, and wood stork. No designated critical habitat occurs in the action area for any of these three species. The movement of aircraft and aircraft noise at altitudes of 200 feet AGL and higher would not impact federally listed plants, fish, crustaceans, clams, amphibians, or reptiles, or their designated critical habitat which could occur beneath IR-057 and IR-059 and the associated 5-mile-wide buffer. Therefore, these listed species are not considered further.

- **Gray Bat.** The gray bat is federally endangered and is a cave specialist, roosting only in cave systems, and is closely associated with water. The gray bat has a very restricted range in Florida, only occurring in a single county in the northwest Panhandle. Gray bat occurrence in Alabama is mostly restricted to areas near the Tennessee River in northern Alabama with small populations in central and southern Alabama. They are year-round

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residents and hibernate in caves in the winter. The gray bat primarily feeds on small insects (Alabama Department of Conservation and Natural Resources 2020). The gray bat could be present in IR-057 and IR-059.

- **Red-Cockaded Woodpecker.** The red-cockaded woodpecker is federally listed as endangered and could potentially occur in low numbers within mature pine forest habitat with sparse understory vegetation beneath the IRs. However, there is very little mature pine forest habitat beneath the IRs, and most pine forest is managed for timber and is harvested before it can reach a size and age class suitable to support the red-cockaded woodpecker. Populations of red-cockaded woodpeckers are known to occur proximate to the IRs and Hurlburt Field in the Eglin Reservation, within longleaf pine forests of the Conecuh National Forest, Blackwater Wildlife Management Area, and the Blackwater River State Forest (Eglin Air Force Base 2017).
- **Wood Stork.** The wood stork is a federally threatened wading bird that occurs in the southeastern United States and across the Caribbean and into South America. They nest colonially in rookeries. Wood storks forage fish, frogs, crabs, and crustaceans in shallow water. Wood storks are known to breed in southern and central Georgia and north Florida. Wood storks move north following breeding and can occur throughout the southeastern United States, including Alabama, during the nonbreeding season (USFWS 2013).

Under the Proposed Action, there would be no ground-disturbing activities, and all potential impacts on biological resources would be associated with aircraft operations in IR-057 and IR-059. Because there would be no ground-disturbing activities, there would be no impacts on federally listed plant species, reptiles, amphibians, fish, or invertebrates.

Effects on listed bird and mammal species could occur from flight operations associated with the renewal of IR-057 and IR-059. These aircraft operations could affect biological resources from aircraft movement, noise, and bird and animal aircraft strikes. For listed bird species, given the large area and very low number of annual operations in the two IRs (i.e., 146 authorized annual operations), along with the very low altitudes in which wood storks and red-cockaded woodpeckers typically fly during breeding and foraging, the risk of interacting with aircraft operations is discountable. Further, there would be no substantial change in the noise environment as a result of the Proposed Action (i.e., sound levels with all proposed operations are estimated to be 38.1 A-weighted decibels [dBA] Day-Night Average Sound Level [DNL]), however, low-altitude aircraft movement could have a startle effect on nesting and foraging red-cockaded woodpeckers and wood storks. Although the likelihood of aircraft movement startling red-cockaded woodpeckers and wood storks is low, aircraft movement may affect but is not likely to adversely affect the red-cockaded woodpecker and wood stork.

The increased aircraft operations under the Proposed Action would not have aircraft interactions with the gray bat as no additional night operations are proposed. Only nine annual operations would occur at night when gray bats would be actively foraging or migrating; however, nine annual night operations are currently authorized and there would be no change in the number of night operations under the Proposed Action. Further, gray bats would primarily forage at very low altitudes, typically less than 200 feet AGL and over water (USFWS 1982).

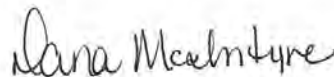
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Addressing the Change in Air Force Operations in IR-057 and IR-059

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while the proposed nine annual aircraft operations at night would be above 200 feet AGL. There would be no substantial change in the noise environment as a result of the Proposed Action. Therefore, the renewal of IR-057 and IR-059 would have no effect on the gray bat.

Please note that we are also consulting with the Panama City and North Florida Ecological Services Field Offices. Therefore, I am requesting your participation in the review and comment process for those resources within your office's area of responsibility. Further, I am requesting written concurrence with our *no effect* determination on the federally listed gray bat; reptiles: gopher tortoise (*Gopherus polyphemus*) and eastern indigo snake (*Drymarchon couperi*); amphibians: Red Hills salamander (*Phaeognathus hubrichti*) and reticulated flatwoods salamander (*Ambystoma bishop*); clams: Chipola slabshell (*Elliptio chipolaensis*), Choctaw bean (*Villosa choctawensis*), fat threeridge (*Amblema neislerii*), fuzzy pigoe (*Pleurobema strodeanum*), Gulf moccasinshell (*Medionidus penicillatus*), orangeacre mucket (*Lampsilis perovalis*), oval pigtoe (*Pleurobema pyriforme*), purple bankclimber (*Elliptioideus sloatianus*), round ebonyshell (*Fusconaia rotulata*), shinyrayed pocketbook (*Lampsilis subangulata*), southern clubshell (*Pleurobema decisum*), southern kidneyshell (*Ptychobranchus jonesi*), southern sandshell (*Hamiota australis*), and tapered pigtoe (*Fusconaia burkei*); fish: Gulf sturgeon (*Acipenser oxyrinchus desotoi*); crustaceans: Panama City crayfish (*Procambarus econfinae*); and plants: American chaffseed (*Schwalbea americana*), Apalachicola rosemary (*Conradina glabra*), Chapman rhododendron (*Rhododendron chapmanii*), Cooley's meadowrue (*Thalictrum cooleyi*), Florida skullcap (*Scutellaria floridana*), Florida torreyia (*Torreyia taxifolia*), fringed campion (*Silene polypetalá*), gentian pinkroot (*Spigelia gentianoides*), Georgia rockcress (*Arabis georgiana*), Godfrey's butterwort (*Pinguicula ionantha*), Harper's beauty (*Harperocallis flava*), papery whitlow-wort (*Paronychia chartacea*), pondberry (*Lindera melissifolia*), relict trillium (*Trillium reliquum*), and white birds-in-a-nest (*Macbridea alba*); and our *may affect but not likely to adversely affect* determination on the federally listed red-cockaded woodpecker and wood stork. We respectfully request that you provide your written questions or comments or concurrence with the Air Force's determinations at your earliest convenience, but no later than 30 days from the date of receipt of this correspondence. Please address all questions and comments to Mr. Derek Adkins, 1 SOCES/CENP, 415 Independence Road, Building 90053, Hurlburt Field, FL 32544, or by email to derek.adkins@us.af.mil. Comments are encouraged to be sent directly via email to derek.adkins@us.af.mil. Thank you in advance for your assistance in this effort.



DANA J. MCINTYRE, P.E., GS-14, DAF
Deputy Base Civil Engineer, 1st Spec Ops Civil
Engineer Sq

Attachments:

1. Figure 1. Location of IR-057 and IR-059
2. Table 1. US Fish and Wildlife Service Information for Planning and Consultation Website Search Results

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References

Alabama Department of Conservation and Natural Resources. 2020. Endangered and Threatened Species. <<https://www.outdooralabama.com/nongame-wildlife-species-projects/endangered-and-threatened-species>>. Accessed April 2020.

Eglin Air Force Base, 2017. Final Threatened and Endangered Species Component Plan Update. June 2017.

United States Fish and Wildlife Service. 2020. Information for Planning and Consultation. Available online: <<https://ecos.fws.gov/ipac>>. Accessed April 2020.

United States Fish and Wildlife Service. 2013. Wood Stork (*Mycteria americana*) Fact Sheet. 3 pages. Last updated February 2013.

United States Fish and Wildlife Service (USFWS). 1982. Gray Bat Recovery Plan. July 1982.

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Addressing the Change in Air Force Operations in IR-057 and IR-059**

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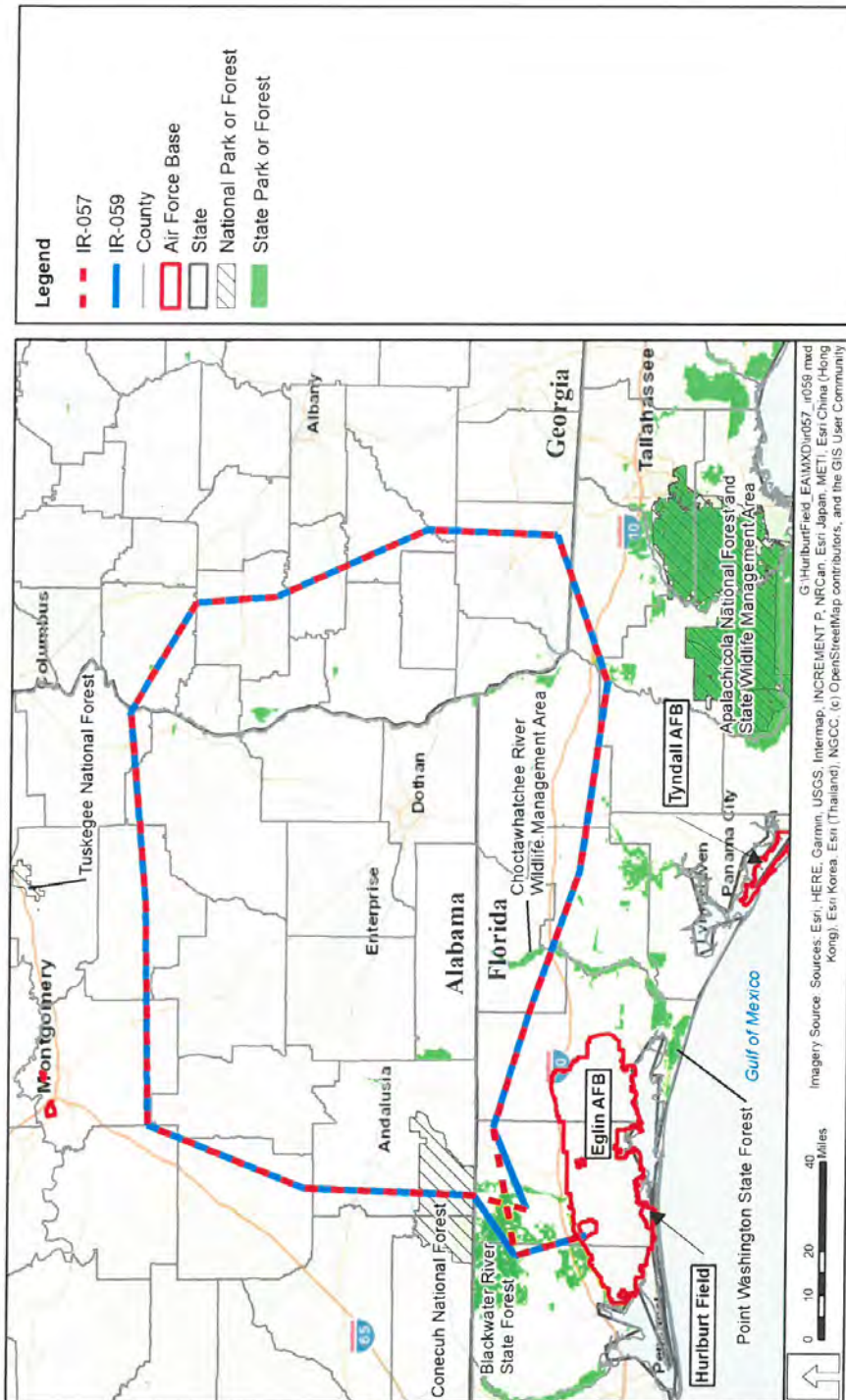


Figure 1. Location of Instrument Route-057 and Instrument Route-059

Table 1. US Fish and Wildlife Service Information for Planning and Consultation Website Search Results

Common Name	Scientific Name	Legal Status	Potential to Be Affected
Mammals			
Gray bat	<i>Myotis grisescens</i>	Endangered	Yes
Birds			
Red-cockaded woodpecker	<i>Picoides borealis</i>	Endangered	Yes
Wood stork	<i>Mycteria americana</i>	Threatened	Yes
Amphibians			
Red Hills salamander	<i>Phacognathus hubrichti</i>	Threatened	No
Reticulated flatwoods salamander	<i>Ambystoma bishop</i>	Endangered	No
Reptiles			
Eastern indigo snake	<i>Drymarchon couperi</i>	Threatened	No
Gopher tortoise	<i>Gopherus polyphemus</i>	Candidate	No
Clams			
Chipola slabshell	<i>Elliptio chipolaensis</i>	Threatened Overlaps Designated Critical Habitat	No
Choctaw bean	<i>Villosa choctawensis</i>	Endangered Overlaps Designated Critical Habitat	No
Fat threeridge (mussel)	<i>Amblyema neiserii</i>	Endangered Overlaps Designated Critical Habitat	No
Fuzzy pigtoe	<i>Pleurobema strodeanum</i>	Threatened Overlaps Designated Critical Habitat	No
Gulf moccasinshell	<i>Medionitilus pemicillatus</i>	Endangered Overlaps Designated Critical Habitat	No
Orangeare mucket	<i>Lampsilis perovialis</i>	Threatened	No
Oval pigtoe	<i>Pleurobema pyriforme</i>	Endangered Overlaps Designated Critical Habitat	No

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Common Name	Scientific Name	Legal Status	Potential to Be Affected
Purple banklambert (mussel)	<i>Elliptoidenus slootianus</i>	Threatened Overlaps Designated Critical Habitat	No
Round ebonyshell	<i>Fusconata rotulata</i>	Endangered Overlaps Designated Critical Habitat	No
Shinyrayed pocketbook	<i>Lampsilis subangulata</i>	Endangered Overlaps Designated Critical Habitat	No
Southern clubshell	<i>Pleurobema decisum</i>	Endangered	No
Southern kidneyshell	<i>Ptychobranthus jonesi</i>	Endangered Overlaps Designated Critical Habitat	No
Southern sandshell	<i>Hamiota australis</i>	Threatened Overlaps Designated Critical Habitat	No
Tapered pigtoe	<i>Fusconata burkei</i>	Threatened Overlaps Designated Critical Habitat	No
Fish			
Gulf Sturgeon	<i>Acipenser oxyrinchus desotoi</i>	Threatened	No
Crustaceans			
Panama City crayfish	<i>Procambarus econfinae</i>	Proposed Threatened	No
Plants			
American chaffseed	<i>Schwalbea americana</i>	Endangered	No
Apalachicola rosemary	<i>Conradina glabra</i>	Endangered	No
Chapman rhododendron	<i>Rhododendron chapmani</i>	Endangered	No
Cooley's meadowrue	<i>Thalictrum cooleyi</i>	Endangered	No
Florida skullcap	<i>Scutellaria floridana</i>	Threatened	No
Florida torreyia	<i>Torreyia taxifolia</i>	Endangered	No
Fringed campton	<i>Silene polypetalata</i>	Endangered	No
Gentian pinkroot	<i>Spigelia genianoides</i>	Endangered	No

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Common Name	Scientific Name	Legal Status	Potential to Be Affected
Georgia rockcress	<i>Arabis georgiana</i>	Threatened	No
Godfrey's butterwort	<i>Pinguicula ionantha</i>	Threatened	No
Harper's beauty	<i>Harperocalis flava</i>	Endangered	No
Papery whitlow-wort	<i>Paronychia chartacea</i>	Threatened	No
Pondberry	<i>Lindera melissifolia</i>	Endangered	No
Relict trillium	<i>Trillium reliquum</i>	Endangered	No
White birds-in-a-nest	<i>Macbridea alba</i>	Threatened	No

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Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059



DEPARTMENT OF THE AIR FORCE
1ST SPECIAL OPERATIONS CIVIL ENGINEER SQUADRON
HURLBURT FIELD, FLORIDA

17 August 2020

Ms. Dana J. McIntyre
Deputy Base Civil Engineer
1st Special Operations Civil Engineer Squadron
415 Independence Road, Building 90053
Hurlburt Field, FL 32544

Ms. Lisa Yarbrough
US Fish and Wildlife Service
Panama City Ecological Services Field Office
1601 Balboa Avenue
Panama City, FL 32405-3792

Dear Ms. Yarbrough

The United States Air Force (Air Force) requests informal Section 7 consultation under the Endangered Species Act for the proposed renewal of military training routes (MTRs) Instrument Route (IR)-057 and IR-059. A total of 37 federally listed threatened or endangered species have the potential to occur beneath, within, and proximate to these IRs (Table 1, attached). As discussed below, the proposal may have a startle effect on nesting and foraging red-cockaded woodpeckers (*Picoides borealis*) and wood storks (*Mycteria americana*), even though the likelihood of this occurring is low. Therefore, the Air Force has determined that the proposal may affect, but is not likely to adversely affect, the red-cockaded woodpecker and wood stork and will have no effect on the other 35 species. Hurlburt Field requests your concurrence with these determinations.

In accordance with the National Environmental Policy Act (NEPA) of 1969, the Council of Environmental Quality regulations, and the Air Force NEPA regulations, the Air Force is preparing an Environmental Assessment (EA) for the renewal of IR-057 and IR-059. Air Force Special Operations Command utilizes designated special use airspace and MTRs to sustain pilots' proficiency in air combat tactics and to accomplish special operations activities such as unconventional warfare, direct action, special reconnaissance, counterterrorism, foreign internal defense, personnel recovery, and information operations. MTRs are aerial corridors in which military aircraft can operate and where all other aircraft are restricted from operating. The Air Force is proposing the renewal of MTRs IR-057 and IR-059 (Figure 1) for Hurlburt Field, Florida.

IR-057 and IR-059 were created in 1989; are located in Alabama, Florida, and Georgia; have a width of 2 nautical miles (NM) on either side of the centerline; are 380 NM long; and were originally created for C-130 operations. An EA was completed in March 1994 that modified IR-057 and IR-059 by adding MH-53 (helicopter) operations to the IRs and lowered the

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floor of the IRs from 250 feet to 200 feet above ground level (AGL) for helicopter operations. Due to an upgrade in aircraft design and capabilities, an EA is currently required for the IR-057 and IR-059 renewal.

The Proposed Action is to renew the use of IR-057 and IR-059, which would amend the type of aircraft permitted for flight training operations from C-130s and MH-53s to Hurlburt Field-stationed CV-22s, MC-130H/Js, and US Army HH-60s. The IRs would continue to have a ground track of approximately 380 NM, with a corridor width of 2 NM on either side of the IR centerline. The IRs would continue to be used for flight training in conjunction with military operations areas (MOAs) as well as MTRs, slow routes, and low-altitude training and navigation (LATN) areas, enabling 1st Special Operations Wing to optimize air combat training of military personnel. The route would continue to be flown at 250 knots or less, at floor altitudes as low as 200 feet AGL during daytime and nighttime hours by CV-22s and HH-60s, and at floor altitudes as low as 250 feet AGL during daytime and nighttime hours for MC-130H/Js.

The Proposed Action would not modify the current use of the IRs (i.e., no change in permitted airspeed, altitude, floor, avoidance of sensitive areas, or hours of operation) except for amending IR-057 and IR-059 to allow for CV-22, MC-130H/J, and HH-60 training operations. Aircraft would continue to use other MOAs, MTRs, slow routes, and LATN areas to access the IRs, and existing procedures for identifying areas of concern would continue to be followed. No new entry or exit routes would be added to the existing IRs.

The Proposed Action would not alter the number of aircraft stationed at Hurlburt Field nor would it affect the number of personnel or support facilities needed for training operations. The Proposed Action would not include any new ground operations, nor would it develop any new helicopter landing zones or drop zones. No construction, site alteration, or other ground-disturbing activities are planned as part of the Proposed Action.

The area evaluated for potential effects on listed species includes the IR-057 and IR-059 corridors and a 5-mile buffer on each side of IR-057 and IR-059. A list of species that could potentially be found in this corridor was obtained from the US Fish and Wildlife Service (USFWS) Information for Planning and Consultation website (USFWS 2020). That list is provided in Table 1. Of the 37 listed species with the potential to occur in the action area, only those potentially affected by aircraft movement and aircraft noise were included for further evaluation. These were limited to three federally listed species: gray bat (*Myotis grisescens*), red-cockaded woodpecker, and wood stork. No designated critical habitat occurs in the action area for any of these three species. The movement of aircraft and aircraft noise at altitudes of 200 feet AGL and higher would not impact federally listed plants, fish, crustaceans, clams, amphibians, or reptiles, or their designated critical habitat which could occur beneath IR-057 and IR-059 and the associated 5-mile-wide buffer. Therefore, these listed species are not considered further.

- **Gray Bat.** The gray bat is federally endangered and is a cave specialist, roosting only in cave systems, and is closely associated with water. The gray bat has a very restricted range in Florida, only occurring in a single county in the northwest Panhandle. Gray bat occurrence in Alabama is mostly restricted to areas near the Tennessee River in northern

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Alabama with small populations in central and southern Alabama. They are year-round residents and hibernate in caves in the winter. The gray bat primarily feeds on small insects (Alabama Department of Conservation and Natural Resources 2020). The gray bat could be present in IR-057 and IR-059.

- **Red-Cockaded Woodpecker.** The red-cockaded woodpecker is federally listed as endangered and could potentially occur in low numbers within mature pine forest habitat with sparse understory vegetation beneath the IRs. However, there is very little mature pine forest habitat beneath the IRs, and most pine forest is managed for timber and is harvested before it can reach a size and age class suitable to support the red-cockaded woodpecker. Populations of red-cockaded woodpeckers are known to occur proximate to the IRs and Hurlburt Field in the Eglin Reservation, within longleaf pine forests of the Conecuh National Forest, Blackwater Wildlife Management Area, and the Blackwater River State Forest (Eglin Air Force Base 2017).

Wood Stork. The wood stork is a federally threatened wading bird that occurs in the southeastern United States and across the Caribbean and into South America. They nest colonially in rookeries. Wood storks forage fish, frogs, crabs, and crustaceans in shallow water. Wood storks are known to breed in southern and central Georgia and north Florida. Wood storks move north following breeding and can occur throughout the southeastern United States, including Alabama, during the nonbreeding season (USFWS 2013).

Under the Proposed Action, there would be no ground-disturbing activities, and all potential impacts on biological resources would be associated with aircraft operations in IR-057 and IR-059. Because there would be no ground-disturbing activities, there would be no impacts on federally listed plant species, reptiles, amphibians, fish, or invertebrates.

Effects on listed bird and mammal species could occur from flight operations associated with the renewal of IR-057 and IR-059. These aircraft operations could affect biological resources from aircraft movement, noise, and bird and animal aircraft strikes. For listed bird species, given the large area and very low number of annual operations in the two IRs (i.e., 146 authorized annual operations), along with the very low altitudes in which wood storks and red-cockaded woodpeckers typically fly during breeding and foraging, the risk of interacting with aircraft operations is discountable. Further, there would be no substantial change in the noise environment as a result of the Proposed Action (i.e., sound levels with all proposed operations are estimated to be 38.1 A-weighted decibels [dBA] Day-Night Average Sound Level [DNL]), however, low-altitude aircraft movement could have a startle effect on nesting and foraging red-cockaded woodpeckers and wood storks. Although the likelihood of aircraft movement startling red-cockaded woodpeckers and wood storks is low, aircraft movement may affect but is not likely to adversely affect the red-cockaded woodpecker and wood stork.

The increased aircraft operations under the Proposed Action would not have aircraft interactions with the gray bat as no additional night operations are proposed. Only nine annual operations would occur at night when gray bats would be actively foraging or migrating; however, nine annual night operations are currently authorized and there would be no change in the number of night operations under the Proposed Action. Further, gray bats would primarily

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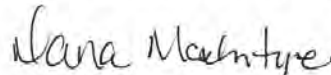
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Addressing the Change in Air Force Operations in IR-057 and IR-059

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forage at very low altitudes, typically less than 200 feet AGL and over water (USFWS 1982), while the proposed nine annual aircraft operations at night would be above 200 feet AGL. There would be no substantial change in the noise environment as a result of the Proposed Action. Therefore, the renewal of IR-057 and IR-059 would have no effect on the gray bat.

Please note that we are also consulting with the North Florida and Georgia Ecological Services Field Offices. Therefore, I am requesting your participation in the review and comment process for those resources within your office's area of responsibility. Further, I am requesting written concurrence with our *no effect* determination on the federally listed gray bat; reptiles: gopher tortoise (*Gopherus polyphemus*) and eastern indigo snake (*Drymarchon couperi*); amphibians: Red Hills salamander (*Phaeognathus hubrichti*) and reticulated flatwoods salamander (*Ambystoma bishop*); clams: Chipola slabshell (*Elliptio chipolaensis*), Choctaw bean (*Villosa choctawensis*), fat threeridge (*Amblema neisleri*), fuzzy pigoe (*Pleurobema sirodeanum*), Gulf moccasinshell (*Medionidus penicillatus*), orangeacre mucket (*Lampsilis perovalis*), oval pigtoe (*Pleurobema pyriforme*), purple bankclimber (*Elliptioideus sloatianus*), round ebonyshell (*Fusconaia rotulata*), shinyrayed pocketbook (*Lampsilis subangulata*), southern clubshell (*Pleurobema decisum*), southern kidneyshell (*Ptychobranthus jonesi*), southern sandshell (*Hamiota australis*), and tapered pigtoe (*Fusconaia burkei*); fish: Gulf sturgeon (*Acipenser oxyrinchus desotoi*); crustaceans: Panama City crayfish (*Procambarus econfinae*); and plants: American chaffseed (*Schwalbea americana*), Apalachicola rosemary (*Conradina glabra*), Chapman rhododendron (*Rhododendron chapmanii*), Cooley's meadowrue (*Thalictrum cooleyi*), Florida skullcap (*Scutellaria floridana*), Florida torreyia (*Torreyia taxifolia*), fringed campion (*Silene polypetala*), gentian pinkroot (*Spigelia gentianoides*), Georgia rockcress (*Arabis georgiana*), Godfrey's butterwort (*Pinguicula ionantha*), Harper's beauty (*Harperocallis flava*), papery whitlow-wort (*Paronychia chartacea*), pondberry (*Lindera melissifolia*), relict trillium (*Trillium reliquum*), and white birds-in-a-nest (*Macbridea alba*); and our *may affect but not likely to adversely affect* determination on the federally listed red-cockaded woodpecker and wood stork.

We respectfully request that you provide your written questions or comments or concurrence with the Air Force's determinations at your earliest convenience, but no later than 30 days from the date of receipt of this correspondence. Please address all questions and comments to Mr. Derek Adkins, 1 SOCES/CENP, 415 Independence Road, Building 90053, Hurlburt Field, FL 32544, or by email to derek.adkins@us.af.mil. Comments are encouraged to be sent directly via email to derek.adkins@us.af.mil. Thank you in advance for your assistance in this effort.



DANA J. MCINTYRE, P.E., GS-14, DAF
Deputy Base Civil Engineer, 1st Spec Ops Civil
Engineer Sq

Attachments:

1. Figure 1. Location of IR-057 and IR-059
2. Table 1. US Fish and Wildlife Service Information for Planning and Consultation Website Search Results

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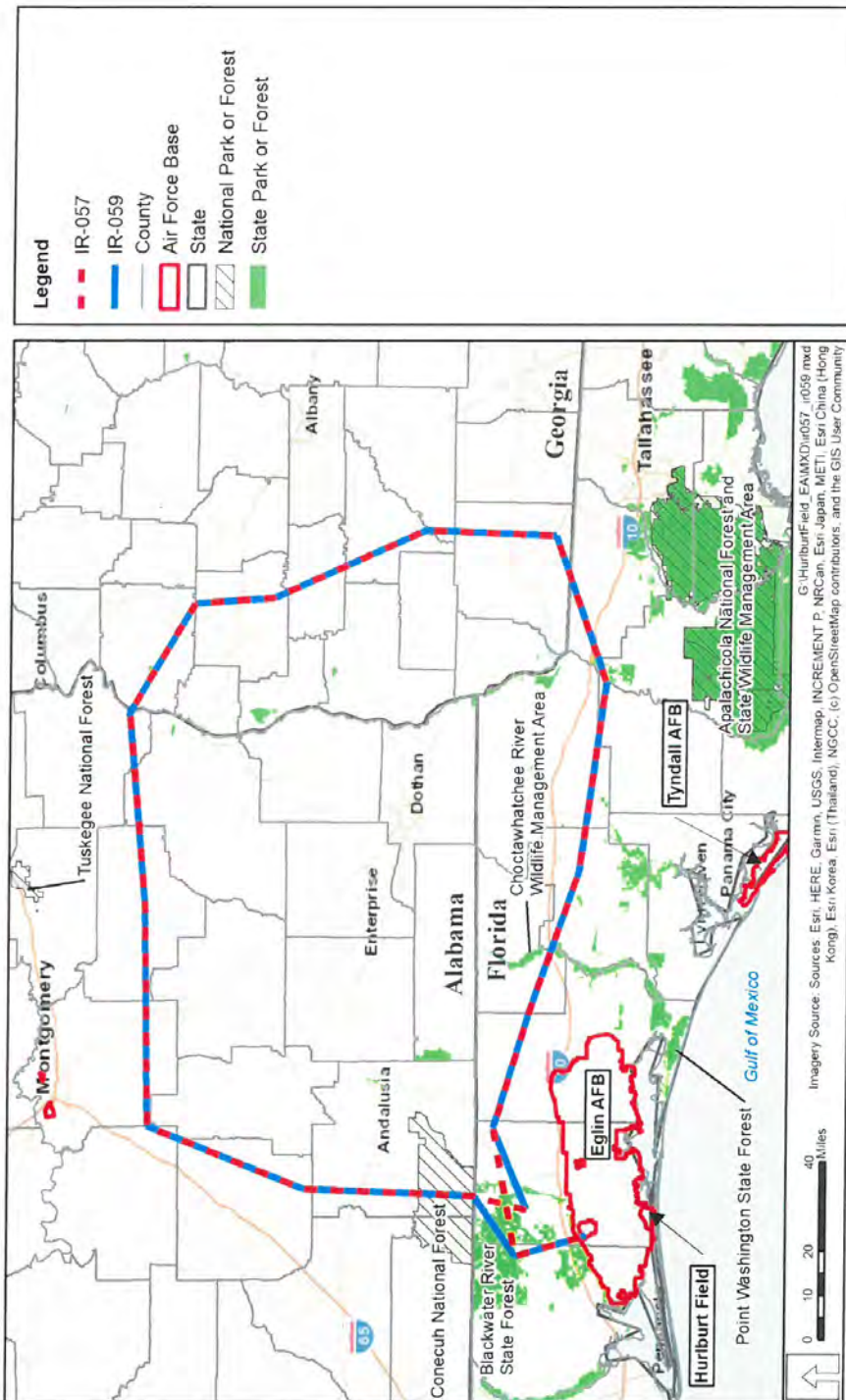


Figure 1. Location of Instrument Route-057 and Instrument Route-059

Table 1. US Fish and Wildlife Service Information for Planning and Consultation Website Search Results

Common Name	Scientific Name	Legal Status	Potential to Be Affected
	Mammals		
Gray bat	<i>Myotis grisescens</i>	Endangered	Yes
	Birds		
Red-cockaded woodpecker	<i>Picoides borealis</i>	Endangered	Yes
Wood stork	<i>Mycteria americana</i>	Threatened	Yes
	Amphibians		
Red Hills salamander	<i>Phacognathus hubrichti</i>	Threatened	No
Reticulated flatwoods salamander	<i>Ambystoma bishop</i>	Endangered	No
	Reptiles		
Eastern indigo snake	<i>Drymarchon couperi</i>	Threatened	No
Gopher tortoise	<i>Gopherus polyphemus</i>	Candidate	No
	Clams		
Chipola slabshell	<i>Elliptio chipolensis</i>	Threatened Overlaps Designated Critical Habitat	No
Choctaw bean	<i>Villosa choctawensis</i>	Endangered Overlaps Designated Critical Habitat	No
Fat threeridge (mussel)	<i>Amblema neisleri</i>	Endangered Overlaps Designated Critical Habitat	No
Fuzzy pigtoe	<i>Pleurobema strodeanum</i>	Threatened Overlaps Designated Critical Habitat	No
Gulf moccasinshell	<i>Medionidus penicillatus</i>	Endangered Overlaps Designated Critical Habitat	No
Orangeacre mucket	<i>Lampsilis perovialis</i>	Threatened	No
Oval pigtoe	<i>Pleurobema pyriforme</i>	Endangered Overlaps Designated Critical Habitat	No

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Common Name	Scientific Name	Legal Status	Potential to Be Affected
Purple banklambert (mussel)	<i>Elliptioideus sloatianus</i>	Threatened Overlaps Designated Critical Habitat	No
Round ebonyshell	<i>Fusconaia rotulata</i>	Endangered Overlaps Designated Critical Habitat	No
Shinyrayed pocketbook	<i>Lampsilis subangulata</i>	Endangered Overlaps Designated Critical Habitat	No
Southern clubshell	<i>Pleurobema decisum</i>	Endangered	No
Sothern kidneyshell	<i>Pychobranchus jonesi</i>	Endangered Overlaps Designated Critical Habitat	No
Southern sandshell	<i>Hamiota australis</i>	Threatened Overlaps Designated Critical Habitat	No
Tapered pigtoe	<i>Fusconaia barkei</i>	Threatened Overlaps Designated Critical Habitat	No
Fish			
Gulf Sturgeon	<i>Acipenser oxyrinchus desotoi</i>	Threatened	No
Crustaceans			
Panama City crayfish	<i>Procambarus econfinae</i>	Proposed Threatened	No
Plants			
American chaffseed	<i>Schwalbea americana</i>	Endangered	No
Apalachicola rosemary	<i>Conradina glabra</i>	Endangered	No
Chapman rhododendron	<i>Rhododendron chapmanii</i>	Endangered	No
Cooley's meadowrue	<i>Thalictrum cooleyi</i>	Endangered	No
Florida skullcap	<i>Scutellaria floridana</i>	Threatened	No
Florida torreya	<i>Torreya taxifolia</i>	Endangered	No
Fringed campion	<i>Silene polypetala</i>	Endangered	No
Gentian pinkroot	<i>Spigelia gentianoides</i>	Endangered	No

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Common Name	Scientific Name	Legal Status	Potential to Be Affected
Georgia rockcress	<i>Arabis georgiana</i>	Threatened	No
Godfrey's butterwort	<i>Pinguicula tonamha</i>	Threatened	No
Harper's beauty	<i>Harperocalis flava</i>	Endangered	No
Papery willow-wort	<i>Pavonychia chariacea</i>	Threatened	No
Pondberry	<i>Lindera melissifolia</i>	Endangered	No
Relict trillium	<i>Trillium reliquum</i>	Endangered	No
White birds-in-a-nest	<i>Macbridea alba</i>	Threatened	No

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Addressing the Change in Air Force Operations in IR-057 and IR-059**



**DEPARTMENT OF THE AIR FORCE
1ST SPECIAL OPERATIONS CIVIL ENGINEER SQUADRON
HURLBURT FIELD, FLORIDA**

17 August 2020

Ms. Dana J. McIntyre
Deputy Base Civil Engineer
1st Special Operations Civil Engineer Squadron
415 Independence Road, Building 90053
Hurlburt Field, FL 32544

Ms. Annie Dziergowski
US Fish and Wildlife Service
North Florida Ecological Services Field Office
7915 Baymeadows Way, Suite 200
Jacksonville FL 32256-7517

Dear Ms. Dziergowski

The United States Air Force (Air Force) requests informal Section 7 consultation under the Endangered Species Act for the proposed renewal of military training routes (MTRs) Instrument Route (IR)-057 and IR-059. A total of 37 federally listed threatened or endangered species have the potential to occur beneath, within, and proximate to these IRs (Table 1, attached). As discussed below, the proposal may have a startle effect on nesting and foraging red-cockaded woodpeckers (*Picooides borealis*) and wood storks (*Mycteria americana*), even though the likelihood of this occurring is low. Therefore, the Air Force has determined that the proposal may affect, but is not likely to adversely affect, the red-cockaded woodpecker and wood stork and will have no effect on the other 35 species. Hurlburt Field requests your concurrence with these determinations.

In accordance with the National Environmental Policy Act (NEPA) of 1969, the Council of Environmental Quality regulations, and the Air Force NEPA regulations, the Air Force is preparing an Environmental Assessment (EA) for the renewal of IR-057 and IR-059. Air Force Special Operations Command utilizes designated special use airspace and MTRs to sustain pilots' proficiency in air combat tactics and to accomplish special operations activities such as unconventional warfare, direct action, special reconnaissance, counterterrorism, foreign internal defense, personnel recovery, and information operations. MTRs are aerial corridors in which military aircraft can operate and where all other aircraft are restricted from operating. The Air Force is proposing the renewal of MTRs IR-057 and IR-059 (Figure 1) for Hurlburt Field, Florida.

IR-057 and IR-059 were created in 1989; are located in Alabama, Florida, and Georgia; have a width of 2 nautical miles (NM) on either side of the centerline; are 380 NM long; and were originally created for C-130 operations. An EA was completed in March 1994 that modified IR-057 and IR-059 by adding MH-53 (helicopter) operations to the IRs and lowered the floor of the IRs from 250 feet to 200 feet above ground level (AGL) for helicopter operations.

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Due to an upgrade in aircraft design and capabilities, an EA is currently required for the IR-057 and IR-059 renewal.

The Proposed Action is to renew the use of IR-057 and IR-059, which would amend the type of aircraft permitted for flight training operations from C-130s and MH-53s to Hurlburt Field-stationed CV-22s, MC-130H/Js, and US Army HH-60s. The IRs would continue to have a ground track of approximately 380 NM, with a corridor width of 2 NM on either side of the IR centerline. The IRs would continue to be used for flight training in conjunction with military operations areas (MOAs) as well as MTRs, slow routes, and low-altitude training and navigation (LATN) areas, enabling 1st Special Operations Wing to optimize air combat training of military personnel. The route would continue to be flown at 250 knots or less, at floor altitudes as low as 200 feet AGL during daytime and nighttime hours by CV-22s and HH-60s, and at floor altitudes as low as 250 feet AGL during daytime and nighttime hours for MC-130H/Js.

The Proposed Action would not modify the current use of the IRs (i.e., no change in permitted airspeed, altitude, floor, avoidance of sensitive areas, or hours of operation) except for amending IR-057 and IR-059 to allow for CV-22, MC-130H/J, and HH-60 training operations. Aircraft would continue to use other MOAs, MTRs, slow routes, and LATN areas to access the IRs, and existing procedures for identifying areas of concern would continue to be followed. No new entry or exit routes would be added to the existing IRs.

The Proposed Action would not alter the number of aircraft stationed at Hurlburt Field nor would it affect the number of personnel or support facilities needed for training operations. The Proposed Action would not include any new ground operations, nor would it develop any new helicopter landing zones or drop zones. No construction, site alteration, or other ground-disturbing activities are planned as part of the Proposed Action.

The area evaluated for potential effects on listed species includes the IR-057 and IR-059 corridors and a 5-mile buffer on each side of IR-057 and IR-059. A list of species that could potentially be found in this corridor was obtained from the US Fish and Wildlife Service (USFWS) Information for Planning and Consultation website (USFWS 2020). That list is provided in Table 1. Of the 37 listed species with the potential to occur in the action area, only those potentially affected by aircraft movement and aircraft noise were included for further evaluation. These were limited to three federally listed species: gray bat (*Myotis grisescens*), red-cockaded woodpecker, and wood stork. No designated critical habitat occurs in the action area for any of these three species. The movement of aircraft and aircraft noise at altitudes of 200 feet AGL and higher would not impact federally listed plants, fish, crustaceans, clams, amphibians, or reptiles, or their designated critical habitat which could occur beneath IR-057 and IR-059 and the associated 5-mile-wide buffer. Therefore, these listed species are not considered further.

- **Gray Bat.** The gray bat is federally endangered and is a cave specialist, roosting only in cave systems, and is closely associated with water. The gray bat has a very restricted range in Florida, only occurring in a single county in the northwest Panhandle. Gray bat occurrence in Alabama is mostly restricted to areas near the Tennessee River in northern Alabama with small populations in central and southern Alabama. They are year-round

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residents and hibernate in caves in the winter. The gray bat primarily feeds on small insects (Alabama Department of Conservation and Natural Resources 2020). The gray bat could be present in IR-057 and IR-059.

- **Red-Cockaded Woodpecker.** The red-cockaded woodpecker is federally listed as endangered and could potentially occur in low numbers within mature pine forest habitat with sparse understory vegetation beneath the IRs. However, there is very little mature pine forest habitat beneath the IRs, and most pine forest is managed for timber and is harvested before it can reach a size and age class suitable to support the red-cockaded woodpecker. Populations of red-cockaded woodpeckers are known to occur proximate to the IRs and Hurlburt Field in the Eglin Reservation, within longleaf pine forests of the Conecuh National Forest, Blackwater Wildlife Management Area, and the Blackwater River State Forest (Eglin Air Force Base 2017).
- **Wood Stork.** The wood stork is a federally threatened wading bird that occurs in the southeastern United States and across the Caribbean and into South America. They nest colonially in rookeries. Wood storks forage fish, frogs, crabs, and crustaceans in shallow water. Wood storks are known to breed in southern and central Georgia and north Florida. Wood storks move north following breeding and can occur throughout the southeastern United States, including Alabama, during the nonbreeding season (USFWS 2013).

Under the Proposed Action, there would be no ground-disturbing activities, and all potential impacts on biological resources would be associated with aircraft operations in IR-057 and IR-059. Because there would be no ground-disturbing activities, there would be no impacts on federally listed plant species, reptiles, amphibians, fish, or invertebrates.

Effects on listed bird and mammal species could occur from flight operations associated with the renewal of IR-057 and IR-059. These aircraft operations could affect biological resources from aircraft movement, noise, and bird and animal aircraft strikes. For listed bird species, given the large area and very low number of annual operations in the two IRs (i.e., 146 authorized annual operations), along with the very low altitudes in which wood storks and red-cockaded woodpeckers typically fly during breeding and foraging, the risk of interacting with aircraft operations is discountable. Further, there would be no substantial change in the noise environment as a result of the Proposed Action (i.e., sound levels with all proposed operations are estimated to be 38.1 A-weighted decibels [dBA] Day-Night Average Sound Level [DNL]), however, low-altitude aircraft movement could have a startle effect on nesting and foraging red-cockaded woodpeckers and wood storks. Although the likelihood of aircraft movement startling red-cockaded woodpeckers and wood storks is low, aircraft movement may affect but is not likely to adversely affect the red-cockaded woodpecker and wood stork.

The increased aircraft operations under the Proposed Action would not have aircraft interactions with the gray bat as no additional night operations are proposed. Only nine annual operations would occur at night when gray bats would be actively foraging or migrating; however, nine annual night operations are currently authorized and there would be no change in the number of night operations under the Proposed Action. Further, gray bats would primarily forage at very low altitudes, typically less than 200 feet AGL and over water (USFWS 1982),

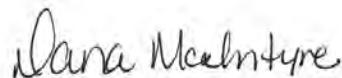
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while the proposed nine annual aircraft operations at night would be above 200 feet AGL. There would be no substantial change in the noise environment as a result of the Proposed Action. Therefore, the renewal of IR-057 and IR-059 would have no effect on the gray bat.

Please note that we are also consulting with the Panama City and Georgia Ecological Services Field Offices. Therefore, I am requesting your participation in the review and comment process for those resources within your office's area of responsibility. Further, I am requesting written concurrence with our *no effect* determination on the federally listed gray bat; reptiles: gopher tortoise (*Gopherus polyphemus*) and eastern indigo snake (*Drymarchon couperi*); amphibians: Red Hills salamander (*Phaeognathus hubrichti*) and reticulated flatwoods salamander (*Ambystoma bishop*); clams: Chipola slabshell (*Elliptio chipolaensis*), Choctaw bean (*Villosa choctawensis*), fat threeridge (*Amblema neislerii*), fuzzy pigoe (*Pleurobema strodeanum*), Gulf moccasinshell (*Medionidus penicillatus*), orangeacre mucket (*Lampsilis perovalis*), oval pigtoe (*Pleurobema pyriforme*), purple bankclimber (*Elliptioideus sloatianus*), round ebonyshell (*Fusconaia rotulata*), shinyrayed pocketbook (*Lampsilis subangulata*), southern clubshell (*Pleurobema decisum*), southern kidneyshell (*Ptychobranhus jonesi*), southern sandshell (*Hamiota australis*), and tapered pigtoe (*Fusconaia burkei*); fish: Gulf sturgeon (*Acipenser oxyrinchus desotoi*); crustaceans: Panama City crayfish (*Procambarus econfinae*); and plants: American chaffseed (*Schwalbea americana*), Apalachicola rosemary (*Conradina glabra*), Chapman rhododendron (*Rhododendron chapmanii*), Cooley's meadowrue (*Thalictrum cooleyi*), Florida skullecup (*Scutellaria floridana*), Florida torreyia (*Torreya taxifolia*), fringed campion (*Silene polypetala*), gentian pinkroot (*Spigelia gentianoides*), Georgia rockcress (*Arabis georgiana*), Godfrey's butterwort (*Pinguicula ionantha*), Harper's beauty (*Harperocallis flava*), papery whitlow-wort (*Paronychia chartacea*), pondberry (*Lindera melissifolia*), relict trillium (*Trillium reliquum*), and white birds-in-a-nest (*Macbridea alba*); and our *may affect but not likely to adversely affect* determination on the federally listed red-cockaded woodpecker and wood stork. We respectfully request that you provide your written questions or comments or concurrence with the Air Force's determinations at your earliest convenience, but no later than 30 days from the date of receipt of this correspondence. Please address all questions and comments to Mr. Derek Adkins, 1 SOCES/CENP, 415 Independence Road, Building 90053, Hurlburt Field, FL 32544, or by email to derek.adkins@us.af.mil. Comments are encouraged to be sent directly via email to derek.adkins@us.af.mil. Thank you in advance for your assistance in this effort.



DANA J. MCINTYRE, P.E., GS-14, DAF
Deputy Base Civil Engineer, 1st Spec Ops Civil
Engineer Sq

Attachments:

1. Figure 1. Location of IR-057 and IR-059
2. Table 1. US Fish and Wildlife Service Information for Planning and Consultation Website Search Results

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Any Time... Any Place

**Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059**

6

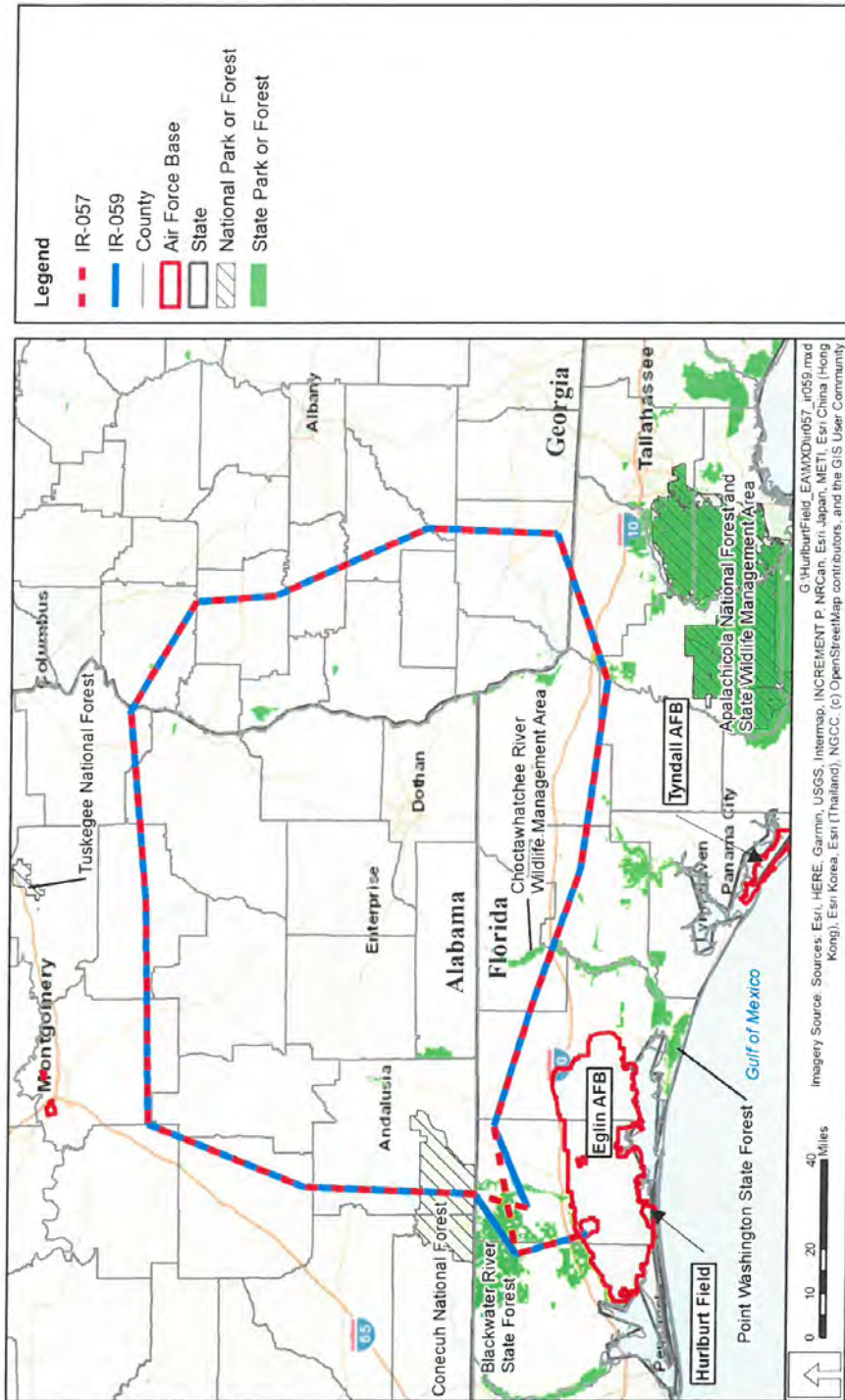


Figure 1. Location of Instrument Route-057 and Instrument Route-059

Table 1. US Fish and Wildlife Service Information for Planning and Consultation Website Search Results

Common Name	Scientific Name	Legal Status	Potential to Be Affected
	Mammals		
Gray bat	<i>Myotis grisescens</i>	Endangered	Yes
	Birds		
Red-cockaded woodpecker	<i>Picoides borealis</i>	Endangered	Yes
Wood stork	<i>Mycteria americana</i>	Threatened	Yes
	Amphibians		
Red Hills salamander	<i>Phaeognathus hubrichti</i>	Threatened	No
Reticulated flatwoods salamander	<i>Ambystoma bishop</i>	Endangered	No
	Reptiles		
Eastern indigo snake	<i>Drymarchon couperi</i>	Threatened	No
Gopher tortoise	<i>Gopherus polyphemus</i>	Candidate	No
	Clams		
Chipola slabshell	<i>Elliptio chipolensis</i>	Threatened Overlaps Designated Critical Habitat	No
Choctaw bean	<i>Villosa choctawensis</i>	Endangered Overlaps Designated Critical Habitat	No
Fat threeridge (mussel)	<i>Ambelena neisterii</i>	Endangered Overlaps Designated Critical Habitat	No
Fuzzy pigtoe	<i>Pleurobema strodeanum</i>	Threatened Overlaps Designated Critical Habitat	No
Gulf moccasinshell	<i>Meionidius penicillatus</i>	Endangered Overlaps Designated Critical Habitat	No
Orangeacre mucket	<i>Lampsilis perovialis</i>	Threatened	No
Oval pigtoe	<i>Pleurobema pyriforme</i>	Endangered Overlaps Designated Critical Habitat	No

**Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059**

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Common Name	Scientific Name	Legal Status	Potential to Be Affected
Purple banklimber (mussel)	<i>Elliptoidens sfoatanus</i>	Threatened Overlaps Designated Critical Habitat	No
Round ebonyshell	<i>Fusconaia rotulata</i>	Endangered Overlaps Designated Critical Habitat	No
Shinyrayed pocketbook	<i>Lampsilis subangulata</i>	Endangered Overlaps Designated Critical Habitat	No
Southern clubshell	<i>Pleurobema decisum</i>	Endangered	No
Sothern kidneyshell	<i>Ptychobranclus jonesi</i>	Endangered Overlaps Designated Critical Habitat	No
Southern sandshell	<i>Hamiota australis</i>	Threatened Overlaps Designated Critical Habitat	No
Tapered pigtoe	<i>Fusconaia burkei</i>	Threatened Overlaps Designated Critical Habitat	No
Fish			
Gulf Sturgeon	<i>Acipenser oxyrinchus desotoi</i>	Threatened	No
Crustaceans			
Panama City crayfish	<i>Procambarus econfinae</i>	Proposed Threatened	No
Plants			
American chaffseed	<i>Schwalbea americana</i>	Endangered	No
Apalachicola rosemary	<i>Conradina glabra</i>	Endangered	No
Chapman rhododendron	<i>Rhododendron chapmanii</i>	Endangered	No
Cooley's meadowrue	<i>Thalictrum cooleyi</i>	Endangered	No
Florida skullcap	<i>Scutellaria floridana</i>	Threatened	No
Florida torreya	<i>Torreya taxifolia</i>	Endangered	No
Fringed campion	<i>Sitene polypetala</i>	Endangered	No
Gentian pinkroot	<i>Spigelia genianoides</i>	Endangered	No

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Common Name	Scientific Name	Legal Status	Potential to Be Affected
Georgia rockress	<i>Arabis georgiana</i>	Threatened	No
Godfrey's butterwort	<i>Pinguicula tonantlia</i>	Threatened	No
Harper's beauty	<i>Harperocalis flava</i>	Endangered	No
Papery whitlow-wort	<i>Paronychia charitacea</i>	Threatened	No
Pondberry	<i>Lindera melissifolia</i>	Endangered	No
Relict trillium	<i>Trillium reliquum</i>	Endangered	No
White birds-in-a-nest	<i>Macbridea alba</i>	Threatened	No

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A-6. Agency and Tribal Responses

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Addressing the Change in Air Force Operations in IR-057 and IR-059**



FLORIDA DEPARTMENT of STATE

RON DESANTIS
Governor

LAUREL M. LEE
Secretary of State

Lieutenant Colonel John P. Conner, USAF
Commander, 1st Special Operations Civil Engineer Squadron
415 Independence Road, Building
Hurlburt Field, Florida 32544

April 13, 2020

RE: DHR Project File No.: 2020-1628
Environmental Assessment for the Renewal of Instrument Route - 057 and Instrument Route - 059
Hurlburt Field, Florida

Dear Lt Col Conner:

The Florida State Historic Preservation Officer reviewed the referenced projects in accordance with Section 106 of the *National Historic Preservation Act of 1966*, as amended, and its implementing regulations in *36 CFR Part 800: Protection of Historic Properties*.

Based on the information provided, it is the opinion of this office that the proposed undertakings will have no effect on historic properties.

If you have any questions concerning our comments, please contact Scott Edwards, Historic Preservationist, by electronic mail scott.edwards@dos.myflorida.com, or at 850.245.6333 or 800.847.7278.

Sincerely,

A handwritten signature in cursive script that reads "Timothy A. Parsons" with the word "For" written below it.

Timothy A. Parsons, Ph.D.
Director, Division of Historical Resources
and State Historic Preservation Officer

Division of Historical Resources
R.A. Gray Building • 500 South Bronough Street • Tallahassee, Florida 32399
850.245.6300 • 850.245.6436 (Fax) • FLHeritage.com



**Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059**



ALABAMA HISTORICAL COMMISSION

468 South Perry Street
Montgomery, Alabama 36130-0900
334-242-3184 / Fax: 334-240-3177

Lisa D. Jones
Executive Director
State Historic Preservation Officer

September 24, 2020

Dana McIntyre
1st Special Operations Civil Engineer Squadron
Hurlburtfield, Florida

Re: AHC 20-1342
Change in Air Force Operations in IR-057 and IR-059
Statewide

Dear Ms. McIntyre:

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

Consultation with the State Historic Preservation Office does not constitute consultation with Tribal Historic Preservation Offices, other Native American tribes, local governments, or the public. If archaeological materials are encountered during construction, the procedures codified at 36 CFR 800.13(b) will apply. Archaeological materials consist of any items, fifty years old or older, which were made or used by man. These items include but are not limited to, stone projectile points (arrowheads), ceramic sherds, bricks, worked wood, bone and stone, metal, and glass objects. The federal agency or the applicant receiving federal assistance should contact our office immediately. If human remains are encountered, the provisions of the Alabama Burial Act (*Code of Alabama* 1975, §13A-7-23.1, as amended; Alabama Historical Commission Administrative Code Chapter 460-X-10 Burials) should be followed. This stipulation shall be placed on the construction plans to insure contractors are aware of it.

We appreciate your commitment to helping us preserve Alabama's historic archaeological and architectural resources. Should you have any questions, please contact Eric Sipes at 334.230.2667 or Eric.Sipes@ahc.alabama.gov. Have the AHC tracking number referenced above available and include it with any future correspondence.

Sincerely,

Lee Anne Wofford
Deputy State Historic Preservation Officer

LAW/EDS/law

THE STATE HISTORIC PRESERVATION OFFICE
www.ahc.alabama.gov

Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059



MARK WILLIAMS
COMMISSIONER

DR. DAVID CRASS
DIVISION DIRECTOR

March 30, 2020

John P. Conner, Lt Col
Commander, 1st Spec Ops Civil Engineer Sq
415 Independence Road, Building 90053
Hurlburt Field, Florida 32544
Attn: Derek Adkins

RE: Military Training Route Renewal, Instrument Route (IR)-057 and IR-059
Statewide, Georgia
HP-200309-003

Dear Lt Col Conner:

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

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

Please refer to project number **HP 200309-003** in future correspondence regarding this project. If we may be of further assistance, please contact me at (770) 389-7851 or Jennifer.dixon@dnr.ga.gov.

Sincerely,

A handwritten signature in blue ink, appearing to read "JD", written over a light blue circular stamp.

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

JEWETT CENTER FOR HISTORIC PRESERVATION
2610 GA HWY 155, SW | STOCKBRIDGE, GA 30281
770.389.7844 | FAX 770.389.7878 | WWW.GEORGIAHPO.ORG

Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059

Brian P. Kemp
Governor



Christopher Nunn
Commissioner

December 3, 2020

Dana J McIntyre
Deputy Base Civil Engineer
1st Special Operations Civil Engineer Squadron
415 Independence Road, Building 90053
Hurlburt Field, Florida 32544
Attn: Derek Adkins

**RE: Hurlburt Field: Renew Military Training Routes (MTR),
Instrument Route (IR)-057, IR-059
Statewide, Georgia
HP-200819-003**

Dear Ms. McIntyre:

The Historic Preservation Division (HPD) has reviewed the additional information submitted concerning the above referenced project. Our comments are offered to assist U.S. Department of the Air Force and Hurlburt Field in complying with the provisions of Section 106 of the National Historic Preservation Act of 1966, as amended (NHPA).

The subject project consists of renewing Hurlburt Field's Military Training Routes (MTR), Instrument Route (IR)-057 and IR-059, portions of which are over Baker, Calhoun, Decatur, Early, Miller, Mitchell, Randolph, Stewart, and Webster Counties in Georgia. It is HPD's understanding that alterations to the IRs include aircraft type and number of flights, that the hours of operation, size, use, altitude, floor, speed, and avoidance of sensitive areas remains the same, and that no new construction, demolition, or ground disturbance will occur. Based on the information provided, HPD concurs that there are multiple National Register of Historic Places (NRHP)-listed, eligible, and unknown resources, which are being treated as eligible for the purposes of Section 106, within the proposed project's area of potential effect (APE). However, it is HPD's opinion that the subject project, as proposed, will have **no adverse effect** to historic properties within its APE, as defined in 36 CFR Part 800.5(d)(1), due to the minor changes proposed.

This letter evidences consultation with our office for compliance with Section 106 of the NHPA. It is important to remember that any changes to this project as it is currently proposed may require additional consultation. HPD encourages federal agencies to discuss such changes with our office to ensure that potential effects to historic properties are adequately considered in project planning.

Please refer to project number **HP-200819-003** in any future correspondence regarding this project. If we may be of further assistance, please contact me at (770) 389-7851 or Jennifer.dixon@dca.ga.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "JD", is written over a light blue circular stamp.

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

300 Executive Park South, NE | Atlanta, GA 30329-2231 | 404-675-8888
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**Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059**



**EASTERN SHAWNEE
CULTURAL PRESERVATION DEPARTMENT**

70500 East 128 Road, Wyandotte, OK 74370

July 23, 2020
USAF 1 SOCES/CENP Hurlburt Field
415 Independence Road, Bldg 90053
Hurlburt, FL 32544

RE: Instrument Route -057/-059, Okaloosa County, FL

Dear Mr. Adkins, NEPA Coordinator,

The Eastern Shawnee Tribe has received your letter regarding the above referenced project(s) within Okaloosa County, FL. The Eastern Shawnee Tribe is committed to protecting sites important to Tribal Heritage, Culture and Religion. Furthermore, the Tribe is particularly concerned with historical sites that may contain but not limited to the burial(s) of human remains and associated funerary objects.

As described in your correspondence, and upon research of our database(s) and files, we find our people occupied these areas historically and/or prehistorically. However, the project proposes **NO Adverse Effect** or endangerment to known sites of interest to the Eastern Shawnee Tribe. Please continue project as planned. However, should this project inadvertently discover an archeological site or object(s) we request that you immediately contact the Eastern Shawnee Tribe, as well as the appropriate state agencies (within 24 hours). We also ask that all ground disturbing activity stop until the Tribe and State agencies are consulted. Please note that any future changes to this project will require additional consultation.

In accordance with the NHPA of 1966 (16 U.S.C. § 470-470w-6), federally funded, licensed, or permitted undertakings that are subject to the Section 106 review process must determine effects to significant historic properties. As clarified in Section 101(d)(6)(A-B), historic properties may have religious and/or cultural significance to Indian Tribes. Section 106 of NHPA requires Federal agencies to consider the effects of their actions on all significant historic properties (36 CFR Part 800) as does the National Environmental Policy Act of 1969 (43 U.S.C. § 4321-4347 and 40 CFR § 1501.7(a)). This letter evidences NHPA and NEPA historic properties compliance pertaining to consultation with this Tribe regarding the referenced proposed projects.

Thank you, for contacting the Eastern Shawnee Tribe, we appreciate your cooperation. Should you have any further questions or comments please contact our Office.

Sincerely,

Brett Barnes

Tribal Historic Preservation Officer (THPO)
Eastern Shawnee Tribe of Oklahoma
(918) 666-5151 Ext:1845

Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059

SEMINOLE TRIBE OF FLORIDA
TRIBAL HISTORIC PRESERVATION OFFICE
AH-TAH-THI-KI MUSEUM

TRIBAL HISTORIC
PRESERVATION OFFICE
SEMINOLE TRIBE OF FLORIDA
AH-TAH-THI-KI MUSEUM
30290 JOSIE BILLIE HIGHWAY
PMB 1004
CLEWISTON, FL 33440
THPO PHONE: (863) 983-6549
MUSEUM PHONE: (863) 902-1113
FAX: (863) 902-1117
THPO WEBSITE: WWW.STOFTHPO.COM
MUSEUM WEBSITE: WWW.AHTAHTHIKI.COM



TRIBAL OFFICERS
MARCELLUS W. OSCEOLA JR.
CHAIRMAN
MITCHELL CYPRESS
VICE CHAIRMAN
LAVONNE ROSE
SECRETARY
PETER A. HAHN
TREASURER

March 17, 2020

Subject: Seminole Tribe of Florida-THPO offices closed due to COVID-19, staff working remotely

Dear Federal Partners,

Due to concerns over the recent spread of COVID-19 the STOF-THPO offices will be closed until further notice. However, the THPO Compliance Review Section staff will be working remotely.

During this closure staff will be unable to receive mailed hardcopies. Therefore, we respectfully request that all Section 106 consultation requests be sent via email to [REDACTED]. Please note that this email address is case sensitive and has file size limitations (about 12 MB). If your agency does not have a secure file transfer site that we can access, we have also set up a secure FTP site for large files which we can provide access to upon request.

Additionally, and unfortunately, the THPO Compliance Review Section was unable to open a number of requests that were received via regular mail before this closure. As a result, we would respectfully like to ask that any consultation requests mailed after February 24th please be re-submitted via email.

We also respectfully ask that all agencies please follow the guidelines below for submitting Section 106 consultation requests via email and secure file transfer sites:

1. Please include in your email:
 - a. a cover consultation request letter with a determination if applicable
 - b. a project/APE description – which includes a clear summary of all proposed ground disturbing activity
 - c. a project/APE location map
 - d. a Cultural Resources Assessment Survey if applicable
 - e. a kmz file (google earth file) for easy reference on google earth
2. Please ONLY upload large files to the FTP or secure file transfer site. Please do not include the consultation request letter in the large file uploaded, this should come in a separate email.

Staff will be available for meetings via webinar and/or teleconference only.

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Addressing the Change in Air Force Operations in IR-057 and IR-059

SEMINOLE TRIBE OF FLORIDA
TRIBAL HISTORIC PRESERVATION OFFICE
AH-TAH-THI-KI MUSEUM

TRIBAL HISTORIC
PRESERVATION OFFICE
SEMINOLE TRIBE OF FLORIDA
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MUSEUM WEBSITE: WWW.AHTAHTHIKI.COM



TRIBAL OFFICERS
MARCELLUS W. OSCEOLA JR.
CHAIRMAN
MITCHELL CYPRESS
VICE CHAIRMAN
LAVONNE ROSE
SECRETARY
PETER A. HAHN
TREASURER

Furthermore, we would respectfully like to request a two-week extension starting today (March 17th) on all projects that were due between February 24th and March 17th.

Finally, we would sincerely like to thank you all for your patience and understanding as we work through this emergency situation. If you have any further questions, please do not hesitate to contact us.

Sincerely,

Anne Mullins, Director
STOF, Tribal Historic Preservation Office
30290 Josie Billie Hwy, PMB 1004
Clewiston, FL 33440
Cell: [REDACTED]
Email: [REDACTED]
Web: www.stofthpo.com

**Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059**



United States Department of the Interior

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



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

September 04, 2020

Coastal Sub Office
4980 Wildlife Drive
Townsend, Georgia 31331

Dana McIntyre
Deputy Base Civil Engineer
1st Special Operations Civil Engineer Squadron
415 Independence Road, Building 90053
Hurlburt Field, FL 32544

Re: **FWS Log No. 2020-I-3406**

Dear Ms. McIntyre:

This letter acknowledges the U.S. Fish and Wildlife Service's (Service) receipt of your August 17, 2020 letter (received on August 31, 2020) requesting informal consultation as stated within Section 7 under the Endangered Species Act (ESA). This consultation concerns the possible effects of the proposed Renewal of Military Training Routes (MTRs) Instrument Route (IR)-057 and IR-059 (Action) on federally protected species within the proposed Action Area (AA).

As stated in the Biological Assessment (BA), the Air Force proposes to renew military training routes/ instrument routes IR-057 and IR-059 across sections of Alabama, Florida and Georgia. The Air Force reports that the Action sustains pilots' proficiency in air combat tactics and to accomplish special operations activities such as unconventional warfare, direct action, special reconnaissance, counterterrorism, foreign internal defense, personnel recovery, and information operations. The BA further reports that IR-057 and IR-059 have a width of 2 nautical miles (NM) on either side of the centerline; are 380 NM long; and were originally created for C-130 operations. The BA states an EA was completed in March 1994 that modified IR-057 and IR-059 by adding MH-53 (helicopter) operations to the IRs and lowered the floor of the IRs from 250 feet to 200 feet above ground level (AGL) for helicopter operations. Additional elements of the Action description as reported include:

- Renewing the use of IR-057 and IR-059, would amend the type of aircraft permitted for flight training operations from C-130s and MH-53s to Hurlburt Field-stationed CV-22s, MC-1 30H/Js, and US Army HH-60s. It's reported the IRs would continue to have a ground track of approximately 380 NM, with a corridor width of 2 NM on either side of the IR centerline. The IRs would continue to be used for flight training in conjunction with military operations areas (MOAs) as well as MTRs, slow routes, and low-altitude training and navigation (LA TN) areas, enabling 1st Special Operations Wing to optimize

Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059

air combat training of military personnel. The Air Force reports the route would continue to be flown at 250 knots or less, at floor altitudes as low as 200 feet AGL during daytime and nighttime hours by CV-22s and HH-60s, and at floor altitudes as low as 250 feet AGL during daytime and nighttime hours for MC-130H/Js.

- The Action would not modify the current use of the IRs (i.e., no change in permitted airspeed, altitude, floor, avoidance of sensitive areas, or hours of operation) except for amending IR-057 and IR-059 to allow for CV-22, MC-130H/J, and HH-60 training operations. Aircraft would continue to use other MO As, MTRs, slow routes, and LA TN areas to access the IRs, and existing procedures for identifying areas of concern would continue to be followed. No new entry or exit routes would be added to the existing IRs.
- The Action would not alter the number of aircraft stationed at Hurlburt Field nor would it affect the number of personnel or support facilities needed for training operations. The Action would not include any new ground operations, nor would it develop any new helicopter landing zones or drop zones. No construction, site alteration, or other ground-disturbing activities are planned as part of the Action.

The AA evaluated for potential effects on listed species includes the IR-057 and IR-059 corridors and a 5-mile buffer on each side of IR-057 and IR-059. The BA provides a map of the AA as well as the list of species analyzed, and states that of the 37 listed species with the potential to occur in the AA, only those potentially affected by aircraft movement and aircraft noise were included for further evaluation. Further analysis then, is limited to three federally listed species: gray bat (*Myotis grisescens*), red-cockaded woodpecker and wood stork. No designated critical habitat occurs in the AA for any of these three species.

The BA further states the movement of aircraft and aircraft noise at altitudes of 200 feet AGL and higher would not impact federally listed plants, fish, crustaceans, clams, amphibians, or reptiles, or their designated critical habitat which could occur beneath IR-057 and IR-059 and the associated 5-mile-wide buffer. Therefore, the Service will not consider further, these listed species.

Species Considered with a No Effect determination:

Gray bat; reptiles: gopher tortoise (*Gopherus polyphemus*) and eastern indigo snake (*Drymarchon couperi*); amphibians: Red Hills salamander (*Phaeognathus hubrichti*) and reticulated flatwoods salamander (*Ambystoma bishop*); clams: Chipola slabshell (*Elliptio chipolaensis*), Choctaw bean (*Villosa choctawensis*), fat threeridge (*Amblema neislerii*), fuzzy pigoe (*Pleurobema strodeanum*), Gulf moccasinshell (*Medionidus penicillatus*), orangeacre mucklet (*Lampsilis perovavis*), oval pigtoe (*Pleurobema pyriforme*), purple bankclimber (*Elliptioideus sloatianus*), round ebonyshell (*Fusconaia rotulata*), shinyrayed pocketbook (*Lampsilis subangulata*), southern clubshell (*Pleurobema decisum*), southern kidneyshell (*Ptychobranchus jonesi*), southern sandshell (*Hamiota australis*), and tapered pigtoe (*Fusconaia burkei*); fish: Gulf sturgeon (*Acipenser oxyrinchus desotoi*); crustaceans: Panama City crayfish (*Procambarus eonjiniae*); and plants: American chaffseed (*Schwalbea americana*), Apalachicola rosemary (*Conradina glabra*), Chapman rhododendron (*Rhododendron chapmanii*), Cooley's meadowrue (*Thalictrum cooleyi*), Florida skullcap (*Scutellaria floridana*), Florida torreyia

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Addressing the Change in Air Force Operations in IR-057 and IR-059

(*Torreya taxifolia*), fringed campion (*Silene polypetala*); gentian pinkroot (*Spigelia gentianoides*), Georgia rockcress (*Arabis georgiana*), Godfrey's butterwort (*Pinguicula ionantha*), Harper's beauty (*Harperocalis jlava*), papery whitlow-wort (*Paronychia chartacea*), pondberry (*Lindera melissifolia*), relict trillium (*Trillium reliquum*), and white birds-in-a-nest (*Macbridea alba*).

Species Considered with a May Affect, Not Likely to Adversely Affect:

Red-cockaded woodpecker (*Picoides borealis*) and wood stork (*Mycteria americana*).

Federally listed species potentially affected by aircraft movement and aircraft noise:

Gray Bat. The gray bat is federally endangered and is a cave specialist, roosting only in cave systems, and is closely associated with water. The gray bat has a very restricted range in Florida, only occurring in a single county in the northwest Panhandle. Gray bat occurrence in Alabama is mostly restricted to areas near the Tennessee River in northern Alabama with small populations in central and southern Alabama. They are year-round residents and hibernate in caves in the winter. The gray bat primarily feeds on small insects (Alabama Department of Conservation and Natural Resources 2020). The gray bat could be present in IR-057 and IR-059.

Red-Cockaded Woodpecker. The red-cockaded woodpecker is federally listed as endangered and could potentially occur in low numbers within mature pine forest habitat with sparse understory vegetation beneath the IRs. However, there is very little mature pine forest habitat beneath the IRs, and most pine forest is managed for timber and is harvested before it can reach a size and age class suitable to support the red-cockaded woodpecker. Populations of red-cockaded woodpeckers are known to occur proximate to the IRs and Hurlburt Field in the Eglin Reservation, within longleaf pine forests of the Conecuh National Forest, Blackwater Wildlife Management Area, and the Blackwater River State Forest.

Wood Stork. The wood stork is a federally threatened wading bird that occurs in the southeastern United States and across the Caribbean and into South America. They nest colonially in rookeries. Wood storks forage fish, frogs, crabs, and crustaceans in shallow water. Wood storks are known to breed in southern and central Georgia and north Florida. Wood storks move north following breeding and can occur throughout the southeastern United States, including Alabama, during the nonbreeding season.

After review of the Action Area and the Action, the Service acknowledges the Air Forces determinations that the under the proposed Action, there would be no ground-disturbing activities, and all potential impacts on biological resources would be associated with aircraft operations in IR-057 and IR-059. Because there would be no ground-disturbing activities, there would be no impacts on federally listed plant species, reptiles, amphibians, fish, or invertebrates.

Effects on listed bird and mammal species could occur from flight operations associated with the renewal of IR-057 and IR-059. These aircraft operations could affect biological resources from aircraft movement, noise, and bird and animal aircraft strikes. For listed bird species, given the large area and very low number of annual operations in the two IRs (i.e., 146 authorized annual operations), along with the very low altitudes in which wood storks and red-cockaded

Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059

woodpeckers typically fly during breeding and foraging, the risk of interacting with aircraft operations is discountable. Further, there would be no substantial change in the noise environment as a result of the Action (i.e., sound levels with all proposed operations are estimated to be 38.1 A-weighted decibels [dBA] Day-Night Average Sound Level [DNL]), however, low-altitude aircraft movement could have an effect on nesting and foraging red-cockaded woodpeckers and wood storks. Although the likelihood of aircraft movement flushing red-cockaded woodpeckers and wood storks is low, aircraft movement *may affect but is not likely to adversely affect* the red-cockaded woodpecker and wood stork.

The increased aircraft operations under the Action would not have aircraft interactions with the gray bat as no additional night operations are proposed. Only nine annual operations would occur at night when gray bats would be actively foraging or migrating; however, nine annual night operations are currently authorized and there would be no change in the number of night operations under the Proposed Action. Further, gray bats would primarily forage at very low altitudes, typically less than 200 feet AGL and over water (USFWS 1982), while the proposed nine annual aircraft operations at night would be above 200 feet AGL. There would be no substantial change in the noise environment as a result of the proposed Action. Therefore, the renewal of IR-057 and IR-059 would have *no effect* on the gray bat.

In summary, the proposed action may affect, but is not likely to adversely affect, the wood stork, and red-cockaded woodpecker, and will not affect the gray bat.

Air Force obligations under Section 7 of the ESA must also be reconsidered if: (1) new information reveals that the proposed action may affect listed species in a manner or extent not previously considered, (2) the proposed action is subsequently modified to include activities which were not considered during this consultation, or (3) new species are listed or critical habitat is designated that might be affected by the proposed action.

If you have any questions or concerns about this consultation or the consultation process in general, please feel free to contact John Doresky at (202) 662-2467.

Sincerely,



(for) Donald Imm
Field Supervisor

FORMAT PAGE

**Appendix B. Public and Agency Comments on the Draft Environmental Assessment and
Proposed Finding of No Significant Impact**

FORMAT PAGE

B-1. Notices of Availability

FORMAT PAGE

**Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059**



Daily-Montgomery, Montgomery County, AL

TO: VERNADERO GROUP INCORPORATED
3400 S. CARROLLTON AVE. #850752
NEW ORLEANS, LA 70185

of Affidavits 1
This is not an invoice

E-Verify#: DHS72179

PROOF OF PUBLICATION

State of Alabama
County of Montgomery:

Before the undersigned authority personally appeared said Legal Clerk who on oath, says that he/she is a personal representative of the *Montgomery Advertiser*, a daily newspaper published in Montgomery, Alabama; that the attached copy of advertisement, being a Legal in the matter of:

Ad Number: 0004347078
Was published in said newspaper in the issue(s) of:

MGM-Montgomery Advertiser
08/30/2020

Affiant further says that the said *Montgomery Advertiser* is a newspaper published in said Montgomery County, Alabama, and that the said newspaper has heretofore been published in said Montgomery County, Alabama, and has been entered as second class matter at the Post Office in said Montgomery County, Alabama, for a period of one year next preceding the first publication of the attached copy of advertisement; and affiant further says that she has neither paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in the said newspaper.

Now due on said account is \$329.28

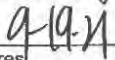


Legal Clerk

Subscribe and sworn before me this 30th day of August, 2020



Notary Public, State of Wisconsin, County of Brown



My Commission expires



Final Environmental Assessment Addressing the Change in Air Force Operations in IR-057 and IR-059

Re: Routes IR-057 and IR-059

NOTICE OF AVAILABILITY

Draft Environmental Assessment Addressing the Change in Air Force Operations in Instrument Routes IR-057 and IR-059, Hurlburt Field, Florida

A Draft Environmental Assessment (EA) and Proposed Finding of No Significant Impact (FONSI) have been prepared by the United States Air Force (Air Force) to address the potential environmental consequences associated with a change in Air Force operations in Military Training Routes (MTRs) Instrument Route (IR) 057 and IR-059, which are located proximate to Hurlburt Field, Florida.

The CV-22, MC-130HJ, and HH-60 flight crews regularly conduct flight training to ensure their effectiveness and readiness when deployed. Air Force Special Operations Command proposes a change in operations for MTRs designated as IR-057 and IR-059 for flight training by Hurlburt Field-stationed CV-22, MC-130HJ, and US Army HH-60 flight crews. The Proposed Action would amend the type of aircraft permitted for flight training operations in IR-057 and IR-059 by permitting the use of CV-22, MC-130HJ, and HH-60 aircraft for training. The Proposed Action would increase the authorized annual operations in the two IRs from 90 to 146.

The Draft EA and Proposed FONSI are available at the following locations:

- Fort Walton Beach Library, 185 Miracle Strip Parkway SE, Fort Walton Beach, Florida 32549
- Greenville-Butler Public Library, 309 Fort Dale Rd., Greenville, Alabama 36037
- Jackson County Public Library, 2929 Green St., Marianna, Florida 32446
- Randolph County Library, 106 Pearl St., Cuthbert, Georgia 39840
- Troy Public Library, 500 E. Walnut St., Troy, Alabama 36081
- Union Springs Public Library, 103 Prairie St. North, Union Springs, Alabama 36089

The Draft EA and Proposed FONSI can also be found on the Hurlburt Field website at <https://www.hurlburt.af.mil/helpful-info/Environmental>. Please provide any comments within 30 days of the date of this Notice of Availability. Comments should be mailed to Mr. Derek Adkins, 1 SOCES/CEN, 415 Independence Road, Building 90053, Hurlburt Field, Florida 32544 or by e-mail at derek.adkins@us.af.mil.

PRIVACY ADVISORY NOTICE

This Draft EA and Proposed FONSI are provided for public comment in accordance with the National Environmental Policy Act (NEPA), the President's Council on Environmental Quality NEPA Regulations (40 Code of Federal Regulations [CFR] Parts 1500-1508), and 32 CFR 989, Environmental Impact Analysis Process (EIAP). The EIAP provides an opportunity for public input on Air Force decision making, allows the public to offer inputs on alternative ways for the Air Force to accomplish what it is proposing, and solicits comments on the Air Force's analysis of environmental effects.

Public commenting allows the Air Force to make better-informed decisions. Letters or other written or oral comments provided may be published in the EA. As required by law, comments provided will be addressed in the EA and made available to the public. Providing personal information is voluntary. Any personal information provided will be used only to identify your desire to make a statement during the public comment portion of any public meetings or hearings or to fulfill requests for copies of the EA or associated documents. Private addresses will be compiled to develop a mailing list for those requesting copies of EA; however, only the names of the individuals making comments and specific comments will be disclosed. Personal home addresses and phone numbers will not be published in the EA.
Mont. Adv. 8/30/2020
0004347078

**Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059**

0004346934 / 6024568283

TALLAHASSEE DEMOCRAT
Tallahassee.com
A GANNETT COMPANY

Attn:
VERNADERO GROUP INCORPORATED
3400 S. CARROLLTON AVE. #850752
NEW ORLEANS, 70185

STATE OF FLORIDA COUNTY OF LEON:
Before the undersigned authority personally appeared JK, who on oath says that he or she is a Legal Advertising Representative of the Tallahassee Democrat, a daily newspaper published at Tallahassee in Leon County, Florida; that the attached copy of advertisement, being a Legal Ad in the matter of

NOTICE

In the Second Judicial Circuit Court was published in said newspaper in the issues of:

08/30/2020

Affiant further says that the said Tallahassee Democrat is a newspaper published at Tallahassee, in the said Leon County, Florida, and that the said newspaper has heretofore been continuously published in said Leon County, Florida each day and has been entered as periodicals matter at the post office in Tallahassee, in said Leon County, Florida, for a period of one year next preceding the first publication of the attached copy of advertisement; and affiant further says that he or she has never paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in the said newspaper.

Sworn to and Subscribed before me this 30th of August 2020, by Nicholas Kennedy who is personally known to me.

[Signature]
Affiant

Nancy Heyrman
Notary Public, State of Wisconsin, County of Brown
5.15.23

My commission expires

of Affidavits 1

NANCY HEYRMAN
Notary Public
State of Wisconsin

NOTICE OF AVAILABILITY

Draft Environmental Assessment Addressing the Change in Air Force Operations in Instrument Routes IR-057 and IR-059, Hurlburt Field, Florida

A Draft Environmental Assessment (EA) and Proposed Finding of No Significant Impact (FONSI) have been prepared by the United States Air Force (Air Force) to address the potential environmental consequences associated with a change in Air Force operations in Military Training Routes (MTRs) Instrument Route (IR)-057 and IR-059, which are located proximate to Hurlburt Field, Florida.

The CV-22, MC-130HJ, and HH-60 flight crews regularly conduct flight training to ensure their effectiveness and readiness when deployed. Air Force Special Operations Command proposes a change in operations for MTRs designated as IR-057 and IR-059 for flight training by Hurlburt Field-stationed CV-22, MC-130HJ, and US Army HH-60 flight crews. The Proposed Action would amend the type of aircraft permitted for flight training operations in IR-057 and IR-059 by permitting the use of CV-22, MC-130HJ, and HH-60 aircraft for training. The Proposed Action would increase the authorized annual operations in the two IRs from 90 to 145.

The Draft EA and Proposed FONSI are available at the following locations:

- Fort Walton Beach Library, 185 Miracle Strip Parkway SE, Fort Walton Beach, Florida 32548
- Greenville-Burder Public Library, 309 Fort Dale Rd., Greenville, Alabama 36037
- Jackson County Public Library, 2929 Green St., Marianna, Florida 32446
- Randolph County Library, 106 Pearl St., Cuthbert, Georgia 39840
- Troy Public Library, 500 E. Walnut St., Troy, Alabama 36081
- Union Springs Public Library, 103 Prairie St. North, Union Springs, Alabama 36089

The Draft EA and Proposed FONSI can also be found on the Hurlburt Field website at <https://www.hurlburt.af.mil/Helpful-Info/Environmental>. Please provide any comments within 30 days of the date of this Notice of Availability. Comments should be mailed to Mr. Derek Adkins, 1 SOCSCKEN, 415 Independence Road, Building 90053, Hurlburt Field, Florida 32544 or by e-mail at derek.adkins@us.af.mil.

PRIVACY ADVISORY NOTICE

This Draft EA and Proposed FONSI are provided for public comment in accordance with the National Environmental Policy Act (NEPA), the President's Council on Environmental Quality NEPA Regulations (40 Code of Federal Regulations [CFR] Parts 1500-1508), and 32 CFR 985, Environmental Impact Analysis Process (EIAP). The EIAP provides an opportunity for public input on Air Force decision making, allows the public to offer inputs on alternative ways for the Air Force to accomplish what it is proposing, and solicits comments on the Air Force's analysis of environmental effects.

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PUBLICATION: 8/30/2020

**Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059**

Alabama Community Newspapers
Advertising Affidavit

227 N. Oates St.
Dothan, AL 36303
(800) 779-2557

Account Number

2277109

Date

August 30, 2020

VERNADERO GROUP INC
3400 S. CARROLLTON AVE. #850752
NEW ORLEANS, LA 70185

Date	Category	Description	Ad Size	Total Cost
08/30/2020	Legal Notices	L1511 EA IR-057 IR-059 Operations Change	1 x 84 L	598.00

L1511 NOTICE OF AVAILABILITY
Draft Environmental Assessment Addressing the Change in Air Force Operations in Instrument Routes IR-057 and IR-059, Hurlburt Field, Florida

A Draft Environmental Assessment (EA) and Proposed Finding of No Significant Impact (FONSI) have been prepared by the United States Air Force (Air Force) to address the potential environmental consequences associated with a change in Air Force operations in Military Training Routes (MTRs) Instrument Route (IR)-057 and IR-059, which are located proximate to Hurlburt Field, Florida. The CV-22, MC-130H/J, and HH-60 flight crews regularly conduct flight training to ensure their effectiveness and readiness when deployed. Air Force Special Operations Command proposes a change in operations for MTRs designated as IR-057 and IR-059 for flight training by Hurlburt Field-stationed CV-22, MC-130H/J, and US Army HH-60 flight crews. The Proposed Action would amend the type of aircraft permitted for flight training operations in IR-057 and IR-059 by permitting the use of CV-22, MC-130H/J, and HH-60 aircraft for training. The Proposed Action would increase the authorized annual operations in the two IRs from 90 to 146.

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- Union Springs Public Library, 103 Prairie St. North, Union Springs, Alabama 36089

The Draft EA and Proposed FONSI can also be found on the Hurlburt Field website at <https://www.hurlburt.af.mil/Helpful-Info/Environmental>. Please provide any comments within 30 days of the date of this Notice of Availability. Comments should be mailed to Mr. Derek Adkins, 1 SOCES/CEN, 415 Independence Road, Building 90053, Hurlburt Field, Florida 32544 or by e-mail at derek.adkins@us.af.mil.

Affidavit of Publication of Legal Notice

State of Alabama
Houston County

Before me, a notary public in and for the county and state above listed, personally appeared Alice Trawick who, by me duly sworn, deposes and says that:

"My name is Alice Trawick. I am the Legal Manager of the Dothan Eagle".

The Newspaper published the attached legal notice in the issues of: 08/30/2020
Newspaper reference: 0001206062
The sum charged for publications was \$598.00.

The charges by the Newspaper for said publication does not exceed the lowest actual classified rate paid by commercial customers for an advertisement of similar size and frequency in the same newspaper(s) in which the public notice appeared.

There are no agreements between the Newspaper and the officer or attorney charged with the duty of placing the attached legal advertising notices whereby any advantage, gain or profit accrued to said officer or attorney.

Alice Trawick
AFFIANT
Sworn and subscribed this 31 of August, 2020

Sherryl A. Doyon
Notary Public
State of Alabama

OFFICIAL SEAL
SHERRYL A. DOYON
Notary Public
Alabama State at Large
My Commission Expires Dec. 11, 2023

THIS IS NOT A BILL. PLEASE PAY FROM INVOICE. THANK YOU

Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059

PRIVACY ADVISORY NOTICE

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**Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059**



Ledger-Enquirer

AFFIDAVIT OF PUBLICATION

Account #	Ad Number	Identification	PO	Amount	Cols	Depth
767899	0004737971	NOTICE OF AVAILABILITY Draft Environmental Assessment	IR-059 Operations Change NOA	\$70.00	2	6.00 In

Attention: Eric Webb

VERNADERO GROUP INCORPORATED
3400 S. CARROLLTON AVE. #850752
NEW ORLEANS, LA 70185

NOTICE OF AVAILABILITY

Draft Environmental Assessment Addressing the Change in Air Force Operations in Instrument Routes IR-057 and IR-059, Hurlburt Field, Florida

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Publish: August 30, 2020 (0004737971)

To whom it may concern:

This is to certify the legal advertisement in the above stated case has been published in the Columbus Ledger-Enquirer, legal organ of Muscogee County on:

1 Insertion(s)

Published On:

August 30, 2020

V Rodela

Representative

Sworn to and subscribed before me this
31st day of August in the year of 2020

Supra

Notary Public, Dallas, TX



**Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059**

NORTHWEST FLORIDA
Daily News
nwfdailynews.com
Published Daily
Fort Walton Beach, Florida
Distributed in Okaloosa, Santa Rosa & Walton
Counties
STATE OF FLORIDA
COUNTY OF OKALOOSA

Before the undersigned authorized personally appeared Toni Brown, who on oath says that she is an employee of Gatehouse Media Group, owner of the Northwest Florida Daily News, a daily newspaper published at Fort Walton Beach, in Okaloosa County, Florida; that the attached copy of advertisement, being a

PUBLIC NOTICE

the matter of

NOTICE OF AVAILABILITY

In the Okaloosa County Court, was published in said newspaper in the issues of

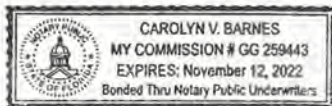
8/30/2020

Affiant further says that the said Northwest Florida Daily News is a newspaper published at Fort Walton Beach, in said Okaloosa County, Florida, and that the said newspaper has heretofore been continuously published in said Okaloosa County, Florida, each day, and has been entered as periodicals matter at the post office in Fort Walton Beach, in said Okaloosa County, Florida, for a period of 1 year next preceding the first publication of the attached copy of advertisement; and affiant further says that she has neither paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in the said newspaper.

Toni Brown
(Signature of Applicant)

Sworn to and subscribed before me this 30th day of AUGUST 2020, by Toni Brown, who is personally known to me or who has produced _____ as identification.

Carolyn V. Barnes
Signature of Notary Public-State of Florida)



Notary Public

8/2837DN

NOTICE OF AVAILABILITY

Draft Environmental Assessment Addressing the Change in Air Force Operations in Instrument Routes IR-057 and IR-059, Hurlburt Field, Florida

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The Draft EA and Proposed FONSI can also be found on the Hurlburt Field website at <https://www.hurlburt.af.mil/ehp/Environmental>

Please provide any comments within 30 days of the date of this Notice of Availability. Comments should be mailed to Mr. Derek Adkins, SOCES/CEN, 415 Independence Road, Building 90053, Hurlburt Field, Florida 32544 or by e-mail at derek.adkins@us.af.mil

PRIVACY ADVISORY NOTICE

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

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8/30/2020
8/2837DN

FORMAT PAGE

B-2. Public and Agency Comments

FORMAT PAGE

**Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059**

From: [State Clearinghouse](#)
To: [Eric Webb; State Clearinghouse](#)
Cc: [ADKINS, DEREK N GS-12 USAF AFSOC 1 SOCES/CEN](#)
Subject: RE: Draft EA for Air Force Operations Change in IR-057 and IR-059
Date: Friday, August 28, 2020 11:31:47 AM

While it is covered by EO 12372, the Florida State Clearinghouse does not select the project for review. You may proceed with your project.

Please continue to send future electronic requests directly to the State of Florida Clearinghouse email address, state.clearinghouse@floridadep.gov.

Good Luck.

Chris Stahl

Chris Stahl, Coordinator
Florida State Clearinghouse
Florida Department of Environmental Protection
3800 Commonwealth Blvd., M.S. 47
Tallahassee, FL 32399-2400
ph. (850) 717-9076
State.Clearinghouse@floridadep.gov

From: Eric Webb
Sent: Wednesday, August 26, 2020 3:25 PM
To: State_Clearinghouse <State.Clearinghouse@dep.state.fl.us>
Cc: ADKINS, DEREK N GS-12 USAF AFSOC 1 SOCES/CEN
Subject: Draft EA for Air Force Operations Change in IR-057 and IR-059

Mr. Stahl,

An electronic copy of the Draft Environmental Assessment Addressing the Change in Air Force Operations in Instrument Routes IR-057 and IR-059 was sent to you via DoD SAFE. A transmittal letter for the Environmental Assessment's distribution via the Clearinghouse is attached. If you have any difficulties accessing the document through the DoD SAFE system, the Draft Environmental Assessment has also been placed on a ShareFile site and can be accessed here:

<https://vernadero.sharefile.com/d-sf8acbbab87045369>

Please let me or Mr. Derek Adkins at Hurlburt Field know if you have any questions or need additional information.

Thanks,

Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059

LANCE R. LEFLEUR
DIRECTOR



KAY IVEY
GOVERNOR

1400 Coliseum Blvd. 36110-2400 • Post Office Box 301463
Montgomery, Alabama 36130-1463
(334) 271-7700 • FAX (334) 271-7950

October 1, 2020

ELECTRONICALLY TRANSMITTED

Mr. Derek Adkins
1 SOCES/CEN
415 Independence Rd, Building 90053
Hurlburt Field, FL 32544

Re: **ADEM Review:** *Draft Environmental Assessment for the Renewal of Instrument Route-057 and Instrument Route-059*, dated August 17, 2020
Hurlburt Field, Florida

Dear Mr. Adkins:

The Alabama Department of Environmental Management (ADEM or the Department) has completed the review of the *Draft Environmental Assessment for the Renewal of Instrument Route-057 and Instrument Route-059*, received September 2, 2020. According to the aforementioned document, the U.S. Air Force is planning to renew both Instrument Route (IR)-057 and IR-059 associated with Hurlburt Air Field for training purposes. Based on this review, the Department has no comments at this time. However, the Department requests to be informed of any future changes or updates regarding the project that may impact the State of Alabama.

If you have any questions regarding this matter, please contact William Overstreet of the Remediation Engineering Section via e-mail at william.overstreet@adem.alabama.gov or at (334) 270-5646.

Sincerely,

Jason Wilson, Chief
Governmental Hazardous Waste Branch
Land Division

JJW/ATM/WGO/tp

Cc via email: Ashley T. Mastin, ADEM

Birmingham Branch
110 Vulcan Road
Birmingham, AL 35209-4702
(205) 942-6198
(205) 941-1400 (fax)

Decatur Branch
2715 Sander Road, S.W.
Decatur, AL 35690-1333
(256) 353-1713
(256) 340-9332 (fax)



Mobile Branch
2294 Remondet Road
Mobile, AL 36615-1131
(251) 412-3400
(251) 479-2205 (fax)

Mobile - Coastal
1177 Governmental Drive
Mobile, AL 36615-1001
(251) 482-6554
(251) 482-6688 (fax)

Appendix C. Noise Analysis Report

FORMAT PAGE

Appendix C-1. US Air Force Land Use Compatibility Guidelines

FORMAT PAGE

Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059

The US Air Force guidelines for land use compatibility in aircraft noise zones is shown in the table below and are extracted from Appendix A of Air Force Instruction 32-7063 dated 15 July 2015. These land use compatibility guidelines have been included for reference purposes (Table C-1).

Table C-1. Land Use Compatibility Guidelines

SLUCM NO.	LAND USE NAME	DNL 65-69	DNL 70-74	DNL 75-79	DNL 80-84	DNL 85+
10	Residential					
11	Household units	N1	N1	N	N	N
11.11	Single units: detached	N1	N1	N	N	N
11.12	Single units: semidetached	N1	N1	N	N	N
11.13	Single units: attached row	N1	N1	N	N	N
11.21	Two units: side-by-side	N1	N1	N	N	N
11.22	Two units: one above the other	N1	N1	N	N	N
11.31	Apartments: walk-up	N1	N1	N	N	N
11.32	Apartment: elevator	N1	N1	N	N	N
12	Group quarters	N1	N1	N	N	N
13	Residential hotels	N1	N1	N	N	N
14	Mobile home parks or courts	N	N	N	N	N
15	Transient lodgings	N1	N1	N1	N	N
16	Other residential	N1	N1	N	N	N
20	Manufacturing					
21	Food and kindred products; manufacturing	Y	Y2	Y3	Y4	N
22	Textile mill products; manufacturing	Y	Y2	Y3	Y4	N
23	Apparel and other finished products; products made from fabrics, leather, and similar materials; manufacturing	Y	Y2	Y3	Y4	N
24	Lumber and wood products (except furniture); manufacturing	Y	Y2	Y3	Y4	N
25	Furniture and fixtures; manufacturing	Y	Y2	Y3	Y4	N
26	Paper and allied products; manufacturing	Y	Y2	Y3	Y4	N
27	Printing, publishing, and allied industries	Y	Y2	Y3	Y4	N
28	Chemicals and allied	Y	Y2	Y3	Y4	N
29	Petroleum refining and related industries	Y	Y2	Y3	Y4	N
30	Manufacturing (continued)					
31	Rubber and misc. plastic products; manufacturing	Y	Y2	Y3	Y4	N
32	Stone, clay, and glass products; manufacturing	Y	Y2	Y3	Y4	N
33	Primary metal products; manufacturing	Y	Y2	Y3	Y4	N
34	Fabricated metal products; manufacturing	Y	Y2	Y3	Y4	N
35	Professional scientific, and controlling instruments; photographic and optical goods; watches and clocks	Y	25	30	N	N
39	Miscellaneous manufacturing	Y	Y2	Y3	Y4	N
40	Transportation, communication and utilities					
41	Railroad, rapid rail transit, and street railway transportation	Y	Y2	Y3	Y4	N
42	Motor vehicle transportation	Y	Y2	Y 3	Y4	N
43	Aircraft transportation	Y	Y2	Y3	Y4	N

Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059

SLUCM NO.	LAND USE NAME	DNL 65-69	DNL 70-74	DNL 75-79	DNL 80-84	DNL 85+
44	Marine craft transportation	Y	Y2	Y3	Y4	N
45	Highway and street right-of-way	Y	Y	Y	Y	N
46	Automobile parking	Y	Y	Y	Y	N
47	Communication	Y	255	305	N	N
48	Utilities	Y	Y2	Y3	Y4	N
49	Other transportation, communication, and utilities	Y	255	305	N	N
50	Trade					
51	Wholesale trade	Y	Y2	Y3	Y4	N
52	Retail trade – building materials, hardware, and farm equipment	Y	25	30	Y4	N
53	Retail trade – including shopping centers, discount clubs, home improvement stores, electronics superstores, etc.	Y	25	30	N	N
54	Retail trade – food	Y	25	30	N	N
55	Retail trade – automotive, marine craft, aircraft, and accessories	Y	25	30	N	N
56	Retail trade – apparel and accessories	Y	25	30	N	N
57	Retail trade – furniture, home,	Y	25	30	N	N
58	Retail trade – eating and drinking establishments	Y	25	30	N	N
59	Other retail trade	Y	25	30	N	N
60	Services					
61	Finance, insurance, and real estate services	Y	25	30	N	N
62	Personal services	Y	25	30	N	N
62.4	Cemeteries	Y	Y2	Y3	Y4,11	Y6,11
63	Business services	Y	25	30	N	N
63.7	Warehousing and storage	Y	Y2	Y3	Y4	N
64	Repair services	Y	Y2	Y3	Y4	N
65	Professional services	Y	25	30	N	N
65.1	Hospitals, other medical facilities	25	30	N	N	N
65.16	Nursing homes	N1	N1	N	N	N
66	Contract construction services	Y	25	30	N	N
67	Government services	Y1	25	30	N	N
68	Educational services	25	30	N	N	N
68.1	Child care services, child development centers, and nurseries	25	30	N	N	N
69	Miscellaneous Services	Y	25	30	N	N
69.1	Religious activities (including places of worship)	Y	25	30	N	N
70	Cultural, entertainment and recreational					
71	Cultural activities	25	30	N	N	N
71.2	Nature exhibits	Y1	N	N	N	N
72	Public assembly	Y	N	N	N	N
72.1	Auditoriums, concert halls	25	30	N	N	N
72.11	Outdoor music shells, amphitheaters	N	N	N	N	N
72.2	Outdoor sports arenas, spectator sports	Y	Y	N	N	N
73	Amusements	Y	Y	N	N	N
74	Recreational activities	Y	25	30	N	N
75	Resorts and group camps	Y	25	N	N	N
76	Parks	Y	25	N	N	N

Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059

SLUCM NO.	LAND USE NAME	DNL 65-69	DNL 70-74	DNL 75-79	DNL 80-84	DNL 85+
79	Other cultural, entertainment and recreation	Y	25	N	N	N
80	Resource production and extraction					
81	Agriculture (except live- stock)	Y8	Y9	Y10	Y10,11	Y10,11
81.5-81.7	Agriculture-Livestock farming including grazing and feedlots	Y8	Y9	N	N	N
82	Agriculture related activities	Y8	Y9	Y10	Y10,11	Y10,11
83	Forestry activities	Y8	Y9	Y10	Y10,11	Y10,11
84	Fishing activities	Y	Y	Y	Y	Y
85	Mining activities	Y	Y	Y	Y	Y
89	Other resource production or extraction	Y	Y	Y	Y	Y

KEY:

SLUCM – Standard Land Use Coding Manual, U.S. Department of Transportation

Y (Yes) – Land use and related structures compatible without restrictions.

N (No) – Land use and related structures are not compatible and should be prohibited.

Yx – Yes with restrictions. The land use and related structures generally are compatible. However, see note(s) indicated by the superscript.

Nx – No with exceptions. The land use and related structures are generally incompatible. However, see note(s) indicated by the superscript.

25, 30, or 35 – The numbers refer to noise level reduction (NLR) levels. NLR (outdoor to indoor) is achieved through the incorporation of noise attenuation into the design and construction of a structure. Land use and related structures are generally compatible; however, measures to achieve NLR of 25, 30, or 35 must be incorporated into design and construction of structures. However, measures to achieve an overall noise reduction do not necessarily solve noise difficulties outside the structure and additional evaluation is warranted. Also, see notes indicated by superscripts where they appear with one of these numbers.

DNL – Day-Night Average Sound Level.

CNEL – Community Noise Equivalent Level (normally within a very small decibel difference of DNL)

Ldn – Mathematical symbol for DNL.

NOTES:

1. General

a. Although local conditions regarding the need for housing may require residential use in these zones, residential use is discouraged in DNL 65-69 and strongly discouraged in DNL 70-74. The absence of viable alternative development options should be determined, and an evaluation should be conducted locally prior to local approvals indicating that a demonstrated community need for the residential use would not be met if development were prohibited in these zones. Existing residential development is considered as preexisting, nonconforming land uses.

b. Where the community determines that these uses must be allowed, measures to achieve outdoor to indoor NLR of at least 25 decibels (dB) in DNL 65-69 and 30 dB in DNL 70-74 should be incorporated into building codes and be considered in individual approvals; for transient housing, an NLR of at least 35 dB should be incorporated in DNL 75-79.

c. Normal permanent construction can be expected to provide an NLR of 20 dB, thus the reduction requirements are often stated as 5, 10, or 15 dB over standard construction and normally assume mechanical ventilation, upgraded sound transmission class ratings in windows and doors, and closed windows year round. Additional consideration should be given to modifying NLR levels based on peak noise levels or vibrations.

d. NLR criteria will not eliminate outdoor noise problems. However, building location, site planning, design, and use of berms and barriers can help mitigate outdoor noise exposure particularly from ground level sources. Measures that reduce noise at a site should be used wherever practical in preference to measures that only protect interior spaces.

Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059

2. Measures to achieve NLR of 25 must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas, or where the normal noise level is low.
3. Measures to achieve NLR of 30 must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas, or where the normal noise level is low.
4. Measures to achieve NLR of 35 must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas, or where the normal noise level is low.
5. If project or proposed development is noise sensitive, use indicated NLR; if not, land use is compatible without NLR.
6. Buildings are not permitted.
7. Land use is compatible provided special sound reinforcement systems are installed.
8. Residential buildings require an NLR of 25
9. Residential buildings require an NLR of 30.
10. Residential buildings are not permitted.
11. Land use that involves outdoor activities is not recommended, but if the community allows such activities, hearing protection devices should be worn when noise sources are present. Long-term exposure (multiple hours per day over many years) to high noise levels can cause hearing loss in some unprotected individuals.

Appendix C-2. MR_NMAP Modeling RESULTS

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Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059

***** MOA RANGE NOISEMAP *****

Version 3.0
Release Date 2/7/2013

CASE INFORMATION

Case Name: Hurlburt MTR - Existing Scenario

SETUP PARAMETERS

Number of MOAs and Ranges = 0 Number of tracks =10
Lower Left Corner of Grid in feet (X Y pair) = -50000., -50000.
Upper Right Corner of Grid in feet (X Y pair) = 50000., 50000.
Grid spacing = 1000. feet Number of events above an SEL of 35.0 dB
Temperature = 59 F Humidity = 70 Flying days per month = 30

TRACK SPECIFICATIONS

Track name IR-057

Flag	Latitude	Longitude	Left	Right	Floor 1	Floor 2	Radius	Angle
Notation		(feet)	(feet)	(feet AGL)	(feet AGL)	(feet)	(feet)	(degrees)
LW	40.00000	-90.00000	6076.	6076.	200			
LW	40.00000	-89.90000	6076.	6076.	200			
LW	40.00000	-89.80000	6076.	6076.	200			

Track name IR-059

Flag	Latitude	Longitude	Left	Right	Floor 1	Floor 2	Radius	Angle
Notation		(feet)	(feet)	(feet AGL)	(feet AGL)	(feet)	(feet)	(degrees)
LW	40.00000	-90.00000	6076.	6076.	200			
LW	40.00000	-89.90000	6076.	6076.	200			
LW	40.00000	-89.80000	6076.	6076.	200			

SPECIFIC POINT SPECIFICATION

Number of Specific points = 1
Latitude Longitude Name
40.00000 -89.90000 POI

MISSION DATA

Mission name = IR-057 -C130H
Aircraft code =FM0290400 Speed = 230 kias Power = 2200.0
Altitude Distribution

Lower Alt	Upper Alt	Percent
(feet AGL)	(feet AGL)	Utilization
250	500	10.0
500	1500	20.0
1500	3000	70.0

Mission name = IR-057 -CV22

Aircraft code =FM6210100 Speed = 120 kias Power = 0.0
Altitude Distribution

Lower Alt	Upper Alt	Percent
(feet AGL)	(feet AGL)	Utilization
200	500	11.1
500	1500	33.3
1500	3000	55.6

Mission name = IR-057 -HH60

Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059

Aircraft code =FM6210100 Speed = 120 kias Power = 0.0

Altitude Distribution

Lower Alt (feet AGL)	Upper Alt (feet AGL)	Percent Utilization
200	500	10.0
500	1000	50.0
1000	2000	40.0

Mission name = IR-059 -C130H

Aircraft code =FM0290300 Speed = 230 kias Power = 2200.0

Altitude Distribution

Lower Alt (feet AGL)	Upper Alt (feet AGL)	Percent Utilization
250	500	10.0
500	1500	20.0
1500	3000	70.0

Mission name = IR-059 -CV22

Aircraft code =FM6210100 Speed = 120 kias Power = 0.0

Altitude Distribution

Lower Alt (feet AGL)	Upper Alt (feet AGL)	Percent Utilization
200	500	20.0
500	1500	30.0
1500	3000	50.0

Mission name = IR-059 -HH60

Aircraft code =FM6210100 Speed = 120 kias Power = 0.0

Altitude Distribution

Lower Alt (feet AGL)	Upper Alt (feet AGL)	Percent Utilization
200	500	10.0
500	1000	50.0
1000	2000	40.0

TRACK OPERATION DATA

IR-057 -C130H	0.061	0.006	1.83	0.17	22.	2.
IR-057 -CV22	0.111	0.028	3.33	0.83	40.	10.
IR-057 -HH60	0.061	0.006	1.83	0.17	22.	2.
IR-059 -C130H	0.061	0.006	1.83	0.17	22.	2.
IR-059 -CV22	0.111	0.028	3.33	0.83	40.	10.
IR-059 -HH60	0.061	0.006	1.83	0.17	22.	2.

***** MOA RANGE NOISEMAP *****
RESULTS

The noise metric is Ldnmr.

SPECIFIC POINT RESULTS

< Airspace	> Mission	Sound Level	
		Aircraft (dB)	HA(%)
IR-059_2_2	IR-059 -CV22	UH60A	< 35.0
IR-059	IR-059 -C130H	C-130H&N&P	< 35.0
IR-057_2_2	IR-057 -CV22	UH60A	< 35.0
IR-057_2	IR-057 -C130H	C-130J	< 35.0

Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059

IR-057_2_2_2	IR-057 -HH60	UH60A	< 35.0
IR-059_2_2_2	IR-059 -HH60	UH60A	< 35.0

Total Level < 35.0

<Run Log>

Date: 5/ 8/2020
Start Time: 18:48:27
Stop Time: 18:48:27
Total Running Time: 0 minutes and 1 seconds.

Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059

***** MOA RANGE NOISEMAP *****

Version 3.0
Release Date 2/7/2013

CASE INFORMATION

Case Name: Hurlburt MTR - Proposed Scenario

SETUP PARAMETERS

Number of MOAs and Ranges = 0 Number of tracks =10
Lower Left Corner of Grid in feet (X Y pair) = -50000., -50000.
Upper Right Corner of Grid in feet (X Y pair) = 50000., 50000.
Grid spacing = 1000. feet Number of events above an SEL of 35.0 dB
Temperature = 59 F Humidity = 70 Flying days per month = 30

TRACK SPECIFICATIONS

Track name IR-057

Flag	Latitude	Longitude	Left	Right	Floor 1	Floor 2	Radius	Angle
Notation		(feet)	(feet)	(feet AGL)	(feet AGL)	(feet)	(feet)	(degrees)
LW	40.00000	-90.00000	6076.	6076.	200			
LW	40.00000	-89.90000	6076.	6076.	200			
LW	40.00000	-89.80000	6076.	6076.	200			

Track name IR-059

Flag	Latitude	Longitude	Left	Right	Floor 1	Floor 2	Radius	Angle
Notation		(feet)	(feet)	(feet AGL)	(feet AGL)	(feet)	(feet)	(degrees)
LW	40.00000	-90.00000	6076.	6076.	200			
LW	40.00000	-89.90000	6076.	6076.	200			
LW	40.00000	-89.80000	6076.	6076.	200			

SPECIFIC POINT SPECIFICATION

Number of Specific points = 1
Latitude Longitude Name
40.00000 -89.90000 POI

MISSION DATA

Mission name = IR-057 -C130J
Aircraft code =FM0290400 Speed = 230 kias Power = 2200.0

Altitude Distribution

Lower Alt	Upper Alt	Percent
(feet AGL)	(feet AGL)	Utilization
250	500	10.0
500	1500	20.0
1500	3000	70.0

Mission name = IR-057 -MH53

Aircraft code =FM6220100 Speed = 120 kias Power = 0.0

Altitude Distribution

Lower Alt	Upper Alt	Percent
(feet AGL)	(feet AGL)	Utilization
200	500	10.0
500	1000	50.0
1000	2000	40.0

Mission name = IR-059 -C130J

**Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059**

Aircraft code =FM0290400 Speed = 230 kias Power = 2200.0
Altitude Distribution

Lower Alt (feet AGL)	Upper Alt (feet AGL)	Percent Utilization
250	500	10.0
500	1500	20.0
1500	3000	70.0

Mission name = IR-059 -MH53
Aircraft code =FM6220100 Speed = 120 kias Power = 0.0
Altitude Distribution

Lower Alt (feet AGL)	Upper Alt (feet AGL)	Percent Utilization
200	500	10.0
500	1000	50.0
1000	2000	40.0

TRACK OPERATION DATA

Track name = IR-057

Mission Name	Daily		Monthly		Yearly	
	Day OPS	Night OPS	Day OPS	Night OPS	Day OPS	Night OPS
IR-057 -C130J	0.028	0.006	0.83	0.17	10.	2.
IR-057 -MH53	0.194	0.022	5.83	0.67	70.	8.
IR-059 -C130J	0.028	0.006	0.83	0.17	10.	2.
IR-059 -MH53	0.194	0.022	5.83	0.67	70.	8.

***** MOA RANGE NOISEMAP *****
RESULTS

The noise metric is Ldnmr.

***** MOA RANGE NOISEMAP *****
RESULTS

< Airspace	> Mission	Sound Level	
		Aircraft (dB)	HA(%)
IR-057_2_2_2_2	IR-057 -MH53	CH-53E	< 35.0
IR-059_2_2_2_2	IR-059 -MH53	CH-53E	< 35.0
IR-059_2	IR-059 -C130J	C-130J	< 35.0
IR-057	IR-057 -C130J	C-130J	< 35.0

Total Level 38.2 0.3

<Run Log>

Date: 5/ 8/2020
Start Time: 18:48:28
Stop Time: 18:48:28
Total Running Time: 0 minutes and 1 seconds.

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Appendix D. Air Quality Analysis Results

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**AIR CONFORMITY APPLICABILITY MODEL REPORT
RECORD OF AIR ANALYSIS (ROAA)**

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform an analysis to assess the potential air quality impact/s associated with the action in accordance with the Air Force Instruction 32-7040, Air Quality Compliance And Resource Management; the *Environmental Impact Analysis Process* (EIAP, 32 CFR 989); and the General Conformity Rule (GCR, 40 CFR 93 Subpart B). This report provides a summary of the ACAM analysis.

a. Action Location:

Base: HURLBURT FIELD

State: Florida

County(s): Okaloosa

Regulatory Area(s): NOT IN A REGULATORY AREA

b. Action Title: MTR Recommissioning and Modification Environmental Assessment

c. Project Number/s (if applicable):

d. Projected Action Start Date: 1 / 2021

e. Action Description:

Recommissioning of IR-057 and IR-059

2. Air Impact Analysis: Based on the attainment status at the action location, the requirements of the General Conformity Rule are:

applicable

not applicable

Total combined direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the "worst-case" and "steady state" (net gain/loss upon action fully implemented) emissions.

"Air Quality Indicators" were used to provide an indication of the significance of potential impacts to air quality. These air quality indicators are EPA General Conformity Rule (GCR) thresholds (de minimis levels) that are applied out of context to their intended use. Therefore, these indicators do not trigger a regulatory requirement; however, they provide a warning that the action is potentially significant. It is important to note that these indicators only provide a clue to the potential impacts to air quality.

Given the GCR de minimis threshold values are the maximum net change an action can acceptably emit in nonattainment and maintenance areas, these threshold values would also conservatively indicate an actions emissions within an attainment would also be acceptable. An air quality indicator value of 100 tons/yr is used based on the GCR de minimis threshold for the least severe nonattainment classification for all criteria pollutants (see 40 CFR 93.153).

Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059

Therefore, the worst-case year emissions were compared against the GCR Indicator and are summarized below.

Analysis Summary:

2021

Pollutant	Action Emissions (ton/yr)	AIR QUALITY INDICATOR	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOCs	0.178	100	No
NOx	3.830	100	No
CO	1.046	100	No
SOx	0.468	100	No
PM 10	0.388	100	No
PM 2.5	0.347	100	No
Pb	0.000	25	No
NH3	0.000	100	No
CO2e	1429.0		

2022 - (Steady State)

Pollutant	Action Emissions (ton/yr)	AIR QUALITY INDICATOR	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOCs	0.178	100	No
NOx	3.830	100	No
CO	1.046	100	No
SOx	0.468	100	No
PM 10	0.388	100	No
PM 2.5	0.347	100	No
Pb	0.000	25	No
NH3	0.000	100	No
CO2e	1429.0		

None of estimated emissions associated with this action are above the GCR indicators, indicating no significant impact to air quality; therefore, no further air assessment is needed.

Tim Lavallee, Contractor

DATE

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

1. General Information

- Action Location

Base: HURLBURT FIELD
State: Florida
County(s): Okaloosa
Regulatory Area(s): NOT IN A REGULATORY AREA

- Action Title: MTR Recommissioning and Modification Environmental Assessment

- Projected Action Start Date: 1 / 2021

- Action Description:

Recommissioning of IR-057 and IR-059

- Activity List:

	Activity Type	Activity Title
2.	Aircraft	V-22
3.	Aircraft	C-130
4.	Aircraft	HH-60

Emission factors and air emission estimating methods come from the United States Air Force's Air Emissions Guide for Air Force Stationary Sources, Air Emissions Guide for Air Force Mobile Sources, and Air Emissions Guide for Air Force Transitory Sources.

2. Aircraft

2.1 General Information & Timeline Assumptions

- Add or Remove Activity from Baseline? Add

- Activity Location

County: Okaloosa
Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: V-22

- Activity Description:

- Activity Start Date

Start Month: 1
Start Year: 2021

- Activity End Date

Indefinite: Yes

- Activity Emissions:

Pollutant	Emissions Per Year (TONs)	Pollutant	Emissions Per Year (TONs)
-----------	---------------------------	-----------	---------------------------

Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059

VOC	0.001853
SO _x	0.085415
NO _x	0.634165
CO	0.146656
PM 10	0.127316

PM 2.5	0.114424
Pb	0.000000
NH ₃	0.000000
CO _{2e}	260.6

- Activity Emissions [Flight Operations (Includes Trim Test & APU) Part]:

Pollutant	Emissions Per Year (TONs)
VOC	0.001853
SO _x	0.085415
NO _x	0.634165
CO	0.146656
PM 10	0.127316

Pollutant	Emissions Per Year (TONs)
PM 2.5	0.114424
Pb	0.000000
NH ₃	0.000000
CO _{2e}	260.6

2.2 Aircraft & Engines

2.2.1 Aircraft & Engines Assumptions

- Aircraft & Engine

Aircraft Designation: CV-22A
Engine Model: AE1107C
Primary Function: Transport - Bomber
Aircraft Has Afterburn: No
Number of Engines: 2

- Aircraft & Engine Surrogate

Is Aircraft & Engine a Surrogate? No

2.2.2 Aircraft & Engines Emission Factor(s)

- Aircraft & Engine Emissions Factors (lb/1,000 lb fuel)

	Fuel Flow	VOC	SO _x	NO _x	CO	PM 10	PM 2.5	CO _{2e}
Idle	362.00	0.10	1.06	4.15	8.35	1.58	1.42	3234
Approach	663.00	0.02	1.06	6.05	3.47	1.58	1.42	3234
Intermediate	948.00	0.02	1.06	7.87	1.82	1.58	1.42	3234
Military	2507.00	0.01	1.06	18.03	0.29	1.58	1.42	3234
After Burn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3234

2.3 Flight Operations

2.3.1 Flight Operations Assumptions

- Flight Operations

Number of Aircraft: 1
Number of Annual LTOs (Landing and Takeoff) Cycles for All Aircraft: 50

- Default Settings Used: No

- Flight Operations TIMs (Time In Mode)

Taxi/Idle Out [Idle] (mins): 0
Takeoff [Military] (mins): 0
Takeoff [After Burn] (mins): 0
Climb Out [Intermediate] (mins): 102
Approach [Approach] (mins): 0

Final Environmental Assessment
Addressing the Change in Air Force Operations in IR-057 and IR-059

Taxi/Idle In [Idle] (mins): 0

2.3.2 Flight Operations Formula(s)

- Aircraft Emissions per Mode for LTOs per Year

$$AEM_{POL} = (TIM / 60) * (FC / 1000) * EF * NE * LTO / 2000$$

AEM_{POL}: Aircraft Emissions per Pollutant & Mode (TONs)

TIM: Time in Mode (min)

60: Conversion Factor minutes to hours

FC: Fuel Flow Rate (lb/hr)

1000: Conversion Factor pounds to 1000pounds

EF: Emission Factor (lb/1000lb fuel)

NE: Number of Engines

LTO: Number of Landing and Takeoff Cycles (for All Aircraft)

2000: Conversion Factor pounds to TONS

- Aircraft Emissions for LTOs per Year

$$AE_{LTO} = AEM_{IDLE_IN} + AEM_{IDLE_OUT} + AEM_{APPROACH} + AEM_{CLIMBOUT} + AEM_{TAKEOFF}$$

AE_{LTO}: Aircraft Emissions (TONs)

AEM_{IDLE_IN}: Aircraft Emissions for Idle-In Mode (TONs)

AEM_{IDLE_OUT}: Aircraft Emissions for Idle-Out Mode (TONs)

AEM_{APPROACH}: Aircraft Emissions for Approach Mode (TONs)

AEM_{CLIMBOUT}: Aircraft Emissions for Climb-Out Mode (TONs)

AEM_{TAKEOFF}: Aircraft Emissions for Takeoff Mode (TONs)

3. Aircraft

3.1 General Information & Timeline Assumptions

- Add or Remove Activity from Baseline? Add

- Activity Location

County: Okaloosa

Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: C-130

- Activity Start Date

Start Month: 1

Start Year: 2021

- Activity End Date

Indefinite: Yes

End Month: N/A

End Year: N/A

- Activity Emissions:

Pollutant	Emissions Per Year (TONs)
VOC	0.174692
SO _x	0.307169
NO _x	2.634987

Pollutant	Emissions Per Year (TONs)
PM 2.5	0.130897
Pb	0.000000
NH ₃	0.000000

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CO	0.769996
PM 10	0.147586

CO ₂ e	937.9

- Activity Emissions [Flight Operations (Includes Trim Test & APU) Part]:

Pollutant	Emissions Per Year (TONs)
VOC	0.174692
SO _x	0.307169
NO _x	2.634987
CO	0.769996
PM 10	0.147586

Pollutant	Emissions Per Year (TONs)
PM 2.5	0.130897
Pb	0.000000
NH ₃	0.000000
CO ₂ e	937.9

3.2 Aircraft & Engines

3.2.1 Aircraft & Engines Assumptions

- Aircraft & Engine

Aircraft Designation: NC-130A
Engine Model: T56-A-9A
Primary Function: Transport - Bomber
Aircraft Has Afterburn: No
Number of Engines: 4

- Aircraft & Engine Surrogate

Is Aircraft & Engine a Surrogate? No
Original Aircraft Name:
Original Engine Name:

3.2.2 Aircraft & Engines Emission Factor(s)

- Aircraft & Engine Emissions Factors (lb/1,000 lb fuel)

	Fuel Flow	VOC	SO _x	NO _x	CO	PM 10	PM 2.5	CO ₂ e
Idle	794.00	24.15	1.06	3.90	32.00	0.83	0.75	3234
Approach	830.00	14.26	1.06	4.40	22.20	0.97	0.87	3234
Intermediate	1825.00	0.58	1.06	9.20	2.40	0.51	0.46	3234
Military	1905.00	0.46	1.06	9.30	2.10	0.50	0.45	3234
After Burn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3234

3.3 Flight Operations

3.3.1 Flight Operations Assumptions

- Flight Operations

Number of Aircraft: 1
Number of Annual LTOs (Landing and Takeoff) Cycles for All Aircraft: 48

- Default Settings Used: No

- Flight Operations TIMs (Time In Mode)

Taxi/Idle Out [Idle] (mins): 0
Takeoff [Military] (mins): 0
Takeoff [After Burn] (mins): 0
Climb Out [Intermediate] (mins): 97
Approach [Approach] (mins): 0
Taxi/Idle In [Idle] (mins): 0

4. Aircraft

4.1 General Information & Timeline Assumptions

- Add or Remove Activity from Baseline? Add

- Activity Location

County: Okaloosa

Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: HH-60

- Activity Start Date

Start Month: 1

Start Year: 2021

- Activity End Date

Indefinite: Yes

- Activity Emissions:

Pollutant	Emissions Per Year (TONs)
VOC	0.001640
SO _x	0.075567
NO _x	0.561049
CO	0.129747
PM 10	0.112638

Pollutant	Emissions Per Year (TONs)
PM 2.5	0.101231
Pb	0.000000
NH ₃	0.000000
CO _{2e}	230.6

- Activity Emissions [Flight Operations (Includes Trim Test & APU) Part]:

Pollutant	Emissions Per Year (TONs)
VOC	0.001640
SO _x	0.075567
NO _x	0.561049
CO	0.129747
PM 10	0.112638

Pollutant	Emissions Per Year (TONs)
PM 2.5	0.101231
Pb	0.000000
NH ₃	0.000000
CO _{2e}	230.6

4.2 Aircraft & Engines

4.2.1 Aircraft & Engines Assumptions

- Aircraft & Engine

Aircraft Designation: CV-22

Engine Model: AE1107C

Primary Function: Transport - Bomber

Aircraft has Afterburn: No

Number of Engines: 2

- Aircraft & Engine Surrogate

Is Aircraft & Engine a Surrogate? Yes

Original Aircraft Name: HH-60

Original Engine Name: T700

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4.2.2 Aircraft & Engines Emission Factor(s)

- Aircraft & Engine Emissions Factors (lb/1,000 lb fuel)

	Fuel Flow	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	CO₂e
Idle	362.00	0.10	1.06	4.15	8.35	1.58	1.42	3234
Approach	663.00	0.02	1.06	6.05	3.47	1.58	1.42	3234
Intermediate	948.00	0.02	1.06	7.87	1.82	1.58	1.42	3234
Military	2507.00	0.01	1.06	18.03	0.29	1.58	1.42	3234
After Burn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3234

4.3 Flight Operations

4.3.1 Flight Operations Assumptions

- Flight Operations

Number of Aircraft: 1
 Number of Annual LTOs (Landing and Takeoff) Cycles for All Aircraft: 24

- Default Settings Used: No

- Flight Operations TIMs (Time In Mode)

Taxi/Idle Out [Idle] (mins): 0
 Takeoff [Military] (mins): 0
 Takeoff [After Burn] (mins): 0
 Climb Out [Intermediate] (mins): 188
 Approach [Approach] (mins): 0
 Taxi/Idle In [Idle] (mins): 0

Appendix E. US Fish and Wildlife Service Information for Planning and Consultation

FORMAT PAGE

IPaC Information for Planning and Consultation **U.S. Fish & Wildlife Service**

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Project information

NAME

IR-057 and IR-059 Renewal

LOCATION

Alabama, Florida and Georgia



DESCRIPTION

The

Proposed Action is to renew the use of IR-057 and IR-059, which are located proximate to Hurlburt Field, by amending the type of aircraft permitted for flight training operations from C-130s and MH-53s to Hurlburt Field-stationed CV-22s, MC-130H/Js, and Army HH-60s. Under the Proposed Action, the IRs would continue to have a ground track of approximately 380 NM, with a corridor width of 2 NM on either side of the IR centerline. The IRs would continue to be used for flight training in conjunction with military operations areas (MOAs) as well

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as MTRs, slow routes and LATNs, enabling 1 SOW to optimize air combat training of military personnel. The route would continue to be flown at 250 knots or less, at floor altitudes as low as 200 feet AGL during daytime and nighttime hours by CV-22s and HH-60s, and at floor altitudes as low as 250 feet AGL during daytime and nighttime hours for MC-130H/Js.

Local offices

Alabama Ecological Services Field Office

☎ (251) 441-5181

📠 (251) 441-6222

1208 B Main Street
Daphne, AL 36526-4419

Georgia Ecological Services Field Office

☎ (706) 613-9493

📠 (706) 613-6059

355 East Hancock Avenue
Room 320
Athens, GA 30601

Panama City Ecological Services Field Office

☎ (850) 769-0552

📠 (850) 763-2177

1601 Balboa Avenue
Panama City, FL 32405-3792

<http://www.fws.gov/panamacity/specieslist.html>

<http://www.fws.gov/panamacity/pcdata.html>

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act requires Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can only be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Log in to IPaC.
2. Go to your My Projects list.
3. Click PROJECT HOME for this project.
4. Click REQUEST SPECIES LIST.

Listed species

Land and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries).

Species and critical habitats under the sole responsibility of NOAA Fisheries are not shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information.
2. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

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Mammals

NAME	STATUS
Gray Bat <i>Myotis grisescens</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/6329	Endangered

Birds

NAME	STATUS
Red-cockaded Woodpecker <i>Picoides borealis</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/7614	Endangered

Wood Stork <i>Mycteria americana</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/8477	Threatened
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Reptiles

NAME	STATUS
Eastern Indigo Snake <i>Drymarchon corais couperi</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/646	Threatened

Gopher Tortoise <i>Gopherus polyphemus</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/6994	Candidate
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Amphibians

NAME	STATUS
Red Hills Salamander <i>Phaeognathus hubrichti</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/3250	Threatened

Reticulated Flatwoods Salamander <i>Ambystoma bishopi</i> There is final critical habitat for this species. Your location overlaps the critical habitat. https://ecos.fws.gov/ecp/species/8939	Endangered
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Fishes

NAME	STATUS
Atlantic Sturgeon (gulf Subspecies) <i>Acipenser oxyrinchus</i> (=oxyrinchus) <i>desotoi</i> There is final critical habitat for this species. Your location overlaps the critical habitat. https://ecms.fws.gov/ecm/species/651	Threatened

Clams

NAME	STATUS
Chipola Slabshell <i>Elliptio chipolaensis</i> There is final critical habitat for this species. Your location overlaps the critical habitat. https://ecms.fws.gov/ecm/species/1775	Threatened
Choctaw Bean <i>Villosa choctawensis</i> There is final critical habitat for this species. Your location overlaps the critical habitat. https://ecms.fws.gov/ecm/species/5038	Endangered
Fat Three ridge (musssel) <i>Amblema neiserii</i> There is final critical habitat for this species. Your location overlaps the critical habitat. https://ecms.fws.gov/ecm/species/2574	Endangered
Fuzzy Pigtoe <i>Pleurobema strodeanum</i> There is final critical habitat for this species. Your location overlaps the critical habitat. https://ecms.fws.gov/ecm/species/3417	Threatened
Gulf Moccasinshell <i>Medionidus penicillatus</i> There is final critical habitat for this species. Your location overlaps the critical habitat. https://ecms.fws.gov/ecm/species/7663	Endangered
Narrow Pigtoe <i>Fusconaia escambia</i> There is final critical habitat for this species. Your location overlaps the critical habitat. https://ecms.fws.gov/ecm/species/5040	Threatened
Orangenacre Mucket <i>Lampsilis perovallis</i> There is final critical habitat for this species. Your location is outside the critical habitat. https://ecms.fws.gov/ecm/species/1980	Threatened

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Oval Pigtoe <i>Pleurobema pyriforme</i>	Endangered
There is final critical habitat for this species. Your location overlaps the critical habitat. https://ecos.fws.gov/ecp/species/4132	
Purple Bankclimber (mussel) <i>Elliptioideus sloatianus</i>	Threatened
There is final critical habitat for this species. Your location overlaps the critical habitat. https://ecos.fws.gov/ecp/species/7660	
Round Ebonyshell <i>Fusconaia rotulata</i>	Endangered
There is final critical habitat for this species. Your location overlaps the critical habitat. https://ecos.fws.gov/ecp/species/3039	
Shinyrayed Pocketbook <i>Lampsilis subangulata</i>	Endangered
There is final critical habitat for this species. Your location overlaps the critical habitat. https://ecos.fws.gov/ecp/species/6517	
Southern Clubshell <i>Pleurobema decisum</i>	Endangered
There is final critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/6113	
Southern Kidneyshell <i>Ptychobranchus jonesi</i>	Endangered
There is final critical habitat for this species. Your location overlaps the critical habitat. https://ecos.fws.gov/ecp/species/7539	
Southern Sandshell <i>Hamiota australis</i>	Threatened
There is final critical habitat for this species. Your location overlaps the critical habitat. https://ecos.fws.gov/ecp/species/2551	
Tapered Pigtoe <i>Fusconaia burkei</i>	Threatened
There is final critical habitat for this species. Your location overlaps the critical habitat. https://ecos.fws.gov/ecp/species/5046	
Crustaceans	
NAME	STATUS
Panama City Crayfish <i>Procambarus efninae</i>	Proposed Threatened
No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/8915	

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Flowering Plants

NAME	STATUS
American Chaffseed <i>Schwalbea americana</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/1286	Endangered
Apalachicola Rosemary <i>Conradina glabra</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/6389	Endangered
Chapman Rhododendron <i>Rhododendron chapmanii</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/3168	Endangered
Cooley's Meadowrue <i>Thalictrum cooleyi</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/3281	Endangered
Florida Skullcap <i>Scutellaria floridana</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/2240	Threatened
Fringed Campion <i>Silene polypetala</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/3788	Endangered
Gentian Pinkroot <i>Spigelia gentianoides</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/4583	Endangered
Georgia Rockcress <i>Arabis georgiana</i> There is final critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/4535	Threatened
Godfrey's Butterwort <i>Pinguicula ionantha</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/6805	Threatened
Harper's Beauty <i>Harperocallis flava</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/3735	Endangered

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Papery Whitlow-wort <i>Paronychia chartacea</i> No critical habitat has been designated for this species. https://ecns.fws.gov/ecp/species/1465	Threatened
Pondberry <i>Lindera melissifolia</i> No critical habitat has been designated for this species. https://ecns.fws.gov/ecp/species/1279	Endangered
Relict Trillium <i>Trillium reliquum</i> No critical habitat has been designated for this species. https://ecns.fws.gov/ecp/species/8489	Endangered
White Birds-in-a-nest <i>Macbridea alba</i> No critical habitat has been designated for this species. https://ecns.fws.gov/ecp/species/6291	Threatened

Conifers and Cycads

NAME	STATUS
Florida Torreya <i>Torreya taxifolia</i> No critical habitat has been designated for this species. https://ecns.fws.gov/ecp/species/5391	Endangered

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

This location overlaps the critical habitat for the following species:

NAME	TYPE
Atlantic Sturgeon (gulf Subspecies) <i>Acipenser oxyrinchus</i> (=oxyrinchus) <i>desotoi</i> https://ecns.fws.gov/ecp/species/651#crithab	Final
Chipola Slabshell <i>Eliptio chipolaensis</i> https://ecns.fws.gov/ecp/species/1775#crithab	Final
Choctaw Bean <i>Villosa choctawensis</i> https://ecns.fws.gov/ecp/species/5038#crithab	Final
Fat Threeridge (mussel) <i>Amblema neislerii</i> https://ecns.fws.gov/ecp/species/2574#crithab	Final

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Fuzzy Pigtoe <i>Pleurobema strodeanum</i> https://ecos.fws.gov/ecp/species/3417#crithab	Final
Gulf Moccasinshell <i>Medionidus penicillatus</i> https://ecos.fws.gov/ecp/species/7663#crithab	Final
Narrow Pigtoe <i>Fusconaia escambia</i> https://ecos.fws.gov/ecp/species/5040#crithab	Final
Oval Pigtoe <i>Pleurobema pyriforme</i> https://ecos.fws.gov/ecp/species/4132#crithab	Final
Purple Bankclimber (mussel) <i>Elliptoideus sloatianus</i> https://ecos.fws.gov/ecp/species/7660#crithab	Final
Reticulated Flatwoods Salamander <i>Ambystoma bishopi</i> https://ecos.fws.gov/ecp/species/8939#crithab	Final
Round Ebonyshell <i>Fusconaia rotulata</i> https://ecos.fws.gov/ecp/species/3039#crithab	Final
Shinyrayed Pocketbook <i>Lampsilis subangulata</i> https://ecos.fws.gov/ecp/species/6517#crithab	Final
Southern Kidneyshell <i>Ptychobranchus jonesi</i> https://ecos.fws.gov/ecp/species/7539#crithab	Final
Southern Sandshell <i>Hamiota australis</i> https://ecos.fws.gov/ecp/species/2551#crithab	Final
Tapered Pigtoe <i>Fusconaia burkei</i> https://ecos.fws.gov/ecp/species/5046#crithab	Final

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act¹

and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

1. The [Migratory Birds Treaty Act](#) of 1918.

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2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern <http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>
- Measures for avoiding and minimizing impacts to birds <http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>
- Nationwide conservation measures for birds <http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf>

MIGRATORY BIRD INFORMATION IS NOT AVAILABLE AT THIS TIME

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) and/or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [AKN Phenology Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

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To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: [The Cornell Lab of Ornithology All About Birds Bird Guide](#) or (if you are unsuccessful in locating the bird of interest there) the [Cornell Lab of Ornithology Neotropical Birds Guide](#). If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC-Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [panotax studies](#) or contact [Caleb Spiezel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cells that overlap your project, not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to

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confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

This location overlaps the following National Wildlife Refuge lands:

LAND	ACRES
Bond Swamp National Wildlife Refuge	80.07 acres
<p>☎ (478) 986-5441 📠 (478) 986-9646 C/o Piedmont Nwr 718 Juliette Road Round Oak, GA 31038-2821 https://www.fws.gov/refuges/profiles/index.cfm?id=41685</p>	
Eufaula National Wildlife Refuge	12,139.55 acres
<p>☎ (334) 687-4065 367 Highway 165 Eufaula, AL 36027-8187 https://www.fws.gov/refuges/profiles/index.cfm?id=43560</p>	

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<p>North Florida Refuge Complex</p> <p>☎ (850) 925-6121 📠 (850) 925-6930</p> <p>MAILING ADDRESS P.O. Box 68 St. Marks, FL 32355-0068</p> <p>PHYSICAL ADDRESS 1255 Lighthouse Road St. Marks, FL 32355-0068</p> <p>https://www.fws.gov/refuges/profiles/index.cfm?id=41645</p>	<p>6,109.79 acres</p>
<p>St. Marks National Wildlife Refuge</p> <p>☎ (850) 925-6121 📠 (850) 925-6930</p> <p>MAILING ADDRESS Post Office Box 68 St. Marks, FL 32355-0068</p> <p>PHYSICAL ADDRESS 1255 Lighthouse Road St. Marks, FL 32355-0068</p> <p>https://www.fws.gov/refuges/profiles/index.cfm?id=41640</p>	<p>510.83 acres</p>
<p>St. Vincent National Wildlife Refuge</p> <p>☎ (850) 653-8808 📠 (850) 653-9893</p> <p>MAILING ADDRESS Post Office Box 447 Apalachicola, FL 32329-0447</p> <p>PHYSICAL ADDRESS 96 5th Street Apalachicola, FL 32320-1329</p> <p>https://www.fws.gov/refuges/profiles/index.cfm?id=41650</p>	<p>493.59 acres</p>

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

The area of this project is too large for IPaC to load all NWI wetlands in the area. The list below may be incomplete. Please contact the local U.S. Fish and Wildlife Service office or visit the [NWI map](#) for a full list.

FRESHWATER EMERGENT WETLAND

[PEM1A](#)

[PEM1/SS1E](#)

FRESHWATER POND

[PAB3H](#)

[PAB4Hh](#)

[PAB3Hh](#)

[PAB3G](#)

[PAB4H](#)

[PAB3E](#)

[PAB3Gh](#)

[PAB3Fh](#)

[PAB4E](#)

[PABG](#)

[PAB4Hx](#)

[PAB3Fh](#)

[PAB3Hx](#)

[PAB3Cd](#)

[PAB4G](#)

[PAB4Ch](#)

[PAB4Ex](#)

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LAKE

[L1UBHh](#)

[L2AB3H](#)

[L1UBH](#)

[L2AB3Hh](#)

[L2U5Ch](#)

[L1UBKx](#)

[L2UBHh](#)

[L1UBHx](#)

[L2AB4H](#)

[L1UBK](#)

[L2AB4Hh](#)

[L2U5Ah](#)

[L2AB3Hx](#)

[L2UBH](#)

[L2U5C](#)

[L2UBEx](#)

A full description for each wetland code can be found at the [National Wetlands Inventory website](#)

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercled worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or

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local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

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