

**Regional Memorandum of Understanding (RMOU) between the
Federal Aviation Administration (FAA),
U.S. Air Force (USAF),
U.S. Army Corps of Engineers (ACOE),
U.S. Environmental Protection Agency (EPA),
U.S. Fish and Wildlife Service (FWS),
U.S. Department of Agriculture APHIS Wildlife Services (USDA)
to Address Aircraft-Wildlife Strikes in the
Southern Region of the United States**

I. PURPOSE

This Regional Memorandum of Understanding (RMOU) establishes procedures necessary to coordinate each signatory agency's mission to more effectively address existing and future environmental conditions contributing to aircraft collisions with wildlife (aircraft-wildlife strikes) in the Southern Region of the United States.

A National Memorandum of Agreement (NMOA) was signed at the National level between Federal Aviation Administration, U.S. Air Force, U.S. Army, U.S. Environmental Protection Agency, U.S. Fish and Wildlife Service, and the U.S. Department Of Agriculture in 2003 to establish procedures necessary to coordinate their respective missions to more effectively address existing and future environmental conditions contributing to aircraft-wildlife strikes throughout the United States (USA). (See Appendix H)

For purposes of this RMOU, the Southern Region includes the states of Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee, the Commonwealth of Puerto Rico, and the U.S. Virgin Islands. These coordination procedures have been established to minimize wildlife risks to aviation and human safety, while protecting the Region's valuable environmental resources.

II. BACKGROUND

The *Wildlife Strikes to Civil Aircraft in the United States 1990-2004* manual states that the number of aircraft-wildlife strikes annually reported tripled from 1990 (1,739) to 2000 (6,002). From 2000 to 2003, reported aircraft-wildlife strikes plateaued at about 5,795 to 6,183 per year. In 2004, a record 6,511 aircraft-wildlife strikes were reported. Federal Aviation Administration suggest the steady increase in reports from 1990 to 2000 was the result of at least two factors: an increased awareness of the wildlife strike issue or an actual increase in the number of strikes. The plateau in reported aircraft--wildlife strikes from 2000 to 2003 might be related to a slight (<6 percent) decline in air traffic after the events of September 11, 2001, more diligent reporting, and more aggressive wildlife hazard management programs at airports.

III. FACTS

The civil and military aviation communities widely recognize that the threat to human health and safety from aircraft collisions with aircraft-wildlife strikes is increasing. Globally, aircraft-wildlife strikes have killed more than 194 people and destroyed over 163 aircraft since 1988. Several factors contribute to this increasing threat:

- Commercial air carriers are replacing their older three and four-engined aircraft fleets with more efficient and quieter, two-engined aircraft. In 1969, 75 percent of the 2,100 USA passenger aircraft had three or four engines. In 1998, the USA passenger fleet had grown to about 5,400 aircraft, and only 30 percent had three or four engines. It is estimated that by 2008 the fleet will contain about 7,000 aircraft, and only 10 percent will have three or four engines. This reduction in engine redundancy increases the probability of life threatening situations resulting from aircraft collisions with wildlife, especially with flocks of birds.

- Many populations of wildlife species commonly involved in aircraft-wildlife strikes have increased markedly in the last few decades. Air traffic has increased substantially since 1980. Passenger enplanements in the USA increased from about 310 million in 1980 to 686 million in 2004 (2.1 percent increase per year), and commercial air traffic increased from about 17.8 million aircraft movements in 1980 to 29 million in 2004 (2.1 percent per year, Federal Aviation Administration, 2005) USA commercial air traffic is predicted to continue growing at a rate of about 2 percent per year to 33 million movements by 2010.

IV. SCOPE OF COOPERATION AND COORDINATION

Based on the preceding information and to achieve the NMOA's purpose, the signatory agencies:

By this RMOU:

A. Agree that the three major activities of most concern include, but are not limited to:

1. airport siting and expansion;
2. development of conservation/mitigation habitats or other land uses that could attract hazardous wildlife to airports or nearby areas; and
3. response to known wildlife hazards or aircraft wildlife strikes.

B. Agree that the ACOE has expertise in regulating and protecting jurisdictional aquatic resources; EPA has expertise in protecting water quality and other environmental resources; and the FWS has expertise in protecting and managing wildlife and their habitats, including migratory birds and wetlands. USDA Wildlife Services (USDA) has expertise in managing wildlife hazards at airports. FAA, USDA, and USAF personnel have the expertise necessary to determine the aircraft-wildlife strike potentials of various land uses.

- C. Agree that "hazardous wildlife" are those animals, identified to species and listed in FAA and USAF databases, that are most often involved in aircraft-wildlife strikes. Many of the species frequently inhabit areas on or near airports, cause structural damage to aircraft or airport facilities or attract other wildlife that pose an aircraft-wildlife strike hazard.
- D. Agree that whenever a significant aircraft-wildlife strike occurs or a potential for one is identified, any signatory agency may initiate actions or cooperate with other appropriate signatory agencies to evaluate the situation and develop mutually acceptable solutions to reduce potential aircraft-wildlife strikes involving that species.

V. GENERAL RULES AND INFORMATION

- A. This RMOU in no way restricts a signatory agency's participation in similar activities or arrangements with other public or private agencies, organizations or individuals.
- B. This RMOU is based on evolving information and may be revised periodically without public notice. The signatory agencies welcome public comments on this RMOU at any time and will consider those comments in any future revision of this RMOU.
- C. This RMOU will last for 5 years from the date the last signatory agency signs this RMOU. The signatory agencies will review this RMOU and renew the agreed upon changes to the RMOU after the 5-year timeframe.
- D. This RMOU incorporates by reference the additional provisions contained in Section II, General Rules and Information, in the National MOA to Address Aircraft-Wildlife Strikes.

VI. ROLES AND RESPONSIBILITIES OF EACH SIGNATORY AGENCY

The FAA Shall:

Designate its Southern Region Environmental Program Manager of the Airport's Division as point of contact and the FAA Southern Region Administrator, as the signatory of this RMOU.

Address potential aircraft-wildlife strikes at Title 14 Code of Federal Regulations Part 139 certificated airports in the Southern Region of the USA as defined in this RMOU.

When evaluating proposals to build aviation facilities or to expand existing ones, the FAA will work with appropriate signatory agencies to evaluate alternatives that may avoid adverse effects on wetlands, and other aquatic resources. If habitats support hazardous wildlife; and there is no practicable alternative location for the proposed aviation project, the appropriate signatory agencies, consistent with applicable laws, regulations and policies will develop mutually acceptable measures to protect aviation safety and mitigate any avoidable wildlife input in a way that does not create wildlife hazards to aviation or worsen existing ones.

Hold annual meetings as needed with the other signatory agencies, such as EPA, to discuss present and upcoming projects under their respective purviews that could result in aircraft-wildlife strikes and impacts to wildlife and environmental resources. The regional points of contact or their designated representative will attend or teleconference meetings for each signatory agency.

Inform USAF, ACOE, EPA, FWS, and USDA of changes in the amendment and revisions of the Advisory Circular Number 150/5200-33A, "Hazardous Wildlife Attractants on or near Airports", which may affect wildlife strikes. For potential discrepancies to 14 CFR 139.337 (Wildlife Hazardous Management), please coordinate with Linda Berkowitz, FAA Southern Region Team Leader for safety and certification for airports certificated under 14 CFR Part 139.

USAF shall:

Designate the Chief of United States Air Force BASH Team as its point of contact and as its signatory of this RMOU.

Address RMOU issues relating to USAF within the Southern Region as defined in this RMOU.

When the USAF is evaluating proposals to build military aviation facilities or to expand existing ones, the USAF will work with appropriate signatory agencies to evaluate alternatives that may avoid adverse affects on wetlands, and other aquatic resources. If these or other habitats support hazardous wildlife, and there is no practicable alternative location for the proposed aviation project, the appropriate signatory agencies, consistent with applicable laws, regulations and policies will develop mutually acceptable measures to protect aviation safety and mitigate any unavoidable wildlife impacts and wetlands.

Attend or teleconference meetings FAA holds with the signatory agencies to the RMOU to discuss current issues relative to wildlife hazards and inter-agency coordination to address those hazards. The regional point of contact (or the designated alternate) will participate in these meetings.

ACOE shall:

Designate the Commander of the US Army Corps of Engineers, South Atlantic Division, Atlanta, Georgia, as the signatory of this RMOU. The primary point of contact will be the Regulatory Program Manager, South Atlantic Division. The Regulatory Chiefs in the respective Districts will be the primary field contacts.

Address RMOU issues relating to ACOE within the FAA Southern Region as defined in this RMOU, excepting the States of Kentucky and Tennessee, and the portion of State of Mississippi which are outside of the regulatory authority of the South Atlantic Division of the ACOE.

Where the issue of aircraft-wildlife strikes is raised in the permitting process, ACOE will appropriately consider this issue as part of the NEPA evaluation, public interest review, and fish and wildlife coordination, in rendering decisions on permit issuance, conditions, and mitigation.

Attend or teleconference (schedule permitting) meetings FAA holds with the signatory agencies to the RMOU to discuss current issues relative to wildlife hazards and inter-agency coordination to address those hazards. The regional point of contact (or designee) will participate in the meetings.

EPA shall:

Designate the NEPA Program Office Manager at EPA Region 4 in Atlanta, Georgia, and at EPA Region 2 in New York, New York, as the points of contact, and the EPA Region 4 Deputy Regional Administrator and the EPA Region 2 Deputy Regional Administrator as the EPA signatories of this RMOU.

Address RMOU issues relating to EPA within the FAA Southern Region as defined in this RMOU.

In concert with ACOE, FWS, USDA and USAF, attend (or teleconference) meetings held by the FAA to discuss current issues relative to wildlife hazards and interagency coordination to address those hazards. The regional points of contact (or the designated alternate) will represent EPA at these meetings.

Address aircraft-wildlife strike problems and ways to protect regional wildlife resources within EPA Regions 4 and 2 as they relate to EPA responsibilities through National Environmental Policy Act (NEPA) document reviews, Section 404 Clean Water Act (CWA) permit reviews, and to a lesser extent, oversight over the Section 402 (CWA) Storm water National Pollutant Discharge Elimination System (NPDES) Permitting Program currently being administered by the states of Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina and Tennessee within EPA Region 4, and the Virgin Islands within EPA Region 2. (Note – Also within Region 2, Puerto Rico is not authorized to implement the NPDES Permitting Program, such that EPA Region 2 retains primacy).

FWS shall:

Designate the Assistant Regional Director, Ecological Services as its regional representative and signatory. Field Supervisors in respective states will be the primary field contact and are included in the Appendix D.

Attend meetings FAA holds with the signatory agencies to the RMOU to discuss current issues relative to wildlife hazards and inter-agency coordination to address those hazards. The regional point of contact (or the designated alternate) will attend these meetings.

Address RMOU issues relating to FWS within the FAA Southern Region as defined in this RMOU.

Please see Appendix D-F for the FWS role in addressing aircraft wildlife strikes, impacts to wildlife, field office contacts, national wildlife refuge system contacts and corresponding maps.

USDA shall:

Designate the Eastern Regional Director as its regional representative and signatory to the RMOU. State Directors in respective states will be the primary field contact and are included in Appendix B.

Assist with evaluation and management of wildlife hazards to aircraft throughout the FAA Southern Region.

Address RMOU issues relating to USDA within the FAA Southern Region as defined in this RMOU.

Attend meetings FAA holds with the signatory agencies to the RMOU to discuss current issues relative to wildlife hazards and inter-agency coordination to address those hazards. The regional point of contact (or the designated alternate) will attend.

VII. PRINCIPAL SIGNATORY AGENCY CONTACTS

The following list identifies points of contact for each signatory agency

Federal Aviation Administration

Airports Division ASO-600
Attn: Jackie Sweatt-Essick
1701 Columbia Avenue
College Park, GA 30337
404-305-6700
404-305-6730 fax
Jackie.Sweatt-Essick@faa.gov

U.S. Air Force

USAF BASH Team
Attn: Eugene LeBoeuf
HQ AFSC-SEFW
9700 Avenue G SE Building 24499
Kirtland AFB, New Mexico 87117
(505) 846-5679
Eugene.LeBoeuf@kirtland.af.mil

U.S. Army Corps Of Engineers

South Atlantic Division
Arthur Middleton
Regulatory Program Manager
Room 9M15, 60 Forsyth St., SW
Atlanta, GA 30303-8801
Arthur.L.Middleton@usace.army.mil

United States Department of the Interior

U.S. Fish and Wildlife Services

Fish and Wildlife Service
Attn: Ken Graham
1875 Century Boulevard
Atlanta, GA 30345
Ken_Graham@fws.gov

U.S. Environmental Protection Agency Region 4

Sam Nunn Atlanta Federal Center
NEPA Program Office
Office of Policy and Management
13th Floor
61 Forsyth Street, SW
Atlanta, GA 30303
Attn: Chris Hoberg (NEPA)
404-562-9619
404-562-9598 fax
hoberg.chris@epa.gov
Attn: Ronald Mikulak (Wetlands)
404-562-9233
404-562-9343 fax
mikulak.ronald@epa.gov
(R4 - AL, FL, GA, KY, MS, NC, SC, TN)

U.S. Environmental Protection Agency Region 2

290 Broadway
New York, NY 10007
Attn: Daniel Montella
212-637-3801
212-637-3889 fax
montella.daniel@epa.gov
(R2 - Puerto Rico, Virgin Islands)

U.S. Department of Agriculture

Wildlife Services
Attn: Frank Boyd
USDA Wildlife Services
Auburn University
School of Forestry and Wildlife Sciences
Auburn, AL 36849
334-844-5680
fboyd@aces.edu

Signature Page

Carolyn Blum
Regional Administrator FAA Southern Region
Federal Aviation Administration

Date

Eugene LeBoeuf
Chief USAF BASH Team
U.S. Air Force

Date

Michael J. Walsh
Brigadier General, USA
Commanding
U.S. Army Corps of Engineers, South Atlantic Division

Date

Charles Brown
Eastern Regional Director
USDA, APHIS Wildlife Services

Date

Kathleen Callahan
Deputy Regional Administrator
U.S. Environmental Protection Agency
Region 2

Date

A. Stanley Meiburg
Deputy Regional Administrator
U.S. Environmental Protection Agency
Region 4

Date

Noreen Walsh
Assistant Regional Director, Ecological Services
U.S. Fish and Wildlife Service
Southeast Region
(See Appendix I for actual signatures)

Date

VIII. LIST OF APPENDICES

(REFERENCE AND RESOURCE MATERIALS)

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APPENDIX A. General Protocol for this Regional Memorandum of Understanding

Through this RMOU, the agencies established procedures necessary to coordinate their missions to address more effectively existing and future environmental conditions contributing to collisions between wildlife and aircraft (wildlife strikes) throughout the Southern United States. These efforts are intended to minimize wildlife risk to aviation and human safety while protecting the Nation's valuable environmental resources. Listed below are resources that can be used:

Wildlife Hazard Management at Airports prepared by FAA and USDA
<http://wildlife-mitigation.tc.FAA.gov>

Army Corps of Engineers (Please see <http://www.usace.army.mil/> for district info)

EPA-Region 2 and Region 4 (See Appendix C)

Hazardous Wildlife Attractants On or Near Airports 150/5200-33A (See Appendix F)

MOU between FAA & WS (See Appendix G)

U.S. Department of Agriculture Wildlife Services (see contact information in Appendix D)

Some land-use practices on or near airports that potentially attract hazardous wildlife

Waste Disposal Operations - Municipal solid waste landfills (MSWLF) are known to attract large numbers of hazardous wildlife, particularly birds.

Water Management Facilities - Drinking water intake and treatment facilities, associated with retention and settling ponds built for recreational use, and ponds that result from mining activities often attract large numbers of potentially hazardous wildlife

Wetlands - Wetlands are attractive to many types of wildlife, including deer, vultures, geese, pelicans, cranes, eagles, ducks, turkeys hawks and owls.

Agricultural Activities - Crops can attract hazardous wildlife during some phases of production.

Golf Courses, Landscaping and other landuse considerations - Canada geese and some species of gulls are attracted to the golf course. Turf grass is also highly attractive to a variety of wildlife species.

APPENDIX B. FAA Contact Information

Southern Region Airports Division Federal Aviation Administration Southern Region Headquarters

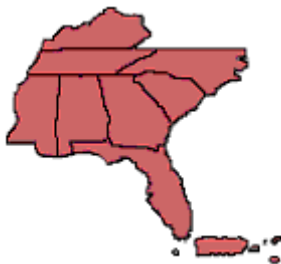
P.O. Box 20636
Atlanta, Georgia 30320-0631

Phone: 404-305-6700

Fax: 404-305-6730

Environmental Program Manager, Jackie Sweatt-Essick, 404-305-6726

<http://www.faa.gov/airports/southern/environmental/>



Atlanta Airports District Office

1701 Columbia Avenue
Campus Building
College Park, GA 30337-2745
Phone (404) 305-7150
Fax (404) 305-7155
Environmental Specialist
Dana Perkins 404-305-7152
Lisa Favors 404-305-7145
Georgia, North Carolina, South Carolina

Jackson Airports District Office

100 West Cross Street
Suite B
Jackson, MS 39208-2306
Phone (601) 965-4628
Fax (601) 965-4632
Environmental Specialist
Kevin L. Morgan 601-664-9891
Alabama and Mississippi

Memphis Airports District Office

2862 Business Park Drive, Bldg. G
Memphis, TN 38118-1555
Phone (901) 322-8180
Fax (901) 322-8195
Environmental Specialist
Stephen Wilson 901-322-8185
Kentucky and Tennessee

Orlando Airports District Office

5950 Hazeltine National Drive
Suite 400
Orlando, FL 32822
Phone (407) 812-6331
Environmental Specialist
Virginia Lane-407-812-6331 Ext. 129
Florida, Puerto Rico, and the U.S. Virgin Islands

APPENDIX C. EPA's Role in Addressing Aircraft-Wildlife Strikes

For the purposes of this RMOU, the limited role of EPA Regions 4 and 2 is principally three-fold: NEPA reviews of proposed aviation development; Clean Water Act (CWA) Section 404 permit application reviews; and oversight over the 402 Stormwater NPDES Permitting Program in the Southern Region as defined in the RMOU (except for Puerto Rico where EPA Region 2 retains Program primacy).

NEPA Review – Section 102(2)(C) of NEPA and consistent with Section 309 of the Clean Air Act, EPA reviews Environmental Impact Statements (EISs) and selected Environmental Assessments (EAs), including reviews of FAA EISs and EAs on proposed new airports and airport expansions. In its reviews of these actions, EPA will coordinate with FAA concerning onsite construction activities such as discouraging open stormwater retention ponds (detention ponds are acceptable if they hold water for no more than 3 days (see AC 150/5200-33A-Appendix F), landscaping ponds and wetland sites that are likely to attract waterfowl and become aircraft-wildlife hazards. As needed, EPA will coordinate with FAA (and principally defer to FAA for designated Vision 100 projects) regarding their presented NEPA alternatives that avoid/minimize onsite and nearby wildlife attractants, including potentially finding new, more suitable sites for proposed airports as appropriate. Alternatives for new airport sites and expansion of existing airports should undergo a vigorous environmental review to avoid the fill of Waters of the United States (“Waters”) such as wetlands, streams and other waterbodies under federal jurisdiction, as well as the proximity to Waters that may act as attractants to birds and wildlife that are known or likely hazards to aviation.

404 Permitting of Waters – EPA provides independent review and comment on 404 permit applications and public notices to the ACOE for Waters. These permits often require compensation for filling or alteration of these Waters. EPA prefers that such mitigation is in-kind (i.e., mitigated Waters are of the same type and quality as the Waters that are to be filled) and within the same watershed, although not necessarily on or near the airport site given the potential for aircraft-wildlife hazards. If proposed federal actions/projects are undertaken without any FAA involvement but have the potential to result in a wildlife hazard, then FAA would like to have the opportunity to review the proposed federal action/project.

Although each project will require case-by-case decisions, the sites and types of wetland compensation (wetland banking, enhancement, restoration and/or creation) that are recommended by EPA Regions 4 and 2 for airport wetland impacts will be coordinated with the ACOE to help avoid attracting waterfowl and other wildlife to and near airports. Mitigation sites may be located relatively close to the airport site so long as they do not attract wildlife species that are known to or are likely to cause aircraft strikes. However, as the 404 permitting agency, the ACOE in consultation with the FAA and in consideration of EPA public notice comments, will make the ultimate decision on the mitigation it deems necessary to issue a 404 permit, subject to EPA's authority under Section 404(c) of the CWA to prohibit discharges into specific sites. Mitigation of streams will be addressed on a case-by-case basis.

Before the airport sponsor (sponsor) submits a 404-permit application to the ACOE to dredge or fill Waters, including wetlands, EPA will assume that the sponsor has already coordinated that application with the FAA and the ACOE regarding the proposed site's potential for aircraft-

wildlife strikes. EPA will assume that consideration of the potential for these strikes has been taken into consideration when the ACOE reviews of the sponsor's 404- permit application. EPA will defer to the FAA regarding the determination of whether the establishment of other types of land uses (e.g., wastewater treatment systems, landfills, golf courses, parks, agricultural or aquacultural facilities, and landscapes) conform with the siting criteria established in the FAA Advisory Circular (AC) 150/5200-33A, Section 2 and do not create a wildlife attractant hazard.

Similar to Waters, standing water of constructed stormwater detention basins can also attract hazardous wildlife if water is retained for longer periods of time. Such detention ponds are often required by states as a form of onsite, post-permitting, construction stormwater management. Although EPA retains oversight over the 402 NPDES Permitting Program now being administered by all eight states within the geographic areas this RMOU covers, the states implement the Program with a substantial degree of independence. Therefore, direct coordination with states is advised regarding NPDES issues such as the design and function of detention ponds to avoid strike hazards, in consultation with EPA as necessary.

APPENDIX D. USDA's Role in Addressing Aircraft-Wildlife Strikes

USDA's Wildlife Services (WS) provides technical assistance and direct management programs to reduce wildlife hazards at airports. These programs are managed on a state program basis with State Directors overseeing the programs. WS has no regulatory responsibility, but it is available for consultation during regulatory processes to assist in determining potential relationships of these actions relative to wildlife hazards to aircraft. This consultation could prevent the establishment of land uses where wildlife control programs may be developed to manage potential wildlife hazards associated with regulatory management actions of other signatories to the RMOU such as on-site wetland mitigation.

APPENDIX E. U.S. Fish and Wildlife Service

FWS Role in Addressing Aircraft-Wildlife Strikes FWS Field Office in the Southeast FWS Southern Region County List

FWS Role in Addressing Aircraft-Wildlife Strikes

U.S. Fish and Wildlife Service Southeast Region Atlanta, Georgia

The U.S. Fish and Wildlife Service has the following programs, which could affect FAA issues relating to aircraft – wildlife strikes. Below is a summary of potential program interactions. The Southeast Region Organizational chart is attached. The web site for the Southeast Region is:

<http://southeast.fws.gov/>

Program: Section 7 Consultation Requirements.

Southeast Regional Office Organization:

Division of Ecological Services – Assistant Regional Director

Branch of Endangered Species - Chief

Section 7 Coordinator

Description: Federal agencies which fund, permit, or carry out actions that could affect Federally-listed species or designated critical habitats must consult with the Service to make sure that their actions do not jeopardize listed (including proposed) species or destroy or adversely modify designated (including proposed) critical habitat. . This includes airfield operations, new or expanded airfields, and activities to control strike hazards which involve Federally-listed species.

Contact: Service Field Office (Contact list is attached).

Program: Candidate Conservation Program.

Southeast Regional Office Organization:

Division of Ecological Services – Assistant Regional Director

Branch of Endangered Species - Chief

Candidate Conservation Coordinator

Description: Works with private and government landowners to protect a species that may become listed under the Endangered Species Act. Locations of these actions cannot be determined before a landowner volunteers their land for participation. Activities to enhance habitat for candidate species could present a strike hazard if they were located near existing airfields or new or expanded airfields facilities were sited near candidate conservation projects.

Contact: Service Field Office (Contact list is attached).

Program: Migratory Birds Permitting Requirements.

Southeast Regional Office Organization:

Division of Migratory Birds and State Programs – Assistant Regional Director

Division of Migratory Birds - Chief

Description: Federal agencies or other entities that propose to carry out activities involving the deliberate removal or killing of migratory birds 50 CFR13 (those protected by the Migratory Bird Treaty Act) must first obtain a Depredation permit from the Service.

Contact: Service's Southeast Regional permits coordinator (if new permit is required).

Note: The Regional Migratory Bird Section could also provide valuable information concerning bird resources in the vicinity of new and existing airport sites that may be hazardous to aviation.

Program: Refuges.

Southeast Regional Office Organization:

National Wildlife Refuge System – Chief

Refuge Supervisors – Areas I, II, III, and IV

Description: The National Wildlife Refuge System manages lands in every State. Airports or other land uses under the responsibility of the RMOU located near refuges (or refuge managed lands) could potentially have conflicts with Service land management goals (which favor management and habitat manipulation for the enhancement of fish and wildlife resources).

Contact: Each refuge is responsible for habitat/wildlife resources on the refuge (and may include nearby lands off of the refuge proper).

Note: Airports or other land uses near Refuge System managed lands would definitely need to be involved in discussions with refuge system personnel to avoid potential conflicts in planning and operations.

Program: Partners Program.

Southeast Regional Office Organization:

Division of Ecological Services – Assistant Regional Director

Branch of Habitat Conservation and Environmental Contaminants – Chief

Partners for Fish and Wildlife Coordinator

Description: The Service's partners program provides funds to private landowners for restoration and enhancement of wildlife and migratory bird habitat. If these habitat enhancement projects were in the vicinity of existing airports, or new or expanded facilities, the potential for aircraft-wildlife strikes could increase. Locations of these actions cannot be determined before a landowner volunteers their land for participation.

Contact: Each Service Field Office has a program lead who would be aware of any proposed or existing partners project in the vicinity of airports. (Field Office contact list is attached).

Program: Coastal Program

Southeast Regional Office Organization:

Division of Ecological Services – Assistant Regional Director

Branch of Habitat Conservation and Environmental Contaminants – Chief

Coastal Program Coordinator

Description: The Services' coastal program provides funds to conserve fish and wildlife habitats and to support healthy ecosystems in high-priority coastal ecosystems. For airports located near coastal ecosystem areas, efforts to reduce potential aircraft-wildlife strikes could be in conflict with wildlife habitat enhancement efforts funded by the coastal program. This RMOU is a tool to help resolve those conflicts

Contact: Currently, the Southeast Region has five Field Offices that administer the coastal program: Raleigh, NC; Charleston, SC; Vero Beach, FL; Jacksonville, FL; and Panama City, FL.

Program: Federal Aid and other Service Grants

Southeast Regional Office Organization:

Division of migratory Birds and State Programs – Assistant Regional Director

Division of Federal Aid – Chief

Description: The Service, through section 6 of the Endangered Species Act provides funding to States for enhancement of game and non-game fish and wildlife resources. Other programs such as the Private Stewardship Grant Program provide funds to private property holders for wildlife habitat enhancement/restoration. Airport operations, or improvements sited near these wildlife enhancement projects could potentially experience increased strike probabilities as a result of habitat enhancement/restoration efforts funded under these programs.

The Service, through section 6 of the Endangered Species Act provides funding to States for enhancement of game and non-game fish and wildlife resources. Other programs such as the Private Stewardship Grant Program provide funds to private property holders for wildlife habitat enhancement/restoration. Airport operations, or improvements sited near these wildlife enhancement projects could potentially experience increased strike probabilities as a result of habitat enhancement/restoration efforts funded under these programs.

Contact: Federal Aid activities and other grant programs are generally carried out at a Regional level, so the Southeast Region would be the best contact point for most of these Service activities.

FWS Field Office in the Southeast

**Fish and Wildlife Service Field Offices
Southeast Region
Contacts and Area of Coverage**

state	counties	contact	county list – web site
AL	All	pete_tuttle@fws.gov	http://daphne.fws.gov/es/specieslist.html
FL-NW	Attached list	jon_hemming@fws.gov	http://southeaast.fws.gov/es/county%20lists.htm
FL-North	Attached list	dave_hankla@fws.gov	http://northflorida.fws.gov/gotocty.htm
FL-South	Attached list	allen_webb@fws.gov	http://verobeach.fws.gov/Species_lists/countyfr.html
GA	All	kathy_valerio@fws.gov	http://athens.fws.gov
KY	All	mike_armstrong@fws.gov	http://frankfort.fws.gov/docs/county.html
MS	All	curtis_james@fws.gov	http://southeast.fws.gov/jackson/index.html
NC-East	Attached list	john_hammon@fws.gov	http://nc-es.fws.gov/es/countyfr.html
NC-West	Attached list	allen_ratzlaff@fws.gov	http://nc-es.fws.gov/es/countyfr.html
PR	All	marelisa_rivera@fws.gov	http://caribbean-ecoteam.fws.gov
SC	All	tim_hall@fws.gov	http://southeaast.fws.gov/es/county%20lists.htm
TN	All	james_widlak@fws.gov	http://cookeville.fws.gov

FWS Southern Region County List
SOUTHEAST REGION
COUNTY LIST
FLORIDA-NORTHWEST

Bay
Calhoun
Escambia
Franklin
Gadsden
Gulf
Holmes
Jackson
Jefferson
Leon
Liberty
Okaloosa
Santa Rosa
Wakulla
Walton
Washington

**SOUTHEAST REGION
COUNTY LIST
FLORIDA-NORTH**

Alachua
Baker
Bradford
Brevard
Citrus
Clay
Columbia
Dixie
Duval
Flagler
Gilchrist
Hamilton
Hernando
Hillsborough
Lafayette
Lake
Levy
Madison
Manatee
Marion
Nassau
Orange
Pasco
Pinellas
Putnam
Seminole
St. Johns
Sumter
Suwannee
Taylor
Union
Volusia

**SOUTHEAST REGION
COUNTY LIST
FLORIDA-SOUTH**

Broward
Charlotte
Collier
DeSoto
Glades
Hardee
Hendry
Highlands
Indian River
Lee
Martin
Miami-Dade
Monroe
Okeechobee
Osceola
Palm Beach
Polk
Sarasota
St. Lucie

**SOUTHEAST REGION
COUNTY LIST
NORTH CAROLINA –EAST**

Alamance
Beaufort
Bertie
Bladen
Brunswick
Camden
Carteret
Caswell
Chatham
Chowan
Columbus
Craven
Cumberland
Currituck
Dare
Duplin
Durham
Edgecombe
Franklin
Gates
Granville
Greene
Guilford
Halifax
Harnett
Hertford
Hoke
Hyde
Johnston
Jones
Lee
Lenoir
Martin
Montgomery
Moore
Nash
New Hanover
Northampton
Onslow
Orange

**SOUTHEAST REGION
COUNTY LIST
NORTH CAROLINA –EAST (continued)**

Pamlico
Pasquotank
Pender
Perquimans
Personal
Pitt
Randolph
Richmond
Robeson
Rockingham
Sampson
Scotland
Tyrrell
Vance
Wake
Warren
Washington
Wayne
Wilson

**SOUTHEAST REGION
COUNTY LIST
NORTH CAROLINA –WEST**

Alexander
Alleghany
Anson
Ashe
Avery
Buncombe
Burke
Cabarrus
Caldwell
Catawba
Cherokee
Clay
Cleveland
Davidson
Davie
Forsyth
Gaston
Graham
Haywood
Henderson
Iredell
Jackson
Lincoln
Macon
Madison
McDowell
Mecklendurg
Mitchell
Polk
Rowan
Rutherford
Stanly
Stokes
Surry
Swain
Transylvania
Union
Watauga
Wilkes
Yadkin
Yancey

**SOUTHEAST REGION
FIELD OFFICES
ADDRESSES AND FAX NUMBERS**

Office name, address	FAX and Phone numbers, Contact name(s)
Asheville Field Office U. S. Fish & Wildlife Service 160 Zillicoa Street Asheville, NC 28801	Fax: 828/258-5330 Phone: 828/258-3939 Brian Cole
Athens Field Office U. S. Fish & Wildlife Service 247 S. Milledge Avenue Athens, GA 30605	Fax: 706/613-6059 Phone: 706/613-9493 Sandy Tucker (FS) Strant Colwell (Brunswick) Robin Goodloe (Athens)
Boqueron Field Office U. S. Fish & Wildlife Service Carr 301, KM 5.1 BO Corozo P.O. Box 491 Boqueron, PR 00622	Fax: 787/851-7440 Phone: 787/851-7297 Edwin Muniz (FS) Carlos Diaz (AFS)
Charleston Field Of fice U. S. Fish & Wildlife Service 176 Croghan Spur Road, Suite 200 Charleston, SC 29407	Fax: 843/727-4218 Phone: 843/727-4707 Tim Hall (FS)
Clemson Field Office U. S. Fish & Wildlife Service 2610 Lehotsky Hall, Box 341003 Clemson, SC 29634-1003	Fax: 864/656-1350 Phone: 864/656-2432 Ralph Costa
Cookeville Field Office U. S. Fish & Wildlife Service 446 Neal Street Cookeville, TN 38501	Fax: 931/528-7075 Phone: 931/528-6481 Lee Barclay (FS) Doug Winford (AFS)
Daphne Field Office U. S. Fish & Wildlife Service 1208-B Main Street P. O. Drawer 1190 Daphne, AL 36526	Fax: 251/441-6222 251/441-5068 Phone: 251/441-5870 Larry Goldman (FS) Elaine Snyder-Conn (AFS)
Frankfort Field Office U. S. Fish & Wildlife Service 3761 Georgetown Road Frankfort, KY 40601	Fax: Phone: 502/695-0468 Lee Andrews (FS)
Jackson Field Office U. S. Fish & Wildlife Service 6578 Dogwood View Parkway, Suite A Jackson, MS 39213 (Construction SU 99)	Fax: 601/321-1024 Phone: 601/321-1123 Ray Aycock (FS) Curtis James (SFWB) Cary Norquist (SFWB)
Jacksonville Field Office U. S. Fish & Wildlife Service 6620 Southpoint Drive, South Suite 310 Jacksonville, FL 32216-0912	Fax: 904/232-2404 Phone: 904/232-2580 Dave Hankla (FS) Linda Walker (SFWB)

Office name, address	FAX and Phone numbers, Contact name(s)
Panama City Field Office U. S. Fish & Wildlife Service 1601 Balboa Avenue Panama City, FL 32405-3721	Fax: 850/763-2177 Phone: 850/769-0552 Gail Carmody (FS) Janet Mizzi (ASF)
Raleigh Field Office U. S. Fish & Wildlife Service 551-F Pylon Drive P.O. Box 33726 Raleigh, NC 27636-3726	Fax: 919/856-4556 Phone: 919/856-4520 Pete Benjamin (FS)
Rio Grande Sub- Field Office U. S. Fish & Wildlife Service Calle Garcia DeLa Noceda Local No. 1 P.O. Box 1600 Rio Grande, PR 00745	Fax: 787/887-7512 Phone: 787/887-8769 Fernando Nunez-Garcia
Vero Beach Field Office U. S. Fish & Wildlife Service 1339 20 th Street Vero Beach, FL 32960-3559	Fax: 7721/562-4288 772/564-7393 Phone: 772/562-3909 Jay Slack (FS) Tom Grahl (DFS)

APPENDIX F. FWS National Wildlife Refuge in Relation to Airports-Maps

National Wildlife Refuge

- a. Alabama**
- b. Caribbean**
- c. Florida**
- d. Georgia**
- e. Kentucky**
- f. Mississippi**
- g. North Carolina**
- h. South Carolina**
- i. Tennessee**

APPENDIX G. MOU between FAA & WS

APPENDIX H. National MOA and Advisory Circular 150/5200-33A

APPENDIX I. Signature Sheets