

SCOPE OF WORK

Argentine Ants (*Linepithema Humile*) Detection, Monitoring, And Eradication Effort On Naval Base Coronado, Naval Auxiliary Landing Field San Clemente Island, CA

I. BACKGROUND

There are thirteen known ant species on SCI, including the non-native Argentine ant (*Linepithema humile*) and twelve native ant species, four of which are Channel Island endemics (Holway & Ward 2011). Argentine ants are an extremely invasive ant species that has spread worldwide resulting in detrimental ecological impacts. This invasive species alters biological communities by negatively affecting native ant populations, other invertebrates, plants and pollinators, terrestrial vertebrates and birds. Argentine ants can cause avian nest failure either directly by predation of nestlings or indirectly by reducing arthropod abundance in foraging areas. SCI supports three federally listed bird species, a listed lizard, and numerous endemic species; eradication of Argentine ants may be critical to recovery and delisting of threatened or endangered species at SCI. Surveys indicate that the Argentine ant population is concentrated in the northern end of the island, making eradication possible on San Clemente.

This project implements, in part, the Commander Navy Region Southwest's (CNRSW) responsibilities pursuant to the Endangered Species Act (16 USC 1531 et seq.), specifically Biological Opinion FWS-LA-09B0027-09F0040, the Sikes Act Improvement Act (16 USC 670 et seq.), and Executive Order 13112. Under a Cooperative Agreement this work would utilize Navy and Cooperator resources to achieve required natural resource management in direct support of the SCI Mission.

II. PERIOD OF PERFORMANCE

The period covered by this Scope of Work (including report preparation, review, submittal of final invoice, invoice payment, etc.) is 3 years from the date of award. The 3-year period of performance is driven by biological factors. Fieldwork would occur in the 3-year period to ensure adequate monitoring of this invasive species threat, treatment application, and efficacy assessment under various seasonal/precipitation-driven conditions.

III. PERFORMANCE OBJECTIVES AND REQUIREMENTS

The goal of this project is to eradicate Argentine ants from SCI and implement a monitoring program to detect future infestations for bio-security. In support of this goal, the following specific tasks are anticipated: 1) Detect and delineate (map) the population of Argentine ants on SCI; 2) Develop detection protocols for Argentine ants at low densities to aid in the eradication of this invasive species; 3) Develop and implement an eradication program; 4) Conduct monitoring to assess the efficacy and effects of the eradication methods; and 5) Prepare reports including work and safety plans, quarterly progress reports, Operational Plan, Licensed Pesticide Application reporting, a Detection Protocol, and a final report.

The Navy (SCI Wildlife Biologist and/or Botanist) will be an active, cooperating participant throughout the project to advise and oversee progress as it relates to the objectives and requirements stated herein.

Specific Requirements in support of the above objective include:

1. Develop a Work Plan that describes the project's tasks and personnel, quality control practices, and timeline.
2. Develop a delineation/detection protocol to be used to detect low-density infestation at the initial delineation phase, during eradication efforts, for post-eradication confirmation of success, and for future biosecurity monitoring.
3. Delineate the SCI Argentine ant population current range or areas of current infestation. Delineation shall be documented through GIS coverage within a known projection system and including an attribute table or another form of metadata.
4. Develop an Operational Plan for Argentine ant eradication that can be supported by Naval Base Coronado (NBC) (e.g., has impacts to ESA-listed species that are minimal or able to be mitigated) and permitted appropriately.
5. Implement Operational Plan and conduct post-treatment monitoring to assess treatment efficacy and any non-target effects.
6. Adaptively and prescriptively continue or adjust treatments (if necessary) within the parameters of the permits, plans, and agreement to meet project goals.
7. Submit a Safety/Accident and Hazard Prevention Plan, quarterly progress reports, copies of any pesticide applicator reporting, and Draft and Final Annual Reports (for 2013 and 2014).
8. Meeting attendance: including a scoping/kick-off meeting prior to the start of fieldwork.
9. Any unusual animal or plant species observed while conducting surveys in the field (e.g., species not known to occur at SCI) shall be immediately reported to the NBC Representative.

IV. DELIVERABLES

1. Draft and Final Work Plan: A Work Plan that includes, at a minimum, locations of all study/work areas; explanation of data collection/monitoring methods, and equipment design; database structure; a deliverables timetable; quality control and safety procedures and checks; copies of necessary permits or certifications (pesticide applicator if necessary); island and range access policies and procedures; and communications policies/plans. The Final Work Plan shall incorporate response to NBC Representative comments from the draft plan within 10 days.
2. Draft and Final Safety Plan/Accident and Hazard Prevention Plan: The Contractor shall prepare and submit within 30 days of the award of this Contract issuance an Accident Prevention Plan (APP) that includes a job hazard analysis in these documents for all tasks

reasonably anticipated by the Contract requirements in order to ensure a safe work environment for all personnel involved.

3. Mission Essential Requests: The NBC Representative may request updated data (presented on maps, figures and/or tables) whenever the Navy's requirement to secure this information cannot wait for the next quarterly progress report.
4. Draft and Final Delineation/Detection Protocol. The Contractor shall prepare and submit within 30 days of acceptance of the Final Work Plan the Draft Delineation/Detection Protocol. The Final Plan shall incorporate response to NBC Representative comments from the Draft Plan within 10 days.
5. Draft and Final Operational Plan. The Contractor shall prepare and submit within 60 days of conducting the delineation fieldwork a Draft Operational Plan for the eradication of Argentine ants from SCI. The Final Plan shall incorporate response to NBC Representative comments from the Draft Plan within 10 days.
6. Quarterly Progress Reports: These reports shall be brief reports that outline accomplishments of past quarter and progress toward achievement of project objectives.
7. Draft and Final Annual Reports (for 2013, 2014, and 2015): Annual reports shall detail methods, results, and discussion based on work accomplished during the prior season. Journal of Wildlife Management shall serve as the standard for format and style. The Cooperator shall work cooperatively with the Navy to resolve all comments provided by Navy representatives. The final report shall respond to comments from the NBC Representative on the draft report within 30 days of receipt of government comments and shall be submitted in Word and PDF formats. All data collected under this and previous Agreements are the property of the U.S. Navy. Raw data and a copy of each reference cited in the Final Report Literature Cited section shall be submitted concurrent with the Final Report. Raw data should, at a minimum, be submitted in hardcopy format literature cited articles or sections may be submitted in hardcopy or electronic copy as convenient and/or efficient. A total of 4 bound copies are to be submitted with the report title, date and author clearly and permanently affixed to the spine of the binding. A PDF electronic copy is also required on CD.
8. GPS data collected shall be submitted as coordinate data. The format of data delivery shall be coordinated with the NBC Representative.
9. Photographs: All digital photographs taken for this study shall be submitted with the Final Report to the NBC Representative, and shall become US Navy property. All digital photo files will be labeled with at least the following information: 1) subject/activity, 2) location (specific place), 3) date, and 4) photographer.
10. Any publications produced from this work must be approved by NBC Representative prior to submission for publication.

V. STIPULATIONS AND RESTRICTIONS

A. Stipulations:

1. The Recipient shall provide all equipment (unless otherwise stated) and analyses necessary to complete the work described herein. All data (raw and associated files), photographs, and equipment or supplies < \$5,000 per unit in value purchased with CESU Agreement funds (including computer software) shall become the property of the Department of the Navy (DoN) at the end of the Agreement.

2. The Recipient shall provide the NBC Representative the names and resumes of staff that will be conducting the surveys required in this Agreement. At the minimum, the Recipient shall have the qualifications described below, but may, on a case-to-case basis, be waived by the NBC Representative:
 - a. A Bachelor of Science degree in ecology, biology, wildlife biology, zoology or a field related to the biological sciences from an accredited college or university.
 - b. The Recipient shall have demonstrated experience with invasive invertebrate species.
 - c. The Recipient shall be in possession of a Licensed Pesticide Applicators Certification and have any required Local Use Permit or other authorization for off label use as necessary.
3. Windy and/or foggy conditions with highly variable temperatures may be encountered at any time on SCI. Many roads are rough and unpaved, and if wet, should be negotiated using extreme caution and four wheel drive. Many places on the island have precipitous terrain and may be covered with cactus. The Recipient's transit through such terrain must be done with the highest concern for the safety of personnel and with strict adherence to all Natural Resources Office Guidelines. The speed limit on unpaved roads shall not exceed 25 mph.
4. All work conducted in support of this Agreement shall comply with all federal laws applicable to CNRSW installations such as the Endangered Species Act and the Migratory Bird Treaty Act and applicable laws and regulations pertaining to the provision of safe and respectful workplace and to provide a work environment free of harassment and intimidation for such party's own employees and third parties.
5. The Recipient shall manage generated electronic waste (including alkaline batteries), bio-medical waste, hazardous material, hazardous waste, and hazardous waste residues in accordance with federal, state, and NBC regulations and policies.
6. It is the responsibility of the Recipient to obtain Installation Access through coordination with the SCI Natural Resources Operations Manager (619-524-9022). It is the responsibility of the Recipient to ensure that all project staff comply with NBC and SCI policies, regulations, and procedures while at SCI and NBC.
7. Prior to entering the field each day, the Recipient shall notify SCI Police by telephone as to the area or areas where work will be accomplished. Upon returning from the field, the Recipient shall check-in with SCI Police by telephone or in-person.
8. Staff working on this Agreement shall carry a functioning two-way radio while conducting fieldwork on SCI, to be provided by the Navy.
9. No ground disturbing activities may take place at SCI without approval from the NBC Representative and Unexploded Ordnance Technician escort. Additionally, to avoid impacts to federally listed, rare, or endemic plants the Recipient and/or their representatives must coordinate all vegetation disturbing activities with the CNRSW Botany Program Manager. Under no circumstances are any federally protected plants to be disturbed and/or destroyed when completing the work required in this Agreement.
10. Under no circumstances are the Recipient and/or his staff(s) to violate the Archeological Resources Protection Act. If any objects are found that appear to be cultural or archeological resources contact the CNRSW Cultural Resources Program Manager at (619) 532-2800.

11. No buildings will be modified without permission from the Naval Base Coronado Public Works Officer and the CNRSW Architectural Historian. The Recipient and/or his staff(s) shall not violate the National Historic Protection Act.
12. The NBC Representative and the SCI Police shall immediately be notified of any unusual activity observed while conducting surveys in the field (e.g., trespassers). Information should include location, date, time and any pertinent detailed facts regarding the activity.
13. All personnel must complete Unexploded Ordnance (avoidance) training prior to working on SCI. This can be arranged through the NR OM at (619) 524-9022.
14. Unexploded ordnance may be encountered while conducting fieldwork. Recipient shall not touch or attempt to pick-up any suspected ordnance. Recipient shall place flagging in the general area of the ordnance and notify the Southern California Offshore Range (SCORE) contact, Mr. Les Stone, of the location of the ordnance as soon as possible.

B. Restrictions:

1. The primary use of SCI is for its military mission. Without prior notice, designated areas may become closed to the activities of the Recipient. In some cases, due to operations or other circumstances, it may be necessary to deny the Recipient access to portions of SCI for short periods of time. In such cases, the Recipient will be provided notification of such as soon as possible. It is the responsibility of the Recipient to reschedule this work as feasible (if not precluded by long-term access restrictions)
2. The Shore Bombardment Area (SHOBA), Training and Range Areas (TARs) and Special Weapons and Tactics Areas (SWATs):
 - a. Access requests to mapped range areas (SHOBA, TARs and SWATs) must be made through SCORE. Access to SHOBA, SWATs, and TARs must be confirmed no more than 24 hours prior to access the area.
 - b. The Recipient is restricted from entering the SHOBA Impact Areas (I and II) and other areas designated by the SCI OIC as Exclusion Areas due to the presence of unexploded ordnance. At the time of this writing, the following areas are off-limits/exclusion areas: Lemon Tank-Nanny BLU-97 area, Eel Point 40mm Range, and Installation Restoration Site 14.
3. The SHOBA gate key may be obtained from the SCI Police at Building 60151. The Recipient shall call the Police from the SHOBA gate (if the phone is operational) if departure from SHOBA is within one hour of the end of scheduled access time to confirm departure and shall directly return the gate key to Security.
4. Naval Special Warfare Basic Underwater Demolition School (BUDS) and Maritime Operations (MAROPS) SWATs 1 & 2 shall not be accessed unless they are schedule for use by the Recipient, confirmed within 24-hours on the SCORE schedule, BUDS Camp/MAROPS personnel have confirmed that the area is not in use by NSW, and the Bravo Flag is not flying. The Recipient shall further comply with the Procedures for Restricted Area Access (prepared by Jennifer Turner) and the SC Sage Sparrow SWAT 1 & 2 Safety Compliance Form (prepared by Melissa Booker).
5. Due to the classified nature of the activities at SCI, only those areas directly associated with the specifications of this Agreement may be visited. Restricted areas will only be entered by special permission.

6. Gates have been installed on various roads. When closed or a road block has been placed, they are not to be ignored or circumvented for any reason. If Agreement work is required behind a locked gate, the Recipient will immediately contact the NR OM at (619) 524-9022 or the NBC Representative (619) 545-7188 or (619) 571-2503 so that appropriate arrangements with the US Navy can be made to gain access.
7. Photography is restricted on SCI. Only photographs of Agreement-related activities are permitted.
8. No smoking is allowed in the non-developed areas of SCI.

VI. GOVERNMENT-SUPPLIED SERVICES

1. Air Transportation: The US Navy will provide the Recipient and/or his staffs with no-cost air transportation to and from SCI on a regularly scheduled air carrier.
2. Barge Transportation: Vehicles and other non-explosive equipment, supplies, and materials may be shipped to and from SCI on a regularly scheduled barge.
3. Unleaded gasoline and diesel fuel will be provided and can be obtained at Wilson Cove.
4. Medical Facilities: A Dispensary, Building 60126, staffed with a Navy Hospital Corpsman, is located at Wilson Cove, SCI. Service is limited and generally not available to Recipient and/or his personnel except on an emergency basis. MEDIVAC to the mainland can be provided under appropriate circumstances, but the Recipient will incur the charges for this service.
5. Housing: The Navy may provide limited berthing space in the NALF SCI Combined Bachelor Housing (Bdlg 121 or elsewhere) on a space available basis at no cost. Navy Gateway housing is also available at a cost to the Recipient.
6. Vehicle: The Navy may permit the use of a Natural Resources Program vehicle for limited times as available, but the Recipient may be required to establish a Job Order Number (JON) through Navy Public Works Transportation and rent a vehicle at SCI as necessary or use a (JON) to support maintenance of a vehicle barged to SCI for the project. No vehicular transportation is provided off of SCI.
7. Work Space: Laboratory, workbench, office, and storage areas are available at the Natural Resources Facility on a space available basis.
8. Meals: Meals are available at the SCI Galley at a cost to the Recipient. Bulk food supplies are provided for the preparation of one meal/person/day at the Natural Resources Facility ready room.