

City of Albuquerque

Request for Proposals

Solicitation Number: RFP 2011-005-PP

WILDLIFE HAZARD ASSESSMENT at THE ALBUQUERQUE INTERNATIONAL
SUNPORT



Due Date: July 28, 2010 NLT 4:00 p.m. (Local Time)

The time and date proposals are due shall be strictly observed.

City of Albuquerque
Department of Finance and Administrative Services
Purchasing Division

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INTRODUCTION

The City of Albuquerque Aviation Department (“City”) is requesting proposals from all interested and qualified Offerors to conduct a Wildlife Hazard Assessment and resultant suggested changes to the current Wildlife Hazard Plan for the Albuquerque International Sunport.

General Information Regarding the Albuquerque International Sunport-

Albuquerque International Sunport: The Albuquerque International Sunport (“Sunport”) is the principal air carrier airport serving the Albuquerque Metropolitan Area and the State of New Mexico. Owned by the City of Albuquerque and operated by the City’s Aviation Department, the Sunport is located 5 miles southeast of downtown Albuquerque. The Sunport holds a Class I Airport Operating Certificate and is joint-use facility with Kirtland Air Force Base.

The Sunport is approximately 2200 acres of land with the Rio Grande River to the west, the 11,000 foot Sandia Mountains to the east, the Puerta del Sol Golf Course just north of the property and a significant terrain drop off to the south of the property. The Sunport has four runways: Runway 08/26 is 13,793 feet in length, Runway 03/21 is 10,000 feet in length, Runway 12/30 is 6,000 feet in length and Runway 17/35 is 10,000 feet in length (currently limited to aircraft 12,500 pounds or less).

Statistical Information: The Sunport is classified as a medium hub airport by the Federal Aviation Administration (“FAA”). In 2009, the Sunport had 158,322 operations of which two-thirds are air carrier or air taxi operations. As of January 2010, seven (7) major national commercial passenger airlines (American, Continental, Delta, Frontier, Southwest, United and US Airways) and two (2) commuter airlines (Great Lakes Airlines and New Mexico Airlines) provided scheduled airline service at the Sunport.

Additional Information: For more information regarding the Sunport, please visit our website, <http://www.cabq.gov/airport>.

PART 1

INSTRUCTIONS TO OFFERORS

1.1 RFP Number and Title: RFP2011-005-PP, "Wildlife Hazard Assessment at The Albuquerque International Sunport"

1.2 Proposal Due Date: July 28, 2010 - NLT 4:00 PM (Local Time)

The time and date proposals are due shall be strictly observed.

1.3 Purchasing Office: This RFP is issued on behalf of the City of Albuquerque by the Purchasing Office, which is the sole point of contact during the entire procurement process.

1.4 Authority: Chapter 5, Article 5 of the Revised Ordinances of the City of Albuquerque, 1994, (the "Public Purchases Ordinance"). The City Council, pursuant to Article 1 of the Charter of the City of Albuquerque and Article X, Section 6 of the Constitution of New Mexico, has enacted this ordinance as authorized by such provisions and for the purpose of providing maximum local self-government. To that end, it is intended that this ordinance shall govern all purchasing transactions of the City and shall serve to exempt the City from all provisions of the New Mexico Procurement Code, as provided in Section 13-1-98K, NMSA 1978.

1.5 Acceptance of Offer: Acceptance of Offer is contingent upon Offeror's certification and agreement by submittal of its offer, to comply and act in accordance with all provisions of the following:

1.5.1 City Public Purchases Ordinance

1.5.2 City Purchasing Rules and Regulations: City of Albuquerque Purchasing Rules and Regulations: These Rules and Regulations (the "Regulations") are written to clarify and implement the provisions of the Public Purchases Ordinance (the "Ordinance"). These Regulations establish policies, procedures, and guidelines relating to the procurement, management, control, and disposal of goods, services, and construction, as applicable, under the authority of the Ordinance.

1.5.3 Civil Rights Compliance: Acceptance of offer is contingent upon the Offeror's certification and agreement by submittal of its offer, to comply and act in accordance with all provisions of the Albuquerque Human Rights Ordinance, the New Mexico Human Rights Act, Title VII of the U.S. Civil Rights Act of 1964, as amended, and all federal statutes and executive orders, New Mexico statutes and City of Albuquerque ordinances and resolutions relating to the enforcement of civil rights and affirmative action. Questions regarding civil rights or affirmative action compliance requirements should be directed to the City of Albuquerque Human Resources Department.

1.5.4 Americans with Disabilities Act Compliance: Offeror certifies and agrees, by submittal of its offer, to comply and act in accordance with all applicable provisions of the

Americans With Disabilities Act of 1990 and federal regulations promulgated thereunder.

1.5.5 Insurance and Bonding Compliance: Acceptance of offer is contingent upon Offeror's ability to comply with the insurance requirements as stated herein. Please include a certificate or statement of compliance in your proposal and bonds as required.

1.5.6 Ethics:

1.5.6.1 Fair Dealing. The Offeror warrants that its proposal is submitted and entered into without collusion on the part of the Offeror with any person or firm, without fraud and in good faith. Offeror also warrants that no gratuities, in the form of entertainment, gifts or otherwise, were, or will be offered or given by the Offeror, or any agent or representative of the Offeror to any officer or employee of the City with a view toward securing a recommendation of award or subsequent contract or for securing more favorable treatment with respect to making a recommendation of award.

1.5.6.2 Conflict of Interest. The Offeror warrants that it presently has no interest and shall not acquire any interest, direct or indirect, which would conflict in any manner or degree with the performance of services required under the contract resulting from this RFP. The Offeror also warrants that, to the best of its knowledge, no officer, agent or employee of the City who shall participate in any decision relating to this RFP and the resulting contract, currently has, or will have in the future, a personal or pecuniary interest in the Offeror's business.

1.5.7 Participation/Offeror Preparation: Offeror may not use the consultation or assistance of any person, firm company who has participated in whole or in part in the writing of these specifications or the Scope of Services, for the preparation of its offer or in the management of its business if awarded the contract resulting from this RFP.

1.5.8 Debarment or Ineligibility Compliance: By submitting its offer in response to this RFP, the Offeror certifies that (i) it has not been debarred or otherwise found ineligible to receive funds by any agency of the federal government, the State of New Mexico, any local public body of the State, or any state of the United States; and (ii) should any notice of debarment, suspension, ineligibility or exclusion be received by the Offeror, the Offeror will notify the City immediately.

1.5.9 Goods Produced Under Decent Working Conditions: It is the policy of the City not to purchase, lease, or rent goods for use or for resale at City owned enterprises that were produced under sweatshop conditions. The Offeror certifies, by submittal of its offer in response to this solicitation, that the goods offered to the City were produced under decent working conditions. The City defines "under decent working conditions" as production in a factory in which child labor and forced labor are not employed; in which adequate wages and benefits are paid to workers; in which workers are not required to work more than 48 hours per week (or less if a shorter workweek applies); in which employees are free from physical, sexual or verbal harassment; and in which employees can speak freely about working

conditions and can participate in and form unions. [Council Bill No. M-8, Enactment No. 9-1998]

1.5.10 Graffiti Free: When required, the Contractor will be required to furnish equipment, facilities, or other items required to complete these services, that are graffiti-free. Failure of Contractor to comply with this requirement may result in cancellation of the contract resulting from this RFP.

1.6 City Contact: The sole point of contact for this Request for Proposals is the City of Albuquerque Purchasing Division. Contact the following individual(s) regarding this RFP:

- Phil Pino, Senior Buyer, Department of Finance and Administrative Services, Purchasing Division,
- Phone: (505) 768-3341 or E-Mail: pcpino@cabq.gov
- Post Office Box 1293, Albuquerque, New Mexico 87103

1.7 Contract Management: The contract resulting from this RFP will be managed by the Operations Department, Aviation Division.

1.8 Clarification: Any explanation desired by an Offeror regarding the meaning or interpretation of this Request For Proposals must be requested in writing not less than ten (10) working days prior to the hour and date specified for the receipt of offers to allow sufficient time for a reply to reach Offerors before the submission of their offers. All inquiries must be directed to the Purchasing Office as stated herein. Oral explanations or instructions given before the award of the contract or at any time will not be binding. Any information given to a prospective Offeror concerning this Request For Proposals, will be furnished to all prospective Offerors as an amendment to this Request for Proposals, if such information is necessary to Offerors in submitting offers on this Request For Proposals or if the lack of such information would be prejudicial to uninformed Offerors.

1.9 Submission of Offers: The Offeror's sealed proposal must be in the format outlined in Part 2 of this Request for Proposals and mailed or delivered pursuant to the following requirements:

1.9.1 Envelope preparation. Offers and modifications thereof shall be enclosed in sealed envelopes and have the following identifying information on the outside:

- Name and address of Offeror
- Closing Date and Time
- Request for Proposals Number
- RFP Title

1.9.2 Ship, Deliver or Hand Carry Sealed Offers to: The Office of the City Clerk, City /County Government Center, Basement Level, One Civic Plaza, N.W., Albuquerque, New Mexico 87102. Mark all packages as stated above.

1.9.3 Mail Sealed Responses to: Office of the City Clerk, Post Office Box 1293, Albuquerque, New Mexico 87103. (Certified Mail is recommended). The City shall not be responsible for the failure of mailed offers to actually be received by the Office of the City Clerk by 4:00 of the day of closing.

Note: The City picks up mail at the post office **only once** per day usually at 7:00 AM (Local Time). **Note: ALL SEALED PROPOSALS MUST BE RECEIVED BY THE OFFICE OF THE CITY CLERK NO LATER THAN 4:00 PM, LOCAL TIME AS RECORDED IN THE CITY CLERK'S OFFICE.**

1.9.4 No other methods of delivery: Neither telephone, facsimile, electronic, nor telegraphic offers shall be accepted.

1.9.5 Submit Hard and Soft Copies of the Proposal as follows:

- **Hard Copy - 1 original and 6 copies of your Technical Proposal. Submit 1 original and 1 copy of your Cost Proposal.**
- **Soft Copy - Submit 1 Original Technical and Cost Proposal on a CD.**

1.9.6 Modification or Withdrawal of Offer: Offers may be modified by submittal of a substitute or supplemental proposal to the City Clerk's Office following the submission requirements set out above. Offers may be withdrawn by written request provided to the City Clerk. In either case, such action must occur prior to the hour and date specified for receipt of offers.

1.10 Receipt of Proposals: The only acceptable evidence to establish the time of receipt of proposals at the City Clerk's Office is the time-date stamp of such office on the proposal wrapper or other documentary evidence of receipt maintained by the office.

1.11 Acknowledgment of Amendments To the Request For Proposals: Receipt of an amendment to the Request For Proposals by an Offeror must be acknowledged (a) by signing and returning the amendment, (b) by letter, or (c) by mention in your proposal. Such acknowledgment may be submitted with your offer.

1.12 Modifications to Scope of Services: In the event that sufficient funds do not become available to complete each task in the Scope of Services, the Scope of Services may be amended, based upon the cost breakdown required in the Cost Proposal.

1.13 Draft Agreement: A copy of the Draft Agreement to be entered into is attached. Please state that you accept the terms and conditions of the Draft Agreement, or note exceptions.

1.14 Evaluation period: The City reserves the right to analyze, examine and interpret any offer for a period of ninety (90) days after the hour and date specified for the receipt of offers.

1.15 Evaluation Assistance: The City of Albuquerque, in evaluating proposals, reserves the right to use any assistance deemed advisable, including City contractors and consultants.

1.16 Rejection and Waiver: The City reserves the right to reject any or all offers and to waive informalities and minor irregularities in offers received.

1.17 Debarment of Offeror: Any proposal received from an Offeror that is, at the time of submitting its proposal or prior to receipt of award of a contract, debarred by or otherwise ineligible to receive funds from any agency of the State of New Mexico, any local public body of the State, or any state of the United States, shall be rejected.

1.18 Award of Contract:

1.18.1 When Award Occurs: Award of contract occurs when a Purchase Order is issued or other evidence of acceptance by the City is provided to the Offeror. A Recommendation of Award does not constitute award of contract.

1.18.2 Award: If a contract is awarded, it shall be awarded to the responsive and responsible Offeror whose offer conforming to the Request for Proposals will be most advantageous to the City as set forth in the Evaluation Criteria.

1.18.3 Contract Term: The contract term shall be for a period of 1 year from the effective date of the contract and/or final execution by the City. This contract term may be extended for up to two (2) twelve (12) month periods or any part of a twelve (12) month period by mutual written agreement between the City and the Contractor.

1.18.4 Type of Contract: Firm Fixed Price

1.18.5 Debarment/Cancellation of Contract: Upon receipt of notice of debarment of an Offeror awarded a contract as a result of this RFP (the "Contractor"), or other ineligibility of the Contractor to receive funds from any agency of the federal government, the State of New Mexico, any local public body of the State, or any state of the United States, the City shall have the right to cancel the contract with the Contractor resulting from this RFP for cause as provided in accordance with the terms of said contract.

1.19 Cancellation: This Request for Proposals may be canceled and any and all proposals may be rejected in whole or in part when it is in the best interest of the City.

1.20 Negotiations: Negotiations may be conducted with the Offeror(s) recommended for award of contract.

1.21 City-Furnished Property: No material, labor, or facilities will be furnished by the City unless otherwise provided for in the Request for Proposals.

1.22 Proprietary Data: The file relating to this RFP, including the proposals submitted by Offerors, shall be open to public inspection after the recommendation of award of a contract has been signed by the Mayor, or his designee. An Offeror may designate trade secrets or other proprietary data to be confidential by separating that material from the Offeror's main proposal,

placing it in a sealed envelope and marking it as “Confidential”. **Pricing and makes and models or catalog numbers of the items offered, deliveries, and terms of payment should not be so designated.** The City of Albuquerque will endeavor to restrict distribution of material separated, placed in a sealed envelope and designated as “Confidential” to only those individuals involved in the review and analysis of the proposals. If a request for inspection of records under the New Mexico Inspection of Public Records Act (Sections 14-2-1 et seq, NMSA 1978) is received, however, which request encompasses such materials, they will be disclosed. The City assumes no responsibility to maintain the confidentiality of any materials submitted in response to this RFP.

1.24 REQUEST FOR PROPOSALS (RFP) PROTEST PROCESS:

1.24.1 When: If the protest concerns the specifications for a competitive solicitation or other matters pertaining to the solicitation documents, it must be received by the Purchasing Officer no later than ten working days prior to the deadline for the receipt of offers.

1.24.2 Recommendation of Award: If the protest concerns other matters relating to this solicitation, the protest must be filed within ten working days after the receipt of notice of the Recommendation of Award.

1.24.3 Timely Protests: Protests must be received by the Purchasing Officer prior to the appropriate deadline as set out herein, or they will not be considered valid. The Purchasing Officer may waive the deadline for good cause, including a delay caused by the fault of the City. Late delivery by the U.S. Postal Service or other carrier shall not be considered good cause.

1.24.4 How to File: Any Offeror who is aggrieved in connection with a competitive solicitation or recommendation of award of a contract may protest to the City Purchasing Officer. The protest shall be addressed to the Purchasing Officer, must be submitted in written form and must be legible. Protests may be hand-delivered or mailed. Facsimile, telephonic, telegraphic or electronic protests will not be accepted.

1.24.5 Required Information: The protest shall contain at a minimum the following;

- The name and address of the protesting party;
- The number of the competitive solicitation;
- A clear statement of the reason(s) for the protest;
- Details concerning the facts, which support the protest;
- Attachments of any written evidence available to substantiate the claims of the protest; and
- A statement specifying the ruling requested.

1.24.6 Address Letters and Envelopes as Follows:

- City of Albuquerque RFP Number

- Purchasing Division
 - PO Box 1293
 - Albuquerque, New Mexico 87103
- PROTEST

1.24.7 Protest Response by Purchasing Officer: All protests will be responded to by the Purchasing Officer upon evaluation. The Purchasing Officer will, after evaluation of a protest, issue a response. Only the issues outlined in the written protest will be considered by the Purchasing Officer.

1.24.8 Protest Hearing: If a hearing is requested, the request must be included in the protest and received within the time limit to be allowed. The filing fee of twenty dollars (\$20.00) must accompany the request for hearing. Only the issues outlined in the protest will be considered by the Purchasing Officer, or may be raised at a protest hearing. The granting of a hearing shall be at the discretion of the Purchasing Officer following review of the request.

1.25 INSURANCE:

1.25.1 General Conditions: The City will require the successful Offeror, referred to as the Contractor, to procure and maintain at its expense during the term of the contract resulting from the RFP, insurance in the kinds and amounts hereinafter provided with insurance companies authorized to do business in the State of New Mexico, covering all operations of the Contractor under the contract. Upon execution of the contract and on the renewal of all coverages, the Contractor shall furnish to the City a certificate or certificates in form satisfactory to the City showing that it has complied with these insurance requirements. All certificates of insurance shall provide that thirty (30) days written notice be given to the Risk Manager, Department of Finance and Administrative Services, City of Albuquerque, P.O. Box 470, Albuquerque, New Mexico, 87103, before a policy is canceled, materially changed, or not renewed. Various types of required insurance may be written in one or more policies. With respect to all coverages required other than professional liability or workers' compensation, the City shall be named an additional insured. All coverages afforded shall be primary with respect to operations provided.

1.25.2 Approval of Insurance: Even though the Contractor may have been given notice to proceed, it shall not begin any work under the contract resulting from this RFP until the required insurance has been obtained and the proper certificates (or policies) filed with the City. Neither approval nor failure to disapprove certificates, policies, or the insurance by the City shall relieve the Contractor of full responsibility to maintain the required insurance in full force and effect. If part of the contract is sublet, the Contractor shall include any or all subcontractors in its insurance policies, or require the subcontractor to secure insurance to protect itself against all hazards enumerated herein, which are not covered by the Contractor's insurance policies.

1.25.3 Coverage Required: The kinds and amounts of insurance required are as follows:

1.25.3.1 Commercial General Liability Insurance. A commercial general liability insurance policy with combined limits of liability for bodily injury or property damage as follows:

\$5,000,000	Per Occurrence
\$1,000,000	Policy Aggregate
\$1,000,000	Products Liability/Completed Operations
\$1,000,000	Personal and Advertising Injury
\$ 50,000	Fire Legal
\$ 5,000	Medical Payments

Said policy of insurance must include coverage for all operations performed for the City by the Contractor and contractual liability coverage shall specifically insure the hold harmless provisions of the contract resulting from this RFP.

1.25.3.2 Automobile Liability Insurance. A comprehensive automobile liability insurance policy with liability limits in amounts not less than \$1,000,000 combined single limit of liability for bodily injury, including death, and property damage in any one occurrence. The policy must include coverage for the use of all owned, non-owned, hired automobiles, vehicles and other equipment both on and off work.

1.25.3.3 Workers' Compensation Insurance. Workers' compensation insurance policy for the Contractor's employees, in accordance with the provisions of the Workers' Compensation Act of the State of New Mexico, (the "Act"). If the Contractor employs fewer than three employees and has determined that it is not subject to the Act, it will certify, in a signed statement, that it is not subject to the Act. The Contractor will notify the City and comply with the Act should it employ three or more persons during the term of the contract resulting from this RFP.

1.25.4 Increased Limits: During the life of the contract the City may require the Contractor to increase the maximum limits of any insurance required herein. In the event that the Contractor is so required to increase the limits of such insurance, an appropriate adjustment in the contract amount will be made.

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PART 2 PROPOSAL FORMAT

2.1 Technical Proposal Format, Section One

2.1.1 Offeror Identification: State name and address of your organization or office and nature of organization (individual, partnership or corporation, private or public, profit or non-profit). Subcontractors if any must be identified in a similar manner. Include name and telephone number of person(s) in your organization authorized to execute the Draft Agreement. Submit a statement of compliance with all laws stated herein. Submit a statement of agreement of the terms and conditions of the Draft Agreement; state exceptions. Show receipt of Addenda if applicable. Provide a statement or show ability to carry the insurance specified.

2.1.2 Experience:

2.1.2.1 Current Experience. State relevant experience of the company and person(s) who will be actively engaged in the proposed project, including experience of subcontractors. Submit resumes for the individuals who will be performing the services for the City.

2.1.2.2 Past Experience. Describe a minimum of three (3) projects of similar scope and size, which are now complete; state for whom the work was performed, year completed, and a reference person who can be contacted regarding the work. References must be for work performed in the past three to five (3 to 5) years. State relevant experience with other municipalities or government entities.

2.1.3 Proposed Approach to Tasks: Discuss fully your proposed approach to each of the tasks described in Part 3, Scope of Services. Use charts to illustrate the number of hours dedicated to each task and who will be performing each task [individual(s)/firm(s)]. Reference Appendix A, attached hereto, without stating the price structure.

2.1.4 Management Summary: Describe individual staff and subcontractor's responsibilities with lines of authority and interface with the City of Albuquerque staff. Describe resources to be drawn from in order to complete tasks.

2.2 Cost Proposal Format, Section Two

2.2.1 Total Cost: Submit one original and one copy of your Cost Proposal, in a **separate** binder, or folder distinctly marked as Cost Proposal, with the following information, in a "spread sheet" format as given in the example provided in Appendix A, and attached hereto.

2.2.2 The cost proposal should contain at least the following information:

- The cost for the entire project broken down by the activities or steps shown on the project schedule.
- Estimated periodic billing to the City based on the cost of the deliverable items.
- Cost or pricing details should be shown by task. This might include, but is not limited to:
 - Hours by category, hourly rates, and total labor broken out by professional and other labor. Rates are to include all overhead and profit.
 - Purchased materials, unit costs, and quantities.
 - Travel, lodging, and other direct expenses.
 - Subcontract costs if applicable, and additional consulting beyond the scope of the described tasks (if requested).

2.2.3 Offerors should show detailed costs by task and number of hours dedicated to each task as listed in the specifications.

2.2.4 An example of the preferred format is contained in Appendix A, attached hereto as described above. Your response to this section will be used in performing a cost/price analysis.

2.2.5 All Costs: All costs to be incurred and billed to the City should be described by the Offeror for each item, to allow for a clear evaluation and comparison, relative to other offers received. The Offeror should understand that the City will not pay for any amounts not included -- for example, insurance or taxes -- and that liability for items not included remains with the Offeror.

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PART 3

SCOPE OF SERVICES

3.1 Objectives: The purpose of this RFP is to solicit Proposals from qualified, wildlife biologists to conduct a wildlife hazard assessment in accordance with FAA Part 139 (Appendix A) guidelines at the Sunport. All applicants/firms must meet the qualifications as outlined in Advisory Circular 150/5200-36 (Appendix B) and conduct the Wildlife Assessment in accordance with Advisory Circular 150/5200-33B (Appendix C).

3.2 Scope of Services: The scope of work will include, but is not limited to the following:

1. Analysis of events or circumstances that prompted the assessment
2. Identification of wildlife species observed and their numbers, locations, local movements and daily and seasonal occurrences
3. Identification and location of features on and near the airport that attract wildlife
4. A description of wildlife hazards to air carrier operations
5. Recommended actions for reducing identified wildlife hazards to air carrier operations
6. Provide recommendations for updates and changes to the current Wildlife Hazard Plan.

3.3 Submission Requirements: Required information is to be presented in a manner that clearly illustrates the following:

1. Background: A general description of the individual/firm to include if applicable size, years in business, educational background.
2. Resumes: Provide resumes for all individuals that will work specifically on this project
3. Relevant Experience: List any qualifications and experience to include assessments and wildlife services provided to airports in the last 5 years
4. References: List clients or airports we may contact, include name and phone number
5. Regulatory Familiarity: Demonstrate familiarity with FAA regulations and Advisory Circular guidelines
7. Provide a timeline of execution of the Scope of Work/Services
6. Provide an outline of standard fees the Sunport will incur to accomplish the items on Scope of Work/Services.

PART 4 EVALUATION OF OFFERS

4.1 Selection Process. The Mayor of Albuquerque shall name, for the purpose of evaluating the proposals, an Ad Hoc Advisory Committee. On the basis of the evaluation criteria established in this RFP, the committee shall submit to the Mayor a list of qualified firms in the order in which they are recommended. Proposal documentation requirements set forth in this RFP are designed to provide guidance to the Offeror concerning the type of documentation that will be used by the Ad Hoc Advisory Committee. Offerors should be prepared to respond to requests by the Purchasing Office on behalf of the Ad Hoc Advisory Committee for oral presentations, facility surveys, demonstrations or other areas deemed necessary to assist in the detailed evaluation process. Offerors are advised that the City, at its option, may award this request on the basis of the initial offers.

4.2 Evaluation Criteria. The following general criteria, not listed in order or significance, will be used by the Ad Hoc Advisory Committee in recommending contract award to the Mayor. The proposal factors will be rated on a scale of **0-1000** with weight relationships as stated below.

4.2.1 Evaluation Factors:

0 - 300 – Qualifications and Experience of Offeror as shown on staff resumes and experience to include assessments and wildlife services provided to airports in the last 5 years.

0 - 300 -- Familiarity with FAA regulations and Advisory Circular guidance.

0 - 200-- Quality of performance on similar projects as rated by references.

0 -100 -- The overall ability of the Offeror, as judged by the evaluation committee, to successfully complete the project within the proposed schedule. This judgment will be based upon factors such as the project management plan and availability of staff and resources.

0 -100 -- Cost Proposal – The costs proposed by the Contractor as described in Section 2.2 of this RFP to perform the tasks listed in Part3, Scope of Services. The evaluation of this section will occur after the technical evaluation, based on a cost/price analysis.

4.2.2 Cost/Price Factors: The evaluation of cost factors in the selection will be determined by a cost/price analysis using your proposed figures. Please note that the lowest cost is not the sole criterion for recommending contract award.

4.2.3 Cost Evaluation. The cost/price evaluation will be performed by the City Purchasing Division or designee. A preliminary cost review will ensure that each Offeror has complied with all cost instructions and requirements. In addition, proposals will be examined to ensure that all proposed elements are priced and clearly presented. Cost proposals that are incomplete or reflect significant inconsistencies or inaccuracies will be scored accordingly or may be rejected by the Ad Hoc Advisory Committee if lacking in information to determine the value/price/cost relative to the services proposed.

PART 5
DRAFT AGREEMENT

THIS AGREEMENT is made and entered into this ____ day of_____, 20__ by and between the City of Albuquerque, New Mexico a municipal corporation, (hereinafter referred to as the "City"), and _____, hereinafter referred to as the "Contractor"), a _____, whose address is _____.

RECITALS

WHEREAS, the City issued a Request For Proposals for the _____ Department, RFP2011-005-PP, titled “_Wildlife Hazard Assessment at The Albuquerque International Sunport_”; and

WHEREAS, the Contractor submitted its proposal, dated _____, in response to RFP2011-005-PP; and

WHEREAS, the City desires to engage the Contractor to render certain services in connection therewith, and the Contractor is willing to provide such services.

NOW, THEREFORE, in consideration of the premises and mutual obligations herein, the parties hereto do mutually agree as follows:

1. Scope of Services. The Contractor shall perform the following services (hereinafter the "Services") in a satisfactory and proper manner, as determined by the City:

Provide **Wildlife Hazard Assessment at The Albuquerque International Sunport** in accordance with Exhibit A as supplemented by Exhibit B.

2. Time of Performance. Services of the Contractor shall commence on the date of final execution of this Agreement and shall be undertaken and completed in such sequence as to assure their expeditious completion in light of the purposes of this Agreement; provided, however, that in any event, all of the Services required hereunder shall be completed within _____ years of the date of execution of this Agreement. This Agreement may be extended for up to _____ additional one-year periods upon written agreement of the parties.

3. Compensation and Method of Payment.

A. Compensation. For performing the Services specified in Section 1 hereof, the City agrees to pay the Contractor up to the amount of _____ Dollars (\$_____), which amount includes any applicable gross receipts taxes and which amount shall constitute full and complete compensation for the Contractor's Services under this Agreement, including all expenditures made and expenses incurred by the Contractor in performing such Services.

B. Method of Payment. Such amount shall be paid to the Contractor in installments, which include any applicable gross receipts taxes, as follows: TBD. Payments shall be made to the Contractor upon completion of each task, upon receipt by the City of a properly documented requisition for payment as determined by the budgetary and fiscal guidelines of the City and on the condition that the Contractor has accomplished the Services to the satisfaction of the City.

C. Appropriations. Notwithstanding any other provisions in this Agreement, the terms of this Agreement are contingent upon the City Council of the City of Albuquerque making the appropriations necessary for the performance of this Agreement. If sufficient appropriations and authorizations are not made by the City Council, this Agreement may be terminated at the end of the City's then current fiscal year upon written notice given by the City to the Contractor. Such event shall not constitute an event of default. All payment obligations of the City and all of its interest in this Agreement will cease upon the date of termination. The City's decision as to whether sufficient appropriations are available shall be accepted by the Contractor and shall be final.

4. Independent Contractor. The Contractor is considered as an independent contractor at all times in the performance of the services described in Section 1. The Contractor further agrees that neither it nor its employees are entitled to any benefits from the City under the provisions of the Workers' Compensation Act of the State of New Mexico, or to any of the benefits granted to employees of the City under the provisions of the Merit System Ordinance as now enacted or hereafter amended.

5. Personnel.

A. The Contractor represents that it has, or will secure at its own expense, all personnel required in performing all of the Services required under this Agreement. Such personnel shall not be employees of or have any contractual relationships with the City.

B. All the Services required hereunder will be performed by the Contractor or under its supervision and all personnel engaged in the work shall be fully qualified and shall be authorized or permitted under state and local law to perform such Services.

C. None of the work or Services covered by this Agreement shall be subcontracted without the prior written approval of the City. Any work or Services subcontracted hereunder shall be specified by written contract or agreement and shall be subject to each provision of this Agreement.

6. **Indemnity.** The Contractor agrees to defend, indemnify and hold harmless the City and its officials, agents and employees from and against any and all claims, actions, suits or proceedings of any kind brought against said parties because of any injury or damage received or sustained by any person, persons or property to the extent arising out of or resulting from the negligent acts, errors, omissions, and performance by the Contractor under this Agreement or by reason of any asserted act or omission, neglect or misconduct of the Contractor or Contractor's agents or employees or any subcontractor or its agents or employees. The indemnity required hereunder shall not be limited by reason of the specification of any particular insurance coverage in this Agreement.

7. **Insurance.** The Contractor shall not commence any work under this Agreement until the insurances required in Exhibit A, Section 1.25, have been obtained and the proper certificates (or policies) have been submitted to the City.

8. **Discrimination Prohibited.** In performing the Services required hereunder, the Contractor shall not discriminate against any person on the basis of race, color, religion, gender, sexual preference, sexual orientation, national origin or ancestry, age, physical handicap or disability, as defined in the Americans With Disabilities Act of 1990, as currently enacted or hereafter amended.

9. **ADA Compliance.** In performing the Services required hereunder, the Contractor agrees to meet all the requirements of the Americans With Disabilities Act of 1990 (the "ADA"), which are imposed directly on the Contractor or which would be imposed on the City as a public entity. The Contractor agrees to be responsible for knowing all applicable rules and requirements of the ADA and to defend, indemnify and hold harmless the City, its officials, agents and employees from and against any and all claims, actions, suits or proceedings of any kind brought against said parties as a result of any acts or omissions of the Contractor or its agents in violation of the ADA.

10. **Reports and Information.** At such times and in such forms as the City may require, there shall be furnished to the City such statements, records, reports, data and information, as the City may request pertaining to matters covered by this Agreement. Unless authorized by the City, the Contractor will not release any information concerning the work product including any reports or other documents prepared pursuant to the Agreement until the final product is submitted to the City.

11. **Open Meetings Requirements.** Any nonprofit organization in the City which receives funds appropriated by the City, or which has as a member of its governing body an elected official, or appointed administrative official, as a representative of the City, is subject to the requirements of §2-5-1 *et seq.* R.O.A. 1994, Public Interest Organizations. The Contractor agrees to comply with all such requirements, if applicable.

12. Establishment and Maintenance of Records. Records shall be maintained by the Contractor in accordance with applicable law and requirements prescribed by the City with respect to all matters covered by this Agreement. Except as otherwise authorized by the City, such records shall be maintained for a period of three (3) years after receipt of final payment under this Agreement.

13. Audits and Inspections. At any time during normal business hours and as often as the City may deem necessary, there shall be made available to the City for examination all of the Contractor's records with respect to all matters covered by this Agreement. The Contractor shall permit the City to audit, examine, and make excerpts or transcripts from such records, and to make audits of all contracts, invoices, materials, payrolls, records of personnel, conditions of employment and other data relating to all matters covered by this Agreement. The Contractor understands and will comply with the City's Accountability in Government Ordinance, §2-10-1 et seq. R.O.A. 1994, and also agrees to provide requested information and records and appear as a witness in hearings for the City's Board of Ethics and Campaign Practices pursuant to Article XII, Section 8 of the Albuquerque City Charter.

14. Publication, Reproduction and Use of Material. No material produced in whole or in part under this Agreement shall be subject to copyright in the United States or in any other country. The City shall have unrestricted authority to publish, disclose, distribute and otherwise use, in whole or in part, any reports, data or other materials prepared under this Agreement.

15. Compliance with Laws. In providing the Scope of Services outlined herein, the Contractor shall comply with all applicable laws, ordinances, and codes of the federal, State, and local governments.

16. Changes. The City may, from time to time, request changes in the Scope of Services of the Contractor to be performed hereunder. Such changes, including any increase or decrease in the amount of the Contractor's compensation, which are mutually agreed upon by and between the City and the Contractor, shall be incorporated in written amendments to this Agreement.

17. Assignability. The Contractor shall not assign any interest in this Agreement and shall not transfer any interest in this Agreement (whether by assignment or novation), without the prior written consent of the City thereto.

18. Termination for Cause. If, through any cause, the Contractor shall fail to fulfill in a timely and proper manner its obligation under this Agreement or if the Contractor shall violate any of the covenants, agreements, or stipulations of this Agreement, the City shall thereupon have the right to terminate this Agreement by giving five (5) days written notice to the Contractor of such termination and specifying the effective date of such termination. In such event, all finished or unfinished documents, data, and reports prepared by the Contractor under this Agreement shall, at the option of the City, become its property, and the Contractor shall be entitled to receive just and equitable compensation for any work satisfactorily completed

hereunder. Notwithstanding the above, the Contractor shall not be relieved of liability to the City for damages sustained by the City by virtue of any breach of this Agreement by the Contractor, and the City may withhold any payments to the Contractor for the purposes of set-off until such time as the exact amount of damages due the City from the Contractor is determined.

19. Termination for Convenience of City. The City may terminate this Agreement at any time by giving at least fifteen (15) days notice in writing to the Contractor. If the Contractor is terminated by the City as provided herein, the Contractor will be paid an amount which bears the same ratio to the total compensation as the Services actually performed bear to the total Services of the Contractor covered by this Agreement, less payments of compensation previously made. If this Agreement is terminated due to the fault of the Contractor, the preceding section hereof relative to termination shall apply.

20. Construction and Severability. If any part of this Agreement is held to be invalid or unenforceable, such holding will not affect the validity or enforceability of any other part of this Agreement so long as the remainder of the Agreement is reasonably capable of completion.

21. Enforcement. The Contractor agrees to pay to the City all costs and expenses including reasonable attorney's fees incurred by the City in exercising any of its rights or remedies in connection with the enforcement of this Agreement.

22. Entire Agreement. This Agreement contains the entire agreement of the parties and supersedes any and all other agreements or understandings, oral or written, whether previous to the execution hereof or contemporaneous herewith. Exhibits A and B, attached hereto, are hereby made a part of this Agreement.

24. Applicable Law. This Agreement shall be governed by and construed and enforced in accordance with the laws of the State of New Mexico, and the laws, rules and regulations of the City of Albuquerque.

25. **Approval Required.** This Agreement shall not become effective or binding until approved by the City's Chief Administrative Officer.

IN WITNESS WHEREOF, the City and the Contractor have executed this Agreement as of the date first above written.

CITY OF ALBUQUERQUE

Approved By:

Chief Administrative Officer

Date: _____

_____, **Director**

Department _____

Date: _____

CONTRACTOR:

By: _____

Title: _____

Date: _____

Federal Tax ID No:

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§ 139.337 Wildlife hazard management.

(a) In accordance with its Airport Certification Manual and the requirements of this section, each certificate holder must take immediate action to alleviate wildlife hazards whenever they are detected.

(b) In a manner authorized by the Administrator, each certificate holder must ensure that a wildlife hazard assessment is conducted when any of the following events occurs on or near the airport:

(1) An air carrier aircraft experiences multiple wildlife strikes;

(2) An air carrier aircraft experiences substantial damage from striking wildlife. As used in this paragraph, substantial damage means damage or structural failure incurred by an aircraft that adversely affects the structural strength, performance, or flight characteristics of the aircraft and that would normally require major repair or replacement of the affected component;

(3) An air carrier aircraft experiences an engine ingestion of wildlife; or

(4) Wildlife of a size, or in numbers, capable of causing an event described in paragraphs (b)(1), (b)(2), or (b)(3) of this section is observed to have access to any airport flight pattern or aircraft movement area.

(c) The wildlife hazard assessment required in paragraph (b) of this section must be conducted by a wildlife damage management biologist who has professional training and/or experience in wildlife hazard management at airports or an individual working under direct supervision of such an individual. The wildlife hazard assessment must contain at least the following:

(1) An analysis of the events or circumstances that prompted the assessment.

- (2) Identification of the wildlife species observed and their numbers, locations, local movements, and daily and seasonal occurrences.
- (3) Identification and location of features on and near the airport that attract wildlife.
- (4) A description of wildlife hazards to air carrier operations.
- (5) Recommended actions for reducing identified wildlife hazards to air carrier operations.
- (d) The wildlife hazard assessment required under paragraph (b) of this section must be submitted to the Administrator for approval and determination of the need for a wildlife hazard management plan. In reaching this determination, the Administrator will consider—
 - (1) The wildlife hazard assessment;
 - (2) Actions recommended in the wildlife hazard assessment to reduce wildlife hazards;
 - (3) The aeronautical activity at the airport, including the frequency and size of air carrier aircraft;
 - (4) The views of the certificate holder;
 - (5) The views of the airport users; and
 - (6) Any other known factors relating to the wildlife hazard of which the Administrator is aware.
- (e) When the Administrator determines that a wildlife hazard management plan is needed, the certificate holder must formulate and implement a plan using the wildlife hazard assessment as a basis. The plan must—
 - (1) Provide measures to alleviate or eliminate wildlife hazards to air carrier operations;
 - (2) Be submitted to, and approved by, the Administrator prior to implementation; and
 - (3) As authorized by the Administrator, become a part of the Airport Certification Manual.
- (f) The plan must include at least the following:
 - (1) A list of the individuals having authority and responsibility for implementing each aspect of the plan.
 - (2) A list prioritizing the following actions identified in the wildlife hazard assessment and target dates for their initiation and completion:
 - (i) Wildlife population management;
 - (ii) Habitat modification; and

- (iii) Land use changes.
- (3) Requirements for and, where applicable, copies of local, State, and Federal wildlife control permits.
- (4) Identification of resources that the certificate holder will provide to implement the plan.
- (5) Procedures to be followed during air carrier operations that at a minimum includes—
 - (i) Designation of personnel responsible for implementing the procedures;
 - (ii) Provisions to conduct physical inspections of the aircraft movement areas and other areas critical to successfully manage known wildlife hazards before air carrier operations begin;
 - (iii) Wildlife hazard control measures; and
 - (iv) Ways to communicate effectively between personnel conducting wildlife control or observing wildlife hazards and the air traffic control tower.
- (6) Procedures to review and evaluate the wildlife hazard management plan every 12 consecutive months or following an event described in paragraphs (b)(1), (b)(2), and (b)(3) of this section, including:
 - (i) The plan's effectiveness in dealing with known wildlife hazards on and in the airport's vicinity and
 - (ii) Aspects of the wildlife hazards described in the wildlife hazard assessment that should be reevaluated.
- (7) A training program conducted by a qualified wildlife damage management biologist to provide airport personnel with the knowledge and skills needed to successfully carry out the wildlife hazard management plan required by paragraph (d) of this section.
- (g) FAA Advisory Circulars contain methods and procedures for wildlife hazard management at airports that are acceptable to the Administrator.

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U.S. Department
of Transportation
**Federal Aviation
Administration**

Advisory Circular

Subject: Qualifications for Wildlife
Biologist Conducting Wildlife Hazard
Assessments and Training Curriculums for
Airport Personnel Involved in Controlling
Wildlife Hazards on Airports

Date: June 28, 2006

AC No: 150/5200-36

Initiated by: AAS-300

1. Purpose.

This Advisory Circular (AC) describes the qualifications for wildlife biologists who conduct Wildlife Hazard Assessments for airports certificated under Title 14, Code of Federal Regulations, Part 139 (14 CFR, Part 139). In addition, it addresses the minimum wildlife hazard management curriculum for the initial and recurrent training of airport personnel involved in implementing a Federal Aviation Administration (FAA) approved Wildlife Hazard Management Plan.

2. Background.

Wildlife biologists conducting Wildlife Hazard Assessments or presenting training for airport personnel actively involved in implementing FAA approved Wildlife Hazard Management Plans at certificated airports must have professional training and/or experience in wildlife hazard management at airports [§139.337(c) and (f)(7)]. Airport personnel actively involved in implementing FAA approved Wildlife Hazard Management Plans must receive initial training and, every 12 consecutive months after that, recurrent training [§139.303(c) and (e) (Personnel)].

3. Applicability.

The Federal Aviation Administration (FAA) recommends that public-use airport operators fulfill the standards and practices contained in this AC. The holders of Airport Operating Certificates issued under Part 139, Subpart D, may use the standards, practices, and recommendations contained in this AC to comply with the wildlife hazard management requirements of Part 139. The FAA also recommends the guidance in this AC for persons wishing to conduct Wildlife Hazard Assessments and for those who help prepare Wildlife Hazard Management Plans or conduct the requisite training.

4. Related Reading Material.

Please review the most recent versions of the following documents:

- a. FAA AC 150/5200-18C, *Airport Safety Self-Inspection*.
- b. FAA AC 150/5200-32A, *Reporting Wildlife Aircraft Strikes*.
- c. FAA AC 150/5200-33A, *Hazardous Wildlife Attractions on or Near Airports*.
- d. FAA AC 150/5200-34A, *Construction or Establishment of Landfills Near Public Airports*.
- e. FAA Office of Safety and Standards, Certalert no. 98-05. *Grasses Attractive to Hazardous Wildlife*.
- f. FAA Office of Safety and Standards, Certalert no. 04-09, *Relationship Between FAA and WS*.
- g. FAA Office of Safety and Standards, Certalert no. 04-16, *Deer Hazard to Aircraft and Deer Fencing*.
- h. Cleary, E. C., R. A. Dolbeer, and S. E. Wright. *Wildlife Strikes to Civil Aircraft in the United States*. FAA National Wildlife Aircraft Strike Database Serial Reports.
- i. Cleary, E. C. and R. A. Dolbeer. 2005. *Wildlife Hazard Management at Airports: A Manual for Airport Operators*. 2nd Ed. FAA, Office of Airport Safety and Standards, Washington, DC. 347 pages.
- j. Report to Congress: *Potential Hazards to Aircraft by Locating Waste Disposal Sites in the Vicinity of Airports*, April 1996, DOT/FAA/AS/96-1.
- k. Title 14, Code of Federal Regulation, Part 139, Certification of Airports.
- l. Title 40, Code of Federal Regulation, Part 258, Criteria for Municipal Solid Waste Landfills.

Some of these documents and other information on wildlife management, including FAA Certalerts and guidance on siting hazardous wildlife attractants such as landfills, are available on the FAA website at http://www.faa.gov/airports_airtraffic/airports/ or <http://wildlife-mitigation.tc.faa.gov/>.

5. Professional Qualifications of Wildlife Biologists Conducting Wildlife Hazard Assessments and Wildlife Hazard Management Training at FAA Certificated Airports.

Wildlife biologists conducting airport Wildlife Hazard Assessments must meet certain education, training, and experience standards.

§139.337(c) reads: Wildlife Hazard Assessment required in paragraph (b) of this section shall be conducted by a wildlife damage management biologist who has professional training and/or experience in wildlife hazard management at airports or an individual working under direct supervision of such an individual.

Airports with an FAA approved Wildlife Hazard Management Plan must provide employees the training needed to carryout the Plan.

§139.337(f)(7) reads: A training program conducted by a qualified wildlife damage management biologist to provide airport personnel with the knowledge and skills needed to successfully carry out the Wildlife Hazard Management Plan required by paragraph (d) of this section.

To meet the requirements of §139.337(c) and (f)(7), wildlife management biologist (from now on referred to as a “qualified airport wildlife biologist”) must:

- a. Have the necessary academic coursework from accredited institutions and work experience to meet the qualifications of a GS-0486 series wildlife biologist as defined by the U.S. Office of Personnel Management classification standards (Appendix A); **or** be designated as a Certified Wildlife Biologist by The Wildlife Society (<http://www.wildlife.org>) **and**,
- b. Have taken and passed an airport wildlife hazard management training course acceptable to the FAA Administrator (Appendix B¹) **and**,
- c. While working under the direct supervision of a qualified airport wildlife biologist, have conducted at least one Wildlife Hazard Assessment acceptable to the FAA Administrator (as described in §139.337(c)). **and**,
- d. Have successfully complete at least one of the following within the past 3 years:
 - (1) An airport wildlife hazard management training course that is acceptable to the FAA Administrator (Appendix B) **or**,
 - (2) Attendance, as a registered participant, at a joint Bird Strike Committee–USA/Bird Strike Committee–Canada annual meeting, **or**,
 - (3) Other training acceptable to the FAA Administrator.

Persons wishing to conduct Wildlife Hazard Assessments or provide the requisite training should provide the Certificate Holder documentation verifying they meet the requirements outlined in 5 a – d above.

6. Initial and Recurrent Training for Airport Personnel Actively Involved in Managing Hazardous Wildlife On or Near Airports.

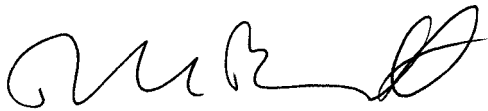
Personnel actively involved in implementing FAA approved Wildlife Hazard Management Plans are subject to the requirements of 14 CFR Part 139.303. §139.303 requires a specific training regimen for all airport personnel. §139.303(c) and (e) requires the holder of an Airport Operating Certificate issued under Part 139 to provide initial training and, every 12 months thereafter, recurrent training in wildlife hazard management to airport personnel actively involved in implementing FAA approved Wildlife Hazard Management Plans. The required training must include, “Any additional subject areas required under ... §139.337 ... ” [§139.303(c)(5)]. And, “As appropriate, comply with the following training requirements of this part. ... §139.337, Wildlife Hazard Management.” [§139.303(e)(5)]

¹ Appendix B also contains instruction for those wishing to establish a training program to train wildlife biologist for designation as “qualified airport wildlife biologist” by the FAA Administrator.

§139.303(c) and (e) describe the minimum areas covered during initial and recurrent airport wildlife hazard management training. Depending on local wildlife and environmental issues, additional topics or more in-depth coverage of listed topics, might be needed. Appendix C outlines the training requirements for airport personnel who carry out an airport's Wildlife Hazard Management Plan. Initial and recurrent training must be at least 8 hours in length.

§139.337(f) does not prohibit holders of Airport Operating Certificates from using a "train-the-trainer" approach when providing the requisite training, provided the trainers receive and successfully complete their initial and recurrent training from a qualified airport wildlife biologist.

Remember, holders of Airport Operating Certificates issued under Part 139 are required to make and keep records of all training for airport personnel involved in controlling wildlife hazards [§139.303(d)].

A handwritten signature in black ink, appearing to read 'DLB', with a stylized flourish at the end.

David L. Bennett
Director, Office of Airport Safety and Standards

Appendix A.

U.S. Office of Personnel Management Qualification Standards for GS-0486 Series Wildlife Biologists.

To be qualified as a GS-0486 series wildlife biologist, a candidate must have the following:

1. A degree in biological science that includes—
 - a. At least 9 semester hours in such wildlife subjects as mammalogy, ornithology, animal ecology, and wildlife management or research courses in the field of wildlife biology; **and**
 - b. At least 12 semester hours in zoology in such subjects as general zoology, invertebrate zoology, vertebrate zoology, comparative anatomy, physiology, genetics, ecology, cellular biology, parasitology, and entomology or research courses in these subjects (excess courses in wildlife biology may be used to meet the zoology requirements where appropriate); **and**
 - c. At least 9 semester hours in botany or the related plant sciences; **or**
2. A combination of education and experience equivalent to a major in biological science (i.e., at least 30 semester hours), with at least 9 semester hours in wildlife subjects, 12 semester hours in zoology, and 9 semester hours in botany or related plant science, as shown in “a” above, plus appropriate experience or additional education.

Appendix B.

1. Curriculum Outline for an Airport Wildlife Hazard Management Course, Acceptable to the FAA Administrator, for Personnel Conducting Wildlife Hazard Assessments, or Providing Training to Personnel Actively Involved in Implementing FAA Approved Wildlife Hazard Management Plans.

A list of training program providers acceptable to the FAA Administrator can be found at the FAA's wildlife strike web page: <http://wildlife-mitigation.tc.faa.gov>.

Links to the most recent versions of FAA regulations, FAA Advisory Circulars, Certalerts, and other documents relevant to wildlife hazard management issues can be found at http://www.faa.gov/airports_airtraffic/airports/ and <http://wildlife-mitigation.tc.faa.gov/>.

Those proposing to establish a program to train qualified airport wildlife biologist to meet the requirements of Title 14, Code of Federal Regulations, §139.337 must submit a complete training syllabus and instructor vita to the FAA. The syllabus must include all lesson plans, student handouts, and graphic presentations. Submit the material to:

FAA Staff Wildlife Biologist, AAS-300
Office of Airport Safety and Standards
Federal Aviation Administration,
800 Independence Ave. SW.
Washington, DC 20591

The goal of the training must be to provide the knowledge, skills, and abilities needed by a GS-0486 wildlife biologist to conduct Wildlife Hazard Assessments [§139.337(c)], and to conduct wildlife hazard training [§139.337(f)(7)]. To be acceptable to the FAA, the course must be at least 24 hours in length and include the agenda items below.

2. Instructor Qualifications.

The lead instructor for the training should have the following qualifications:

- a. Be a qualified airport wildlife biologist
- b. Academic credits in education or instructor/teaching experience
- c. A minimum of 2 years experience in all aspects of managing hazardous wildlife on or near airports

3. Training Curriculum Outline.

- a. Training goals and process
- b. Airport familiarization
 - (1) Introduction to the National Plan of Integrated Airport Systems
 - (2) Airport design and layout
 - (3) Navigation aids and Air Traffic Control
 - (4) Airport operations and safety
 - (5) Signs, marking, and lighting

- (6) Ground vehicle operator communication
- c. Aircraft familiarization
 - (1) Physics of a strike
 - (2) Aircraft nomenclature
 - (3) Civil aviation aircraft categories
 - (4) Aircraft engines
 - (a) Reciprocating
 - (b) Turbo
 - (5) Aircraft certification standards
- d. Preview of wildlife hazards to aviation
 - (1) History of major strikes
 - (2) Aviation losses
 - (a) Worldwide
 - (b) United States
- e. Controlling laws, regulations and policies
 - (1) Migratory Bird Treaty Act of 1918, as amended
 - (2) Animal Damage Control Act of 1931, as amended
 - (3) Bald Eagle Protection Act of 1940, as amended
 - (4) Federal Insecticide, Fungicide, and Rodenticide Act of 1948, as amended
 - (5) National Environmental Policy Act of 1969, as amended
 - (6) Endangered Species Act of 1973, as amended
 - (7) Title 14, Code of Federal Regulation, Part 139, Certification of Airports
 - (8) Title 40, Code of Federal Regulations, Part 258, Criteria for Municipal Solid Waste Landfills
 - (9) Title 50, Code of Federal Regulations, Parts 1–199, Wildlife Management
 - (10) Wendell H. Ford Aviation Investment and Reform Act for the 21st Century, Pub. L. No. 106–181 (April 5, 2000), "Structures Interfering with Air Commerce," section 503
 - (11) Applicable FAA ACs in the 150/5200 series about Airport Wildlife Hazard Management
 - (12) Applicable FAA Office of Airports Certalerts
 - (13) Applicable state and local laws, regulations, and ordinances
- f. Department of Defense requirements and perspective on military/civilian joint-use airports

- g. Other Federal and State agency roles and responsibilities
 - (1) U.S. Department of Interior, Fish and Wildlife Service
 - (a) Role and responsibilities related to managing problem wildlife
 - (b) Migratory Bird Depredation Permits
 - (c) Salvage Permits
 - (2) U.S. Department of Agriculture, Wildlife Services
 - (a) Role and responsibilities related to managing problem wildlife
 - (3) Other agencies
 - (a) U.S. Environmental Protection Agency
 - i. Siting landfills
 - ii. Pesticide registration and use
 - (b) U.S. Army Corps of Engineers
 - i. Wetlands mitigation
 - (4) Multi-Federal Agency Memorandum of Agreement
 - (5) Applicable state wildlife regulations
- h. FAA National Wildlife Aircraft Strike Database
 - (1) Strike reporting
 - (2) Species identification and feather identification
 - (3) Database access
- i. Environmental issues—working with Federal and State agencies
 - (1) National Environmental Policy Act
 - (2) U.S. Army Corps of Engineers (wetland loss and mitigation issues)
- j. Initial consultations and Wildlife Hazard Assessments (WHA)
 - (1) Triggering events for WHA
 - (2) Duration and contents of WHA
 - (3) Wildlife surveys at airports to assess wildlife hazards
 - (4) Data analysis and presentation of results
 - (5) Writing a WHA
- k. FAA review of WHA and determination of need for Wildlife Hazard Management Plan (WHMP)
- l. Drafting and carrying out integrated WHMP
 - (1) Contents of WHMP
 - (2) FAA review of WHMP

- (3) Endangered Species Act compliance
 - (4) National Environmental Policy Act review
- m. Integrated wildlife hazard management for airports; survey of basic control strategies and tactics
 - (1) Flight schedule modification
 - (2) Habitat modification and exclusion
 - (3) Wildlife dispersal techniques
 - (4) Wildlife population management
- n. Addressing off-airport attractants and community planning and involvement
- o. Outline of field trip (to conduct a “mini” WHA)
- p. Field trip/site visit
- q. Final exam
- r. Post exam review
- s. Course evaluation
- t. Presentation of certificates

4. Recommendations.

- a. Exams or tests may be oral, written, practical demonstrations, or a combination of all three.
- b. Passing grade/evaluation should be recorded and retained as instructor’s records.
- c. Instructors should retain course attendance records for a period of three years.

Appendix C.

1. Training curriculum outline for airport personnel actively involved in implementing FAA approved Wildlife Hazard Management Plans.

The goal of the training course must be to provide the knowledge, skills, and abilities needed by airport personnel to safely and accurately implement relevant portions of an FAA approved Wildlife Hazard Management Plan. To be acceptable to the FAA, initial and recurrent training must be at least 8 hours in length and include the agenda items:

- a. General survey of wildlife hazards to aviation based on the most recent annual FAA National Wildlife Strike Database Serial Report.
- b. Review of wildlife strikes, control actions, and observations at the airport over at least the past 12 months.
- c. Review of the airport's Wildlife Hazard Assessment, (conducted by a qualified airport wildlife biologist), to include—
 - (1) Existing wildlife hazards and trends in wildlife abundance.
 - (2) Status of any open or unresolved recommended action items for reducing identified wildlife hazards to air carrier operations within the past 12 months.
- d. Review of the airport's Wildlife Hazard Management Plan, to include —
 - (1) Airport-specific wildlife attractants, including man-made and natural features, and habitat management practices of the last 12 months.
 - (2) Review of the airport's wildlife permits (local, State, and Federal).
 - (3) Review of other airport-specific items:
 - (a) Wildlife hazard management strategies, techniques, and tools —
 - (i) Flight schedule modification.
 - (ii) Habitat modification, exclusion.
 - (iii) Repelling methods.
 - (iv) Wildlife population management.
 - (b) Responsibilities of airport personnel for —
 - (i) Reporting wildlife strikes, control actions, and wildlife observations.
 - (ii) Communicating with personnel who conduct wildlife control actions or who see wildlife hazards and air traffic control tower personnel and others who may require notification, such as airport operations or maintenance departments.
 - (iii) Documenting and reporting wildlife hazards seen during patrols and inspections, and follow-up control efforts.
 - (iv) Documenting and reporting when no hazards are seen during patrols and inspections.

- e. Basic bird and mammal identification, stressing local hazardous and rare or endangered species of concern.
- f. For any airport personnel using pyrotechnic launchers or firearms, training on the following topics from a qualified individual²:
 - (1) Safety, parts, and operation of firearms and pyrotechnic launchers.
 - (2) Fundamentals of using ammunition and pyrotechnics.
 - (3) Personnel protective equipment.
 - (4) Cleaning, storage, and transport of firearms and pyrotechnic launchers.
 - (5) Applicable local, State, and Federal regulations on firearms, pyrotechnic launchers, and pyrotechnics.
 - (6) Live fire training with firearms and pyrotechnic launchers.
- g. Any other training required by local, State, or Federal regulations.

2. Recommendations.

- a. Exams or tests may be oral, written, practical demonstrations, or a combination of all three.
- b. The Trainer should retain passing grades/evaluations records.
- c. The Trainer should retain course attendance records for a period of three years.
- d. Airport personnel charged with responsibility for the airport's wildlife hazard management program should retain records of those to whom instruction in airport wildlife hazard management has been given for the period of time during which the employee conduct hazardous wildlife management activity on the airport and for six months after termination of employment.

² State Certificated Hunter Safety Instructors, police officers, and firearms instructors should be qualified to teach firearms safety and possibly the safe use of pyrotechnic launchers. Pyrotechnics are classified as high explosives by the Bureau of Alcohol Tobacco and Firearms (ATF) and as Division 1.4 explosives by the U.S. Department of Transportation. There are numerous regulations, security considerations, and ATF licensing requirements that apply to pyrotechnics.



U.S. Department
of Transportation

**Federal Aviation
Administration**

Advisory Circular

**Subject: HAZARDOUS WILDLIFE
ATTRACTANTS ON OR NEAR
AIRPORTS**

Date: 8/28/2007

AC No: 150/5200-33B

Initiated by: AAS-300 **Change:**

1. PURPOSE. This Advisory Circular (AC) provides guidance on certain land uses that have the potential to attract hazardous wildlife on or near public-use airports. It also discusses airport development projects (including airport construction, expansion, and renovation) affecting aircraft movement near hazardous wildlife attractants. Appendix 1 provides definitions of terms used in this AC.

2. APPLICABILITY. The Federal Aviation Administration (FAA) recommends that public-use airport operators implement the standards and practices contained in this AC. The holders of Airport Operating Certificates issued under Title 14, Code of Federal Regulations (CFR), Part 139, Certification of Airports, Subpart D (Part 139), may use the standards, practices, and recommendations contained in this AC to comply with the wildlife hazard management requirements of Part 139. Airports that have received Federal grant-in-aid assistance must use these standards. The FAA also recommends the guidance in this AC for land-use planners, operators of non-certificated airports, and developers of projects, facilities, and activities on or near airports.

3. CANCELLATION. This AC cancels AC 150/5200-33A, *Hazardous Wildlife Attractants on or near Airports*, dated July 27, 2004.

4. PRINCIPAL CHANGES. This AC contains the following major changes, which are marked with vertical bars in the margin:

- a. Technical changes to paragraph references.
- b. Wording on storm water detention ponds.
- c. Deleted paragraph 4-3.b, *Additional Coordination*.

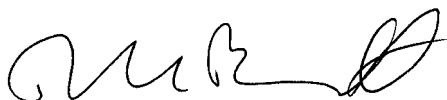
5. BACKGROUND. Information about the risks posed to aircraft by certain wildlife species has increased a great deal in recent years. Improved reporting, studies, documentation, and statistics clearly show that aircraft collisions with birds and other wildlife are a serious economic and public safety problem. While many species of wildlife can pose a threat to aircraft safety, they are not equally hazardous. Table 1

ranks the wildlife groups commonly involved in damaging strikes in the United States according to their relative hazard to aircraft. The ranking is based on the 47,212 records in the FAA National Wildlife Strike Database for the years 1990 through 2003. These hazard rankings, in conjunction with site-specific Wildlife Hazards Assessments (WHA), will help airport operators determine the relative abundance and use patterns of wildlife species and help focus hazardous wildlife management efforts on those species most likely to cause problems at an airport.

Most public-use airports have large tracts of open, undeveloped land that provide added margins of safety and noise mitigation. These areas can also present potential hazards to aviation if they encourage wildlife to enter an airport's approach or departure airspace or air operations area (AOA). Constructed or natural areas—such as poorly drained locations, detention/retention ponds, roosting habitats on buildings, landscaping, odor-causing rotting organic matter (putrescible waste) disposal operations, wastewater treatment plants, agricultural or aquaculture activities, surface mining, or wetlands—can provide wildlife with ideal locations for feeding, loafing, reproduction, and escape. Even small facilities, such as fast food restaurants, taxicab staging areas, rental car facilities, aircraft viewing areas, and public parks, can produce substantial attractions for hazardous wildlife.

During the past century, wildlife-aircraft strikes have resulted in the loss of hundreds of lives worldwide, as well as billions of dollars in aircraft damage. Hazardous wildlife attractants on and near airports can jeopardize future airport expansion, making proper community land-use planning essential. This AC provides airport operators and those parties with whom they cooperate with the guidance they need to assess and address potentially hazardous wildlife attractants when locating new facilities and implementing certain land-use practices on or near public-use airports.

6. MEMORANDUM OF AGREEMENT BETWEEN FEDERAL RESOURCE AGENCIES. The FAA, the U.S. Air Force, the U.S. Army Corps of Engineers, the U.S. Environmental Protection Agency, the U.S. Fish and Wildlife Service, and the U.S. Department of Agriculture - Wildlife Services signed a Memorandum of Agreement (MOA) in July 2003 to acknowledge their respective missions in protecting aviation from wildlife hazards. Through the MOA, 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 United States. These efforts are intended to minimize wildlife risks to aviation and human safety while protecting the Nation's valuable environmental resources.



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Director, Office of Airport Safety
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Table 1. Ranking of 25 species groups as to relative hazard to aircraft (1=most hazardous) based on three criteria (damage, major damage, and effect-on-flight), a composite ranking based on all three rankings, and a relative hazard score. Data were derived from the FAA National Wildlife Strike Database, January 1990–April 2003.¹

Species group	Ranking by criteria			Composite ranking ²	Relative hazard score ³
	Damage ⁴	Major damage ⁵	Effect on flight ⁶		
Deer	1	1	1	1	100
Vultures	2	2	2	2	64
Geese	3	3	6	3	55
Cormorants/pelicans	4	5	3	4	54
Cranes	7	6	4	5	47
Eagles	6	9	7	6	41
Ducks	5	8	10	7	39
Osprey	8	4	8	8	39
Turkey/pheasants	9	7	11	9	33
Hérons	11	14	9	10	27
Hawks (buteos)	10	12	12	11	25
Gulls	12	11	13	12	24
Rock pigeon	13	10	14	13	23
Owls	14	13	20	14	23
H. lark/s. bunting	18	15	15	15	17
Crows/ravens	15	16	16	16	16
Coyote	16	19	5	17	14
Mourning dove	17	17	17	18	14
Shorebirds	19	21	18	19	10
Blackbirds/starling	20	22	19	20	10
American kestrel	21	18	21	21	9
Meadowlarks	22	20	22	22	7
Swallows	24	23	24	23	4
Sparrows	25	24	23	24	4
Nighthawks	23	25	25	25	1

¹ Excerpted from the *Special Report for the FAA, "Ranking the Hazard Level of Wildlife Species to Civil Aviation in the USA: Update #1, July 2, 2003"*. Refer to this report for additional explanations of criteria and method of ranking.

² Relative rank of each species group was compared with every other group for the three variables, placing the species group with the greatest hazard rank for ≥ 2 of the 3 variables above the next highest ranked group, then proceeding down the list.

³ Percentage values, from Tables 3 and 4 in Footnote 1 of the *Special Report*, for the three criteria were summed and scaled down from 100, with 100 as the score for the species group with the maximum summed values and the greatest potential hazard to aircraft.

⁴ Aircraft incurred at least some damage (destroyed, substantial, minor, or unknown) from strike.

⁵ Aircraft incurred damage or structural failure, which adversely affected the structure strength, performance, or flight characteristics, and which would normally require major repair or replacement of the affected component, or the damage sustained makes it inadvisable to restore aircraft to airworthy condition.

⁶ Aborted takeoff, engine shutdown, precautionary landing, or other.

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SECTION 1.

GENERAL SEPARATION CRITERIA FOR HAZARDOUS WILDLIFE ATTRACTANTS ON OR NEAR AIRPORTS.

1-1. INTRODUCTION. When considering proposed land uses, airport operators, local planners, and developers must take into account whether the proposed land uses, including new development projects, will increase wildlife hazards. Land-use practices that attract or sustain hazardous wildlife populations on or near airports can significantly increase the potential for wildlife strikes.

The FAA recommends the minimum separation criteria outlined below for land-use practices that attract hazardous wildlife to the vicinity of airports. Please note that FAA criteria include land uses that cause movement of hazardous wildlife onto, into, or across the airport's approach or departure airspace or air operations area (AOA). (See the discussion of the synergistic effects of surrounding land uses in Section 2-8 of this AC.)

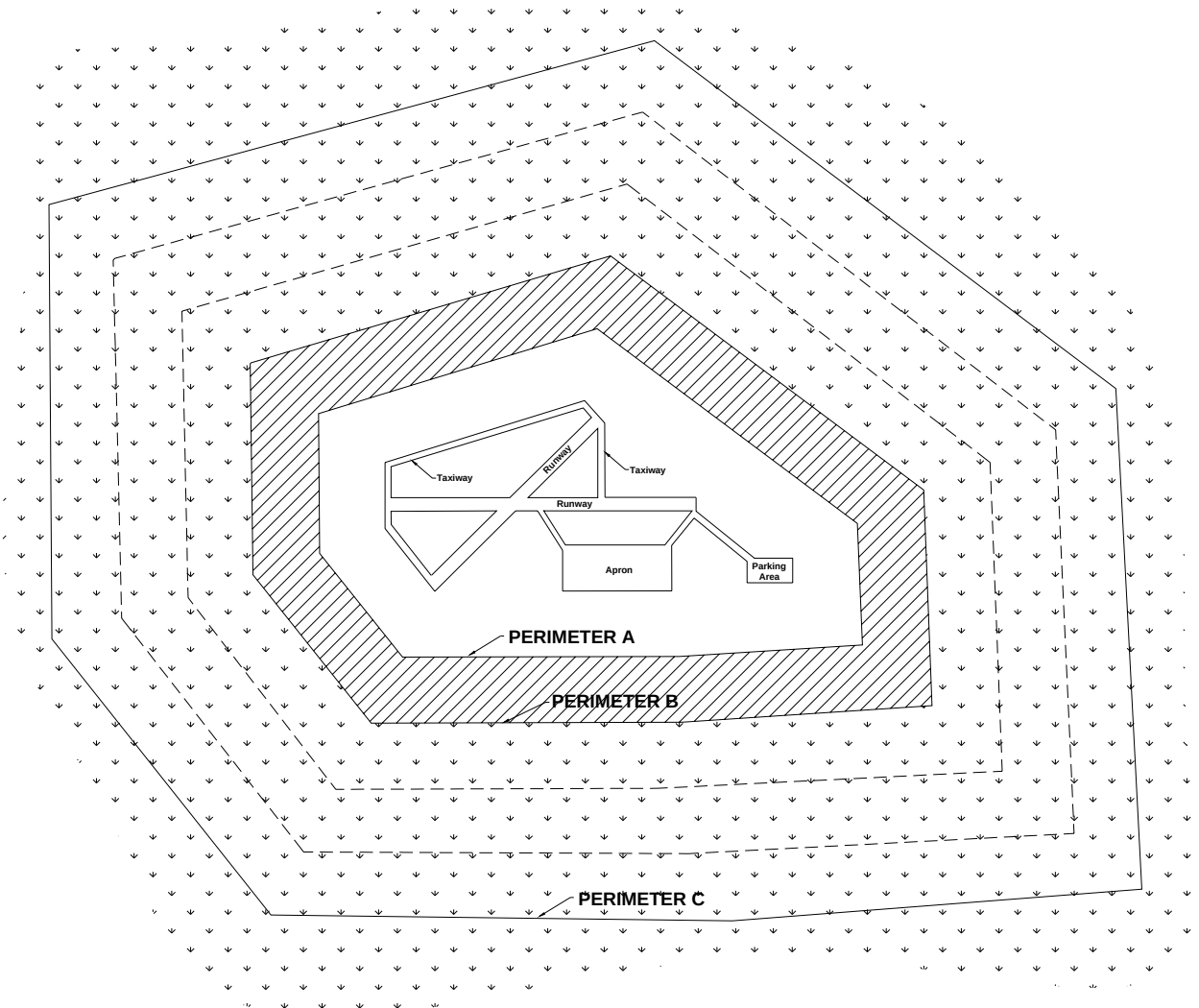
The basis for the separation criteria contained in this section can be found in existing FAA regulations. The separation distances are based on (1) flight patterns of piston-powered aircraft and turbine-powered aircraft, (2) the altitude at which most strikes happen (78 percent occur under 1,000 feet and 90 percent occur under 3,000 feet above ground level), and (3) National Transportation Safety Board (NTSB) recommendations.

1-2. AIRPORTS SERVING PISTON-POWERED AIRCRAFT. Airports that do not sell Jet-A fuel normally serve piston-powered aircraft. Notwithstanding more stringent requirements for specific land uses, the FAA recommends a separation distance of 5,000 feet at these airports for any of the hazardous wildlife attractants mentioned in Section 2 or for new airport development projects meant to accommodate aircraft movement. This distance is to be maintained between an airport's AOA and the hazardous wildlife attractant. Figure 1 depicts this separation distance measured from the nearest aircraft operations areas.

1-3. AIRPORTS SERVING TURBINE-POWERED AIRCRAFT. Airports selling Jet-A fuel normally serve turbine-powered aircraft. Notwithstanding more stringent requirements for specific land uses, the FAA recommends a separation distance of 10,000 feet at these airports for any of the hazardous wildlife attractants mentioned in Section 2 or for new airport development projects meant to accommodate aircraft movement. This distance is to be maintained between an airport's AOA and the hazardous wildlife attractant. Figure 1 depicts this separation distance from the nearest aircraft movement areas.

1-4. PROTECTION OF APPROACH, DEPARTURE, AND CIRCLING AIRSPACE. For all airports, the FAA recommends a distance of 5 statute miles between the farthest edge of the airport's AOA and the hazardous wildlife attractant if the attractant could cause hazardous wildlife movement into or across the approach or departure airspace.

Figure 1. Separation distances within which hazardous wildlife attractants should be avoided, eliminated, or mitigated.



PERIMETER A: For airports serving piston-powered aircraft, hazardous wildlife attractants must be 5,000 feet from the nearest air operations area.

PERIMETER B: For airports serving turbine-powered aircraft, hazardous wildlife attractants must be 10,000 feet from the nearest air operations area.

PERIMETER C: 5-mile range to protect approach, departure and circling airspace.

SECTION 2.

LAND-USE PRACTICES ON OR NEAR AIRPORTS THAT POTENTIALLY ATTRACT HAZARDOUS WILDLIFE.

2-1. GENERAL. The wildlife species and the size of the populations attracted to the airport environment vary considerably, depending on several factors, including land-use practices on or near the airport. This section discusses land-use practices having the potential to attract hazardous wildlife and threaten aviation safety. In addition to the specific considerations outlined below, airport operators should refer to *Wildlife Hazard Management at Airports*, prepared by FAA and U.S. Department of Agriculture (USDA) staff. (This manual is available in English, Spanish, and French. It can be viewed and downloaded free of charge from the FAA's wildlife hazard mitigation web site: <http://wildlife-mitigation.tc.FAA.gov>.) And, *Prevention and Control of Wildlife Damage*, compiled by the University of Nebraska Cooperative Extension Division. (This manual is available online in a periodically updated version at: ianrwww.unl.edu/wildlife/solutions/handbook/.)

2-2. WASTE DISPOSAL OPERATIONS. Municipal solid waste landfills (MSWLF) are known to attract large numbers of hazardous wildlife, particularly birds. Because of this, these operations, when located within the separations identified in the siting criteria in Sections 1-2 through 1-4, are considered incompatible with safe airport operations.

- a. Siting for new municipal solid waste landfills subject to AIR 21.** Section 503 of the Wendell H. Ford Aviation Investment and Reform Act for the 21st Century (Public Law 106-181) (AIR 21) prohibits the construction or establishment of a new MSWLF within 6 statute miles of certain public-use airports. Before these prohibitions apply, both the airport and the landfill must meet the very specific conditions described below. These restrictions do not apply to airports or landfills located within the state of Alaska.

The airport must (1) have received a Federal grant(s) under 49 U.S.C. § 47101, et. seq.; (2) be under control of a public agency; (3) serve some scheduled air carrier operations conducted in aircraft with less than 60 seats; and (4) have total annual enplanements consisting of at least 51 percent of scheduled air carrier enplanements conducted in aircraft with less than 60 passenger seats.

The proposed MSWLF must (1) be within 6 miles of the airport, as measured from airport property line to MSWLF property line, and (2) have started construction or establishment on or after April 5, 2001. Public Law 106-181 only limits the construction or establishment of some new MSWLF. It does not limit the expansion, either vertical or horizontal, of existing landfills.

NOTE: Consult the most recent version of AC 150/5200-34, *Construction or Establishment of Landfills Near Public Airports*, for a more detailed discussion of these restrictions.

- b. Siting for new MSWLF not subject to AIR 21.** If an airport and MSWLF do not meet the restrictions of Public Law 106-181, the FAA recommends against locating MSWLF within the separation distances identified in Sections 1-2 through 1-4. The separation distances should be measured from the closest point of the airport's AOA to the closest planned MSWLF cell.
- c. Considerations for existing waste disposal facilities within the limits of separation criteria.** The FAA recommends against airport development projects that would increase the number of aircraft operations or accommodate larger or faster aircraft near MSWLF operations located within the separations identified in Sections 1-2 through 1-4. In addition, in accordance with 40 CFR 258.10, owners or operators of existing MSWLF units that are located within the separations listed in Sections 1-2 through 1-4 must demonstrate that the unit is designed and operated so it does not pose a bird hazard to aircraft. (See Section 4-2(b) of this AC for a discussion of this demonstration requirement.)
- d. Enclosed trash transfer stations.** Enclosed waste-handling facilities that receive garbage behind closed doors; process it via compaction, incineration, or similar manner; and remove all residue by enclosed vehicles generally are compatible with safe airport operations, provided they are not located on airport property or within the Runway Protection Zone (RPZ). These facilities should not handle or store putrescible waste outside or in a partially enclosed structure accessible to hazardous wildlife. Trash transfer facilities that are open on one or more sides; that store uncovered quantities of municipal solid waste outside, even if only for a short time; that use semi-trailers that leak or have trash clinging to the outside; or that do not control odors by ventilation and filtration systems (odor masking is not acceptable) do not meet the FAA's definition of fully enclosed trash transfer stations. The FAA considers these facilities incompatible with safe airport operations if they are located closer than the separation distances specified in Sections 1-2 through 1-4.
- e. Composting operations on or near airport property.** Composting operations that accept only yard waste (e.g., leaves, lawn clippings, or branches) generally do not attract hazardous wildlife. Sewage sludge, woodchips, and similar material are not municipal solid wastes and may be used as compost bulking agents. The compost, however, must never include food or other municipal solid waste. Composting operations should not be located on airport property. Off-airport property composting operations should be located no closer than the greater of the following distances: 1,200 feet from any AOA or the distance called for by airport design requirements (see AC 150/5300-13, *Airport Design*). This spacing should prevent material, personnel, or equipment from penetrating any Object Free Area (OFA), Obstacle Free Zone (OFZ), Threshold Siting Surface (TSS), or Clearway. Airport operators should monitor composting operations located in proximity to the airport to ensure that steam or thermal rise does not adversely affect air traffic. On-airport disposal of compost by-products should not be conducted for the reasons stated in 2-3f.

- f. Underwater waste discharges.** The FAA recommends against the underwater discharge of any food waste (e.g., fish processing offal) within the separations identified in Sections 1-2 through 1-4 because it could attract scavenging hazardous wildlife.
- g. Recycling centers.** Recycling centers that accept previously sorted non-food items, such as glass, newspaper, cardboard, or aluminum, are, in most cases, not attractive to hazardous wildlife and are acceptable.
- h. Construction and demolition (C&D) debris facilities.** C&D landfills do not generally attract hazardous wildlife and are acceptable if maintained in an orderly manner, admit no putrescible waste, and are not co-located with other waste disposal operations. However, C&D landfills have similar visual and operational characteristics to putrescible waste disposal sites. When co-located with putrescible waste disposal operations, C&D landfills are more likely to attract hazardous wildlife because of the similarities between these disposal facilities. Therefore, a C&D landfill co-located with another waste disposal operation should be located outside of the separations identified in Sections 1-2 through 1-4.
- i. Fly ash disposal.** The incinerated residue from resource recovery power/heat-generating facilities that are fired by municipal solid waste, coal, or wood is generally not a wildlife attractant because it no longer contains putrescible matter. Landfills accepting only fly ash are generally not considered to be wildlife attractants and are acceptable as long as they are maintained in an orderly manner, admit no putrescible waste of any kind, and are not co-located with other disposal operations that attract hazardous wildlife.

Since varying degrees of waste consumption are associated with general incineration (not resource recovery power/heat-generating facilities), the FAA considers the ash from general incinerators a regular waste disposal by-product and, therefore, a hazardous wildlife attractant if disposed of within the separation criteria outlined in Sections 1-2 through 1-4.

2-3. WATER MANAGEMENT FACILITIES. Drinking water intake and treatment facilities, storm water and wastewater treatment facilities, associated retention and settling ponds, ponds built for recreational use, and ponds that result from mining activities often attract large numbers of potentially hazardous wildlife. To prevent wildlife hazards, land-use developers and airport operators may need to develop management plans, in compliance with local and state regulations, to support the operation of storm water management facilities on or near all public-use airports to ensure a safe airport environment.

- a. Existing storm water management facilities.** On-airport storm water management facilities allow the quick removal of surface water, including discharges related to aircraft deicing, from impervious surfaces, such as pavement and terminal/hangar building roofs. Existing on-airport detention ponds collect storm water, protect water quality, and control runoff. Because they slowly release water

after storms, they create standing bodies of water that can attract hazardous wildlife. Where the airport has developed a Wildlife Hazard Management Plan (WHMP) in accordance with Part 139, the FAA requires immediate correction of any wildlife hazards arising from existing storm water facilities located on or near airports, using appropriate wildlife hazard mitigation techniques. Airport operators should develop measures to minimize hazardous wildlife attraction in consultation with a wildlife damage management biologist.

Where possible, airport operators should modify storm water detention ponds to allow a maximum 48-hour detention period for the design storm. The FAA recommends that airport operators avoid or remove retention ponds and detention ponds featuring dead storage to eliminate standing water. Detention basins should remain totally dry between rainfalls. Where constant flow of water is anticipated through the basin, or where any portion of the basin bottom may remain wet, the detention facility should include a concrete or paved pad and/or ditch/swale in the bottom to prevent vegetation that may provide nesting habitat.

When it is not possible to drain a large detention pond completely, airport operators may use physical barriers, such as bird balls, wires grids, pillows, or netting, to deter birds and other hazardous wildlife. When physical barriers are used, airport operators must evaluate their use and ensure they will not adversely affect water rescue. Before installing any physical barriers over detention ponds on Part 139 airports, airport operators must get approval from the appropriate FAA Regional Airports Division Office.

The FAA recommends that airport operators encourage off-airport storm water treatment facility operators to incorporate appropriate wildlife hazard mitigation techniques into storm water treatment facility operating practices when their facility is located within the separation criteria specified in Sections 1-2 through 1-4.

- b. New storm water management facilities.** The FAA strongly recommends that off-airport storm water management systems located within the separations identified in Sections 1-2 through 1-4 be designed and operated so as not to create above-ground standing water. Stormwater detention ponds should be designed, engineered, constructed, and maintained for a maximum 48-hour detention period after the design storm and remain completely dry between storms. To facilitate the control of hazardous wildlife, the FAA recommends the use of steep-sided, rip-rap lined, narrow, linearly shaped water detention basins. When it is not possible to place these ponds away from an airport's AOA, airport operators should use physical barriers, such as bird balls, wires grids, pillows, or netting, to prevent access of hazardous wildlife to open water and minimize aircraft-wildlife interactions. When physical barriers are used, airport operators must evaluate their use and ensure they will not adversely affect water rescue. Before installing any physical barriers over detention ponds on Part 139 airports, airport operators must get approval from the appropriate FAA Regional Airports Division Office. All vegetation in or around detention basins that provide food or cover for hazardous wildlife should be eliminated. If soil conditions and other requirements allow, the FAA encourages

the use of underground storm water infiltration systems, such as French drains or buried rock fields, because they are less attractive to wildlife.

- c. Existing wastewater treatment facilities.** The FAA strongly recommends that airport operators immediately correct any wildlife hazards arising from existing wastewater treatment facilities located on or near the airport. Where required, a WHMP developed in accordance with Part 139 will outline appropriate wildlife hazard mitigation techniques. Accordingly, airport operators should encourage wastewater treatment facility operators to incorporate measures, developed in consultation with a wildlife damage management biologist, to minimize hazardous wildlife attractants. Airport operators should also encourage those wastewater treatment facility operators to incorporate these mitigation techniques into their standard operating practices. In addition, airport operators should consider the existence of wastewater treatment facilities when evaluating proposed sites for new airport development projects and avoid such sites when practicable.
- d. New wastewater treatment facilities.** The FAA strongly recommends against the construction of new wastewater treatment facilities or associated settling ponds within the separations identified in Sections 1-2 through 1-4. Appendix 1 defines wastewater treatment facility as “any devices and/or systems used to store, treat, recycle, or reclaim municipal sewage or liquid industrial wastes.” The definition includes any pretreatment involving the reduction of the amount of pollutants or the elimination of pollutants prior to introducing such pollutants into a publicly owned treatment works (wastewater treatment facility). During the site-location analysis for wastewater treatment facilities, developers should consider the potential to attract hazardous wildlife if an airport is in the vicinity of the proposed site, and airport operators should voice their opposition to such facilities if they are in proximity to the airport.
- e. Artificial marshes.** In warmer climates, wastewater treatment facilities sometimes employ artificial marshes and use submergent and emergent aquatic vegetation as natural filters. These artificial marshes may be used by some species of flocking birds, such as blackbirds and waterfowl, for breeding or roosting activities. The FAA strongly recommends against establishing artificial marshes within the separations identified in Sections 1-2 through 1-4.
- f. Wastewater discharge and sludge disposal.** The FAA recommends against the discharge of wastewater or sludge on airport property because it may improve soil moisture and quality on unpaved areas and lead to improved turf growth that can be an attractive food source for many species of animals. Also, the turf requires more frequent mowing, which in turn may mutilate or flush insects or small animals and produce straw, both of which can attract hazardous wildlife. In addition, the improved turf may attract grazing wildlife, such as deer and geese. Problems may also occur when discharges saturate unpaved airport areas. The resultant soft, muddy conditions can severely restrict or prevent emergency vehicles from reaching accident sites in a timely manner.

2-4. WETLANDS. Wetlands provide a variety of functions and can be regulated by local, state, and Federal laws. Normally, wetlands are attractive to many types of wildlife, including many which rank high on the list of hazardous wildlife species (Table 1).

NOTE: If questions exist as to whether an area qualifies as a wetland, contact the local division of the U.S. Army Corps of Engineers, the Natural Resources Conservation Service, or a wetland consultant qualified to delineate wetlands.

- a. Existing wetlands on or near airport property.** If wetlands are located on or near airport property, airport operators should be alert to any wildlife use or habitat changes in these areas that could affect safe aircraft operations. At public-use airports, the FAA recommends immediately correcting, in cooperation with local, state, and Federal regulatory agencies, any wildlife hazards arising from existing wetlands located on or near airports. Where required, a WHMP will outline appropriate wildlife hazard mitigation techniques. Accordingly, airport operators should develop measures to minimize hazardous wildlife attraction in consultation with a wildlife damage management biologist.
- b. New airport development.** Whenever possible, the FAA recommends locating new airports using the separations from wetlands identified in Sections 1-2 through 1-4. Where alternative sites are not practicable, or when airport operators are expanding an existing airport into or near wetlands, a wildlife damage management biologist, in consultation with the U.S. Fish and Wildlife Service, the U.S. Army Corps of Engineers, and the state wildlife management agency should evaluate the wildlife hazards and prepare a WHMP that indicates methods of minimizing the hazards.
- c. Mitigation for wetland impacts from airport projects.** Wetland mitigation may be necessary when unavoidable wetland disturbances result from new airport development projects or projects required to correct wildlife hazards from wetlands. Wetland mitigation must be designed so it does not create a wildlife hazard. The FAA recommends that wetland mitigation projects that may attract hazardous wildlife be sited outside of the separations identified in Sections 1-2 through 1-4.

(1) Onsite mitigation of wetland functions. The FAA may consider exceptions to locating mitigation activities outside the separations identified in Sections 1-2 through 1-4 if the affected wetlands provide unique ecological functions, such as critical habitat for threatened or endangered species or ground water recharge, which cannot be replicated when moved to a different location. Using existing airport property is sometimes the only feasible way to achieve the mitigation ratios mandated in regulatory orders and/or settlement agreements with the resource agencies. Conservation easements are an additional means of providing mitigation for project impacts. Typically the airport operator continues to own the property, and an easement is created stipulating that the property will be maintained as habitat for state or Federally listed species.

Mitigation must not inhibit the airport operator's ability to effectively control hazardous wildlife on or near the mitigation site or effectively maintain other aspects of safe airport operations. Enhancing such mitigation areas to attract hazardous wildlife must be avoided. The FAA will review any onsite mitigation proposals to determine compatibility with safe airport operations. A wildlife damage management biologist should evaluate any wetland mitigation projects that are needed to protect unique wetland functions and that must be located in the separation criteria in Sections 1-2 through 1-4 before the mitigation is implemented. A WHMP should be developed to reduce the wildlife hazards.

(2) Offsite mitigation of wetland functions. The FAA recommends that wetland mitigation projects that may attract hazardous wildlife be sited outside of the separations identified in Sections 1-2 through 1-4 unless they provide unique functions that must remain onsite (see 2-4c(1)). Agencies that regulate impacts to or around wetlands recognize that it may be necessary to split wetland functions in mitigation schemes. Therefore, regulatory agencies may, under certain circumstances, allow portions of mitigation to take place in different locations.

(3) Mitigation banking. Wetland mitigation banking is the creation or restoration of wetlands in order to provide mitigation credits that can be used to offset permitted wetland losses. Mitigation banking benefits wetland resources by providing advance replacement for permitted wetland losses; consolidating small projects into larger, better-designed and managed units; and encouraging integration of wetland mitigation projects with watershed planning. This last benefit is most helpful for airport projects, as wetland impacts mitigated outside of the separations identified in Sections 1-2 through 1-4 can still be located within the same watershed. Wetland mitigation banks meeting the separation criteria offer an ecologically sound approach to mitigation in these situations. Airport operators should work with local watershed management agencies or organizations to develop mitigation banking for wetland impacts on airport property.

2-5. DREDGE SPOIL CONTAINMENT AREAS. The FAA recommends against locating dredge spoil containment areas (also known as Confined Disposal Facilities) within the separations identified in Sections 1-2 through 1-4 if the containment area or the spoils contain material that would attract hazardous wildlife.

2-6. AGRICULTURAL ACTIVITIES. Because most, if not all, agricultural crops can attract hazardous wildlife during some phase of production, the FAA recommends against the use of airport property for agricultural production, including hay crops, within the separations identified in Sections 1-2 through 1-4. If the airport has no financial alternative to agricultural crops to produce income necessary to maintain the viability of the airport, then the airport shall follow the crop distance guidelines listed in the table titled "Minimum Distances between Certain Airport Features and Any On-Airport Agricultural Crops" found in AC 150/5300-13, *Airport Design*, Appendix 17. The cost of wildlife control and potential accidents should be weighed against the income produced by the on-airport crops when deciding whether to allow crops on the airport.

- a. Livestock production.** Confined livestock operations (i.e., feedlots, dairy operations, hog or chicken production facilities, or egg laying operations) often attract flocking birds, such as starlings, that pose a hazard to aviation. Therefore, The FAA recommends against such facilities within the separations identified in Sections 1-2 through 1-4. Any livestock operation within these separations should have a program developed to reduce the attractiveness of the site to species that are hazardous to aviation safety. Free-ranging livestock must not be grazed on airport property because the animals may wander onto the AOA. Furthermore, livestock feed, water, and manure may attract birds.
- b. Aquaculture.** Aquaculture activities (i.e. catfish or trout production) conducted outside of fully enclosed buildings are inherently attractive to a wide variety of birds. Existing aquaculture facilities/activities within the separations listed in Sections 1-2 through 1-4 must have a program developed to reduce the attractiveness of the sites to species that are hazardous to aviation safety. Airport operators should also oppose the establishment of new aquaculture facilities/activities within the separations listed in Sections 1-2 through 1-4.
- c. Alternative uses of agricultural land.** Some airports are surrounded by vast areas of farmed land within the distances specified in Sections 1-2 through 1-4. Seasonal uses of agricultural land for activities such as hunting can create a hazardous wildlife situation. In some areas, farmers will rent their land for hunting purposes. Rice farmers, for example, flood their land during waterfowl hunting season and obtain additional revenue by renting out duck blinds. The duck hunters then use decoys and call in hundreds, if not thousands, of birds, creating a tremendous threat to aircraft safety. A wildlife damage management biologist should review, in coordination with local farmers and producers, these types of seasonal land uses and incorporate them into the WHMP.

2-7. GOLF COURSES, LANDSCAPING AND OTHER LAND-USE CONSIDERATIONS.

- a. Golf courses.** The large grassy areas and open water found on most golf courses are attractive to hazardous wildlife, particularly Canada geese and some species of gulls. These species can pose a threat to aviation safety. The FAA recommends against construction of new golf courses within the separations identified in Sections 1-2 through 1-4. Existing golf courses located within these separations must develop a program to reduce the attractiveness of the sites to species that are hazardous to aviation safety. Airport operators should ensure these golf courses are monitored on a continuing basis for the presence of hazardous wildlife. If hazardous wildlife is detected, corrective actions should be immediately implemented.
- b. Landscaping and landscape maintenance.** Depending on its geographic location, landscaping can attract hazardous wildlife. The FAA recommends that airport operators approach landscaping with caution and confine it to airport areas not associated with aircraft movements. A wildlife damage management biologist should review all landscaping plans. Airport operators should also monitor all landscaped areas on a continuing basis for the presence of hazardous wildlife. If

hazardous wildlife is detected, corrective actions should be immediately implemented.

Turf grass areas can be highly attractive to a variety of hazardous wildlife species. Research conducted by the USDA Wildlife Services' National Wildlife Research Center has shown that no one grass management regime will deter all species of hazardous wildlife in all situations. In cooperation with wildlife damage management biologist, airport operators should develop airport turf grass management plans on a prescription basis, depending on the airport's geographic locations and the type of hazardous wildlife likely to frequent the airport

Airport operators should ensure that plant varieties attractive to hazardous wildlife are not used on the airport. Disturbed areas or areas in need of re-vegetating should not be planted with seed mixtures containing millet or any other large-seed producing grass. For airport property already planted with seed mixtures containing millet, rye grass, or other large-seed producing grasses, the FAA recommends disking, plowing, or another suitable agricultural practice to prevent plant maturation and seed head production. Plantings should follow the specific recommendations for grass management and seed and plant selection made by the State University Cooperative Extension Service, the local office of Wildlife Services, or a qualified wildlife damage management biologist. Airport operators should also consider developing and implementing a preferred/prohibited plant species list, reviewed by a wildlife damage management biologist, which has been designed for the geographic location to reduce the attractiveness to hazardous wildlife for landscaping airport property.

- c. **Airports surrounded by wildlife habitat.** The FAA recommends that operators of airports surrounded by woodlands, water, or wetlands refer to Section 2.4 of this AC. Operators of such airports should provide for a Wildlife Hazard Assessment (WHA) conducted by a wildlife damage management biologist. This WHA is the first step in preparing a WHMP, where required.
- d. **Other hazardous wildlife attractants.** Other specific land uses or activities (e.g., sport or commercial fishing, shellfish harvesting, etc.), perhaps unique to certain regions of the country, have the potential to attract hazardous wildlife. Regardless of the source of the attraction, when hazardous wildlife is noted on a public-use airport, airport operators must take prompt remedial action(s) to protect aviation safety.

2-8. SYNERGISTIC EFFECTS OF SURROUNDING LAND USES. There may be circumstances where two (or more) different land uses that would not, by themselves, be considered hazardous wildlife attractants or that are located outside of the separations identified in Sections 1-2 through 1-4 that are in such an alignment with the airport as to create a wildlife corridor directly through the airport and/or surrounding airspace. An example of this situation may involve a lake located outside of the separation criteria on the east side of an airport and a large hayfield on the west side of an airport, land uses that together could create a flyway for Canada geese directly across the airspace of the airport. There are numerous examples of such situations;

therefore, airport operators and the wildlife damage management biologist must consider the entire surrounding landscape and community when developing the WHMP.

SECTION 3.

PROCEDURES FOR WILDLIFE HAZARD MANAGEMENT BY OPERATORS OF PUBLIC-USE AIRPORTS.

3.1. INTRODUCTION. In recognition of the increased risk of serious aircraft damage or the loss of human life that can result from a wildlife strike, the FAA may require the development of a Wildlife Hazard Management Plan (WHMP) when specific triggering events occur on or near the airport. Part 139.337 discusses the specific events that trigger a Wildlife Hazard Assessment (WHA) and the specific issues that a WHMP must address for FAA approval and inclusion in an Airport Certification Manual.

3.2. COORDINATION WITH USDA WILDLIFE SERVICES OR OTHER QUALIFIED WILDLIFE DAMAGE MANAGEMENT BIOLOGISTS. The FAA will use the Wildlife Hazard Assessment (WHA) conducted in accordance with Part 139 to determine if the airport needs a WHMP. Therefore, persons having the education, training, and expertise necessary to assess wildlife hazards must conduct the WHA. The airport operator may look to Wildlife Services or to qualified private consultants to conduct the WHA. When the services of a wildlife damage management biologist are required, the FAA recommends that land-use developers or airport operators contact a consultant specializing in wildlife damage management or the appropriate state director of Wildlife Services.

NOTE: Telephone numbers for the respective USDA Wildlife Services state offices can be obtained by contacting USDA Wildlife Services Operational Support Staff, 4700 River Road, Unit 87, Riverdale, MD, 20737-1234, Telephone (301) 734-7921, Fax (301) 734-5157 (<http://www.aphis.usda.gov/ws/>).

3-3. WILDLIFE HAZARD MANAGEMENT AT AIRPORTS: A MANUAL FOR AIRPORT PERSONNEL. This manual, prepared by FAA and USDA Wildlife Services staff, contains a compilation of information to assist airport personnel in the development, implementation, and evaluation of WHMPs at airports. The manual includes specific information on the nature of wildlife strikes, legal authority, regulations, wildlife management techniques, WHAs, WHMPs, and sources of help and information. The manual is available in three languages: English, Spanish, and French. It can be viewed and downloaded free of charge from the FAA's wildlife hazard mitigation web site: <http://wildlife-mitigation.tc.FAA.gov/>. This manual only provides a starting point for addressing wildlife hazard issues at airports. Hazardous wildlife management is a complex discipline and conditions vary widely across the United States. Therefore, qualified wildlife damage management biologists must direct the development of a WHMP and the implementation of management actions by airport personnel.

There are many other resources complementary to this manual for use in developing and implementing WHMPs. Several are listed in the manual's bibliography.

3-4. WILDLIFE HAZARD ASSESSMENTS, TITLE 14, CODE OF FEDERAL REGULATIONS, PART 139. Part 139.337(b) requires airport operators to conduct a Wildlife Hazard Assessment (WHA) when certain events occur on or near the airport.

Part 139.337 (c) provides specific guidance as to what facts must be addressed in a WHA.

3-5. WILDLIFE HAZARD MANAGEMENT PLAN (WHMP). The FAA will consider the results of the WHA, along with the aeronautical activity at the airport and the views of the airport operator and airport users, in determining whether a formal WHMP is needed, in accordance with Part 139.337. If the FAA determines that a WHMP is needed, the airport operator must formulate and implement a WHMP, using the WHA as the basis for the plan.

The goal of an airport's Wildlife Hazard Management Plan is to minimize the risk to aviation safety, airport structures or equipment, or human health posed by populations of hazardous wildlife on and around the airport.

The WHMP must identify hazardous wildlife attractants on or near the airport and the appropriate wildlife damage management techniques to minimize the wildlife hazard. It must also prioritize the management measures.

3-6. LOCAL COORDINATION. The establishment of a Wildlife Hazards Working Group (WHWG) will facilitate the communication, cooperation, and coordination of the airport and its surrounding community necessary to ensure the effectiveness of the WHMP. The cooperation of the airport community is also necessary when new projects are considered. Whether on or off the airport, the input from all involved parties must be considered when a potentially hazardous wildlife attractant is being proposed. Airport operators should also incorporate public education activities with the local coordination efforts because some activities in the vicinity of your airport, while harmless under normal leisure conditions, can attract wildlife and present a danger to aircraft. For example, if public trails are planned near wetlands or in parks adjoining airport property, the public should know that feeding birds and other wildlife in the area may pose a risk to aircraft.

Airport operators should work with local and regional planning and zoning boards so as to be aware of proposed land-use changes, or modification of existing land uses, that could create hazardous wildlife attractants within the separations identified in Sections 1-2 through 1-4. Pay particular attention to proposed land uses involving creation or expansion of waste water treatment facilities, development of wetland mitigation sites, or development or expansion of dredge spoil containment areas. At the very least, airport operators must ensure they are on the notification list of the local planning board or equivalent review entity for all communities located within 5 miles of the airport, so they will receive notification of any proposed project and have the opportunity to review it for attractiveness to hazardous wildlife.

3-7 COORDINATION/NOTIFICATION OF AIRMEN OF WILDLIFE HAZARDS. If an existing land-use practice creates a wildlife hazard and the land-use practice or wildlife hazard cannot be immediately eliminated, airport operators must issue a Notice to Airmen (NOTAM) and encourage the land-owner or manager to take steps to control the wildlife hazard and minimize further attraction.

SECTION 4.

FAA NOTIFICATION AND REVIEW OF PROPOSED LAND-USE PRACTICE CHANGES IN THE VICINITY OF PUBLIC-USE AIRPORTS

4-1. FAA REVIEW OF PROPOSED LAND-USE PRACTICE CHANGES IN THE VICINITY OF PUBLIC-USE AIRPORTS.

- a. The FAA discourages the development of waste disposal and other facilities, discussed in Section 2, located within the 5,000/10,000-foot criteria specified in Sections 1-2 through 1-4.
- b. For projects that are located outside the 5,000/10,000-foot criteria but within 5 statute miles of the airport's AOA, the FAA may review development plans, proposed land-use changes, operational changes, or wetland mitigation plans to determine if such changes present potential wildlife hazards to aircraft operations. The FAA considers sensitive airport areas as those that lie under or next to approach or departure airspace. This brief examination should indicate if further investigation is warranted.
- c. Where a wildlife damage management biologist has conducted a further study to evaluate a site's compatibility with airport operations, the FAA may use the study results to make a determination.

4-2. WASTE MANAGEMENT FACILITIES.

- a. **Notification of new/expanded project proposal.** Section 503 of the Wendell H. Ford Aviation Investment and Reform Act for the 21st Century (Public Law 106-181) limits the construction or establishment of new MSWLF within 6 statute miles of certain public-use airports, when both the airport and the landfill meet very specific conditions. See Section 2-2 of this AC and AC 150/5200-34 for a more detailed discussion of these restrictions.

The Environmental Protection Agency (EPA) requires any MSWLF operator proposing a new or expanded waste disposal operation within 5 statute miles of a runway end to notify the appropriate FAA Regional Airports Division Office and the airport operator of the proposal (40 CFR 258, *Criteria for Municipal Solid Waste Landfills*, Section 258.10, *Airport Safety*). The EPA also requires owners or operators of new MSWLF units, or lateral expansions of existing MSWLF units, that are located within 10,000 feet of any airport runway end used by turbojet aircraft, or within 5,000 feet of any airport runway end used only by piston-type aircraft, to demonstrate successfully that such units are not hazards to aircraft. (See 4-2.b below.)

When new or expanded MSWLF are being proposed near airports, MSWLF operators must notify the airport operator and the FAA of the proposal as early as possible pursuant to 40 CFR 258.

- b. Waste handling facilities within separations identified in Sections 1-2 through 1-4.** To claim successfully that a waste-handling facility sited within the separations identified in Sections 1-2 through 1-4 does not attract hazardous wildlife and does not threaten aviation, the developer must establish convincingly that the facility will not handle putrescible material other than that as outlined in 2-2.d. The FAA strongly recommends against any facility other than that as outlined in 2-2.d (enclosed transfer stations). The FAA will use this information to determine if the facility will be a hazard to aviation.
- c. Putrescible-Waste Facilities.** In their effort to satisfy the EPA requirement, some putrescible-waste facility proponents may offer to undertake experimental measures to demonstrate that their proposed facility will not be a hazard to aircraft. To date, no such facility has been able to demonstrate an ability to reduce and sustain hazardous wildlife to levels that existed before the putrescible-waste landfill began operating. For this reason, demonstrations of experimental wildlife control measures may not be conducted within the separation identified in Sections 1-2 through 1-4.

4-3. OTHER LAND-USE PRACTICE CHANGES. As a matter of policy, the FAA encourages operators of public-use airports who become aware of proposed land use practice changes that may attract hazardous wildlife within 5 statute miles of their airports to promptly notify the FAA. The FAA also encourages proponents of such land use changes to notify the FAA as early in the planning process as possible. Advanced notice affords the FAA an opportunity (1) to evaluate the effect of a particular land-use change on aviation safety and (2) to support efforts by the airport sponsor to restrict the use of land next to or near the airport to uses that are compatible with the airport.

The airport operator, project proponent, or land-use operator may use FAA Form 7460-1, *Notice of Proposed Construction or Alteration*, or other suitable documents similar to FAA Form 7460-1 to notify the appropriate FAA Regional Airports Division Office. Project proponents can contact the appropriate FAA Regional Airports Division Office for assistance with the notification process.

It is helpful if the notification includes a 15-minute quadrangle map of the area identifying the location of the proposed activity. The land-use operator or project proponent should also forward specific details of the proposed land-use change or operational change or expansion. In the case of solid waste landfills, the information should include the type of waste to be handled, how the waste will be processed, and final disposal methods.

- a. Airports that have received Federal grant-in-aid assistance.** Airports that have received Federal grant-in-aid assistance are required by their grant assurances to take appropriate actions to restrict the use of land next to or near the airport to uses that are compatible with normal airport operations. The FAA recommends that airport operators to the extent practicable oppose off-airport land-use changes or practices within the separations identified in Sections 1-2 through 1-4 that may attract hazardous wildlife. Failure to do so may lead to noncompliance with applicable grant assurances. The FAA will not approve the placement of airport

development projects pertaining to aircraft movement in the vicinity of hazardous wildlife attractants without appropriate mitigating measures. Increasing the intensity of wildlife control efforts is not a substitute for eliminating or reducing a proposed wildlife hazard. Airport operators should identify hazardous wildlife attractants and any associated wildlife hazards during any planning process for new airport development projects.

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APPENDIX 1. DEFINITIONS OF TERMS USED IN THIS ADVISORY CIRCULAR.**1. GENERAL.** This appendix provides definitions of terms used throughout this AC.

- 1. Air operations area.** Any area of an airport used or intended to be used for landing, takeoff, or surface maneuvering of aircraft. An air operations area includes such paved areas or unpaved areas that are used or intended to be used for the unobstructed movement of aircraft in addition to its associated runway, taxiways, or apron.
- 2. Airport operator.** The operator (private or public) or sponsor of a public-use airport.
- 3. Approach or departure airspace.** The airspace, within 5 statute miles of an airport, through which aircraft move during landing or takeoff.
- 4. Bird balls.** High-density plastic floating balls that can be used to cover ponds and prevent birds from using the sites.
- 5. Certificate holder.** The holder of an Airport Operating Certificate issued under Title 14, Code of Federal Regulations, Part 139.
- 6. Construct a new MSWLF.** To begin to excavate, grade land, or raise structures to prepare a municipal solid waste landfill as permitted by the appropriate regulatory or permitting agency.
- 7. Detention ponds.** Storm water management ponds that hold storm water for short periods of time, a few hours to a few days.
- 8. Establish a new MSWLF.** When the first load of putrescible waste is received on-site for placement in a prepared municipal solid waste landfill.
- 9. Fly ash.** The fine, sand-like residue resulting from the complete incineration of an organic fuel source. Fly ash typically results from the combustion of coal or waste used to operate a power generating plant.
- 10. General aviation aircraft.** Any civil aviation aircraft not operating under 14 CFR Part 119, Certification: Air Carriers and Commercial Operators.
- 11. Hazardous wildlife.** Species of wildlife (birds, mammals, reptiles), including feral animals and domesticated animals not under control, that are associated with aircraft strike problems, are capable of causing structural damage to airport facilities, or act as attractants to other wildlife that pose a strike hazard
- 12. Municipal Solid Waste Landfill (MSWLF).** A publicly or privately owned discrete area of land or an excavation that receives household waste and that is not a land application unit, surface impoundment, injection well, or waste pile, as those terms are defined under 40 CFR § 257.2. An MSWLF may receive

other types wastes, such as commercial solid waste, non-hazardous sludge, small-quantity generator waste, and industrial solid waste, as defined under 40 CFR § 258.2. An MSWLF can consist of either a stand alone unit or several cells that receive household waste.

13. **New MSWLF.** A municipal solid waste landfill that was established or constructed after April 5, 2001.
14. **Piston-powered aircraft.** Fixed-wing aircraft powered by piston engines.
15. **Piston-use airport.** Any airport that does not sell Jet-A fuel for fixed-wing turbine-powered aircraft, and primarily serves fixed-wing, piston-powered aircraft. Incidental use of the airport by turbine-powered, fixed-wing aircraft would not affect this designation. However, such aircraft should not be based at the airport.
16. **Public agency.** A State or political subdivision of a State, a tax-supported organization, or an Indian tribe or pueblo (49 U.S.C. § 47102(19)).
17. **Public airport.** An airport used or intended to be used for public purposes that is under the control of a public agency; and of which the area used or intended to be used for landing, taking off, or surface maneuvering of aircraft is publicly owned (49 U.S.C. § 47102(20)).
18. **Public-use airport.** An airport used or intended to be used for public purposes, and of which the area used or intended to be used for landing, taking off, or surface maneuvering of aircraft may be under the control of a public agency or privately owned and used for public purposes (49 U.S.C. § 47102(21)).
19. **Putrescible waste.** Solid waste that contains organic matter capable of being decomposed by micro-organisms and of such a character and proportion as to be capable of attracting or providing food for birds (40 CFR §257.3-8).
20. **Putrescible-waste disposal operation.** Landfills, garbage dumps, underwater waste discharges, or similar facilities where activities include processing, burying, storing, or otherwise disposing of putrescible material, trash, and refuse.
21. **Retention ponds.** Storm water management ponds that hold water for several months.
22. **Runway protection zone (RPZ).** An area off the runway end to enhance the protection of people and property on the ground (see AC 150/5300-13). The dimensions of this zone vary with the airport design, aircraft, type of operation, and visibility minimum.
23. **Scheduled air carrier operation.** Any common carriage passenger-carrying operation for compensation or hire conducted by an air carrier or commercial

operator for which the air carrier, commercial operator, or their representative offers in advance the departure location, departure time, and arrival location. It does not include any operation that is conducted as a supplemental operation under 14 CFR Part 119 or as a public charter operation under 14 CFR Part 380 (14 CFR § 119.3).

- 24. Sewage sludge.** Any solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in a treatment works. Sewage sludge includes, but is not limited to, domestic septage; scum or solids removed in primary, secondary, or advanced wastewater treatment process; and a material derived from sewage sludge. Sewage does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator or grit and screenings generated during preliminary treatment of domestic sewage in a treatment works. (40 CFR 257.2)
- 25. Sludge.** Any solid, semi-solid, or liquid waste generated from a municipal, commercial or industrial wastewater treatment plant, water supply treatment plant, or air pollution control facility or any other such waste having similar characteristics and effect. (40 CFR 257.2)
- 26. Solid waste.** Any garbage, refuse, sludge, from a waste treatment plant, water supply treatment plant or air pollution control facility and other discarded material, including, solid liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, and from community activities, but does not include solid or dissolved materials in domestic sewage, or solid or dissolved material in irrigation return flows or industrial discharges which are point sources subject to permits under section 402 of the Federal Water Pollution Control Act, as amended (86 Stat. 880), or source, special nuclear, or by product material as defined by the Atomic Energy Act of 1954, as amended, (68 Stat. 923). (40 CFR 257.2)
- 27. Turbine-powered aircraft.** Aircraft powered by turbine engines including turbojets and turboprops but excluding turbo-shaft rotary-wing aircraft.
- 28. Turbine-use airport.** Any airport that sells Jet-A fuel for fixed-wing turbine-powered aircraft.
- 29. Wastewater treatment facility.** Any devices and/or systems used to store, treat, recycle, or reclaim municipal sewage or liquid industrial wastes, including Publicly Owned Treatment Works (POTW), as defined by Section 212 of the Federal Water Pollution Control Act (P.L. 92-500) as amended by the Clean Water Act of 1977 (P.L. 95-576) and the Water Quality Act of 1987 (P.L. 100-4). This definition includes any pretreatment involving the reduction of the amount of pollutants, the elimination of pollutants, or the alteration of the nature of pollutant properties in wastewater prior to or in lieu of discharging or otherwise introducing such pollutants into a POTW. (See 40 CFR Section 403.3 (q), (r), & (s)).

- 30. Wildlife.** Any wild animal, including without limitation any wild mammal, bird, reptile, fish, amphibian, mollusk, crustacean, arthropod, coelenterate, or other invertebrate, including any part, product, egg, or offspring thereof (50 CFR 10.12, *Taking, Possession, Transportation, Sale, Purchase, Barter, Exportation, and Importation of Wildlife and Plants*). As used in this AC, wildlife includes feral animals and domestic animals out of the control of their owners (14 CFR Part 139, Certification of Airports).
- 31. Wildlife attractants.** Any human-made structure, land-use practice, or human-made or natural geographic feature that can attract or sustain hazardous wildlife within the landing or departure airspace or the airport's AOA. These attractants can include architectural features, landscaping, waste disposal sites, wastewater treatment facilities, agricultural or aquaculture activities, surface mining, or wetlands.
- 32. Wildlife hazard.** A potential for a damaging aircraft collision with wildlife on or near an airport.
- 33. Wildlife strike.** A wildlife strike is deemed to have occurred when:
- a. A pilot reports striking 1 or more birds or other wildlife;
 - b. Aircraft maintenance personnel identify aircraft damage as having been caused by a wildlife strike;
 - c. Personnel on the ground report seeing an aircraft strike 1 or more birds or other wildlife;
 - d. Bird or other wildlife remains, whether in whole or in part, are found within 200 feet of a runway centerline, unless another reason for the animal's death is identified;
 - e. The animal's presence on the airport had a significant negative effect on a flight (i.e., aborted takeoff, aborted landing, high-speed emergency stop, aircraft left pavement area to avoid collision with animal) (Transport Canada, Airports Group, *Wildlife Control Procedures Manual*, Technical Publication 11500E, 1994).

2. RESERVED.