

Funding Agency: US Army Corps of Engineers, Alaska District 2204 3 rd street JBER, AK. 99506	Funding Instrument: Cooperative Agreement Funding Opportunity No: POA-CESU-19-03 CFDA No: 12.632 Program Title: Legacy Resource Management Program, Sikes Act 670c-1
Issue Date: 10 April 2019	Application Due Date: 10 May 2019
<p>Overview: Management, Habitat, Alpine Training Support, FXSB61425519, Management, Species Nuisance Wildlife – Bear DNA Analysis FXSBOS691419 Joint Base Elmendorf Richardson Alaska.</p> <ol style="list-style-type: none"> 1. PIKA Survey. 2. Wildlife Survey. 3. Bear DNA Analysis. 4. Preperation, Equipment, Supplies & Materials. Transportation, Travel 5. Government Furnished Information & Equipment. 6. Data Collection & GIS Requirements. 7. Deliverables. 8. Period of Performance. 9. Points of Contact. <p>See Scope of Work for detailed information.</p> <p>Period of Performance is: 18 months from date of award.</p>	
Estimated Total Funding: \$154,000	Anticipated Number of Awards: 1
Contents of Full Text Announcement	
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II. Award Information	2. Project Tasks and Requirements
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	6. Spatial Data & Mapping Standards
	7. Deliverables
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	9. Points of Contact
<p>Contact Information: Questions that are related to Grants.gov including registration and system requirements should be directed to the Grants.gov contact center at 1-800-518-4726. For assistance with this funding Opportunity Announcement please contact Olen.R.Northern@usace.army.mil</p>	

Instructions to Applicant: The complete Funding Opportunity Announcement, application forms and Instructions can be downloaded directly from Grants.gov.

Applications in response to this Funding Opportunity Announcement must be submitted by 2:00PM Alaska time, on the Application Due Date. Applications may be submitted by mail, e-mail, or via the internet through Grants.gov. Each applicant is responsible to ensure their application has been received timely.

Applicants will have a Dun and Bradstreet Data Universal Numbering System (DUNS) number, and registered

See section IV of the Funding Opportunity Announcement for complete application submission information.

Section I: Funding Opportunity Description

Management, Habitat, Alpine Training Support, FXSB61425519, Management, Species Nuisance Wildlife – Bear DNA Analysis FXSBOS691419 Joint Base Elmendorf Richardson Alaska.

Section II: Award Information

Cooperative Agreement, \$154,000, 18 month period of performance.

Section III: Eligibility Information

Eligible Applicants – CESU Hawaii, N&W Alaska, PNW.

Section IV: Application and Submission Information

1. Address to Request Application Package

The complete funding opportunity announcement, application forms, and instructions are available for download at Grants.gov. USACE is not responsible for any loss of internet connectivity or for an applicant's inability to access documents posted at the referenced website.

The administrative point of contact is Olen Northern, (907) 753-2525,
Olen.R.Northern@usace.army.mil.

2. Content and Form of Application Submission

All mandatory forms and any applicable optional forms must be completed in accordance with the instructions on the forms and the additional instructions below.

a. SF 424 - Application for Federal Assistance

b. SF 424 A – Budget Information for Non-Construction Programs

c. SF 424 B – Assurances – Non-Construction Programs

d. Program Narrative – Brief program description illustrating applicant's ability to meet the goals and objectives described in Section I of the announcement.

Application shall be submitted NO LATER THAN 10 MAY 2019

3. Submission Instructions

Applications may be submitted via e-mail and, or the internet. E-mail is preferred.

a. Internet:

Applicants may submit proposals through Grants.gov. Applicants are responsible for ensuring that their Grants.gov proposal submission is received in its entirety. The Government bears no responsibility for data errors resulting from transmission of conversion processes associated with electronic submissions. The Government will bear no responsibility for delays in submissions due to technical difficulties at or with the Grants.gov website.

All applicants using Grants.gov to submit proposals must be registered and have an account with Grants.gov. It may take up to three weeks to complete Grants.gov registration. For more information on registration, go to <http://www.grants.gov/ForApplicants>.

b. E-mail:

If there is an issue with submission to Grants.gov, please contact the Corps at the email addresses below. Format all documents to print on Letter (8 ½ x 11”) paper. E-mail proposal to Olen.R.Northern@usace.army.mil. If submitting via e-mail please put 55 AF in the subject line.

Section V: Application Review Information

1. Evaluation for Selection to receive consideration for award, the proposal must meet the requirements set forth in this FOA and be presented with adequate detail to assure the evaluator(s) have a good understanding of the proposed requirement(s). All proposals will be evaluated to determine the extent to which each offeror demonstrates a clear understanding of the requirements of the announcement, Scope of Work (SOW), and FOA.

The offeror shall submit a proposal that completely addresses all evaluation criteria and specifically identifies how each requirement will be satisfied. Technical proposal shall be no longer than 15-pages, font 12 (This page limitation is in addition to all required forms). All questions shall be submitted no later than 10 May 2019 at 2:00PM Alaska time.

2. Basis of Award: The selection decision will be based on the NFE offering the best overall value to the Government, with consideration given to all factors described below (weighted in descending order of importance). Proposals will not be ranked. The Government will not award a Cooperative Agreement to a grantee whose proposal contains a deficiency. The selection will not be based on lowest proposed cost, it will be

based on an analysis of each criteria listed below. The proposal document shall be outlined as shown below.

STATEMENT OF WORK
COOPERATIVE ECOSYSTEM STUDIES UNIT (CESU)
Management, Habitat, Alpine Training Support (FXSB61425519)
Management, Species, Nuisance Wildlife – Bear DNA Analysis (FXSBOS691419)
Joint Base Elmendorf-Richardson (JBER), Alaska
Project Cost Ceiling: \$154,000

1. GENERAL

The purpose of this Statement of Work (SOW) is to provide details of the work to be performed to support the U.S. Air Force through a cooperative agreement (CA) between the Cooperator, U.S. Army Corps of Engineers (USACE) and Joint Base Elmendorf-Richardson (JBER) Natural Resources program involving the terrestrial wildlife program. The work outlined in the tasks in this SOW support collaborative studies between Alaska Department of Fish and Game (ADF&G) and Joint Base Elmendorf-Richardson (JBER) Natural Resources program involving a multi-year projects.

Projects for execution under this CA 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 recipient 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 do not include functions to be performed that are personal services.

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

2. OBJECTIVES

The objectives of the work to be performed under this cooperative agreement are to conduct natural resource tasks on the federal lands belonging to Joint Base Elmendorf-Richardson (JBER), and to prepare reports detailing the results of this work for submission to the USACE Alaska District point of contact (POC) and JBER Natural Resource POC. It is anticipated a Senior Biologist and MS Student would complete the work in supporting the collaborative studies between ADF&G and JBER Natural Resources program.

3. MAJOR REQUIREMENTS AND TASKS

3.1 ALPINE TRAINING SUPPORT (FXSB61425519)

3.1.1 Background

Wildlife surveys are a component of the Joint Base Elmendorf-Richardson (JBER) Natural Resources Project, MGT, Habitat, Alpine Training Support. These surveys are aimed to fill in information gaps of species presence, abundance and distribution across JBER. Monitoring the distribution and relative abundance of wildlife species can be important for documenting the effects of harvest, habitat change, and environmental variability on populations. However, many mammals are highly secretive, difficult to repeatedly capture, and naturally occur at low to moderate densities, making it difficult to estimate abundance over large areas using traditional methods (e.g. mark-recapture, distance sampling, etc.).

Collared pika have been identified within the ADF&G State Wildlife Action Plan as a species of greatest conservation need. Documenting their distribution and abundance is necessary to support sustainably functioning military land. JBER natural resources has collaborated with ADF&G and incorporated surveying collared pika on JBER as part of a larger ADF&G study aimed to fill in the information gaps of species presence, abundance, and reproduction across southcentral and interior Alaska.

Another species of top concern on JBER are wolves. In addition, understanding the wolf population in GMU 14C is important as this population has previously been deemed a risk to public safety. Since 1995, individual wolves in the vicinity of Joint Base Elmendorf-Richardson (JBER), Eagle River, and Birchwood displayed increasingly habituated and aggressive behavior toward humans and pets. Starting in 2007, negative human/wolf encounters increased and during the winter of 2007–08, several dogs were killed or injured by wolves in this area. In May 2010, 2 female runners were pursued until forced to climb a tree by 2 wolves on Artillery Road on JBER. The runners were accompanied by a dog, but these 2 wolves reportedly ignored the dog and focused their attention on the humans. During the winter of 2010-11, ADF&G and JBER Conservation personnel removed 9 wolves from JBER via trapping and ground-based shooting efforts. This operation was deemed successful due to the removal of specific wolves thought to be involved in aggressive incidents and the reduction of wolf numbers in the area, but there was no way to determine whether all aggressive wolves were removed. Although wolf attacks on humans are rare, previous wolf attacks in Alaska by individual wolves which exhibited similar habituated and aggressive behaviors have occurred (McNay 2002, Butler et al, 2011). The only known aerial wolf survey conducted in GMU 14C was in 1995. This survey documented four packs using 14C. A fifth pack is believed to have formed shortly after the survey was flown (Sinnott 1996). Of these estimated packs, there were ≥ 2 packs who utilized JBER as part of their territory.

The status of wolves on JBER since the 2010-11 removal effort is unknown. Since the removal effort, no wolf work (surveys, collaring, etc.) has occurred in GMU 14C, including JBER. Given the history of the wolves on JBER and GMU 14C, there is a renewed interest to investigate the status on JBER.

This scope of work is designed to be a multi-year survey in conjunction with the ADF&G study, while still providing beneficial information on natural resources on JBER.

3.1.2 ALPINE TRAINING SUPPORT – TASK 1: PIKA SURVEY

Scope

The purpose of this task is to identify distribution, habitat use, and abundance of collared pika on JBER. The information collected on JBER will provide key insight to the natural resources on JBER to support management decisions while supporting the multi-agency collaboration. The collared pika study is a multi-agency collaboration with ADF&G as the principle investigator, which aims to address the informational gaps on how abundance, survival, and reproduction are influenced by environmental change in Alaska. The Cooperator shall work closely with the JBER-Natural Resource Manager and ADF&G during the project. Listed below are the ADF&G Collared Pika Study objectives and identified tasks the JBER survey effort is currently addressing.

The objectives for this study are to:

- Conduct a thorough ground based search of known pika sites on JBER for evidence (fresh haypiles or visual observations of pikas) of current occupancy by collared pikas.
- Identify pika territories based on visual observations and presence of haypiles.
- Collect fecal samples from pika territories at all study sites.
- Collect representative samples of vegetation from haypiles.

Professional Requirements

Professional experience is required to accomplish the tasks described in this SOW. Project team must have experience with collared pika (*Ochotona collaris*), occupancy modeling, and knowledge of Alaska alpine flora (including incomplete, old/dry specimens).

Kick-Off Meeting and Project Outline

Within the first quarter after award, the COOPERATOR will schedule a kick-off meeting with all parties involved (JBER, ADF&G, COOPERATORS, etc.) to discuss the project, and develop a project schedule to implement the SOW. The cooperator or principal investigator is responsible for all meeting minutes and distributed to all parties within 10 working days of the meeting.

The COOPERATOR shall work with the JBER-Natural Resources Program Manager and ADF&G to establish priority areas of survey areas. This determination should be made based on mission priority, range access, or by habitat priority as determined by the JBER-Natural Resources Program Manager. Due to JBER mission and training prioritization schedules and access restrictions, implementation of fieldwork activity/schedules may be required to be changed, as agreed upon as necessary by the COOPERATOR and the JBER-Natural Resources Program Manager.

Project Schedule

Upon agreement award, the COOPERATOR shall review the University of Alaska Anchorage (UAA), Alaska Center for Conservation Science (ACCS) and ADF&G (2018), *Field Guide for Pika Surveys* and be familiarized with the established field sampling protocol as well as the 2018 JBER sampling sites and field summary report. These documents will be provided to the COOPERATOR during the kick-off meeting.

A project schedule shall be produced by the Cooperator. The project schedule will identify a project timeline for all required tasks to complete the project and required deliverables. A draft will be provided to the JBER-Natural Resource Manager for review and comment within 30 days of the task order award. The government shall be afforded 14 calendar days review period and shall provide the Cooperator with comments to utilize for finalization of the document. The Cooperator shall utilize the government comments to make final edits and changes to the work plan. Any field deviations will be documented in field notes and require verbal concurrence from the JBER Technical POC. Any deviations that modify the project scope must be approved by the USACE Grants Officer prior to any being action taken.

Potential Pika Habitat Identification and Fieldwork Preparation

Current known JBER pika habitat and territories are limited to the Snowhawk Valley near Tanaina Lake (Dial, et. al 2014). The COOPERATOR shall review in ArcGIS JBER aerial imagery to identify any additional potential pika habitat within the alpine training areas of JBER. This review shall produce a polygon ArcGIS shapefile identifying all talus locations currently supporting and that could support pika habitat which will be titled: *JBER_Available_Pika_Habitat*.

Identification of potential pika habitat for all alpine habitat on JBER shall be completed prior to preparation and conducting field work. The ArcGIS shapefile and a pdf map of the shapefile shall be provided to the JBER-Natural Resource Manager within 45 days of award.

In addition to the aerial image review and ArcGIS shapefile development, field work survey plots shall be prepared to include a re-survey of the pika survey sites from 2018 and a minimum two new survey sites of potential pika habitat. The survey maps shall be completed and provided to the JBER-Natural Resources Manager 30-days prior to scheduled field work.

Coordinate with the JBER-Natural Resources Program Manager and ADF&G to arrange and prepare supplies, equipment, personnel, transportation, range access information, etc. in preparation for field events. Certain equipment, if available, such as GPS units and radios must be picked up at JBER from the

Natural Resources Program Office. Equipment may be checked out at the start of the field season or as needed and returned after the field season is completed.

Fieldwork

All activities will be documented by areal extent using GPS or other mapping form to document the plot locations and transects sampled at each LTEM plot.

At a minimum, four survey plots shall be completed within the JBER alpine training areas, with an option to survey more sites if time, resources and access allow. The plots must include a re-survey of the two pika survey plots that were completed in 2018 and minimum of two new potential pika habitat sites.

Survey methods shall follow the established protocols developed by the University of Alaska Anchorage (UAA), Alaska Center for Conservation Science (ACCS) and ADF&G (2018), *Field Guide for Pika Surveys*. These methods consist of occupancy surveys, fecal sample collections and food collections during the occupancy surveys. In addition, surrounding vegetation shall be surveyed using the standardized vegetative protocol in the *Field Guide for Pika Survey* to provide an estimate of habitat and forage availability.

During the re-surveys of the existing plots, motion-activated game cameras shall be deployed at a minimum of two active haypiles (one per plot). At the locations where the game cameras will be deployed, temperature and humidity sensors shall be set up following set-up recommendations from ADF&G.

Due to JBER mission and training prioritization schedules and access restrictions, implementation of activity/schedules may change. Field work and access schedules shall be coordinated with Range Control and the JBER-Natural Resources Program Manager.

Lab Analysis

Post field work, all field forms shall be reviewed for completeness and accuracy. Data forms shall be scanned into electronic pdf format. GPS information shall be downloaded and converted into ArcGIS shapefile format, and photos electronically saved to project specific folders. Copies of all data shall be provided to the JBER-Natural Resource Manager and ADF&G for their records.

Data and sample analysis shall be completed using the established project protocols. For the JBER work to be consistent with the larger multi-agency project, all lab work shall be completed at the UAA herbarium lab and added to the existing Collared Pika Database currently managed by UAA, ACCS. Lab analysis shall include, but not limited to, haypile vegetation identification, haypile species preference, pika occupancy, and database management.

Data and lab analysis results will be provided as part of the Post Field Season Summary Report, discussed in the following paragraphs.

Draft/Draft Final/Final Project Reports

Post Field Season Summary Report

Upon completion of the field work and tasks outlined in the work plan, the COOPERATOR shall take information collected over the course of the project and develop a draft post field season summary. The post field season summary shall discuss all the work completed for the tasks presented in this document and detailed in the work plan. The summary report shall contain at a minimum: methodology (and any deviations), results, data analysis and discussion, photos, and maps; a narrative regarding the quality assurance and quality control of the data and results (data accuracy); overall field season success and discussion of any issues and recommendations towards improving the projects or study. The report shall

include maps of the areas surveyed, locations of species identified during surveys, samples collected and locations, results of the samples collected, and results of the occupancy study identifying current occupancy by collared pikas.

The draft report shall be submitted to the government within 90 days of the end of the field season survey effort. The government shall be afforded 14 calendar day review period. The COOPERATOR shall utilize the government comments to make final edits and changes to the draft project summary report. One set of all field notes and/or field data forms, photos, GPS and GIS data, and excel database of all survey data shall be submitted digitally alongside the report to the JBER-Natural Resource Manager. Spatial data requirements are detailed in section 4.4 of the SOW.

Pika Survey Deliverables Schedule

Deliverable Title	Submission Schedule
<ul style="list-style-type: none"> - Draft Project Schedule (deliverable A) - Final Project Schedule (deliverable A 1) - List of Project Supplies and Materials (deliverable A2) 	<ul style="list-style-type: none"> - Deliverable A: Within 30 days of Task Order award - Deliverables A 1 and A2: Within 15 working days of receiving comments from the JBER Technical POC
<ul style="list-style-type: none"> - Potential Collared Pika Habitat Areas (deliverable B) - Pika Survey Site Maps (deliverable B1) 	<ul style="list-style-type: none"> - Deliverable B: Within 45 days of award. - Deliverable B1: 30 days prior to field work.
<ul style="list-style-type: none"> - Draft Post Field Season Report (deliverable C) - Final Post Field Season Report (deliverable C1) - Field Season Survey Data 	<ul style="list-style-type: none"> - Deliverable C: Within 90 days of completion of field work (estimated end April) - Deliverable C1 and C2: Within 15 working days of receiving comments from the JBER Technical POC
<ul style="list-style-type: none"> - Installation Program Review (IPR) 	<ul style="list-style-type: none"> - Present in the Installation Program Review on JBER in Spring (typically March or April each year)

3.1.3 ALPINE TRAINING SUPPORT – TASK 2: WILDLIFE SURVEY

Scope

The purpose of this task is to use a harvest-independent method to monitor distribution and potential population trends of furbearer species on JBER that has limited to no data available. This statement of work supports a multi-year survey in collaboration with the ADF&G GMU 14C study. The information collected on JBER will provide key insight to the natural resources on JBER to support management decisions while supporting the multi-agency collaboration.

The objectives for this study are to:

- Document species presence utilizing aerial track surveys
- Document numbers of packs, pack size, and pack dynamics for wolves on JBER.
- Estimate home range and movements of wolves.
- Estimate survival rates, dispersal, and numbers of wolves on JBER.

The Cooperator shall work closely with the JBER technical POC and ADF&G during the project. As standard track surveys are difficult to estimate wolf numbers in areas with a high percentage of canopy cover, like most of JBER, a combination of aerial winter track surveys and collared individuals will be used to provide more accurate population estimates for this area.

As typical aerial surveys for wolves (i.e., track surveys), would only provide a minimum count, and is greatly influenced by survey conditions and canopy cover, other methodology is necessary to better

understand the wolf numbers on JBER. In order to address this information gap, collaring wolves on JBER in order to estimate abundance and document their population/pack dynamics and movements.

Professional Requirements

Professional experience is required to accomplish the tasks described in this SOW. Project team must have extensive experience with large mammal trapping and handling, specifically wolves, and predator prey dynamics. The COOPERATOR shall have, or have the ability to obtain, safe capture certification, wildlife handling and chemical immobilization for wildlife.

Kick-Off Meeting and Project Outline

Within the first quarter post-award, the COOPERATOR will schedule a kick-off meeting with all parties involved (JBER, ADF&G, COOPERATORS, etc.) to discuss the project, and develop a project schedule to implement the SOW. The cooperators or principal investigator is responsible for all meeting minutes and distributed to all parties within 10 working days of the meeting.

The COOPERATOR shall work with the JBER-Natural Resources Program Manager and ADF&G to establish survey and trapping priority areas. This determination should be made based on mission priority, range access, or by habitat priority as determined by the JBER-Natural Resources Program Manager. Field work and access schedules shall be coordinated with Range Control and the JBER-Natural Resources Program Manager. Due to JBER mission and training prioritization schedules and access restrictions, implementation of fieldwork activity/schedules may be required to be changed, as agreed upon as necessary by the COOPERATOR and the JBER-Natural Resources Program Manager.

Work Plan/Fieldwork Preparation

A work plan shall be produced by the Cooperator with the support of ADF&G and the JBER-Natural Resource Manager depicting how and when the work will be completed over the course of the period of performance. The work plan will be based on the tasks and methods, deliverables, and schedule presented in this document and kick-off meeting discussions. The work plan shall be approved by JBER-Natural Resource Manager and ADF&G prior to initiating fieldwork. The work plan will define the schedule for all required tasks and methods to complete the projects and required deliverables. A draft will be provided to the JBER-Natural Resource Manager and ADF&G for review and comment within 60 days of the task order award. The government shall be afforded 14 calendar days review period and shall provide the Cooperator with comments to utilize for finalization of the document. The Cooperator shall utilize the government comments to make final edits and changes to the work plan. Any field deviations will be documented in field notes and require verbal concurrence from the JBER technical POC. Any field deviations that modifies the project scope must be approved by the USACE Grants Officer prior to any action being taken.

Coordinate with the JBER-Natural Resources Program Manager and ADF&G to arrange and prepare for supplies, equipment, personnel, transportation, range access information, etc. in preparation for field events. Certain equipment and supplies, such as radios and GPS units, must be picked up at JBER from the Natural Resources Program Office. Equipment may be checked out at the start of the field season or as needed and returned after the field season is completed.

Fieldwork

The project team will attempt to capture up to 10 wolves on JBER. We intend to capture and collar at least 2 wolves from each pack and maintain this sample size throughout the entire study. Wolves will be captured either by ground trapping or helicopter darting. Trapping will likely occur on JBER, where hunter killed moose carcasses will be monitored via camera traps to document any wolves visiting the area. If wolves are detected, we will deploy anchored foothold traps (clean and scent free) on trails around

the carcass. For aerial captures, wolves will be first located with fixed wing aircraft, then captured by helicopter darting. Both methods will use ADFG veterinary and IACUC approved capture, drug and handling protocols. Wolves will be immobilized and collared with a remote drop-off (CR-2A) scheduled to release 2-3 years after deployment. While immobilized, the following data will be collected, weight, gender, classify age through tooth wear (Gipson et al. 2000) into three age classes (juvenile [< 1 year], young adult [1-2 years], and mature adult [> 2]), obtain biological samples (tissue, hair, and blood), and uniquely mark each individual with numbered ear tags. Additional captures may occur in winter 2020 – 2023 to replace lost collars, increase sample size, and collar individuals from packs missed during the previous capture sessions, if funding is available.

Collared wolves will be tracked via fixed-wing aircraft at least twice a month during the winter (October-April) to assess collar fit, document pack size, and produce a minimum population estimate for JBER or GMU 14C. During the aerial surveys, all other tracks observed will be recorded and documented to provide species presence for other furbearer and large mammal species on base.

Under ADF&G direction the Cooperator is responsible for leading the following aspects of the study:

- Work with JBER Technical POC and ADF&G to trap and collar wolves on JBER, as described above;
- Compile and summarize data collected;
- Assist ADF&G with monitoring collared wolves on JBER;
- Accomplish and coordinate data analysis, report writing, and manuscript preparation on furbearers, specifically wolf trends and movements on JBER with ADF&G and JBER Technical POC.

Draft/Draft Final/Final Project Reports

Post Field Season Summary Report

Upon completion of the field work and tasks outlined in the work plan, the COOPERATOR shall take information collected over the course of the project and develop a draft post field season summary. The post field season summary shall discuss all the work completed for the tasks presented in this document and detailed in the work plan. The summary report shall contain at a minimum: methodology (and any deviations), results, data analysis and discussion, photos, and maps; a narrative regarding the quality assurance and quality control of the data and results (data accuracy); overall field season success and discussion of any issues and recommendations towards improving the projects or study. The report shall include maps of the areas surveyed, locations of species identified during surveys, initial locations of collared wolves, and, if available, initial movement data.

The draft report shall be submitted to the government within 90 days of the end of the field season survey effort. The government shall be afforded 14 calendar day review period. The COOPERATOR shall utilize the government comments to make final edits and changes to the draft project summary report. One set of all field notes and/or field data forms, photos, GPS and GIS data, and excel database of all survey data shall be submitted digitally alongside the report to the JBER Technical POC. Spatial data requirements are detailed in section 4.4 of the SOW.

Winter Track Survey Deliverables Schedule

Deliverable Title	Submission Schedule
- Draft Work Plan (deliverable A)	- Deliverable A: Within 60 days of Task Order award
- Final Work Plan (deliverable A 1)	- Deliverables A 1 and A2: Within 15 working days of receiving comments from the JBER Technical POC
- List of Project Supplies and Materials (deliverable A2)	

<ul style="list-style-type: none"> - Draft Post Field Season Report (deliverable B) - Final Post Field Season Report (deliverable B1) - Field Season Survey Data 	<ul style="list-style-type: none"> - Deliverable B: Within 90 days of completion of field work (estimated end April) - Deliverable B1 and B2: Within 15 working days of receiving comments from the JBER Technical POC
<ul style="list-style-type: none"> - Installation Program Review (IPR) 	<ul style="list-style-type: none"> - Present in the Installation Program Review on JBER in Spring (typically March or April each year)

3.1.4 NUISANCE WILDLIFE – BEAR DNA ANALYSIS (FXSBOS691419)

Wildlife is protected under a number of statutes, such as the ESA, MBTA, State of Alaska fish and game. JBER is located in Anchorage, Alaska, with abundant wildlife. Most species indigenous to southcentral Alaska can be found on JBER, including moose, wolves, and both black and brown bears. Extensive natural areas in and around JBER provide habitat for these and other species. Conflicts routinely arise with animals that occasionally pose a health or safety hazard to Base residents, training military, and recreationists. Currently, the JBER Conservation Law Enforcement Officers (CLEOs) respond to most wildlife nuisance calls and conflict situations on JBER, particularly involving potentially dangerous animals such as moose and bears. Over the past nine years, the CLEOs have responded to an average of 431 wildlife calls.

In 1996 the State of Alaska recognized the unique nature of human-wildlife conflicts within the greater Anchorage area (including JBER lands) and began a planning program designed to mitigate human-wildlife interactions. The program publishes a guide entitled “Living with Wildlife” and JBER staff are participants in the planning group responsible for the document and its revision. In 2000 JBER became a signatory to the 2000 MOU Regarding a Comprehensive Wildlife Management Plan, Living with Wildlife in Anchorage: A Cooperative Planning Effort for Anchorage, Alaska (FWS70181-9-K235). Other key signatories included ADF&G, the Municipality of Anchorage, USFWS, and other land and natural resource management agencies. Two of the stated goals of this program are to “Minimize opportunities for conflicts between wildlife and people” and “Foster a sense of stewardship for wildlife and their habitats among the public, non-governmental organizations, and local governmental agencies.”

Scope

The task goal is to support the military mission by minimization of wildlife conflict impacts on human health and safety and military operations. Data from this project will be used in support of human/wildlife conflicts risk management decisions.

This SOW will be conducted in accordance ADF&G’s established analytical protocols with U.S. Geological Survey (USGS) genomic laboratory, with Cooperator is responsible for sample DNA genotype data identified in the JBER Black Bear DNA Study Work Plan.

The purpose of the JBER Black Bear DNA Study is to support the military mission by minimizing human-bear conflicts on JBER lands, particularly near military operations and the cantonment areas. The project will identify high risk areas (hot spots) from nuisance bear calls and begin a monitoring program focused on problem bear issues on JBER.

Primary objectives for the JBER Black Bear DNA Study:

1. Estimate the number of individual black bears responsible for nuisance calls within the cantonment area on JBER;
2. Identify periods of peak and reduced calls of nuisance black bear responses from den emergence in May until October. This will focus on the cantonment area on JBER.

3. Utilize DNA sampling of residue left by bears at conflict sites such as garbage cans, to generate individual genotypes. Use that data to estimate degree of relatedness among nuisance bears, and test the hypothesis that nuisance behavior of black bears on JBER is a learned behavior following matriarchal lineages.

Secondary Objective:

1. Utilize DNA collected from harvested bears to determine the degree that the current JBER black bear hunt could reduce nuisance bear numbers on JBER.

Kick-Off Meeting and Project Outline

Within the first quarter post-award, the COOPERATOR will schedule a kick-off meeting with all parties involved (JBER, ADF&G, COOPERATORS, etc.) to discuss the project, and develop a project schedule to implement the SOW. The cooperator or principal investigator is responsible for all meeting minutes and distributed to all parties within 10 working days of the meeting.

Work Plan/Fieldwork Preparation

A Bear DNA Analysis Protocol, including Quality Assurance Project Plan (QAPP) and reporting requirements will be developed and completed by the Cooperator with assistance from of ADF&G, USGS, and the JBER-Natural Resource Manager. The protocol will be based on the tasks and methods, deliverables, and schedule presented in this document and kick-off meeting discussions. The protocol shall be approved by JBER-Natural Resource Manager and ADF&G prior to initiating analysis work. The protocol will define the schedule for all required tasks and methods to complete the projects and required deliverables. A draft will be provided to the JBER-Natural Resource Manager and ADF&G for review and comment within 60 days of the task order award. The government shall be afforded 14 calendar days review period and shall provide the Cooperator with comments to utilize for finalization of the document. The Cooperator shall utilize the government comments to make final edits and changes to the work plan. Any field deviations will be documented in field notes and require verbal concurrence from the JBER-Natural Resources Program Manager. Any field deviations that modifies the project scope must be approved by the USACE Grants Officer prior to any action being taken.

Fieldwork/DNA Analysis

This task includes support of the collaborative study between Alaska Department of Fish and Game ADF&G and JBER Natural Resources program involving a multi-year Black Bear DNA project. The Cooperator will work closely with the JBER technical POC, JBER-CSU support staff CLEOs and ADF&G staff. The work would support the study between Alaska Department of Fish and Game ADF&G and JBER Natural Resources Program.

The DNA sample analysis component of this study is anticipated to be conducted by a MS Student under the supervision of ADF&G and USGS. Based on the established analysis plan of the project DNA samples will be sent to ADF&G and the University of Alaska, Anchorage for cataloging and analysis. The project assumption is a MS Student will work in conjunction with the USGS genomic laboratory to accomplish this work. All genotype identification, QAPP protocol and reporting requirements will be delineated in the Bear DNA Analysis Protocol.

Under ADF&G direction the Cooperator (anticipated to be a MS Student) is responsible for leading the following aspects of the study:

- Work with JBER Technical POC and ADF&G to support the JBER Black Bear DNA Study as described above;

- Assist ADF&G with DNA laboratory analysis;
- Responsible for sample DNA genotype data database;
- Compile and summarize samples collected;
- Accomplish and coordinate data analysis, report writing.

Draft/Draft Final/Final Project Reports

Bear DNA Genotype Database

The COOPERATOR shall develop, establish, and input a Microsoft Access database for cataloging the Bear DNA samples and results. The COOPERATOR shall work with the JBER-Natural Resources Manager and ADF&G to determine the type of data to be included in the database. One electronic copy of the database with the first year data results shall be provided to the JBER-Natural Resource Manager and ADF&G within 60 days of end of analysis. The database shall include all related data associated with the applicable systems identified in the kick-off meeting minutes and analysis plan.

Bear DNA Genotype Summary Report

To keep the Bear DNA analysis consistent with the larger JBER, Management, Species, Nuisance Wildlife Project, A Bear DNA Genotype data summary report will be completed for each year of results. One electronic copy shall be provided to the JBER Technical POC at the end of the analysis. The analysis report should contain at a minimum: methodology, results and discussion, including tables and graphs; narrative regarding the quality assurance and quality control of the data and results (data accuracy); overall success and discussion of any issues and recommendations towards additional analysis for the data in the future. Copies of all analysis will be provided as an attachment or separate electronic file to the JBER Technical POC.

The draft report shall be submitted to the government within 90 days of the end of the field season survey effort. The government shall be afforded 14 calendar day review period. The COOPERATOR shall utilize the government comments to make final edits and changes to the draft project summary report. One set of all lab notes and/or lab data forms, photos, and GIS data (if any), and access database of all data (above mentioned Bear DNA Genotype Database) shall be submitted digitally alongside the report to the JBER-Natural Resource Manager.

Nuisance Wildlife – Bear DNA Analysis Deliverables

Deliverable Title	Submission Schedule
<ul style="list-style-type: none"> - Draft Bear DNA Analysis Protocol and QAPP (deliverable A) - Final Bear DNA Analysis Protocol and QAPP (deliverable A1) - List of Project Supplies and Materials (deliverable A2) 	<ul style="list-style-type: none"> - Deliverable A: Within 60 days of Task Order award - Deliverables A1 and A2: Within 15 working days of receiving comments from the JBER Technical POC
<ul style="list-style-type: none"> - Draft Bear DNA Genotype Database (deliverable B) - Final Bear DNA Genotype Database (deliverable B1) 	<ul style="list-style-type: none"> - Deliverable B: Established during kick-off meeting, but no later than 30 days prior to start of DNA analysis - Deliverable B1: 60 days of end of analysis
<ul style="list-style-type: none"> - Draft Bear DNA Genotype Data Summary Report (deliverable C) - Final Bear DNA Genotype Data Summary Report (deliverable C1) - Season Lab Data (deliverable C2) 	<ul style="list-style-type: none"> - Deliverable C: Within 90 days of completion of field work - Deliverable C1 and C2: Within 15 working days of receiving comments from the JBER Technical POC
<ul style="list-style-type: none"> - Installation Program Review (IPR) 	<ul style="list-style-type: none"> - Present in the Installation Program Review on JBER in Spring (typically March or April each year)

4. GENERAL REQUIREMENTS

The following requirements are common to all tasks listed above in Section 3.0.

4.1 Preparation

Provide professional report preparation, editing and printing which present study findings for future JBER planning purposes.

4.2 Equipment, Supplies, and Materials

Provide supplies and materials as necessary to conduct fieldwork for this study and prepare reports. Provide computers with GIS mapping capabilities and hard drives, to collect, analyze, and report on data collected. For safety reasons, cellular phones are required for Cooperator personnel to operate in the field on JBER-managed lands. Cooperator(s) are required to have a cellular phone and bear spray on their person when operating in the field on JBER-managed lands.

4.3 Transportation

If needed, provide 4X4 vehicle, ATV, snow machine, and air (rotary or fixed wing) support as necessary to complete surveys and monitoring studies.

4.4 Travel

Travel on JBER is required to accomplish some of the tasks identified in this SOW. In addition, travel is required to meet with various consulting agencies and stakeholders. Cooperator personnel may be required to travel on government-provided fixed or rotary wing aircraft during the execution of their studies on JBER-managed lands.

4.5 Cooperator Employee Government Access Requirements

4.5.1 All cooperators shall comply with applicable installation, facility and area commander installation/facility access and local security policies and procedures. The cooperator shall also provide all information required for background checks to meet installation access requirements to be accomplished by installation Provost Marshall Office, Director of Emergency services or Security Office.

4.5.2 The cooperator will ensure that its employees entering JBER installations or facilities have obtained access badges and passes in accordance with facility regulations and that these badges and passes are obtained in advance so as not to delay the accomplishment of services.

4.5.3 The cooperator will return all issued US Government Common Access Cards (CAC), installation badges, and/or access passes to the Government Representative when the project is completed or when a cooperator employee no longer requires access to the installation or facility.

5. GOVERNMENT FURNISHED INFORMATION AND EQUIPMENT

The Government will not furnish any supplies or manpower in support of this agreement. The Government may furnish some sensitive equipment for use during field surveys as available and appropriate for specified field work. Sensitive equipment furnished may include GPS, binoculars, and digital cameras in an effort to standardize data collected as well as comply with sensitive equipment

rules/restrictions while on JBER. JBER will provide access to the installation, training on how to access training areas, how to identify and report ordnance, and how to avoid negative interactions with wildlife. Additional government furnished material includes:

- Coordination and signup for range training
- Historical and current aerial imagery and GIS data, if needed
- Military radio for field communication with Range Control, if available
- GPS Unit(s), if available
- Technical guidance and fieldwork support (fieldwork support only if JBER personnel are available)

6. DATA COLLECTION AND GIS REQUIREMENTS

Original data sheets will be delivered to the JBER-Natural Resources Program Manager no later than seven (7) days after the completion of each field event. Data sheet format will be approved by the JBER-Natural Resources Program Manager prior to first field event.

GPS waypoints will be submitted electronically using any Environmental Systems Research Institute's (ESRI) compatible GIS format or Garmin GPS exchange format (.gpx) if COOPERATOR equipment was used. All Government issued GPS /sensitive equipment will be turned in to the JBER-Natural Resources Program Manager immediately after each field event. GPS waypoint files will be provided electronically to the COOPERATOR for use in the data analysis.

All GIS data must be accepted and approved to be compatible by the 673 CES GeoBase GIS office to ensure compliance with AF GIS format. Data for this project will be collected using in compliance with Spatial Data Standards for Facilities, Infrastructure, and Environment (SDSFIE). The latest version should be used for data collection. Maps generated from GIS data will be reduced and included in reports. Data collection will be accurate enough to ensure reasonable accuracy on large scale maps. The collected data will be made available in layers as agreed by the COOPERATOR and the JBER-Natural Resources Program Manager. All original and AF formatted GIS information and data shall be delivered in the required format to the JBER-Natural Resources Program Manager.

All geospatial data must be delivered in the following format:

The horizontal coordinate system shall be Universal Transverse Mercator (UTM) coordinate system, Transverse Mercator projection, Geodetic Reference System 1980 (GRS80) spheroid, World Geodetic System 1984 (WGS84) datum, (WGS84 UTM Zone 6 North) and use metric coordinate units.

The vertical datum will be the North American Vertical Datum 1988 (NAVD 88). Further guidance on mapping units, coordinate systems and projections is available from the Installation GIO (673 CES GeoBase section).

7. DELIVERABLES

The following deliverable requirements are common to all project tasks listed in Section 3.0. The project specific deliverables are identified under the specified tasks in Section 3.0.

7.1 Field Work Events

Original data sheets will be delivered to the JBER-Natural Resources Program Manager no later than seven (7) days after the completion of each field event. Data sheet format will be approved by the JBER-Natural Resources Program Manager prior to first field event.

7.2 Prior to Project Closeout

The COOPERATOR shall provide all draft/draft final/final reports as identified. All reports and information collected shall not be released to the public unless permission is obtained in advance from the AFCEC/JBER ISS, and the JBER-Natural Resources Program Manager. All GIS data must be reviewed and approved by 673 CES GeoBase GIS office to ensure compliance with AF GIS compatibility.

7.3 Progress Reports

Progress reports shall be submitted to the USACE Project Manager and JBER POC quarterly via electronic mail no later than the 10th calendar day following the end of the reporting period. Invoices for partial payment shall be submitted to coincide with receipt of the quarterly progress reports. No partial payment will be approved unless the government has received all progress reports which are due.

8. PERIOD OF PERFORMANCE

The period of performance is 18 months from date of award.

9. POINTS OF CONTACT

The USACE GOTR and POC for Project Management is Ms. Charis Cooper. Cooperative agreement questions should be addressed to the Grants Officer, Mr. Olen Northern. Correspondence should be addressed as follows:

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The Air Force JBER-Natural Resource Manager is:

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Natural Resources Program Manager
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Compete POA-CESU-19-03
 Management, Habitat, Alpine Training Support (FXSB61425519)
 Management, Species, Nuisance Wildlife – Bear DNA Analysis (FXSBOS691419)
 Joint Base Elmendorf-Richardson (JBER), Alaska

Lease vs. Buy Evaluation Factors

The NFE shall provide a cost analysis for Lease vs. Buy factors. The following factors shall be considered at a minimum, and shall contain numerical values where applicable.

Factors	Lease	Buy
Estimated Period of Use/Extent of Use		
Financial Advantages		
Cumulative Rental Payments for Estimated Time Period		
Transportation and Installation Costs		
Maintenance & Other Service Costs		
Potential Obsolescence of equipment due to imminent technological improvements		
Availability of Purchase Options		
Potential for Use by other Agencies after preliminary use has ended		
Trade-in or Salvage Value		
Imputed Interest		
Can the equipment be serviced by the government or other sources if it is purchased?		
Total Cost:		

Factors	Lease	Buy
Estimated Period of Use/Extent of Use		
Financial Advantages		
Cumulative Rental Payments for Estimated Time Period		
Transportation and Installation Costs		
Maintenance & Other Service Costs		
Potential Obsolescence of equipment due to imminent technological improvements		
Availability of Purchase Options		
Potential for Use by other Agencies after preliminary use has ended		
Trade-in or Salvage Value		
Imputed Interest		
Can the equipment be serviced by the government or other sources if it is purchased?		
Total Cost:		

Compete POA-CESU-19-03

Management, Habitat, Alpine Training Support (FXSB61425519)

Management, Species, Nuisance Wildlife – Bear DNA Analysis (FXSBOS691419)

Joint Base Elmendorf-Richardson (JBER), Alaska

Project Past Performance

Project Name,	
Project Location:	
Contract or Cooperative Agreement #:	
Size (Value):	
Technical Complexity:	
Technical Team Utilized:	
Point of Contact(s): Provide Email and phone number	