

SCOPE OF WORK
PROJECT FSPM210017, MGT, HABITAT, AIRFIELD
GREAT BASIN COOPERATIVE ECOSYSTEM STUDIES UNIT
CESU-17-31

Projects for execution under this CA by USACE do not include any functions to be performed that are inherently governmental. This determination is made with the assessment that places emphasis on the degree to which conditions and facts restrict the discretionary authority, decision-making responsibility, or accountability of Government officials using NFE services or work products.

This CA shall not be used for performance of personal services. These tasks provided by the customer for execution under this CA by USACE do not include functions to be performed that are personal services.

Any modifications to Cooperative Agreement activities as outlined by this SOW/PWS must be channeled through the Grants Officer's Technical Representative (GOTR) and Grants Officer (GO) prior to Non-Federal Entity (NFE) implementation.

NFE personnel shall also wear a distinctive NFE furnished security (ID) badge/lanyard readily identifying the individual as a NFE employee. The badge shall be worn in a conspicuous place at all times when performing work under the Cooperative Agreement including attendance at Government meetings and conferences that take place outside of the Government facility.

NFE personnel shall identify themselves as an NFE employee when answering or placing calls on a Government telephone and when leaving outgoing or incoming messages on voice mail. Use of acronyms in this identification is insufficient to meet this requirement.

All NFE email signatures shall identify them as such and will include their employer's name.

PERIOD OF PERFORMANCE: 18-months administrative and 12-months technical.

GOVERNMENT POCs:

1. USACE Omaha District POC: Mr. David Leptien PM, (402) 995-2742, david.b.leptien@usace.army.mil
2. USACE Omaha District POC: Ms. Kali Evans, GOTR, (402) 995-2295, kali.l.evans@usace.army.mil
3. USACE Omaha District POC: Ms. Stephanie Rostermundt, Grants Officer, (402) 995-2083, stephanie.a.rostermundt@usace.army.mil

This statement of work addresses the following tasks:

PROJECT NUMBER	TITLE	LOCATION
	Project Management	Edwards AFB
FSPM210017	MGT, HABITAT, AIRFIELD	Edwards AFB
OPTIONAL TASK	MGT, HABITAT, AIRFIELD	AF Plant 42

TASK 1: PROJECT FSPM210017 MGT, HABITAT, AIRFIELD EDWARDS AFB, CA

Summary: The goal of this project is to conduct a comprehensive assessment of wildlife use patterns and habitat features surrounding three airfields on Edwards AFB; and to recommend wildlife and habitat management alternatives to reduce the Bird/Wildlife Aircraft Strike Hazard (BASH) risks on these three airfields.

Background: The Edwards AFB Integrated Natural Resource Management Plan (INRMP) and BASH Management Plan promote a modified vegetation height exception for airfield habitat management in arid environments. However, recent wildlife incidents on the airfields necessitate a thorough examination and analysis of wildlife (avian and mammalian) patterns and supporting habitats near existing runways to determine the best habitat management strategies for minimizing and reducing BASH incidents. This project covers three airfields (North Base, South Base, and Main Base) and at a minimum the areas delineated on the attached maps surrounding the airfield features (runways, aprons, taxiways, ramps and flightline areas). Approximate size of each airfield survey area delineated on the attached maps is: North Base – 446 acres, South Base – 598 acres, and Main Base – 1,855 acres.

Task Objectives:

1. The NFE shall meet with personnel from Environmental Management, Airfield Management, and the Safety Office to gain knowledge and perspective of Edwards AFB BASH issues. NFE will interact frequently with Airfield Management to enable open communications regarding historic and current observations and problem areas. NFE shall review the Edwards AFB INRMP, BASH plan, BASH logs, and Integrated Pest Management Plan for project relevant background information.
2. Conduct weekly surveys over a 12-month period to identify types and abundance of mammals and birds utilizing each airfield. The survey protocol must include special consideration for coyotes, owls (barn, great horned, burrowing), horned larks, pigeons, doves, sparrows, ravens, and other migratory species. The intent is to identify areas where birds or other wildlife may be found in greater numbers compared to other locations or times of year. A grid overlay or other

broad description of areas may be used to describe general locations where more precise location data is not available or is impractical.

3. Map perennial vegetative land cover within each airfield survey area.
4. Map locations of invasive plant species populations and identify abundance of each population within each airfield survey area.
5. Map locations of all seasonal standing water and sources of temporary or permanent manmade standing water locations within each airfield survey area. This includes the swales along airfield margins, and fieldwork shall include assessing how much and how long standing water occurs in those features.
6. Map all trees with a minimum height of 10 feet, but include all Tamarisk and Joshua trees within each airfield survey area.
7. Analysis of mapping data, habitat characteristics, bird and wildlife observations, locations where aircraft strikes occurred, and other relevant information. Develop habitat management recommendations to reduce BASH risk.

Deliverables:

1. Draft and final Airfield Wildlife Survey Work Plan.
2. Draft, pre-final, and final Airfield Wildlife Survey technical report containing each airfield's mammal/bird and habitat assessment data, vegetative land cover map, invasive plant species map, seasonal standing water and sources of temporary or permanent manmade standing water map, tree survey map, Tamarisk and Joshua tree survey map(s), and habitat management recommendations to reduce BASH risk.

(OPTIONAL) TASK 2: PROJECT #TBD# MGT, HABITAT, AIRFIELD AF PLANT 42, PALMDALE, CA

PERIOD OF PERFORMANCE: 12-months

Summary: The goal of this project is to conduct a comprehensive assessment of wildlife use patterns and habitat features surrounding the airfield at Air Force Plant 42 (AFP 42), and to recommend wildlife and habitat management alternatives to reduce the Bird/Wildlife Aircraft Strike Hazard (BASH) risks. This task would be accomplished as an option concurrently with a similar study at Edwards AFB. The goals, methods, and objectives would be similar to the work at Edwards, except for the reduced survey intervals described below. Submit separate invoices and deliverables for AFP 42 versus Edwards.

Background: BASH incidents at AFP 42 necessitate a thorough examination and analysis of wildlife (avian and mammalian) patterns and supporting habitats near existing runways to determine the best habitat management strategies for minimizing and reducing BASH incidents.

This project would address the airfield and the areas surrounding the airfield features, approximately 1500 acres. This area is generally defined by the runways and overruns buffered by 1000ft in all directions.

Task Objectives:

This task consists of:

1. NFE personnel will meet with personnel from Environmental Management, Airfield Management, and the Flight Safety Office to gain knowledge and perspective of AFP 42 BASH issues. NFE will interact frequently with Airfield Management to enable open communications regarding historic and current observations and problem areas. NFE shall also review any available management plans for project relevant background information.
2. Conducting, over a 12 month period, once weekly surveys during the Fall (15 Sep to 15 Nov) and Spring (1 Mar to 30 Apr) migration seasons and once monthly surveys for the remaining 8 months to identify types and abundance of mammals and birds utilizing the airfield or transiting the area en route to attractants on either side of the airfield, such as nearby off-base agricultural fields. The survey protocol must include special consideration of coyotes, owls (barn, great horned, burrowing), horned larks, pigeons, doves, sparrows, ravens, and other migratory species. The intent is to identify areas where birds or other wildlife may be found in greater numbers compared to other locations or times of year. A grid overlay or other broad description of areas may be used to describe general locations where more precise location data is not available or is impractical.
3. Mapping perennial vegetative land cover within each airfield survey area.
4. Mapping locations of invasive plant species populations and identifying abundance of each population within each airfield survey area.
5. Mapping locations of all seasonal standing water and sources of temporary or permanent manmade standing water locations within each airfield survey area. This includes drainage features along airfield margins, and fieldwork shall include assessing how much and how long standing water occurs in those features.
6. Mapping all trees with a minimum height of 10 feet, but include all Tamarisk and Joshua tree species within each airfield survey area.
7. Analysis of mapping data, habitat characteristics, bird and wildlife observations, locations where aircraft strikes occurred, and other relevant information. Develop habitat management recommendations to reduce BASH risk.

Deliverables:

1. Draft and final Airfield Wildlife Survey Work Plan.
2. Draft, pre-final, and final Airfield Wildlife Survey technical report containing mammal/bird and habitat assessment data, vegetative land cover map, invasive plant species map, seasonal standing water and sources of temporary or permanent manmade standing water map, tree survey map, Tamarisk and Joshua tree survey map(s), and habitat management recommendations to reduce BASH risk.

GIS STANDARDS

The NFE shall comply with all requirements in the most recent version of the *Edwards Air Force Base Standards for Geographic Information System (GIS) Deliveries* document (available from 412 CEG/CEVA Environmental Support Section [412 CEG/CEVA]). This document provides all details required for a successful GIS delivery. A preliminary technical consultation with 412 CEG/CEVA staff shall be accomplished within one week following the task order award. Following consultation, 412 CEG/CEVA will provide the required file geodatabase template to be used for the GIS delivery (if applicable).

The NFE shall deliver GIS data to include all survey data, and data reported in the final report (if applicable) in ESRI file geodatabase format. The NFE shall consult and coordinate with 412 CEG/CEVA staff on the development of table structure, attributes and domains for all delivered data. Data not currently maintained by Edwards Air Force Base (EAFB) will be incorporated into the delivery following the EAFB currently-used Spatial Data Standards for Facilities, Infrastructure, and Environment (SDSFIE) version. The currently-used SDSFIE version may be obtained from 412 CEG/CEVA. Deviations from, or additions to, existing SDSFIE objects must be coordinated with, and approved by 412 TW CEG/CEVA in writing prior to the delivery of any GIS product. All delivered data shall be error free (including geometry errors), attributed completely, and include metadata at the geodatabase, feature class, and standalone table level. GPS data accuracy requirements shall be coordinated with 412 CEG/CEVA staff prior to collection and differential correction processes. The NFE shall provide draft electronic copies of the GIS deliverable for 412 CEG/CEVA review and comment. A list of issues will be returned to the NFE for rectification. Following deliverable approval, the NFE shall submit one (1) final electronic copy to 412 CEG/CEVA.

All text documentation shall be delivered in a Microsoft Office 2013 or Adobe Acrobat PDF version 11 compliant format and be searchable. Photographic images shall be TIFF with at least 1,200 dpi resolution. All NFE documents shall be accompanied by a Standard Form 298 Report Document Page (SF 298). This form is available in electronic format at DTIC's web site: <http://www.dtic.mil>. Electronic copies shall be submitted through a preapproved file transfer site, on CD-ROM or DVD. Rewritable CDs and DVDs will not be accepted. CDs or DVDs and the jewel case shall be labeled with the document title, including the spine of the CD or DVD case. The NFE shall consult and coordinate with 412 CEG/CEVA on larger deliverables that require delivery on a portable USB or Firewire hard disk drive (HDD). Electronic files for text, photographs, images, and illustrations shall be in the native software whenever possible. ISO 9660 file names shall be used, with standard extensions that will be recognized on Microsoft Windows platform. Folder names shall be no more than 8 characters, have no extension, and can

be no more than eight levels deep. All security, password protection, etc., shall be removed so that there are no access restrictions on any section for any purpose (viewing, printing, and editing).