

**SUBMITTAL TO THE BOARD OF SUPERVISORS  
COUNTY OF RIVERSIDE, STATE OF CALIFORNIA**

522



**FROM:** Economic Development Agency

**SUBMITTAL DATE:**  
February 26, 2015

**SUBJECT:** Jacqueline Cochran Regional Airport, Hemet-Ryan Airport and French Valley Airport – Wildlife Hazard Assessment. District 3 and District 4 [\$333,333]; Federal Aviation Administration Airport Improvement Grant Funds 90% Special Aviation Fund (22350) 10%

**RECOMMENDED MOTION:** That the Board of Supervisors:

1. Approve and authorize the Chairman of the Board to execute the attached work order agreement between the County of Riverside and Mead & Hunt, Inc. for the Wildlife Hazard Assessment - Design Services Work Order Agreement at Jacqueline Cochran Regional Airport, Hemet-Ryan Airport and French Valley Airport; and
2. Delegate Change Order authority to the Assistant County Executive Officer/EDA or designee in accordance with Board Policy B-11.
3. Approve and direct the Auditor-Controller to make the budget adjustments shown on Schedule A, attached.

**BACKGROUND:**

**Summary**

(Commences on Page 2)

Robert Field  
Assistant County Executive Officer/EDA

FINANCIAL DATA	Current Fiscal Year:	Next Fiscal Year:	Total Cost:	Ongoing Cost:	POLICY/CONSENT (per Exec. Office)
COST	\$ 333,333	\$ 0	\$ 333,333	\$ 0	Consent <input type="checkbox"/> Policy <input checked="" type="checkbox"/>
NET COUNTY COST	\$	\$ 0	\$	\$ 0	

<b>SOURCE OF FUNDS:</b> Federal Aviation Administration Airport Improvement Grant Funds 90% Special Aviation Fund (22350) 10%	<b>Budget Adjustment:</b> Yes
	<b>For Fiscal Year:</b> 2014/15

**C.E.O. RECOMMENDATION:**

**APPROVE**

BY:   
Rohini Dasika

County Executive Office Signature

**MINUTES OF THE BOARD OF SUPERVISORS**

On motion of Supervisor Benoit, seconded by Supervisor Jeffries and duly carried, IT WAS ORDERED that the above matter is approved as recommended.

Ayes: Jeffries, Washington, Benoit and Ashley  
Nays: None  
Absent: Tavaglione  
Date: April 7, 2015  
xc: EDA, Auditor

Kecia Harper-Ihem  
Clerk of the Board  
By:   
Deputy

Prev. Agn. Ref.: \_\_\_\_\_ District: 3/4 Agenda Number: \_\_\_\_\_

3-12

FORM APPROVED COUNTY COUNSEL  
BY: GREGORY P. PRIAMOS  
DATE: 1/26/15

Departmental Concurrence

FISCAL PROCEDURES APPROVED  
PAUL ANGUILO, CPA AUDITOR-CONTROLLER  
BY: Esteban Hernandez  
3/25/15

A-30  
 4/5 Vote  
 Positions Added  
 Change Order

# **SUBMITTAL TO THE BOARD OF SUPERVISORS, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA**

Economic Development Agency

**FORM 11:** Jacqueline Cochran Regional Airport, Hemet-Ryan Airport and French Valley Airport – Wildlife Hazard Assessment District 3 and District 4 [\$333,333] Federal Aviation Administration Airport Improvement Grant Funds 90% Special Aviation Fund (22350) 10%

**DATE:** February 26, 2014

**PAGE:** 2 of 3

## **BACKGROUND:**

### **Summary**

A Wildlife Hazard Assessment (WHA) per the Federal Aviation Administration's (FAA) wildlife strike database will be conducted at Jacqueline Cochran Regional Airport, Hemet-Ryan Airport and French Valley Airport. Pursuant to Federal Aviation Regulation (FAR) Part 139.337, the primary goal of the WHA is to identify the features, habitats, and species that are most likely to cause hazards to aircraft operations and to provide recommendations for reducing such hazards.

The Federal Aviation Administration's (FAA) wildlife strike database includes reports of wildlife strikes with aircraft at Jacqueline Cochran Regional Airport and Hemet-Ryan Airport that have resulted in damage. The (FAA) wildlife strike database does not include strike records for French Valley Airport. However, the FAA estimates that only 20 to 40 percent of the wildlife strikes that occur are recorded in the database. Furthermore, the French Valley Airport is located in an area that includes open space and resources that could support wildlife that is potentially hazardous to aircraft operations. The FAA can require the operator of a federally obligated airport to conduct a Wildlife Hazard Assessment (WHA), and if necessary, prepare a Wildlife Hazard Management Plan (WHMP) when a triggering event occurs on or near the airport.

The WHA project is consistent with the Airport's Capital Improvement Program and Master Plan. Mead & Hunt Inc. were selected by Request for Qualification (RFQ) as the County's Airports Project Consultant, per the Federal Aviation Administration's (FAA) five-year consultant selection criteria.

Staff proposes to have Mead & Hunt, Inc. provide design engineering services and recommend that the Board of Supervisors approve the necessary work order agreement for the project. County Counsel has reviewed and approved the attached documents as to legal form.

### **Impact on Citizens and Businesses**

The Wildlife Hazard Assessment (WHA) will improve airport operations and enhance capacity and safety.

## **SUPPLEMENTAL:**

### **Additional Fiscal Information**

The FAA Airport Improvement Program (AIP) Grant has a mandatory 10% local match requirement. This match will be taken from Restricted Fund Balance held for airport improvement in special Aviation Fund 22350. There will be no impact on the County's general fund.

## **ATTACHMENTS:**

Schedule A

Work Order Agreements:

Jacqueline Cochran Regional Airport

Hemet-Ryan Airport

French Valley Airport

**SUBMITTAL TO THE BOARD OF SUPERVISORS, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA**

Economic Development Agency

**FORM 11:** Jacqueline Cochran Regional Airport, Hemet-Ryan Airport and French Valley Airport – Wildlife Hazard Assessment District 3 and District 4 [\$333,333] Federal Aviation Administration Airport Improvement Grant Funds 90% Special Aviation Fund (22350) 10%

**DATE:** February 26, 2014

**PAGE:** 3 of 3

**Schedule A**

Increase Estimated Revenues:

22350 – 1910300000 – 767060 – Fed-Airports Improvements	\$300,000
22350 – 1910300000 – 790500 – Operating Transfer-In	\$ 33,333

Increase Appropriations:

22350 – 1910300000 – 525440 – Professional Services	\$257,830
22350 – 1910300000 – 537180 – Interfnd-Salary Reimb	\$ 75,503

Increase Appropriations:

22350 – 1910500000 – 551000 – Operating Transfer-Out	\$ 33,333
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Decrease Restricted Fund Balance:

22350 – 1910500000 – 321101 – Restricted Program Money	\$ 33,333
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WORK ORDER AGREEMENT  
FOR  
**FRENCH VALLEY AIRPORT – WILDLIFE HAZARD ASSESSMENT**  
BY AND BETWEEN  
RIVERSIDE COUNTY ECONOMIC DEVELOPMENT AGENCY  
AND  
MEAD & HUNT, INC.

This Agreement is made and entered into this 7<sup>th</sup> day of April, 2014<sup>5</sup>, by and between the COUNTY OF RIVERSIDE by and through the Economic Development Agency (EDA), a public body corporate politic in the State of California (hereinafter "COUNTY"), and MEAD & HUNT, INC., (hereinafter "CONSULTANT").

**RECITALS**

**WHEREAS**, the proposed services provided in this Agreement are necessary to maintain airport pavement conditions, critical to the airport's operation.

**WHEREAS**, the COUNTY has selected CONSULTANT to provide services based on a Request for Proposal (RFP) for Airport Consulting Services that included pavement reconstruction; and

**WHEREAS**, the COUNTY and the CONSULTANT have entered into a MASTER SERVICE AGREEMENT, dated 9 day of September, 2014 the terms of which apply to this Work Order Agreement; and

**WHEREAS**, CONSULTANT is uniquely qualified based on their prior knowledge by completing prior design and construction projects for French Valley Airport; and

**WHEREAS**, CONSULTANT has agreed to provide such services to COUNTY.

**NOW, THEREFORE**, in consideration of the mutual covenants contained herein, the parties hereto agree as follows:

1. **DESCRIPTION OF SERVICES**: CONSULTANT shall conduct a Wildlife Hazard Assessment, the Scope of Services, which is attached hereto as Exhibit A, and by this reference incorporated herein.

1.1 CONSULTANT represents and maintains that it is skilled in the professional calling necessary to perform all services, duties, and obligations required by this Agreement to fully and adequately complete the project. CONSULTANT shall perform the services and duties in conformance to, and consistent with, the standards generally recognized as being employed by professionals in the same discipline in the State of California. CONSULTANT further represents and warrants to the COUNTY that it has all licenses, permits, qualifications, and approvals of whatever nature are legally required to practice its profession. CONSULTANT further represents that it shall keep all such licenses and approvals in effect during the term of this Agreement.

2. **PERIOD OF PERFORMANCE**: CONSULTANT shall commence performance upon date of execution of this Agreement and complete performance within thirteen (13) months. CONSULTANT will diligently and responsibly pursue the performance of the services required of it by this Agreement through project completion unless the work is altered by written amendment(s) pursuant to the MASTER SERVICES AGREEMENT between COUNTY and CONSULTANT, dated September 9, 2014, currently in place. In the event the services described in this fully executed work order are not completed during the term of the MASTER SERVICES AGREEMENT, though the work order was executed by the parties while the MASTER SERVICES AGREEMENT was in effect, CONSULTANT shall continue to be

obligated to perform the services and the COUNTY shall be obligated to pay for such services as provided in this work order.

3. **COMPENSATION**: The COUNTY shall pay the CONSULTANT for services performed and expenses incurred in accordance with the attached Exhibit "A", Scope of Services.

3.1 CONSULTANT shall be paid a LUMP SUM amount of Seventy-nine Thousand Two Hundred Thirty Dollars (\$79,230.00) for Engineering Design Services as described in Exhibit "A", Scope of Services. CONSULTANT shall submit invoices monthly to the COUNTY for progress payments based on the performance of the total work completed to date.

4. **CONFLICT OF INTEREST**: CONSULTANT shall have no interest, and shall not acquire any interest, direct or indirect, which will conflict in any manner or degree with the performance of services required under this Agreement.

5. **DESIGNATED REPRESENTATIVES**: The following individuals are designated as representatives of the COUNTY and CONSULTANT respectively to act as liaison between the parties:

**AGENCY**

Daryl Shippy  
Airports Manager  
County of Riverside, EDA Aviation  
3403 10<sup>th</sup> Street Suite 400  
Riverside, CA 92501  
Phone: (951) 955-9418  
Fax: (951) 955-6686  
Email: [dshippy@rivcoeda.org](mailto:dshippy@rivcoeda.org)

**CONSULTANT**

Lisa Harmon  
Project Planner  
Mead and Hunt, Inc.  
180 Promenade Circle, Suite 240  
Sacramento, CA 95834  
Phone: (916)-971-3961  
Fax (916) 971-0578  
Email: [lisa.harmon@meadhunt.com](mailto:lisa.harmon@meadhunt.com)

Any change in designated representatives shall be promptly reported to the other party in order to ensure proper coordination of the Project.

6. **NOTICES:** All correspondence and notices required or contemplated by this Agreement shall be delivered to the respective parties at the addresses set forth below and are deemed submitted one (1) day after their deposit in the United States Mail, postage prepaid:

**AGENCY**

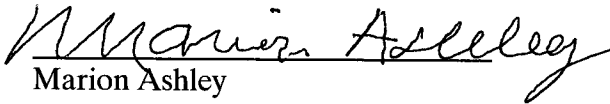
Daryl Shippy  
Airports Manager  
County of Riverside, EDA Aviation  
3403 10<sup>th</sup> Street, Suite 400  
Riverside, CA 92501

**CONSULTANT**


Jon J. Faucher  
Vice President  
Mead & Hunt, Inc.  
133 Aviation Boulevard, Suite 100  
Santa Rosa, CA 95403

IN WITNESS WHEREOF, the parties hereto have caused their duly representatives to execute this Agreement.

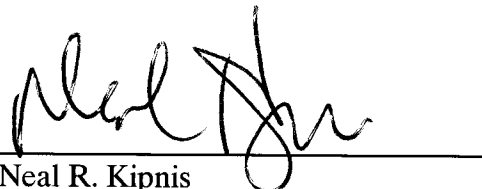
**COUNTY OF RIVERSIDE**

  
Marion Ashley  
Chairman, Board of Supervisors

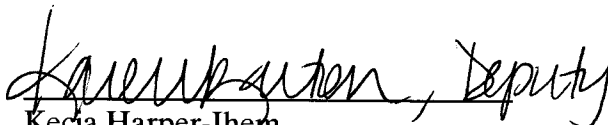
**MEAD & HUNT, INC.**

  
Jon J. Faucher  
Vice President

APPROVED AS TO FORM:  
GREGORY P. PRIAMOS  
COUNTY COUNSEL

  
Neal R. Kipnis  
Deputy County Counsel

**ATTEST:**

  
Kecia Harper-Ihem  
Clerk of the Board

# EXHIBIT A



**EXHIBIT A**  
**PROJECT BACKGROUND AND SCOPE OF WORK**  
**FRENCH VALLEY AIRPORT**

**Site Background**

The French Valley Airport (F70) is a public-use general aviation airport located in southwestern, unincorporated Riverside County, California. The approximately 270-acre airport is adjacent to the communities of Temecula, Murrieta, and Winchester. The airport is owned and operated by the Riverside County Economic Development Agency. The airport includes one runway, Runway 18-36, which is 6,000 feet long and 75 feet wide. The airport is home to fixed-based operators, a flight school, and offers fuel services, hangars, and tie-down spaces.

The airport is located adjacent to an area that is addressed by the Western Riverside County Multiple Species Habitat Conservation Plan (WRCMSHCP). Burrowing owls (*Athene cunicularia*) are known to occur in the airport vicinity.

The Federal Aviation Administration's (FAA's) Wildlife Strike Database does not include strike records for F70. However, the FAA estimates that only 20 to 40 percent of the wildlife strikes that occur are recorded in the database. The airport is located in an area that includes open space and resources that could support wildlife that is potentially hazardous to aircraft operations.

**Regulatory Background**

The FAA can require the operator of a federally obligated airport to conduct a WHA, and if necessary, prepare a Wildlife Hazard Management Plan (WHMP) when a "triggering event" occurs on or near the airport. According to FAR, Part 139.337b, the FAA can require an airport operator to conduct a WHA when one or more 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.

Pursuant to Federal Aviation Regulation (FAR) Part 139.337, the primary goal of the WHA is to identify the features, habitats, and species that are most likely to cause hazards to aircraft operations and to provide

recommendations for reducing such hazards. The scope of work described in tasks 1 through 6 will result in the completion of a Wildlife Hazard Assessment in accordance with FAR Part 139.337 and associated FAA guidance including, but not limited to:

- FAA AC 150/5200-33C, Wildlife Hazard Assessments on and Near Airports
- FAA AC 150/5200-36A, Qualifications for Wildlife Biologist Conducting Wildlife Hazard Assessments and Training Curriculums for Airport Personnel Involved in Controlling Wildlife Hazards on Airports

## **TASK 1: PROJECT INITIATION, COORDINATION AND MANAGEMENT**

### **1a. Project Kick-Off Meeting and Project Coordination**

To initiate the project, the project manager and FAA-Qualified Wildlife Biologist will facilitate an on-site kick-off meeting with airport management and other stakeholders (e.g., pilots, tenants, etc.). We will discuss wildlife hazard management activities and other site-specific issues associated with the Wildlife Hazard Assessment (WHA). Before the meeting, the Mead & Hunt team will review existing wildlife hazard data for the airport.

Following the kick-off meeting, the Mead & Hunt team will perform an airport reconnaissance visit with airport staff to identify:

- On-site and off-site monitoring locations to include in the study design; and
- Maintenance activities or short-term actions that the airport staff can implement to reduce hazards prior to completion of the WHA study.

### **1b. Prepare Study Design**

Based on the data review and site visit, the Mead & Hunt team will prepare a project-specific study design to meet statutory requirements pursuant to FAR Part 139.337. The study design will include:

- Standardized survey points throughout the AOA and off-airport areas suspected of attracting birds or other potentially hazardous species that could move across the AOA;
- Methods for conducting standardized surveys and bird counts to be performed at least twice each month; and
- Specialized surveys, as needed, to document the presence of mammals: Two small mammal surveys and two large mammal surveys (i.e., spotlight surveys) will be conducted during the 12-month WHA survey period.

The Mead & Hunt team will provide airport staff with a draft study design document for review and comment within 10 days of the project kick-off meeting, and we will incorporate one round of comments from airport staff. A final study document will be provided within one week after receipt of comments.

### **Task 1c. Project Specific SharePoint Site/Web Tool**

Mead & Hunt will create a project-specific SharePoint site to store data and make it available for team members and project management. This secure webpage will be available to project team members and

airport management throughout the project duration and include the project monitoring schedule, monitoring data, site photographs, and other related project documentation so that it is always available to project team members.

#### **Task 1d. Project Management**

Standard project management activities will include monthly invoices and progress reports. We will provide an ongoing comparison between project progress and project budgets.

#### **Task 1 Deliverables:**

- Preparation, attendance, and documentation of project kick-off meeting and initial site visit;
- Participation in airport-specific training activities;
- Draft and final study design documents;
- Project-specific SharePoint site;
- Monthly invoice and progress reports; and
- Ongoing coordination with Airport staff and management.

### **TASK 2: DATA COLLECTION AND REVIEW**

As described in FAA Part 139.337 (c) (2), a WHA must include the “identification of the wildlife species observed and their numbers, locations, local movements, and daily and seasonal occurrences.” In most cases, a 12-month assessment is required to identify seasonal patterns of activity for birds and other wildlife inhabiting the airport and surrounding environs. We propose twice-monthly monitoring events and four mammal monitoring surveys, for a total of 28 monitoring events, throughout the course of the biological study.

#### **2a. Initial Monitoring Event**

Mead & Hunt’s FAA-qualified biologist will perform the initial monitoring event following the project kickoff meeting to describe initial observations and proposed monitoring locations, potential access considerations, or immediate measures that can be taken to reduce wildlife hazards.

#### **2b. Twice-Monthly Surveys**

In addition to the initial monitoring event, Mead & Hunt biologists will perform 23 (twice-monthly) surveys to record the presence, extent, and movement of wildlife on and near the airport. These twice-monthly surveys will also include ongoing conversations with airport staff and tenants. Each wildlife sighting will be documented on standardized forms and maps.

To adequately identify the required information during a WHA, the Mead & Hunt team will use standardized survey procedures. Each individual or flock will be indicated on the project grid to identify the spatial distributions of wildlife on or near the airport. Collected information can include time of observation, survey station, species, activity, habitat type, and location. Observations of non-avian species will be recorded to identify prey base, migration patterns or other changes in behavior that could be hazardous to aircraft.

To supplement the data gleaned from the twice monthly site visits, the Mead & Hunt team will install a trail camera and download photographic documentation during the regular site visits. Photographs taken by the camera will be posted to the project-specific SharePoint site so that they may be reviewed by Airport Staff and incorporated into the WHA report (see Task 4).

### **2c. Small Mammal Surveys**

Although Mead & Hunt will routinely record data pertaining to small mammals during the twice-monthly monitoring events (tracks, scat, etc.) we will also perform two small mammal surveys. These dedicated surveys typically consist of 150 traps located in three transects (trap lines). Each transect or trap line will include 50 traps located at 10- to 20-meter intervals with a small mammal trap set at each station. These transects will be established in the various types of habitat present at the airport to determine the presence of small mammals in each habitat. Each small mammal survey will be conducted for three consecutive nights. The data collected will identify the number of mammals captured, trap station, species, activity, habitat use, grid location, and type of trap. Our FAA-qualified Wildlife Hazard Biologist will direct activities associated with the small mammal surveys.

### **2d. Large Mammal Surveys**

Two large mammal surveys will be performed at night along a predetermined route, which usually includes areas near the runways and more remote areas of the airport property. Observations typically begin at least 30 minutes after sunset. Data to be collected during each large mammal survey includes species, activity, habitat use, and grid location. Our FAA-qualified Wildlife Hazard Biologist will direct activities associated with these surveys.

### **2e. Data Review and Access**

Our FAA-qualified Wildlife Hazard Biologist will review all monitoring data monthly for completion and accuracy.

### **Task 2 Deliverables:**

- Performance and documentation of twice-monthly monitoring events; and
- Travel to, participation in, and documentation of small and large mammal survey events.

Other species also will be identified by species during the twice-monthly events. If necessary, dedicated species-specific surveys will be performed. Mead & Hunt will modify its proposed scope and cost should such additional surveys be necessary.

## **TASK 3: WILDLIFE AND HABITAT ANALYSIS/ASSESSMENT**

### **Tas1 3a. Wildlife Assessment**

Pursuant to FAA regulations in FAR Part 139.337, the WHA will be based on an assessment/evaluation of the wildlife and habitat conditions identified during the 12-month observation period. To evaluate or assess the wildlife observed during the 12-month observation period, the Mead & Hunt team will review and analyze the data based on accepted protocols and the relative risk posed by the wildlife observed.

To analyze the data, the observed avian species will be categorized in guilds based on their behavioral characteristics. Habitat assessment analyses will include calculating the quantity of birds recorded at each observation point, seasonal and daily patterns, habitat use, species activity, guild abundance and frequency of occurrence recorded during twice-monthly surveys. Species-specific data will address abundance, legal status, management techniques, and the relative risk posed by the species or guild.

Based on this quantitative data and relative risk data provided by FAA, we will identify the presence and frequency of species that occur on or near the airport and the relative risk posed by each. We will develop a prioritized list of species-specific management measures using a risk-based approach. When documented in the WHA, each proposed measure will be identified as having a potentially critical, high, medium, or low priority.

**Task 3b. Habitat Assessment**

In addition to evaluating the various species observed, we will identify and evaluate the habitats on and near the airport. We will describe and quantify the different habitat types present within the airfield. These habitat types could include, manages grasslands, scrub habitat, wetlands, surface water, etc. The habitat assessment can help assess the relative importance of environmental features within the airfield to the distribution and abundance of wildlife species that are observed during the wildlife hazard assessment. Habitat types that are deemed as attractive to hazardous wildlife will be documented and proper management techniques will be presented.

**TASK 4: PREPARE WILDLIFE HAZARD ASSESSMENT REPORT**

FAA will review the WHA to determine whether a WHMP will be require. Should the FAA determine that a WHMP is necessary, the data presented in the plan and the proposed management measures will serve as the foundation of the plan.

As summarized in Table 1, Federal Aviation Regulations (FAR) at Part 139.337 specify the topics that must be addressed in a WHA report.

Table 1– Wildlife Hazard Assessment (WHA) Report Components	
Requirement	Description
Analysis of the event or circumstances that prompted the study.	For example, who, what, when, where, and why the WHA is required, including a description of triggering events or site-specific conditions that pose concern.

**Table 1– Wildlife Hazard Assessment (WHA) Report Components**

Requirement	Description
Identification of the wildlife species observed and their numbers, locations, local movements, and daily and seasonal occurrences.	Description of wildlife species that have access to the airport, including their: Legal status Movement patterns Seasonal patterns  A description of the degree of risk posed by each species (e.g., observed behavior, hazard ranking per FAA guidance).
Identification and location of features on and near the airport that attract wildlife.	Description of features on or near the airport that attract wildlife, such as large open areas where they can loaf in relative safety; abundant food or water; and escape, loafing or nesting cover. Each attractant shall be identified and evaluated, and the person or agency responsible for its operation should be identified (e.g., airport tenant, local agency, etc.).
Description of the wildlife hazards to air carrier operations.	The wildlife hazard damage biologist must identify the wildlife species or conditions that pose hazards to aircraft and provide a description of wildlife behavior, such as times of day when such wildlife traverse the Airport Operations Area (AOA), migration patterns, on-site features that may attract hazardous wildlife, etc.
Recommended actions for reducing identified wildlife hazards to air carrier operations.	The biologist preparing the WHA must provide prioritized recommendations for mitigating the hazardous wildlife attractants identified. Potential actions could include vegetation management, habitat management, water management or wildlife hazing in accordance with appropriate regulations when necessary.

Following the completion of the 12-month monitoring cycle, Mead & Hunt staff will prepare an administrative draft report in accordance with 14 CFR 139.337. The completed WHA report will include the necessary elements of a WHA as outlined in Title 14 CFR 139.337 and prioritized recommendations for mitigating the hazardous wildlife attractants identified. We will provide applicable strategies and measures based on field observations and proven Best Management Practices (BMPs). The proposed measures will be based on sound scientific principles and safe airport operation. We will consider unique airport circumstances and operational concerns when recommending wildlife hazard management techniques.

Mead & Hunt will prepare a Preliminary/Administrative Draft WHA for review by airport staff. Following staff review, we will incorporate one round of comments and prepare a Draft WHA for submission to the FAA. The Mead & Hunt team members and airport management and, if available, FAA staff to present the Draft WHA report.

#### **Task 4 Deliverables:**

- Preliminary/Administrative draft WHA Report for airport review (electronic deliverable); and
- Four copies of a Draft WHA Report and participation in a meeting or teleconference with Airport/FAA staff

#### **TASK 5: FINAL WHA REPORT AND PROJECT CLOSE OUT**

Upon the receipt of FAA comments on the Draft WHA, the Mead & Hunt team will meet with airport management. Following the meeting, we will incorporate the FAA comments and prepare a Draft-Final WHA report within one week of the meeting for airport management review. We will incorporate one round of comments on the Draft Final report and upon acceptance by airport management, prepare five copies of the final report. We will close out the proposed project and prepare a final invoice and project upon acceptance of the Final WHA report by FAA.

#### **Task 5 Deliverables:**

- Meeting with airport staff and preparation of Draft-Final WHA Report (electronic deliverable);
- Final WHA for airport review that incorporates airport comments on the draft-final report prior to FAA submission;
- Final WHA Report for FAA submission (five hard copies); and
- Final invoice and progress report.

#### **PROJECT SCOPE AND SCHEDULE ASSUMPTIONS**

The proposed scope, schedule, and cost associated with wildlife hazard assessment activities was based on the following assumptions:

- **Off-site access.** If access to off-site locations is required, the airport staff will coordinate with landowners to gain access prior to site monitoring.
- **Interruptions as a result of construction or other airport activities.** In most cases, site monitoring can occur during construction or other non-routine events at the airport. We assume that our monitoring schedule will not be interrupted by site activities and that our data will remain valid despite these activities.
- **Agency Review Times.** The proposed WHA Report must be reviewed by Airport staff and the FAA. We assume that the Airport staff will review the administrative draft document within two weeks. We cannot estimate FAA's review schedule, but we will respond to FAA comments within one week of comment receipt.

#### **Project Schedule**

Based on our previous experience conducting WHAs and preparing Wildlife Hazard Management Plans (WHMP), we have identified a 13-month project schedule to complete a Draft WHA Report for submission to FAA. Mead & Hunt will provide Airport staff with a complete Administrative Draft WHA Report within four weeks of monitoring completion (month 13). We anticipate both the Airport staff and the FAA will review project reports within appropriate timeframes, and we will provide a revised draft within two weeks of comment receipt from each agency.

## **ESTIMATED COST**

As shown on **Table 2**, the total estimated cost of the WHA for the French Valley Airport is Seventy-Nine Thousand Two Hundred Thirty Dollars (\$79,230), which includes an estimated labor cost of \$69,898 and reimbursable/direct costs of \$9,332.





WORK ORDER AGREEMENT  
FOR  
**HEMET-RYAN AIRPORT – WILDLIFE HAZARD ASSESSMENT**  
BY AND BETWEEN  
RIVERSIDE COUNTY ECONOMIC DEVELOPMENT AGENCY  
AND  
MEAD & HUNT, INC.

This Agreement is made and entered into this 7<sup>th</sup> day of April, 2015, by and between the COUNTY OF RIVERSIDE by and through the Economic Development Agency (EDA), a public body corporate politic in the State of California (hereinafter "COUNTY"), and MEAD & HUNT, INC., (hereinafter "CONSULTANT").

**RECITALS**

**WHEREAS**, the proposed services provided in this Agreement are necessary to maintain airport pavement conditions, critical to the airport's operation.

**WHEREAS**, the COUNTY has selected CONSULTANT to provide services based on a Request for Proposal (RFP) for Airport Consulting Services that included pavement reconstruction; and

**WHEREAS**, the COUNTY and the CONSULTANT have entered into a MASTER SERVICE AGREEMENT, dated 9 day of September, 2014 the terms of which apply to this Work Order Agreement; and

**WHEREAS**, CONSULTANT is uniquely qualified based on their prior knowledge by completing prior design and construction projects for Hemet-Ryan Airport; and

**WHEREAS**, CONSULTANT has agreed to provide such services to COUNTY.

**NOW, THEREFORE,** in consideration of the mutual covenants contained herein, the parties hereto agree as follows:

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2. **PERIOD OF PERFORMANCE:** CONSULTANT shall commence performance upon date of execution of this Agreement and complete performance within thirteen (13) months. CONSULTANT will diligently and responsibly pursue the performance of the services required of it by this Agreement through project completion unless the work is altered by written amendment(s) pursuant to the MASTER SERVICES AGREEMENT between COUNTY and CONSULTANT, dated September 9, 2014, currently in place. In the event the services described in this fully executed work order are not completed during the term of the MASTER SERVICES AGREEMENT, though the work order was executed by the parties while the MASTER SERVICES AGREEMENT was in effect, CONSULTANT shall continue to be

obligated to perform the services and the COUNTY shall be obligated to pay for such services as provided in this work order.

3. **COMPENSATION:** The COUNTY shall pay the CONSULTANT for services performed and expenses incurred in accordance with the attached Exhibit "A", Scope of Services.

3.1 CONSULTANT shall be paid a LUMP SUM amount of Seventy-Eight Thousand Nine Hundred Sixteen Dollars (\$78,916.00) for Engineering Design Services as described in Exhibit "A", Scope of Services. CONSULTANT shall submit invoices monthly to the COUNTY for progress payments based on the performance of the total work completed to date.

4. **CONFLICT OF INTEREST:** CONSULTANT shall have no interest, and shall not acquire any interest, direct or indirect, which will conflict in any manner or degree with the performance of services required under this Agreement.

5. **DESIGNATED REPRESENTATIVES:** The following individuals are designated as representatives of the COUNTY and CONSULTANT respectively to act as liaison between the parties:

<b>AGENCY</b>	<b>CONSULTANT</b>
Daryl Shippy Airports Manager County of Riverside, EDA Aviation 3403 10 <sup>th</sup> Street Suite 400 Riverside, CA 92501 Phone: (951) 955-9418 Fax: (951) 955-6686 Email: <a href="mailto:dshippy@rivcoeda.org">dshippy@rivcoeda.org</a>	Lisa Harmon Project Planner Mead and Hunt, Inc. 180 Promenade Circle, Suite 240 Sacramento, CA 95834 Phone: (916)-971-3961 Fax (916) 971-0578 Email: <a href="mailto:lisa.harmon@meadhunt.com">lisa.harmon@meadhunt.com</a>

Any change in designated representatives shall be promptly reported to the other party in order to ensure proper coordination of the Project.

6. **NOTICES:** All correspondence and notices required or contemplated by this Agreement shall be delivered to the respective parties at the addresses set forth below and are deemed submitted one (1) day after their deposit in the United States Mail, postage prepaid:

**AGENCY**

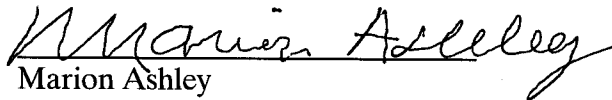
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Airports Manager  
County of Riverside, EDA Aviation  
3403 10<sup>th</sup> Street, Suite 400  
Riverside, CA 92501

**CONSULTANT**

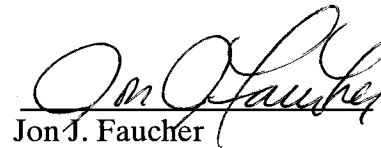
Jon J. Faucher  
Vice President  
Mead & Hunt, Inc.  
133 Aviation Boulevard, Suite 100  
Santa Rosa, CA 95403

IN WITNESS WHEREOF, the parties hereto have caused their duly representatives to execute this Agreement.


**COUNTY OF RIVERSIDE**

  
Marion Ashley  
Chairman, Board of Supervisors

**MEAD & HUNT, INC.**

  
Jon J. Faucher  
Vice President

APPROVED AS TO FORM:  
GREGORY P. PRIAMOS  
COUNTY COUNSEL

  
Neal R. Kipnis  
Deputy County Counsel

**ATTEST:**

  
Kécia Harper-Ihem  
Clerk of the Board

# EXHIBIT A

**EXHIBIT A**  
**PROJECT BACKGROUND AND SCOPE OF WORK**  
**HEMET-RYAN AIRPORT**

**Site Background**

Hemet-Ryan Airport (HMT) is located in the San Jacinto Valley of Riverside County. HMT provides convenient access to the mid-county region, including the cities of Hemet and San Jacinto. The airport is owned and operated by the Riverside County Economic Development Agency and is an essential component of the transportation system for Riverside County. As a general aviation facility, the airport provides a base of operations for local pilots while also supporting a variety of recreational, medical, and business uses, as well as providing a point of air access to the community and a place for practicing flight training.

The Federal Aviation Administration's (FAA's) Wildlife Strike Database includes four strike records for HMT. However, the FAA estimates that only 20 to 40 percent of the wildlife strikes that occur are recorded in the database. Three of the four reported aircraft strikes were associated with unidentified small birds and did not damage aircraft. One strike with a red-tailed hawk occurred in July 2000 that resulted in minor damage to a government Aircraft. In addition, the airport is located in an area that supports wildlife that is potentially hazardous to aircraft operations.

**Regulatory Background**

The FAA can require the operator of a federally obligated airport to conduct a WHA, and if necessary, prepare a Wildlife Hazard Management Plan (WHMP) when a "triggering event" occurs on or near the airport. According to FAR, Part 139.337b, the FAA can require an airport operator to conduct a WHA when one or more 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.

Pursuant to Federal Aviation Regulation (FAR) Part 139.337, the primary goal of the WHA is to identify the features, habitats, and species that are most likely to cause hazards to aircraft operations and to provide recommendations for reducing such hazards. The scope of work described in tasks 1 through 6 will result

in the completion of a Wildlife Hazard Assessment in accordance with FAR Part 139.337 and associated FAA guidance including, but not limited to:

- FAA AC 150/5200-33C, Wildlife Hazard Assessments on and Near Airports
- FAA AC 150/5200-36A, Qualifications for Wildlife Biologist Conducting Wildlife Hazard Assessments and Training Curriculums for Airport Personnel Involved in Controlling Wildlife Hazards on Airports

## **TASK 1: PROJECT INITIATION, COORDINATION AND MANAGEMENT**

### **1a. Project Kick-Off Meeting and Project Coordination**

To initiate the project, the project manager and FAA-Qualified Wildlife Biologist will facilitate an on-site kick-off meeting with airport management and other stakeholders (e.g., pilots, tenants, etc.). We will discuss wildlife hazard management activities and other site-specific issues associated with the Wildlife Hazard Assessment (WHA). Before the meeting, the Mead & Hunt team will review existing wildlife hazard data for the airport.

Following the kick-off meeting, the Mead & Hunt team will perform an airport reconnaissance visit with airport staff to identify:

- On-site and off-site monitoring locations to include in the study design; and
- Maintenance activities or short-term actions that the airport staff can implement to reduce hazards prior to completion of the WHA study.

### **1b. Prepare Study Design**

Based on the data review and site visit, the Mead & Hunt team will prepare a project-specific study design to meet statutory requirements pursuant to FAR Part 139.337. The study design will include:

- Standardized survey points throughout the AOA and off-airport areas suspected of attracting birds or other potentially hazardous species that could move across the AOA;
- Methods for conducting standardized surveys and bird counts to be performed at least twice each month; and
- Specialized surveys, as needed, to document the presence of mammals: Two small mammal surveys and two large mammal surveys (i.e., spotlight surveys) will be conducted during the 12-month WHA survey period.

The Mead & Hunt team will provide airport staff with a draft study design document for review and comment within 10 days of the project kick-off meeting, and we will incorporate one round of comments from airport staff. A final study document will be provided within one week after receipt of comments.

#### **Task 1c. Project Specific SharePoint Site/Web Tool**

Mead & Hunt will create a project-specific SharePoint site to store data and make it available for team members and project management. This secure webpage will be available to project team members and airport management throughout the project duration and include the project monitoring schedule,



monitoring data, site photographs, and other related project documentation so that it is always available to project team members.

#### **Task 1d. Project Management**

Standard project management activities will include monthly invoices and progress reports. We will provide an ongoing comparison between project progress and project budgets.

#### **Task 1 Deliverables:**

- Preparation, attendance, and documentation of project kick-off meeting and initial site visit;
- Participation in airport-specific training activities;
- Draft and final study design documents;
- Project-specific SharePoint site;
- Monthly invoice and progress reports; and
- Ongoing coordination with Airport staff and management.

### **TASK 2: DATA COLLECTION AND REVIEW**

As described in FAA Part 139.337 (c) (2), a WHA must include the “identification of the wildlife species observed and their numbers, locations, local movements, and daily and seasonal occurrences.” In most cases, a 12-month assessment is required to identify seasonal patterns of activity for birds and other wildlife inhabiting the airport and surrounding environs. We propose twice-monthly monitoring events and four mammal monitoring surveys, for a total of 28 monitoring events, throughout the course of the biological study.

#### **2a. Initial Monitoring Event**

Mead & Hunt’s FAA-qualified biologist will perform the initial monitoring event following the project kickoff meeting to describe initial observations and proposed monitoring locations, potential access considerations, or immediate measures that can be taken to reduce wildlife hazards.

#### **2b. Twice-Monthly Surveys**

In addition to the initial monitoring event, Mead & Hunt biologists will perform 23 (twice-monthly) surveys to record the presence, extent, and movement of wildlife on and near the airport. These twice-monthly surveys will also include ongoing conversations with airport staff and tenants. Each wildlife sighting will be documented on standardized forms and maps.

To adequately identify the required information during a WHA, the Mead & Hunt team will use standardized survey procedures. Each individual or flock will be indicated on the project grid to identify the spatial distributions of wildlife on or near the airport. Collected information can include time of observation, survey station, species, activity, habitat type, and location. Observations of non-avian species will be recorded to identify prey base, migration patterns or other changes in behavior that could be hazardous to aircraft.

To supplement the data gleaned from the twice monthly site visits, the Mead & Hunt team will install a trail camera and download photographic documentation during the regular site visits. Photographs taken by the

camera will be posted to the project-specific SharePoint site so that they may be reviewed by Airport Staff and incorporated into the WHA report (see Task 4).

### **2c. Small Mammal Surveys**

Although Mead & Hunt will routinely record data pertaining to small mammals during the twice-monthly monitoring events (tracks, scat, etc.) we will also perform two small mammal surveys. These dedicated surveys typically consist of 150 traps located in three transects (trap lines). Each transect or trap line will include 50 traps located at 10- to 20-meter intervals with a small mammal trap set at each station. These transects will be established in the various types of habitat present at the airport to determine the presence of small mammals in each habitat. Each small mammal survey will be conducted for three consecutive nights. The data collected will identify the number of mammals captured, trap station, species, activity, habitat use, grid location, and type of trap. Our FAA-qualified Wildlife Hazard Biologist will direct activities associated with the small mammal surveys.

### **2d. Large Mammal Surveys**

Two large mammal surveys will be performed at night along a predetermined route, which usually includes areas near the runways and more remote areas of the airport property. Observations typically begin at least 30 minutes after sunset. Data to be collected during each large mammal survey includes species, activity, habitat use, and grid location. Our FAA-qualified Wildlife Hazard Biologist will direct activities associated with these surveys.

### **2e. Data Review and Access**

Our FAA-qualified Wildlife Hazard Biologist will review all monitoring data monthly for completion and accuracy.

### **Task 2 Deliverables:**

- Performance and documentation of twice-monthly monitoring events; and
- Travel to, participation in, and documentation of small and large mammal survey events.

Other species also will be identified by species during the twice-monthly events. If necessary, dedicated species-specific surveys will be performed. Mead & Hunt will modify its proposed scope and cost should such additional surveys be necessary.

## **TASK 3: WILDLIFE AND HABITAT ANALYSIS/ASSESSMENT**

### **Tas1 3a. Wildlife Assessment**

Pursuant to FAA regulations in FAR Part 139.337, the WHA will be based on an assessment/evaluation of the wildlife and habitat conditions identified during the 12-month observation period. To evaluate or assess the wildlife observed during the 12-month observation period, the Mead & Hunt team will review and analyze the data based on accepted protocols and the relative risk posed by the wildlife observed.

To analyze the data, the observed avian species will be categorized in guilds based on their behavioral characteristics. Habitat assessment analyses will include calculating the quantity of birds recorded at each

observation point, seasonal and daily patterns, habitat use, species activity, guild abundance and frequency of occurrence recorded during twice-monthly surveys. Species-specific data will address abundance, legal status, management techniques, and the relative risk posed by the species or guild.

Based on this quantitative data and relative risk data provided by FAA, we will identify the presence and frequency of species that occur on or near the airport and the relative risk posed by each. We will develop a prioritized list of species-specific management measures using a risk-based approach. When documented in the WHA, each proposed measure will be identified as having a potentially critical, high, medium, or low priority.

**Task 3b. Habitat Assessment**

In addition to evaluating the various species observed, we will identify and evaluate the habitats on and near the airport. We will describe and quantify the different habitat types present within the airfield. These habitat types could include, manages grasslands, scrub habitat, wetlands, surface water, etc. The habitat assessment can help assess the relative importance of environmental features within the airfield to the distribution and abundance of wildlife species that are observed during the wildlife hazard assessment. Habitat types that are deemed as attractive to hazardous wildlife will be documented and proper management techniques will be presented.

**TASK 4: PREPARE WILDLIFE HAZARD ASSESSMENT REPORT**

FAA will review the WHA to determine whether a WHMP will be require. Should the FAA determine that a WHMP is necessary, the data presented in the plan and the proposed management measures will serve as the foundation of the plan.

As summarized in Table 1, Federal Aviation Regulations (FAR) at Part 139.337 specify the topics that must be addressed in a WHA report.

Requirement	Description
Analysis of the event or circumstances that prompted the study.	For example, who, what, when, where, and why the WHA is required, including a description of triggering events or site-specific conditions that pose concern.
Identification of the wildlife species observed and their numbers, locations, local movements, and daily and seasonal occurrences.	Description of wildlife species that have access to the airport, including their: Legal status Movement patterns Seasonal patterns  A description of the degree of risk posed by each species (e.g., observed behavior, hazard ranking per FAA guidance).

Table 1– Wildlife Hazard Assessment (WHA) Report Components	
Requirement	Description
Identification and location of features on and near the airport that attract wildlife.	Description of features on or near the airport that attract wildlife, such as large open areas where they can loaf in relative safety; abundant food or water; and escape, loafing or nesting cover. Each attractant shall be identified and evaluated, and the person or agency responsible for its operation should be identified (e.g., airport tenant, local agency, etc.).
Description of the wildlife hazards to air carrier operations.	The wildlife hazard damage biologist must identify the wildlife species or conditions that pose hazards to aircraft and provide a description of wildlife behavior, such as times of day when such wildlife traverse the Airport Operations Area (AOA), migration patterns, on-site features that may attract hazardous wildlife, etc.
Recommended actions for reducing identified wildlife hazards to air carrier operations.	The biologist preparing the WHA must provide prioritized recommendations for mitigating the hazardous wildlife attractants identified. Potential actions could include vegetation management, habitat management, water management or wildlife hazing in accordance with appropriate regulations when necessary.

Following the completion of the 12-month monitoring cycle, Mead & Hunt staff will prepare an administrative draft report in accordance with 14 CFR 139.337. The completed WHA report will include the necessary elements of a WHA as outlined in Title 14 CFR 139.337 and prioritized recommendations for mitigating the hazardous wildlife attractants identified. We will provide applicable strategies and measures based on field observations and proven Best Management Practices (BMPs). The proposed measures will be based on sound scientific principles and safe airport operation. We will consider unique airport circumstances and operational concerns when recommending wildlife hazard management techniques.

Mead & Hunt will prepare a Preliminary/Administrative Draft WHA for review by airport staff. Following staff review, we will incorporate one round of comments and prepare a Draft WHA for submission to the FAA. The Mead & Hunt team members and airport management and, if available, FAA staff to present the Draft WHA report.

**Task 4 Deliverables:**

- Preliminary/Administrative draft WHA Report for airport review (electronic deliverable); and
- Four copies of a Draft WHA Report and participation in a meeting or teleconference with Airport/FAA staff

**TASK 5: FINAL WHA REPORT AND PROJECT CLOSE OUT**

Upon the receipt of FAA comments on the Draft WHA, the Mead & Hunt team will meet with airport management. Following the meeting, we will incorporate the FAA comments and prepare a Draft-Final

WHA report within one week of the meeting for airport management review. We will incorporate one round of comments on the Draft Final report and upon acceptance by airport management, prepare five copies of the final report. We will close out the proposed project and prepare a final invoice and project upon acceptance of the Final WHA report by FAA.

#### **Task 5 Deliverables:**

- Meeting with airport staff and preparation of Draft-Final WHA Report (electronic deliverable);
- Final WHA for airport review that incorporates airport comments on the draft-final report prior to FAA submission;
- Final WHA Report for FAA submission (five hard copies); and
- Final invoice and progress report.

#### **PROJECT SCOPE AND SCHEDULE ASSUMPTIONS**

The proposed scope, schedule, and cost associated with wildlife hazard assessment activities was based on the following assumptions:

- **Off-site access.** If access to off-site locations is required, the airport staff will coordinate with landowners to gain access prior to site monitoring.
- **Interruptions as a result of construction or other airport activities.** In most cases, site monitoring can occur during construction or other non-routine events at the airport. We assume that our monitoring schedule will not be interrupted by site activities and that our data will remain valid despite these activities.
- **Agency Review Times.** The proposed WHA Report must be reviewed by Airport staff and the FAA. We assume that the Airport staff will review the administrative draft document within two weeks. We cannot estimate FAA's review schedule, but we will respond to FAA comments within one week of comment receipt.

#### **Project Schedule**

Based on our previous experience conducting WHAs and preparing Wildlife Hazard Management Plans (WHMP), we have identified a 13-month project schedule to complete a Draft WHA Report for submission to FAA. Mead & Hunt will provide Airport staff with a complete Administrative Draft WHA Report within four weeks of monitoring completion (month 13). We anticipate both the Airport staff and the FAA will review project reports within appropriate timeframes, and we will provide a revised draft within two weeks of comment receipt from each agency.

#### **ESTIMATED COST**

As shown on **Table 2**, the total estimated cost of the WHA for the Hemet-Ryan Airport is Seventy-eight Thousand Nine Hundred Sixteen Dollars (\$78,916), which includes an estimated labor cost of \$69,898 and reimbursable costs of \$9,018.

Table 2 – Estimated Cost									
Wildlife Hazard Assessment for the Hemet-Ryan Airport									
Task/Labor	Principal (QA/QC)	Project Manager	FAA-Qualified Biologist	Wildlife Biologist	GIS Analyst	Admin.	Subtotals		
1. Project initiation, Kick-off, Coordination and Management	2	24	30	32	4	8	100		
2. Data Collection and Review (Site Monitoring)		12	80	180	4		276		
3. Wildlife and Habitat Assessment and Analysis		4	16	8			28		
4. Prepare Wildlife Hazard Assessment Report	2	24	40	16	4	16	102		
5. Final Report and Project Closeout		4	4	4		4	16		
Total Hours	4	68	170	240	12	28	522		
<b>LABOR</b>	<b>\$824</b>	<b>\$11,764</b>	<b>\$24,650</b>	<b>\$28,800</b>	<b>\$1,620</b>	<b>\$2,240</b>	<b>\$69,898</b>		
<b>Direct Costs</b>									
<b>Travel</b>									
Airfare (Three trips)	\$2,100								
Lodging and Meals (12 nights, trapping, etc.)	\$3,600								
Mileage (@0.56/mile, 28 trips, and 100 miles RT)	\$1,568								
<b>Supplies</b>									
Trail Cameras (two)	\$500								
Sherman Traps (mammal monitoring)	\$750								
Misc. Supplies	1,000								
Report Production and Delivery	\$250								
<b>Subtotal Direct Costs</b>	<b>\$9,018</b>								
<b>Project Cost (including direct costs)</b>	<b>\$78,916</b>								
<b>GRAND TOTAL</b>	<b>\$78,916</b>								

WORK ORDER AGREEMENT  
FOR  
JACQUELINE COCHRAN REGIONAL AIRPORT – WILDLIFE HAZARD  
ASSESSMENT

BY AND BETWEEN  
RIVERSIDE COUNTY ECONOMIC DEVELOPMENT AGENCY  
AND  
MEAD & HUNT, INC.

This Agreement is made and entered into this 7th day of April, 2014, by and between the COUNTY OF RIVERSIDE by and through the Economic Development Agency (EDA), a public body corporate politic in the State of California (hereinafter "COUNTY"), and MEAD & HUNT, INC., (hereinafter "CONSULTANT").

**RECITALS**

**WHEREAS**, the proposed services provided in this Agreement are necessary to maintain airport pavement conditions, critical to the airport's operation.

**WHEREAS**, the COUNTY has selected CONSULTANT to provide services based on a Request for Proposal (RFP) for Airport Consulting Services that included pavement reconstruction; and

**WHEREAS**, the COUNTY and the CONSULTANT have entered into a MASTER SERVICE AGREEMENT, dated 9 day of September, 2014 the terms of which apply to this Work Order Agreement; and

**WHEREAS**, CONSULTANT is uniquely qualified based on their prior knowledge by completing prior design and construction projects for Jacqueline Cochran Regional Airport; and

**WHEREAS**, CONSULTANT has agreed to provide such services to COUNTY.

**NOW, THEREFORE**, in consideration of the mutual covenants contained herein, the parties hereto agree as follows:

1. **DESCRIPTION OF SERVICES**: CONSULTANT shall conduct a Wildlife Hazard Assessment, the Scope of Services, which is attached hereto as Exhibit A, and by this reference incorporated herein.

1.1 CONSULTANT represents and maintains that it is skilled in the professional calling necessary to perform all services, duties, and obligations required by this Agreement to fully and adequately complete the project. CONSULTANT shall perform the services and duties in conformance to, and consistent with, the standards generally recognized as being employed by professionals in the same discipline in the State of California. CONSULTANT further represents and warrants to the COUNTY that it has all licenses, permits, qualifications, and approvals of whatever nature are legally required to practice its profession. CONSULTANT further represents that it shall keep all such licenses and approvals in effect during the term of this Agreement.

2. **PERIOD OF PERFORMANCE**: CONSULTANT shall commence performance upon date of execution of this Agreement and complete performance within thirteen (13) months. CONSULTANT will diligently and responsibly pursue the performance of the services required of it by this Agreement through project completion unless the work is altered by written amendment(s) pursuant to the MASTER SERVICES AGREEMENT between COUNTY and CONSULTANT, dated September 9, 2014, currently in place. In the event the services described in this fully executed work order are not completed during the term of the MASTER SERVICES AGREEMENT, though the work order was executed by the parties while



the MASTER SERVICES AGREEMENT was in effect, CONSULTANT shall continue to be obligated to perform the services and the COUNTY shall be obligated to pay for such services as provided in this work order.

3. **COMPENSATION:** The COUNTY shall pay the CONSULTANT for services performed and expenses incurred in accordance with the attached Exhibit "A", Scope of Services.

3.1 CONSULTANT shall be paid a LUMP SUM amount of Eighty Thousand Four Hundred Eighty-four Dollars (\$80,484.00) for Engineering Design Services as described in Exhibit "A", Scope of Services. CONSULTANT shall submit invoices monthly to the COUNTY for progress payments based on the performance of the total work completed to date.

4. **CONFLICT OF INTEREST:** CONSULTANT shall have no interest, and shall not acquire any interest, direct or indirect, which will conflict in any manner or degree with the performance of services required under this Agreement.

5. **DESIGNATED REPRESENTATIVES:** The following individuals are designated as representatives of the COUNTY and CONSULTANT respectively to act as liaison between the parties:

**AGENCY**  
Daryl Shippy  
Airports Manager  
County of Riverside, EDA Aviation  
3403 10<sup>th</sup> Street Suite 400  
Riverside, CA 92501  
Phone: (951) 955-9418  
Fax: (951) 955-6686  
Email: [dshippy@rivcoeda.org](mailto:dshippy@rivcoeda.org)

**CONSULTANT**  
Lisa Harmon  
Project Planner  
Mead and Hunt, Inc.  
180 Promenade Circle, Suite 240  
Sacramento, CA 95834  
Phone: (916)-971-3961  
Fax (916) 971-0578  
Email: [lisa.harmon@meadhunt.com](mailto:lisa.harmon@meadhunt.com)

Any change in designated representatives shall be promptly reported to the other party in order to ensure proper coordination of the Project.

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6. **NOTICES:** All correspondence and notices required or contemplated by this Agreement shall be delivered to the respective parties at the addresses set forth below and are deemed submitted one (1) day after their deposit in the United States Mail, postage prepaid:

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Airports Manager  
County of Riverside, EDA Aviation  
3403 10<sup>th</sup> Street, Suite 400  
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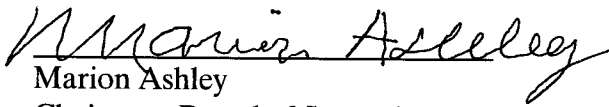
**CONSULTANT**


Jon J. Faucher  
Vice President  
Mead & Hunt, Inc.  
133 Aviation Boulevard, Suite 100  
Santa Rosa, CA 95403

IN WITNESS WHEREOF, the parties hereto have caused their duly representatives to execute this Agreement.

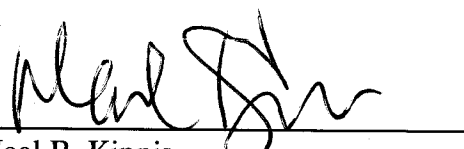
**COUNTY OF RIVERSIDE**

**MEAD & HUNT, INC.**

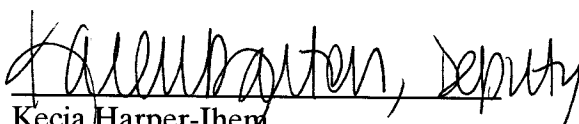
  
Marion Ashley  
Chairman, Board of Supervisors

  
Jon J. Faucher  
Vice President

APPROVED AS TO FORM:  
GREGORY P. PRIAMOS  
COUNTY COUNSEL

  
Neal R. Kipnis  
Deputy County Counsel

**ATTEST**

  
Kecia Harper-Ihemi  
Clerk of the Board

# EXHIBIT A

EXHIBIT A  
PROJECT BACKGROUND AND SCOPE OF WORK  
JACQUELINE COCHRAN REGIONAL AIRPORT

**Site Background**

The Jacqueline Cochran Regional Airport (TRM) is a public-use airport that is owned and operated by the County of Riverside. The approximately 2,553-acre airport supports general aviation and a small number of military operations (less than 1 percent). TRM is located in an unincorporated area of Riverside County south of the City of Coachella and west of the town of Thermal. Land uses immediately bordering the airport are predominantly agricultural and light industrial, with some residential use.

Based on available data from the Federal Aviation Administration (FAA) wildlife strike database from January 1, 1990 through April 30, 2014, four wildlife strikes with business aircraft have been reported in association with the TRM, three of which have resulted in damage to aircraft:

- An October 2013 strike with geese resulted in substantial damage to the aircraft;
- A 2006 strike with a California gull resulted in substantial damage to the aircraft; and
- A 2004 strike with a Canada goose resulted in minor damage to the aircraft.

One strike with unidentified medium-sized bird occurred in 2002 and resulted in no damage to the aircraft.

**Regulatory Background**

The FAA can require the operator of a federally obligated airport to conduct a WHA, and if necessary, prepare a Wildlife Hazard Management Plan (WHMP) when a “triggering event” occurs on or near the airport. According to FAR, Part 139.337b, the FAA can require an airport operator to conduct a WHA when one or more 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.

Pursuant to Federal Aviation Regulation (FAR) Part 139.337, the primary goal of the WHA is to identify the features, habitats, and species that are most likely to cause hazards to aircraft operations and to provide

recommendations for reducing such hazards. The scope of work described in tasks 1 through 6 will result in the completion of a Wildlife Hazard Assessment in accordance with FAR Part 139.337 and associated FAA guidance including, but not limited to:

- FAA AC 150/5200-33C, Wildlife Hazard Assessments on and Near Airports
- FAA AC 150/5200-36A, Qualifications for Wildlife Biologist Conducting Wildlife Hazard Assessments and Training Curriculums for Airport Personnel Involved in Controlling Wildlife Hazards on Airports

## **TASK 1: PROJECT INITIATION, COORDINATION AND MANAGEMENT**

### **1a. Project Kick-Off Meeting and Project Coordination**

To initiate the project, the project manager and FAA-Qualified Wildlife Biologist will facilitate an on-site kick-off meeting with airport management and other stakeholders (e.g., pilots, tenants, etc.). We will discuss wildlife hazard management activities and other site-specific issues associated with the Wildlife Hazard Assessment (WHA). Before the meeting, the Mead & Hunt team will review existing wildlife hazard data for the airport.

Following the kick-off meeting, the Mead & Hunt team will perform an airport reconnaissance visit with airport staff to identify:

- On-site and off-site monitoring locations to include in the study design; and
- Maintenance activities or short-term actions that the airport staff can implement to reduce hazards prior to completion of the WHA study.

### **1b. Prepare Study Design**

Based on the data review and site visit, the Mead & Hunt team will prepare a project-specific study design to meet statutory requirements pursuant to FAR Part 139.337. The study design will include:

- Standardized survey points throughout the AOA and off-airport areas suspected of attracting birds or other potentially hazardous species that could move across the AOA;
- Methods for conducting standardized surveys and bird counts to be performed at least twice each month; and
- Specialized surveys, as needed, to document the presence of mammals: Two small mammal surveys and two large mammal surveys (i.e., spotlight surveys) will be conducted during the 12-month WHA survey period.

The Mead & Hunt team will provide airport staff with a draft study design document for review and comment within 10 days of the project kick-off meeting, and we will incorporate one round of comments from airport staff. A final study document will be provided within one week after receipt of comments.

### **Task 1c. Project Specific SharePoint Site/Web Tool**

Mead & Hunt will create a project-specific SharePoint site to store data and make it available for team members and project management. This secure webpage will be available to project team members and

airport management throughout the project duration and include the project monitoring schedule, monitoring data, site photographs, and other related project documentation so that it is always available to project team members.

#### **Task 1d. Project Management**

Standard project management activities will include monthly invoices and progress reports. We will provide an ongoing comparison between project progress and project budgets.

#### **Task 1 Deliverables:**

- Preparation, attendance, and documentation of project kick-off meeting and initial site visit;
- Participation in airport-specific training activities;
- Draft and final study design documents;
- Project-specific SharePoint site;
- Monthly invoice and progress reports; and
- Ongoing coordination with Airport staff and management.

### **TASK 2: DATA COLLECTION AND REVIEW**

As described in FAA Part 139.337 (c) (2), a WHA must include the “identification of the wildlife species observed and their numbers, locations, local movements, and daily and seasonal occurrences.” In most cases, a 12-month assessment is required to identify seasonal patterns of activity for birds and other wildlife inhabiting the airport and surrounding environs. We propose twice-monthly monitoring events and four mammal monitoring surveys, for a total of 28 monitoring events, throughout the course of the biological study.

#### **2a. Initial Monitoring Event**

Mead & Hunt’s FAA-qualified biologist will perform the initial monitoring event following the project kickoff meeting to describe initial observations and proposed monitoring locations, potential access considerations, or immediate measures that can be taken to reduce wildlife hazards.

#### **2b. Twice-Monthly Surveys**

In addition to the initial monitoring event, Mead & Hunt biologists will perform 23 (twice-monthly) surveys to record the presence, extent, and movement of wildlife on and near the airport. These twice-monthly surveys will also include ongoing conversations with airport staff and tenants. Each wildlife sighting will be documented on standardized forms and maps.

To adequately identify the required information during a WHA, the Mead & Hunt team will use standardized survey procedures. Each individual or flock will be indicated on the project grid to identify the spatial distributions of wildlife on or near the airport. Collected information can include time of observation, survey station, species, activity, habitat type, and location. Observations of non-avian species will be recorded to identify prey base, migration patterns or other changes in behavior that could be hazardous to aircraft.

To supplement the data gleaned from the twice monthly site visits, the Mead & Hunt team will install a trail camera and download photographic documentation during the regular site visits. Photographs taken by the camera will be posted to the project-specific SharePoint site so that they may be reviewed by Airport Staff and incorporated into the WHA report (see Task 4).

### **2c. Small Mammal Surveys**

Although Mead & Hunt will routinely record data pertaining to small mammals during the twice-monthly monitoring events (tracks, scat, etc.) we will also perform two small mammal surveys. These dedicated surveys typically consist of 150 traps located in three transects (trap lines). Each transect or trap line will include 50 traps located at 10- to 20-meter intervals with a small mammal trap set at each station. These transects will be established in the various types of habitat present at the airport to determine the presence of small mammals in each habitat. Each small mammal survey will be conducted for three consecutive nights. The data collected will identify the number of mammals captured, trap station, species, activity, habitat use, grid location, and type of trap. Our FAA-qualified Wildlife Hazard Biologist will direct activities associated with the small mammal surveys.

### **2d. Large Mammal Surveys**

Two large mammal surveys will be performed at night along a predetermined route, which usually includes areas near the runways and more remote areas of the airport property. Observations typically begin at least 30 minutes after sunset. Data to be collected during each large mammal survey includes species, activity, habitat use, and grid location. Our FAA-qualified Wildlife Hazard Biologist will direct activities associated with these surveys.

### **2e. Data Review and Access**

Our FAA-qualified Wildlife Hazard Biologist will review all monitoring data monthly for completion and accuracy.

### **Task 2 Deliverables:**

- Performance and documentation of twice-monthly monitoring events; and
- Travel to, participation in, and documentation of small and large mammal survey events.

Other species also will be identified by species during the twice-monthly events. If necessary, dedicated species-specific surveys will be performed. Mead & Hunt will modify its proposed scope and cost should such additional surveys be necessary.

## **TASK 3: WILDLIFE AND HABITAT ANALYSIS/ASSESSMENT**

### **Tas1 3a. Wildlife Assessment**

Pursuant to FAA regulations in FAR Part 139.337, the WHA will be based on an assessment/evaluation of the wildlife and habitat conditions identified during the 12-month observation period. To evaluate or assess the wildlife observed during the 12-month observation period, the Mead & Hunt team will review and analyze the data based on accepted protocols and the relative risk posed by the wildlife observed.

To analyze the data, the observed avian species will be categorized in guilds based on their behavioral characteristics. Habitat assessment analyses will include calculating the quantity of birds recorded at each observation point, seasonal and daily patterns, habitat use, species activity, guild abundance and frequency of occurrence recorded during twice-monthly surveys. Species-specific data will address abundance, legal status, management techniques, and the relative risk posed by the species or guild.

Based on this quantitative data and relative risk data provided by FAA, we will identify the presence and frequency of species that occur on or near the airport and the relative risk posed by each. We will develop a prioritized list of species-specific management measures using a risk-based approach. When documented in the WHA, each proposed measure will be identified as having a potentially critical, high, medium, or low priority.

**Task 3b. Habitat Assessment**

In addition to evaluating the various species observed, we will identify and evaluate the habitats on and near the airport. We will describe and quantify the different habitat types present within the airfield. These habitat types could include, manages grasslands, scrub habitat, wetlands, surface water, etc. The habitat assessment can help assess the relative importance of environmental features within the airfield to the distribution and abundance of wildlife species that are observed during the wildlife hazard assessment. Habitat types that are deemed as attractive to hazardous wildlife will be documented and proper management techniques will be presented.

**TASK 4: PREPARE WILDLIFE HAZARD ASSESSMENT REPORT**

FAA will review the WHA to determine whether a WHMP will be require. Should the FAA determine that a WHMP is necessary, the data presented in the plan and the proposed management measures will serve as the foundation of the plan.

As summarized in Table 1, Federal Aviation Regulations (FAR) at Part 139.337 specify the topics that must be addressed in a WHA report.

<b>Table 1– Wildlife Hazard Assessment (WHA) Report Components</b>	
Analysis of the event or circumstances that prompted the study.	For example, who, what, when, where, and why the WHA is required, including a description of triggering events or site-specific conditions that pose concern.



**Table 1– Wildlife Hazard Assessment (WHA) Report Components**

<p>Identification of the wildlife species observed and their numbers, locations, local movements, and daily and seasonal occurrences.</p>	<p>Description of wildlife species that have access to the airport, including their:                  Legal status                  Movement patterns                  Seasonal patterns</p> <p>A description of the degree of risk posed by each species (e.g., observed behavior, hazard ranking per FAA guidance).</p>
<p>Identification and location of features on and near the airport that attract wildlife.</p>	<p>Description of features on or near the airport that attract wildlife, such as large open areas where they can loaf in relative safety; abundant food or water; and escape, loafing or nesting cover. Each attractant shall be identified and evaluated, and the person or agency responsible for its operation should be identified (e.g., airport tenant, local agency, etc.).</p>
<p>Description of the wildlife hazards to air carrier operations.</p>	<p>The wildlife hazard damage biologist must identify the wildlife species or conditions that pose hazards to aircraft and provide a description of wildlife behavior, such as times of day when such wildlife traverse the Airport Operations Area (AOA), migration patterns, on-site features that may attract hazardous wildlife, etc.</p>
<p>Recommended actions for reducing identified wildlife hazards to air carrier operations.</p>	<p>The biologist preparing the WHA must provide prioritized recommendations for mitigating the hazardous wildlife attractants identified. Potential actions could include vegetation management, habitat management, water management or wildlife hazing in accordance with appropriate regulations when necessary.</p>

Following the completion of the 12-month monitoring cycle, Mead & Hunt staff will prepare an administrative draft report in accordance with 14 CFR 139.337. The completed WHA report will include the necessary elements of a WHA as outlined in Title 14 CFR 139.337 and prioritized recommendations for mitigating the hazardous wildlife attractants identified. We will provide applicable strategies and measures based on field observations and proven Best Management Practices (BMPs). The proposed measures will be based on sound scientific principles and safe airport operation. We will consider unique airport circumstances and operational concerns when recommending wildlife hazard management techniques.

Mead & Hunt will prepare a Preliminary/Administrative Draft WHA for review by airport staff. Following staff review, we will incorporate one round of comments and prepare a Draft WHA for submission to the FAA. The Mead & Hunt team members and airport management and, if available, FAA staff to present the Draft WHA report.

#### **Task 4 Deliverables:**

- Preliminary/Administrative draft WHA Report for airport review (electronic deliverable); and
- Four copies of a Draft WHA Report and participation in a meeting or teleconference with Airport/FAA staff

#### **TASK 5: FINAL WHA REPORT AND PROJECT CLOSE OUT**

Upon the receipt of FAA comments on the Draft WHA, the Mead & Hunt team will meet with airport management. Following the meeting, we will incorporate the FAA comments and prepare a Draft-Final WHA report within one week of the meeting for airport management review. We will incorporate one round of comments on the Draft Final report and upon acceptance by airport management, prepare five copies of the final report. We will close out the proposed project and prepare a final invoice and project upon acceptance of the Final WHA report by FAA.

#### **Task 5 Deliverables:**

- Meeting with airport staff and preparation of Draft-Final WHA Report (electronic deliverable);
- Final WHA for airport review that incorporates airport comments on the draft-final report prior to FAA submission;
- Final WHA Report for FAA submission (five hard copies); and
- Final invoice and progress report.

#### **PROJECT SCOPE AND SCHEDULE ASSUMPTIONS**

The proposed scope, schedule, and cost associated with wildlife hazard assessment activities was based on the following assumptions:

- **Off-site access.** If access to off-site locations is required, the airport staff will coordinate with landowners to gain access prior to site monitoring.
- **Interruptions as a result of construction or other airport activities.** In most cases, site monitoring can occur during construction or other non-routine events at the airport. We assume that our monitoring schedule will not be interrupted by site activities and that our data will remain valid despite these activities.
- **Agency Review Times.** The proposed WHA Report must be reviewed by Airport staff and the FAA. We assume that the Airport staff will review the administrative draft document within two weeks. We cannot estimate FAA's review schedule, but we will respond to FAA comments within one week of comment receipt.

#### **Project Schedule**

Based on our previous experience conducting WHAs and preparing Wildlife Hazard Management Plans (WHMP), we have identified a 13-month project schedule to complete a Draft WHA Report for submission to FAA. Mead & Hunt will provide Airport staff a complete Administrative Draft WHA Report within four weeks of monitoring completion (month 13). We anticipate both the Airport staff and the FAA will review project reports within appropriate timeframes, and we will provide a revised draft within two weeks of comment receipt from each agency.

## **ESTIMATED COST**

As shown on **Table 2**, the total estimated cost of the WHA for the Jacqueline Cochran Regional Airport is Eighty Thousand Four Hundred Eighty-four Dollars (\$80,484), which includes an estimated labor cost of \$69,898 and reimbursable/direct costs of \$10,586.

Table 2 – Estimated Cost							
Task/Labor	Principal (QA/QC)	Project Manager	FAA-Qualified Biologist	Wildlife Biologist	GIS Analyst	Admin.	Subtotals
1. Project initiation, Kick-off, Coordination and Management	206	\$173	\$145	\$120	\$135	\$80	
2. Data Collection and Review (Site Monitoring)	2	24	30	32	4	8	100
3. Wildlife and Habitat Assessment and Analysis		12	80	180	4		276
4. Prepare Wildlife Hazard Assessment Report	2	24	40	16	4	16	102
5. Final Report and Project Closeout		4	4	4		4	16
Total Hours	4	68	170	240	12	28	522
<b>LABOR</b>	<b>\$824</b>	<b>\$11,764</b>	<b>\$24,650</b>	<b>\$28,800</b>	<b>\$1,620</b>	<b>\$2,240</b>	<b>\$69,898</b>

Direct Costs	
<b>Travel</b>	
Airfare (Three trips)	\$2,100
Lodging and Meals (12 nights, trapping, etc.)	\$3,600
Mileage (@0.56/mile , 28 trips, and 200 miles RT)	\$3,136
<b>Supplies</b>	
Trail Cameras (two)	\$500
Sherman Traps (mammal monitoring)	\$750
Misc. Supplies	1,000
Report Production and Delivery	\$250
<b>Subtotal Direct Costs</b>	<b>\$10,586</b>
<b>Project Cost (including direct costs)</b>	<b>\$80,484</b>
<b>GRAND TOTAL</b>	<b>\$80,484</b>