

# **Scope of Work for Integrated Natural Resource Management Plan Project Implementation at Commander Navy Region Southeast Installations**

## **A. Introduction**

The purpose of this project is to conduct various biological surveys and other natural resource actions that support the implementation of the Integrated Natural Resource Management Plans (INRMPs) of several naval installations in the Commander Navy Region Southeast. The Sikes Act Improvement Act of 1997 (PL 105-85) directed the Department of Defense to develop and implement INRMPs for the management, enhancement and protection of natural resources on its lands in support of military readiness. An INRMP is a plan focused, to the maximum extent practicable, on ecosystem-based management that shows the interrelationships of individual components of natural resource conservation (e.g., fish and wildlife, forestry, land management, outdoor recreation) to mission requirements and other land-use activities affecting a Navy installation's natural resources. The primary purpose of the INRMP is to ensure natural resource conservation measures and military operations on the installation are integrated and consistent with environmental stewardship, laws and regulations, and the military mission. As part of this process, updated biological surveys and habitat management and restoration actions are essential for providing new data to incorporate into INRMPs, and permit military natural resource specialists to make informed decisions regarding the management and conservation of natural resources on the installations they oversee.

## **B. Services Requested**

The Cooperator shall furnish all labor, supervision, tools, materials, equipment, and transportation necessary to complete the tasks outlined in this scope of work. The Cooperator will be responsible for obtaining all applicable state and federal permits and installation access required to conduct the surveys.

### **Task 1: Meetings and Progress Reports**

Within 30 days of execution of this cooperative agreement, the Cooperator shall organize a teleconference kick-off meeting to discuss points of contact, logistics and access, security and safety issues, and the requested work (e.g., proposed work dates, methods, data collection, personnel that will be involved). Within five business days of the kickoff meeting, the Cooperator shall submit a written summary (minutes) to the project team.

The Cooperator shall attend a teleconference within 30 days prior to the commencement of fieldwork to discuss timelines, data collection methods, and installation access with the project team.

The Cooperator shall submit quarterly reports describing progress of the project to the points of contact listed below in Section G. The reports shall be due the last day of the third month (quarterly) and shall be transmitted via electronic mail.

### **Task 2a: Naval Air Station Key West (NASKW) Invasive Exotic Vegetation Control**

This task is primarily intended to provide habitat management services involving the removal and control of invasive exotic vegetation as defined by the Florida Invasive Exotic Pest Plant Council (FLWEPPC) on NASKW. Priority should be considered based on categorical ranking, level of infestation and feasibility. The Cooperator shall focus on removal and control of the following species within habitats that have the potential to support the at-risk Lower Keys Marsh Rabbit : Australian pine (*Casuarina equisetifolia*), Brazilian peppertree (*Schinus terebinthifolia*), Lead tree (*Leucaena leucocephala*), Seaside mahoe (*Thespesia populnea*) and Asiatic Colubrina (*Colubrina asiatica*). Control methods shall involve industry-approved methods that effectively remove exotic vegetation and apply post-removal treatment with herbicide. Following removal of invasive exotic vegetation, selected areas will be restored through re-planting of appropriate native plant species. Areas for invasive exotic plant control and revegetation plans shall be developed in coordination with the NASKW Installation Environmental Program Director (IEPD) and Installation Natural Resource Manager (NRM).

Prior to initiating work on this task, the Cooperator shall develop a detailed work plan that identifies specific restoration and management tasks in collaboration with NRM and IEPD at NASKW. The work plan shall identify the specific location(s) of proposed work, acres, the type of management actions, and other details of the proposed project. Work shall not commence until a final work plan is approved by the installation environmental management staff.

### **Task 2b: Lower Keys Marsh Rabbit Habitat Management**

The Cooperator shall conduct habitat management actions in selected areas of Lower Keys Marsh Rabbit (LKMR; *Sylvilagus palustris hefneri*) habitat on NASKW. The goal of this task will be to identify LKMR habitat requiring restoration and improvement enhancements. LKMR habitat patches with an excess of 20% cover of overstory hardwood vegetation should be considered suboptimal and shall be targeted for management action.

Once LKMR areas are identified, the Cooperator shall develop a detailed work plan to effectively reduce and maintain overstory vegetation in LKMR habitat optimally between 0%-20% cover. The work plan will be developed in collaboration with the NRM and the IEPD at NASKW. The work plan will include methods, work timelines, and a list of subcontractor staff to conduct the vegetation removal work (with qualifications of field personnel) to be approved by the Navy Technical Representative (NTR) and NRM prior to commencement of field activities. The work plan will identify the specific location of proposed work, management actions, and other details of the proposed project. Work shall only commence once a final work plan is approved by the Government.

The following approach will be used to implement habitat management in areas identified by the Navy as high-quality LKMR segments with significant hardwood encroachment:

The Vegetation Removal Work Plan shall describe the specific amount of hardwood vegetation to be removed from each segment as a proportion of total hardwood vegetation present and include specific methods for removal and disposal.

The density of hardwood vegetation within the habitat area (e.g., buttonwood, mangrove, other species) shall be documented using scientific estimation methods as pre-work documentation of site conditions. All hardwood vegetation shall be cut flush with the ground, with no stumps extending beyond 6 inches. All cut stumps shall be treated immediately with a cut-stump treatment of Garlon 4-A or equivalent. Herbicide application shall occur immediately following cutting, e.g., within one minute, to ensure effective treatment. All hardwood vegetation shall be removed from Navy property and disposed of in a lawful manner. Following hardwood removal, the Cooperator shall document post-vegetation removal conditions using the vegetation density assessment techniques used pre-work, and also take photos at the fixed photo points. The Cooperator shall prepare a project report documenting pre- and post-work conditions within each treatment area. The report shall include the density of vegetation before and after work was completed, the approximate amount of vegetation removed, the number of man-hours required for the removal effort, pre-and post-work site photos, significant findings, and recommendations for future management.

### **Task 2c: Lower Keys Marsh Rabbit Population Monitoring**

The Cooperator shall conduct annual LKMR population monitoring on NASKW properties in accordance with established LKMR Management Plan and consistent with the established monitoring program and data collection and analysis protocols. The Cooperator will conduct annual LKMR fecal pellet surveys to identify population abundance and spatial distribution on NASKW properties. Post data collection, the Cooperator will prepare a comprehensive annual report that summarizes the findings of annual population abundance and spatial distribution of LKMR populations on NASKW. The annual LKMR population density study should provide insight on the overall condition and presence of the species observed throughout NASKW properties and offer suggestions and recommendations for improving habitat quality for the LKMR. The Cooperator will analyze data and compile survey findings into a report offering suggestions and recommendations for future management methods and strategies.

### **Task 2d: Native Vegetation Planting and Monitoring**

The Airfield Vegetation Conversion Project (AVCP) was a large-scale wetland conversion and mitigation project located on Boca Chica Field (the main airfield located on NASKW). Implementation of the AVCP required the creation of wetland mitigation areas including created wetlands and hydrologic improvement projects. This task is intended to implement native vegetation planting efforts of the airfield vegetation conversion and other habitat areas on NAS Key West properties as needed. The task will involve identifying areas suitable for planting native species appropriate vegetation in areas identified in poor or reduced condition. The Cooperator will work with the installation NRM and IEPD to develop a detailed work plan outlining the specific locations, revegetation plan, resources, methods, and project specific details. Qualitative and quantitative assessments of native vegetation plantings shall be

documented and compiled into a report detailing pre and post treatment conditions, significant findings, and recommendations for future management.

### **Task 2e: Reporting for Tasks 2a-2d**

**Draft and Final Work Plan:** The Cooperator shall develop a single work plan that will include the elements noted in tasks 2a-2d. The work plan shall identify specific restoration and management tasks in collaboration with natural resource personnel at NASKW. The work plan shall identify the specific location(s) of proposed work, acres, the type of management actions, and other details of the proposed project. Work shall not commence until a final work plan has been approved by Government.

**Health and Safety Plan:** The Cooperator must submit a detailed risk assessment and safety plan conforming to OSHA standards for all tasks to be completed on NASKW.

**Draft/Final Project Report:** The Cooperator shall submit a draft and final summary report for tasks 2a-2d no later than one month before end of the project. The report shall summarize the tasks completed, methods, results, and discussion. NASKW Environmental staff and the Contracting Officer Representative (COR) shall review and provide comments, if any, within fifteen calendar days after receipt. The Cooperator shall incorporate the Government comments received on the draft report and produce a final report. The report is due prior to the period of performance end date.

**Table 1. Deliverables and Due Dates for Tasks 2a-2d.**

<b>Deliverable</b>	<b>Due Date</b>
Tasks 2a-2d: Work Plan (Draft/Final)	July 2024
Health and Safety Plan	July 2024
Task 2c: Lower Keys Marsh Rabbit Population Monitoring (Draft/Final)	August 2025

## **Task 3: At-risk Shorebird Surveys at Naval Air Station Corpus Christi**

### **Task 3a At-risk Shorebird Survey**

The purpose of this study is to perform shorebird surveys for at-risk bird species, such as the Piping Plover (*Charadrius melodus*), at Naval Air Station (NAS) Corpus Christi. The resulting report and data will aid in ensuring compliance with applicable federal, state and local statutes and regulations, and with DoD policies, instructions and guidance. The project area will include two areas of Piping Plover critical habitat (TX-11 & TX-12) located adjacent to Oso Bay on installation property. The goal of this project is to determine the presence of at-risk shorebird species on NAS Corpus Christi.

Before beginning the biological surveys, the Cooperator shall review past biological inventories to identify data gaps critical to natural resource management at the properties. Survey and data collection methods shall be those that are scientifically acceptable for shorebird species and shall

be approved in advance by the NRM and NTR. Surveys shall be designed to have sufficient duration and intensity (statistical power) to reasonably indicate the absence of a species if a species that is not found on the property. Surveys shall be conducted during appropriate seasons and time of day to ensure the likelihood of detection. Color photographs will be provided of rare, threatened and endangered species observed during the inventory. The Cooperator shall provide management recommendations for the preservation, conservation, and enhancement of at-risk shorebird species and their habitat on the naval installation.

A Global Positioning System instruments (GPS) capable of less than one meter accuracy will be utilized to define survey areas and bird locations. Data will be incorporated into GIS systems software consistent with parameters identified in Attachment A, Commander Navy Region Southeast (CNRSE) Standards for Geographic Information System (GIS).

### **Task 3b: At-risk Shorebird Reporting**

Within 30 days of completion of the at-risk shorebird surveys, the Cooperator shall submit a draft report (MS Word format) for the Government's review. The report shall include the following sections: Title Page, Executive Summary, Introduction, Materials and Methods, Results, Discussion, Conclusions, Literature Cited, and Appendices. The report shall include, at a minimum: a description of the survey methods and materials; maps; results, data and observations; and recommendations for future surveys and habitat management. Draft and final documents shall be distributed to the points of contact in Section G below via DoD Safe (<https://safe.apps.mil/>).

The Government shall conduct a technical review of the draft report and provide edits/comments to the Cooperator within 30 days. The Cooperator shall incorporate the Government's comments and provide a final report within 30 days of receiving the Government's comments.

Drawings and maps should be prepared in the most up to date and installation compatible version of ArcGIS. See Attachment A, Commander Navy Region Southeast (CNRSE) Standards for Geographic Information System (GIS) Deliveries for further details and guidelines.

**Table 2. Deliverables and Due Dates for Task 3.**

<b>Deliverable</b>	<b>Due Date</b>
Draft Piping Plover Survey Report	June 2025
Final Piping Plover Survey Report	August 2025

### **Task 4: Bat Surveys at Naval Air Station Kingsville**

#### **Task 4a: Bat Mist Netting Surveys**

The purpose of this study is to conduct a mist netting survey to verify presence of bat species that may utilize the installation property, particularly the species that are currently Endangered Species Act-listed or those species currently Under Review by the USFWS. The Cooperator shall obtain all required state and federal permits in advance of the 2024 field season, and shall coordinate with the NAS Kingsville NRM for base access.

The Cooperator shall conduct two mist netting survey events for bat species on NAS Kingsville between May 1 and June 30, 2024. Each trapping event shall be three (3) consecutive nights, weather permitting, with at least 4 weeks (28 days) between events. The surveys shall be conducted in weather conditions that satisfy the recommended USFWS guidelines, including air temperatures above 10 degrees Celsius, little to no precipitation, and light winds for the majority of the survey night. During the surveys, nets shall be checked at least once every 10 minutes. Captured bats shall be identified to species by the permitted bat biologist, and the sex, age, reproductive status, mass, forearm length of each bat shall also be documented. Photographs shall be taken of all species captured. To alleviate possible transmission of white nose syndrome (WNS), equipment such as bags that held bats, nets, and all surfaces (measuring equipment, gloves, etc.) that come in contact with a bat shall be decontaminated following the most current USFWS protocols.

The Cooperator shall coordinate with the NAS Kingsville NRM to determine the survey (mist-net) locations. Each net location will be recorded with a GPS and assigned a unique identifier. Each night, the Cooperator will operate two (2) mist-net locations (arrays) simultaneously. The Cooperator will take measures sufficient to ensure the safety of captured bats and personnel. Nets should be set up in order to maximize capture probability of all bat species that occur in the area. In coordination with the NAS Kingsville NRM, the Cooperator may choose to move nets to different locations to maximize bat capture. Per USFWS permit requirements, captured federally-listed bats will be tagged and tracked for 5 days/nights using radio transmitters.

#### **4b: Bat Survey Reporting**

The Cooperator will record and report the GPS location and survey dates for mist-net locations, bat capture data, and photographs of captured bats. Captured bats will be photographed and identified to species. The mass (grams), sex, forearm length, and age class of each bat will be recorded and reported in an Excel spreadsheet. Lastly, any signs of captured bats having the disease white noise syndrome shall be reported.

Within 30 days of completion of the second bat survey event, the Cooperator shall submit a draft report (MS Word format) for the Government's review. The report shall include the following sections: Title Page, Executive Summary, Introduction, Materials and Methods, Results, Discussion, Conclusions, Literature Cited, and Appendices. The report shall include, at a minimum: a description of the survey methods and materials; maps; results, data and observations; and recommendations for future population monitoring and habitat management, particularly for Endangered Species Act listed and at-risk species. The Cooperator shall also submit the following items: photographs of captured bats with unique identifiers that correspond to the bat capture data; an Excel spreadsheet of the biological data including the capture location, species, capture date, sex, weight, forearm length, and age class for all captured bats; and GIS shapefiles of the survey sites (each site with a unique identifier) and the survey dates. Geospatial data shall be consistent with the Navy's current standards (Attachment A).

The Government shall conduct a technical review of the draft report and provide edits/comments to the Cooperator within 30 days. The Cooperator shall incorporate the Government's comments and provide a final report within 30 days of receiving the Government's comments.

**Table 3. Deliverables and Due Dates for Task 4.**

<b>Deliverable</b>	<b>Due Date</b>
Draft Bat Survey Report	June 2025
Final Bat Survey Report	August 2025

### **C. Role of the Government**

1. Substantial Government involvement in all tasks listed above is expected. Government involvement will include participation in development of study methodology; field work; data collection and analysis; vegetation monitoring; wildlife plantings; and invasive species control. In addition, Government personnel will provide project assistance, technical assistance/oversight and coordinate safety planning for projects and provide a job hazard analysis for installation projects. Lastly, the Government shall review and comment on all draft plans and reports developed by the Cooperator.
2. The Government shall provide previously developed GIS data layers, and prior survey reports related to the tasks above to assist the Cooperator with the services requested. A current version of the installations INRMP shall also be provided to the Cooperator.
3. The Government will assist in obtaining security passes for the Cooperator and interfacing with range control to schedule fieldwork.

### **D. Role of the Cooperator**

1. To comply with all Occupational Safety and Health Administration (OSHA) requirements. It is the Cooperator's responsibility to conduct all field activities safely and avoids damage to property. Cooperator personnel shall wear appropriate high-visibility safety apparel (garment, vest, or harness of retro-reflective and fluorescent material) meeting ANSI/ISEA 107-2004 requirements. Appropriate garment shall be based on the hazards and tasks, complexity of the work environment or background, and vehicular traffic and speed. As a minimum, the Cooperator personnel shall wear ANSI/ISEA 107-2004 Class I compliant apparel when working outside.
2. To obtain all necessary program management actions to ensure this agreement remains on schedule and within budget. The Cooperator is responsible for communicating with the COR and TPMs for any problems that arise and to identify corrective solutions.
3. To provide the necessary qualified personnel and equipment to perform the tasks for this project. This includes study design, labor, transportation, equipment, material, tools, supplies, engineering, supervision, and administration services.
4. To comply with all applicable federal and state laws, statutes, ordinances, instructions, manuals, handbooks, regulations, guidance, policy letters, installation Environmental Management Systems and rules (inclusive of changes and amendments) and Presidential Executive Orders in effect on the date of issuance of the cooperative agreement.

5. To obey station regulations, including fire, traffic, and security regulations. Personnel will not enter restricted areas unless required to do so and only when cleared for such entry.
6. The Cooperator shall be responsible for scheduling and coordinating field activities such as surveying with the installation NRM, and other necessary base personnel.
7. The Cooperator shall be responsible for providing information necessary to obtain security passes for all personnel and vehicles requiring access to naval installations and shall submit the information necessary to obtain the security passes at least three weeks in advance of needing access.
8. To obtain all applicable permits and licensing in accordance with local, state, and Federal laws and regulations necessary to perform the services requested.
9. At the conclusion of the project, all materials purchased for this project shall be provided to the Government.

## E. Government Furnished Materials and Property

Government furnished materials or property is governed by 2 C.F.R. Part 200.312 which states that a) Title to federally-owned property remains vested in the Federal government. The non-Federal entity must submit annually an inventory listing of federally-owned property in its custody to the Federal awarding agency. Upon completion of the Federal award or when the property is no longer needed, the non-Federal entity must return the property to the Federal awarding agency for further Federal agency utilization.

## F. Period of Performance

**Base Award** - Work will begin from the date of award and extend 18 months in total. Fieldwork will occur for a minimum of the first 12 months of the period of performance, with up to six months of annual and cumulative analyses and reporting occurring within the 18-month period of performance. These elements are non-severable.

**Option Years** - Option year awards could occur 12 months after the base award is awarded and annually thereafter for each option period. This allows for continuous fieldwork (each 12 months) with overlapping periods of performance for analyses and reporting. Thus, as shown below, option period fieldwork shall begin from the date of award and extend at least 12 months with an additional 6 months for reporting, totaling an 18-month period of performance for each Option Period (with 6 months of overlap with prior period). Award of option periods is contingent on project conditions, project needs, and available funding. The cost of optional years would not be pre-negotiated.

	Months 1,2,3	Months 4,5,6	Months 7,8,9	Months 10,11,12	Months 13,14,15	Months 16,17,18															
Base 18 Months																					
					Months 1,2,3	Months 4,5,6	Months 7,8,9	Months 10,11,12	Months 13,14,15	Months 16,17,18											
Option Period 1 - 18 months																					
									Months 1,2,3	Months 4,5,6	Months 7,8,9	Months 10,11,12	Months 13,14,15	Months 16,17,18							
Option Period 2 - 18 months																					
															Months 1,2,3	Months 4,5,6	Months 7,8,9	Months 10,11,12	Months 13,14,15	Months 16,17,18	
Option Period 3 - 18 months																					
																		Months 7,8,9	Months 10,11,12	Months 13,14,15	Months 16,17,18
Option Period 4 - 18 months																					



Optional Tasks – The Government may add additional tasks that support the implementation of Department of the Navy INRMPs in the southeast region during the period of performance of this agreement. The addition of tasks shall be contingent on project needs and available funding.

#### **G. Points of Contact**

- Contracting Officer Representative (COR)  
Chris Petersen  
Naval Facilities Engineering Command Atlantic  
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