

**COOPERATIVE AGREEMENT
FOR THE MONITORING OF NESTING
CALIFORNIA LEAST TERN AND WESTERN SNOWY PLOVER ON
MARINE CORPS BASE CAMP PENDLETON, CALIFORNIA**

A. PURPOSE

The purpose of this Agreement is to monitor nesting activity of the California Least Tern (*Sternula antillarum browni*) and Western Snowy Plover (*Charadrius nivosus nivosus*) on Marine Corps Base, Camp Pendleton, California, hereinafter referred to as the Base. This research will involve field investigations, including the observation and documentation of Least Tern and Snowy Plover behavior, nesting chronology, and chick banding to evaluate ongoing Least Tern and Snowy Plover management practices specifically concerning military training, predation and vegetation management practices. Data are to be presented in three formats: a written scientific report (both paper and electronic forms); electronic raw data using Microsoft ACCESS or Microsoft Excel software running on IBM AT compatible computers; and Geographic Information System (GIS) formatted data for inclusion in the Base GIS.

B. LOCATION

The Base is located in the northwestern portion of San Diego County, immediately north of Oceanside. The areas covered under this agreement are all potential nesting sites for Least Terns and Snowy Plovers (all beaches lagoons, estuaries, and salt panne) on the Base. The specific Least Tern colonies include: 1) the Santa Margarita River Estuary which contains the North Beach North and North Beach South sites, the Salt Flats site and the Salt Flats Island site; and 2) the White Beach (Aliso Creek) site. The areas for nesting surveys and predator control are delineated on the Camp Pendleton Military Installation Map 1:50,000 (Sheet: Camp Pendleton MIM, Series: V795S, Edition: 3-NIMA published by Defense Mapping Agency, 2002).

The Base has a distinct Mediterranean climate with cool summers and mild winters. Rainfall is normally limited to the period between December and April. The average annual precipitation on the study area is about 5 inches, with the majority occurring during major winter storms. The average mean summer and winter temperatures are 65° F and 55° F, respectively. Heavy fog is common, especially along the coastline, although it usually dissipates by mid-morning. Wind is almost constant, and ranges between 5 and 15 mph, although periods of higher velocity may be experienced periodically, especially in the late afternoon.

C. DESIGNATED REPRESENTATIVES

1. The Cooperative Agreement Administrator (CAA) is Reagan Pablo, Contract Specialist, Naval Facilities Engineering Command Southwest, 1220 Pacific Highway, San Diego, CA 92132-5190 telephone (619) 532-1592, and email: reagan.s.pablo@navy.mil.
2. The Cooperative Agreement Technical Representative (CATR) is Aaron Hebshi, Natural

Resources Specialist, Central Integrated Products Team, Naval Facilities Engineering Command Southwest (NAVFAC SW), 1220 Pacific Highway, San Diego, California, 92132-5190, telephone (619) 532-1448, facsimile and email: aaron.hebshi@navy.mil.

The CATR is responsible for ensuring that all work is performed per the requirements and specifications outlined in this Cooperative Agreement, and that the work performed, including all written reports and professional services are of an acceptable technical quality. For this Cooperative Agreement, the CATR shall be the first and primary point of contact for the Recipient and Base Representative (including their respective representatives or staffs) regarding any inquiries, questions, concerns, and issues related to the implementation of the requirements and specifications of this Cooperative Agreement. The CATR has no authority to make any changes to this Cooperative Agreement, only the CAA may affect any change to this Cooperative Agreement.

3. The Base Representative is Barak Shemai, Wildlife Biologist, Environmental Security, Box 555008, Camp Pendleton, CA 92055-5008, telephone (760) 725-3813, email: barak.shemai@usmc.mil.

The Base Representative is responsible for providing the CAA, via the CATR, the technical requirements for this Cooperative Agreement's scope of work specifications. The Base Representative has no authority to make any changes to the Cooperative Agreement only the CAA may affect any change to this Cooperative Agreement. The Base Representative has no authority to direct or change any work identified in this Cooperative Agreement.

4. Any change in scope of work must be issued to the Recipient, in writing, by the Grants Officer to be binding on the government. No government employee has authority to change this Cooperative Agreement by oral or written directives, instructions, commitments and/or acceptances or any other manner.

5. The Cooperator will designate at time of proposal submission the individual within their organization who is authorized to negotiate with the Cooperative Agreement Administrator. The designation will stipulate the individual's authority to commit the Cooperator.

D. PERIOD OF AGREEMENT

The Agreement period is for one year, with an additional 4 option years, for a total of 5 years. The total duration of this Agreement, including any modifications shall not exceed five years.

A fifteen (15) day period, starting on date of award, will be used for the cooperator to provide preliminary documents to the CAA and CATR. Documents include, but are not limited to, Insurance documents/certificates, Accident Prevention Plans/Site Health and Safety Plans (as applicable), Draft Work Plans, etc. Cooperator may not begin performance until preliminary documents are submitted and accepted/approved as appropriate.

E. U.S. MARINE CORPS SERVICES AND RESPONSIBILITIES

1. The U.S. Marine Corps (USMC) will contract with predator management contractor(s) (PMC) for removal of birds, feral mammals, and other predators. The Cooperator will contact and coordinate with the PMC if known or suspected predation is occurring.
2. The Cooperator and/or his/her representative(s) will have access to the following materials through the CATR and Base Representative.
 - a. Temporary barrier material to identify/protect active Snowy Plover nests
 - b. Informational signs identifying the general Snowy Plover nest sites
 - c. Aerial photos of the beaches used by the tern and plover
 - d. Fencing around tern sites
 - e. "Keep out" signs around each tern site
3. The U.S. Marine Corps will provide funding of approximately \$308,420 per year to the Cooperator.

F. COOPERATOR GENERAL REQUIREMENTS

1. The Cooperator shall visit the study area as often as necessary and within the time limits stated below to accomplish the purposes of the agreement as detailed further in this work statement. It is the Cooperator's responsibility to obtain security and entrance clearances and camera passes for himself/herself and his/her personnel into the Base. The Cooperator must comply with all Base security rules, regulations, requirements, and day-to-day operational changes thereto.
2. Due to the complexity of work, the Recipient shall provide a Principal Investigator with the following minimum qualifications:
 - A. The Principal Investigator/Project Manager must have completed a graduate-level degree (MSc required, PhD strongly preferred) in ecology, biology, wildlife biology, zoology or a field related to wildlife sciences from an accredited college or university and the appropriate experience to comply with the requirements of this Agreement.
 - B. The lead field technician must have completed at least a bachelor's degree in ecology, biology, wildlife biology, zoology or a field related to wildlife sciences from an accredited college or university and the appropriate experience to comply with the requirements of this Agreement. The lead field technician shall also have strong project management experience, have a minimum of 2400 hours of experience (collected over at least three (3) years) in surveying shorebirds, specifically monitoring Least Terns and Snowy Plovers, and possess specific knowledge of the general biology, ecology and survey methodology of all species of shorebirds that have the potential to occur within San Diego.
 - C. All field assistants shall have at least a bachelor's degree in ecology, biology, wildlife biology, zoology or a field related to wildlife sciences from an accredited college or

university or at least two field seasons of experience to comply with the requirements of this Agreement. Field Assistants shall have at least two field seasons of experience and knowledge in conducting visual and acoustic surveys for all species of birds that have the potential to occur in California.

- D. The Cooperator shall ensure that all project personnel must coordinate their work with the Installation Representative and be able to conduct all duties that will meet the objectives in this Agreement. All necessary state and federal permits, necessary to conduct the activities stated in this Agreement will also be required. All required permits must be submitted to the Installation Representative with the project proposal. The Installation Representative must review and approve the permits before work can proceed.
- E. The Principal Investigator or lead field technician must have a banding permit from the U.S. Geological Survey Bird Banding Laboratory (BBL), and a federal endangered species permit, for the banding of CLT and WSP and provide evidence of experience in the handling, measuring, and banding of Charadriiform birds. The BBL banding permit must allow for the banding and handling of CLT and WSP and must be submitted with the project proposal.

3. The Cooperator and each of his/her employees working on the Base are required to obtain either a Camp Pendleton Business Pass or sign-up for the RapidGate program.

The Base Provost Marshal's Office (PMO) issues Business Passes. All applicants must apply in person at the Police Records Office (Building 1523) to apply for a business pass and to receive a temporary pass while the applications are processed. If required by the PMO, the Base Representative will provide a memo of introduction requesting that Business Passes be issued. Each Business Pass is valid for no more than a 30-day period. Police Records phone number is (760) 725-0819 or (760) 725-5161. Those with a business pass may only enter the Base through the San Luis Rey Gate (back gate), the Pulgas Gate, and the San Onofre Gate. Contractors with a business pass will be turned away from the MAIN GATE, the Del Mar Gate, and the Cristianitos Gate. Vehicles attempting to enter the main gate (or Del Mar or Cristianitos) with any personnel with a business pass may be turned away, even if the driver has a RapidGate. All personnel in the vehicle must have a Common Access Card (CAC), AFID or RapidGate to enter through the main gate unless they plan to stop for visitor pass(es).

Base Access: The preferred method of Base access is via the RAPIDGate™ program. RAPIDGate™ is consistent with and complementary to Homeland Security Presidential Directive 12 (HSPD-12) and the Federal Information Processing Standard 201 (FIPS 201).

Under the RAPIDGate™ program, Contractor personnel are vetted through a series of national and local record checks to determine whether they meet Camp Pendleton's criteria for access. The determination of whether to authorize a pass (badge) is made by the Government. The badges have Radio Frequency Identification (RFID) capability, and will be scanned upon entry onto the installation. Contractor personnel departure from the installation will be recorded by passive RFID receivers. Contractor personnel who have been screened and are determined to be eligible

for access will be required to self register at kiosks located at the Main Gate, San Onofre Gate, as well as two additional kiosks located in Bldg. 1523 (PMO).

Participation in RAPIDGate™ is optional, but the number of gates open to non-registered Contractor personnel will be limited to gates which can safely accommodate traffic backups. However, all gates will be open to RAPIDGate™ registered Contractor personnel.

The cost of the RAPIDGate™ program is \$99.00 per year for the Contractor's firm, and \$129.00 per Contractor employee for a one-year pass. The fee for lost or stolen passes is \$30.00.

Contractors who choose not to participate in the RAPIDGate™ program will be required to obtain a 90-day business pass from PMO. These personnel will be required to access Camp Pendleton at the following gates: San Luis Rey, Las Pulgas and San Onofre.

Information regarding acquiring a business pass will be provided after award. A letter of support will be drafted by the Land Management Branch.

Base access requirements and procedures may change during the term of this contract. The Contractor shall comply with all changes, and such compliance shall not be grounds for a request for an equitable adjustment or other contract modification.

4. Each Cooperator/employee that will be driving on dirt roads or working in undeveloped areas of the Base is also required to obtain a Camp Pendleton Range Control POV (Privately Owned Vehicle) PASS for themselves and all vehicles. This permit is in addition to the Base Business Pass. The POV Passes are obtained through the Base Representative. The POV Pass is valid only during the project's field time (one day or several weeks), and is non-transferable. The POV Pass must be displayed in the Cooperator /employee's vehicle windshield when they are within the boundaries of the Base. The POV Pass should not be presented at Base gates to gain access to the Base, which is the purpose of the Business Pass. Should the Cooperator escort persons onto the Base for one day to work who do not hold a valid Business Pass or POV Pass, he/she must possess a day pass from the Base. The Cooperator or employee of the Cooperator that possesses a POV Pass must always accompany this person.

5. Cooperator personnel are required to request training area access using Range Control's automated scheduling system. Access to this system is available at the Environmental Security office and authorized Environmental Security personnel will conduct actual data entry. Training area requests should be entered at least two weeks prior to scheduled fieldwork. Please contact the Base Representative to ensure that the training area entry request is authorized.

6. All Cooperator personnel are required to be able to communicate with Range Control while in the field. Two-way radios are available for daily checkout from Environmental Security (ES).

7. All personnel working within training areas on Base are required to obtain and hold a current Range Safety Officer (RSO) certification. To receive RSO certification personnel must watch an online video and then complete a written test administered by the Range Operations Division.

The test is administered on the third Thursday of each month in the MCAS CAMPEN classroom on the 1st deck of Bldg 2399. There are three available sessions: 0800, 0930 and 1100.

Attendance for testing is by APPOINTMENT ONLY! To obtain an appointment, email:

PNDL_OTRANGEINSPECTORS@usmc.mil or call (760) 725-0357/3510/4219. Standbys will not be permitted. All Personnel must bring a copy of the class handout and bubble sheet. These items can be found at:

http://www.marines.mil/unit/basecamp Pendleton/Pages/BaseStaffandAgencies/Operations/Range_Ops/Home.aspx

There are three parts to the video and all three parts can be found at:

<http://www.youtube.com/user/PendletonScout?feature=mhee>

All personnel should bring photo ID to enrollment. Each attendee will remain in the database for two years pending certification of completion through ES Environmental Security. Contractor personnel will be expected to provide the last four digits of their social security number and the six-digit UTM grid coordinates each time they request access to the range. Identification is confirmed in Range Control's database and access will be permitted.

8. The Cooperator shall provide all transportation, meals, and lodging for himself/herself and his/her personnel as well as all equipment and analysis necessary to complete the work. All equipment is subject to the inspection by and approval of the Base safety officer.

9. The Cooperator shall work closely with the CATR and the Base Representative in planning and carrying out all field investigations and information sharing through the Western Snowy Plover and California Least Tern working groups.

10. The Cooperator shall inform the Base Representative in writing, preferable via electronic mail, of any unusual activity observed while conducting surveys in the field (e.g. trespassers). Information should include (1) location, (2) date, (3) time, and (4) any detailed facts regarding the activity. For actions requiring an immediate response, the Base Representative shall be notified via telephone and follow up with a detailed electronic mail message.

11. All field notes, field data forms, electronic storage of field data, photographs, etc. collected and produced as part of this Scope of Work are the property of the USMC. These data will not be used, in whole or in part, of any professional, scientific, or non-scientific report, paper or note, published or unpublished, or any presentation without the written pre-authorization of the Base Representative and the CATR.

12. Vehicle operators may not use cell phones unless the vehicle is safely stopped or the cell phone employs a "hands free" device. Drivers may not hold, dial, text or adjust the phone while the vehicle is in motion. Hands free systems such as ear buds, blue tooth, OnStar and other voice activated or speaker phone systems are authorized. Base Security personnel can issue military motor vehicle citations to operators in violation of this policy. These citations result in a three-point penalty assessed to the violator's driving record and if a driver accumulates twelve points within a twelve month period or eighteen points within a twenty-four

month period he/she is subject to suspension of Base driving privileges for one year.

13. The Cooperator shall conduct field investigations and interviews with experts and authorities as necessary to accomplish the work described within this Agreement. The Cooperator shall particularly attempt to contact and utilize information from the U.S. Navy, U.S. Marine Corps, and personnel of the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Game (CDFG), and the California State Parks System as well as any other professionals who are experienced in monitoring California Least Tern and Western Snowy Plover. However, the cooperators shall not involve themselves in negotiations with the regulators concerning matters addressed within this agreement. If information or data is needed to support a consultation, it will be requested by the Agreement or Base Representative, who will then discuss with the regulator(s).

14. The Cooperator shall review pertinent files at the Base and shall work closely with the CATR and Base Representative in planning and carrying out field work.

15. The Cooperator shall prepare a report that contains documenting photographs, including all sites, techniques, methodologies and any other significant events. The Cooperator shall provide film, camera, and development. Original photographs are to be taken on 35mm color slide film or digitally and shall become U.S. Marine Corps property.

Photography is restricted on the Base. The Cooperator is required to obtain permission prior to taking any photographs on the Base. Taking video is strictly prohibited.

16. The Recipient shall provide all equipment (unless otherwise stated) and analyses necessary to complete the work described within this Agreement. All data (raw and associated files), photographs, equipment > \$5,000 per unit in value, and supplies > \$5,000 aggregate value purchased with Agreement funds (including computer software) shall become the property of the Government at the end of the Agreement. Equipment is defined as “tangible nonexpendable personal property including exempt property charged directly to the award having a useful life of more than one year.” Supplies are defined as “All personal property excluding equipment, intangible property, and debt instruments, and inventions of a contractor conceived or first actually reduced to practice in the performance of work under a funding agreement (“subject inventions”), as defined in 37 CFR part 401, “Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts, and Cooperative Agreements.” (DoD Grant and Agreement Regulations, DoD 3210.6-R#). The Cooperator shall include an inventory of all equipment purchased during the agreement period and submit it to the CATR upon completion of the study.

17. All work conducted in support of this Agreement will comply with all federal laws applicable to the Base such as the Endangered Species Act and the Migratory Bird Treaty Act.

18. The Cooperator shall inform the Base representative in writing, preferably via electronic mail, of any unusual animal or plant species observed while conducting surveys in the field (e.g. species which are federally listed or are State of California Species of Special Concern). Information should include (1) location, (2) date, (3) time and (4) any detailed facts of the

sighting.

19. The Cooperator may encounter dusty, windy, or foggy conditions. The majority of roads are rough and unpaved, and if wet, should be negotiated using extreme caution. Access to portions of the study area is over precipitous terrain. Transit through such terrain must be done with the highest concern for the safety of personnel. A four-wheel drive vehicle is necessary for access to some portions of the study area and for any travel on the beaches.

20. Smoking is not allowed in the non-developed areas while individuals are working on the Base.

21. In order to avoid impacts to federally listed, rare, or endemic plants the Recipient must coordinate all vegetation and ground disturbing activities with the Base Representative at (760) 725-3813. Under no circumstances are any federally protected plants to be disturbed and/or destroyed when completing the work required in this Agreement. The Recipient shall ensure that all footwear, backpacks, clothing, vehicles and equipment transported to the Installation are clean of weed seed.

22. No ground disturbing activities are to take place without the concurrence from the Base Representative at (760) 725-3813. Under no circumstances shall the Recipient violate the Archeological Resources Protection Act. If any objects are found that appear to be cultural or archeological resources contact the Cultural Resources Program Manager. If the Recipient accidentally disturbs an archeological and/or cultural resources site, the Recipient shall leave the site immediately (as intact as possible) and contact the Cultural Resources Program Manager.

23. No buildings will be modified or altered without permission from the MCBCP Public Works Officer and the Architectural Historian. The Recipient shall not violate the National Historic Preservation Act.

24. The Recipient shall manage generated hazardous material, hazardous waste, and hazardous waste residues in accordance with Federal, State, and local regulations. Transport and dispose of hazardous waste (i.e., batteries) in accordance with Federal, State, local and applicable Installation requirements.

25. Throughout the term of this Agreement the CATR and the Base Representative shall be afforded the opportunity by the Recipient to periodically observe the Recipient's field activities, to review computer or paper files of raw data, prepared data (such as data analyses, summaries, maps, figures, tables, etc.), or any record deemed appropriate by the CAA in establishing the Recipient's performance in fulfilling the requirements of this Agreement.

G. COOPERATOR SPECIFIC REQUIREMENTS FOR BASE AND OPTION YEARS

1. The data obtained during this Agreement shall be scientifically defensible and suitable for publication. Authorship of any resulting publications will include the Technical, and Installation Representative, and will be reviewed by the government. All methods of data collection and analyses shall be standardized with previous studies conducted by the Recipient

under past Agreements for this type of work, or when appropriate, analyzed using acceptable new or improved methods as determined in current scientific literature(s). If changes in analyses make results unfit for comparison with previously collected data, the Recipient shall reanalyze all appropriate data sets for comparison. The CAA shall approve (via the CATR) in advance any changes to previously used experimental designs, methods of data collection and/or analyses, which shall be provided in the Recipient's required Work Plan. The CATR, at their discretion, may subject draft work plans, draft reports or draft manuscripts to external peer review.

2. The Cooperator shall develop a field schedule for each nesting site and coordinate it through and provide a copy to the CATR during the pre-season meeting. The schedule will identify the dates, times and personnel, by location to best extent possible. Deviations from this schedule shall be coordinated with as much advance notice as possible via telephone or email with the Base Representative and Duty Warden. However, at no time shall the monitoring schedule cause breeding California Least Tern or Western Snowy Plover to be unnecessarily exposed to extremes of weather, including, but not limited to, heat, cold, rain or wind.

3. The Cooperator shall conduct surveys and monitor the nesting success of the California Least Tern at all existing and potential breeding sites. Periodic pre-breeding visits to the ternaries may begin as early as 1 March. The surveys are to be conducted as often as necessary throughout the breeding season (15 April - 15 September) to gather the required data as discussed further in this Scope. A visitation schedule may need to be changed should the tern breeding population fluctuate unexpectedly. However, no additional costs shall be incurred by the USMC as a result of these fluctuations.

The Cooperator shall monitor all existing and potential colony sites from 15 April to 15 September between three and six days/week dependent upon tern nesting activity. During peak season, sites will be monitored a minimum 5 times per week. Monitors will document courtship behavior, nesting activity sufficiently to be able to describe the breeding season chronology, roosting locations of adults and fledglings, general use of colony sites by Least Tern and to document the presence and activity of potential mammalian and avian predators.

4. The Cooperator shall conduct Western Snowy Plover surveys by foot and/or vehicle to monitor the nesting activity and success and to document foraging and resting areas on Base. Breeding surveys are to be conducted at least two times per week from the start of the breeding season (mid- to late February) and continue through 15 September, or until the breeding season is determined to be complete.

1. Surveys are to be conducted a minimum of two (2) times a week during the nesting season (Feb 15 to Sept 15) or upon the discovery of the first Snowy Plover nest and as long as Snowy Plover remain nesting, incubating, or caring for young at the study sites. More frequent site visits may be required as a result of unanticipated variations in breeding season events.
2. Much of the work may need to be conducted during early morning (0530-0900) and evening (1700-2100) hours.

5. Maintain/reestablish the census grid for all tern colonies using a grid scale of 15 m, 25 m or 30m per unit, depending on the colony size. The census grid is to be based upon a permanent metal stake placed in the most northeast corner of each grid and will constitute one grid point within the census grid. Grid lines originating from the permanent marker must have the corresponding compass bearings recorded (NE to NW, NE to SW and NE to SE). Each grid will be described as to size of the grid, its location and the exact location of the fence (if present). Each grid will be separately illustrated in the report.

6. The Cooperator is strictly prohibited from carrying out any predator control activities under any circumstances. However, attempts of predation on Least Terns and Snowy Plovers that are observed shall be documented in detail, and the predator management Cooperator contacted as soon as possible to report any incident where tern or plover mortality is imminent or has occurred. The CATR and the Base Representative shall also be notified as soon as practical after notification of the predator management Cooperator. The Cooperator and assistants shall be especially observant when avian predators are in the vicinity of the breeding colonies. The following information shall be noted for all predator observations:

1. Species and number
2. Age and sex (when possible)
3. Bands - both prey and predator (L leg, R leg, metal, plastic, etc.) or patagial tags (presence/absence, color and number)
4. Duration of presence at the colony
5. Frequency of visits for that observation period (i.e.: first, second, etc. occurrence)
6. Location (including from what direction arrived, what direction departed) and perch sites utilized
7. Predator behavior (resting, stooping, vocalizations, prey catch [species -adult, juvenile, chick,] etc.) and Least Tern response (i.e. mobbing, flight, no reaction, vocalization, combination of responses, time to return to nest (when possible), percent of colony responding).

7. The Cooperator is strictly prohibited from removing any eggs, wildlife (dead or alive) or their parts from the Base. This requirement remains in effect regardless of the status of the nest (i.e., abandoned or destroyed). The Cooperator is expressly prohibited from doing any plant or animal collection on the Base unless written approval is obtained from Environmental Security (ES) via the CATR.

8. Fence Maintenance and colony protection. The Cooperator will be responsible for minor maintenance of the colony perimeter fence throughout the breeding season. The Cooperator will conduct in-the-field outreach to reduce the incidence of human disturbance to nesting terns

and plovers.

9. Beach surveys by vehicle and other activities will require the use of a 4-wheel drive vehicle that the Cooperator shall provide. The Cooperator shall also be responsible for the upkeep, maintenance and gasoline for this vehicle.

10. The Cooperator will completely document all visits to any tern site or plover nesting site, noting at least the following: site arrival/departure times, presence/absence of terns/plover (if present, number adults and chicks/fledglings and nests present), unusual behavior patterns, inter-specific encounters, and bands observed (whenever possible). In addition, the following minimum data shall be recorded:

1. Observed disturbances, or evidence thereof, due to human activities on site.
2. Record each disturbance in terms of:
 - (a) Estimated distance from the fence or edge of the colony
 - (b) Type of disturbance (vehicle, human, etc.)
 - (c) Numbers of vehicles and people
 - (d) Frequency of occurrence during the nesting season
 - (e) Type of evidence (footprint, tire tracks, damage, etc.)
 - (f) Location in relation to the nesting site
 - (g) Duration of the disturbance (when observed)
3. Document reactions of the terns/plovers to disturbances whenever possible (i.e. types of reactions, duration away from the nest, abandonment of nest, predation upon nest due to absence of adult, etc.).
4. When observing the interactions of beach users (Marine Corps, recreational and public), determine as often as possible, the origin (i.e. beaches from north or from south) of the user.

11. The Cooperator shall document all sightings of banded terns and plovers and report survival and movement data from recaptures of previously banded birds. Careful attention shall be given to observation of adult Snowy Plovers to determine whether they are banded. Previously banded birds shall be researched to determine age, site of origin, and previous nesting history. An appendix to the final report shall identify and list all adult terns and plovers banded on the Base by year in a format identical to that used for the Bird Banding Laboratory.

12. The Cooperator shall conduct the following:

1. Survey all tern colonies by foot and all potential plover nesting sites by foot or vehicle during the breeding season, to document courtship behavior and the full nesting chronology of Snowy Plovers and Least Terns. Monitor all plover sites by foot, where nesting has become established, as completely as possible, to ensure recording of all significant breeding activity.

2. Record the numbers of adults, nests, and eggs and estimate the number of chicks and fledglings for each survey period throughout the breeding season. Each site visit will be completely documented, noting at least the following:

(a) site arrival/departure times of observers

(b) presence/absence of Snowy Plovers and Least Terns

(c) band combinations of any banded Snowy Plovers and Least Terns (L leg, R leg, metal plastic, etc.)

(d) any unusual behavior patterns

(e) inter-specific encounters that appear to significantly affect the Snowy Plovers or Least Terns

(f) number of active or potentially active nests and eggs present

3. Mark all nests with a numbered marker approximately 1 m from the nest. For each nest, record the grid cell containing the nest, the GPS coordinates, the date of first discovery, and the egg chronology. The status of each nest is to be recorded on each visit. Status categories are:

(a) active

(b) partially hatched

(c) hatched

(d) depredated

(e) partially depredated

(f) abandoned

(g) destroyed (indicate how destroyed - flooding, man, etc.-if known)

4. The Cooperator shall band as many plover and tern chicks as necessary to accomplish project objectives. The Cooperator will provide a copy of all information gathered on each chick banded as an appendix to the report. Data to be recorded for each new (unbanded)

chick captured are to include, but is not limited to:

- (a) Bird Banding Laboratory (BBL) band number, band color(s), and the positioning of the band(s) (i.e., right/left leg, top/bottom)
- (b) weight (to nearest .5 gm) and wing cord length (to the nearest millimeter)
- (c) age class
- (d) individual general health
- (e) location, grid number and nest number of the chick
- (f) date of capture
- (g) person doing the banding

5. Data recorded for tern chicks during banding shall be submitted to the BBL in their accepted format. The Cooperator shall submit the copies of all BBL data to the CATR no later than 15 October.

6. When banded chicks are captured the Cooperator is to inspect all leg bands on the chick to ensure proper fit and condition. Each banded chick encountered shall be measured unless weather or time precludes the activity. Banding shall be conducted in accordance with the procedures defined in the Cooperator's endangered species and banding permits.

7. Document any mortality (date, source, location/nest #) of eggs, chicks, fledglings or adults, as well as any pertinent information on the circumstances surrounding that mortality.

8. Conduct fledgling counts in order to develop an accurate fledgling survey methodology. If necessary, utilize alternate methodologies such as telemetry or mark recapture, to estimate reproductive success.

9. For California Least Terns, estimate the breeding population size using current California Department of Fish and Wildlife (CDFW) methods. Additionally, provide methods for a sampling effort and estimate population size for comparison to CDFW. Also, provide methods for and estimate the breeding population size of Western Snowy Plovers.

10. Provide methods for and estimate daily fledgling survival rates for both terns and plovers, and identify causes of nest failure.

11. Provide methods for and estimate rates of tern and plover fledgling production and identify causes of mortality.

12. Provide methods for and estimate effects of vegetation density on tern and plover nest site selection and nest success.

13. The Cooperator shall collect and record all raw field data in the following manner:

1. All raw field data are to be recorded into a database compatible with Microsoft ACCESS or EXCEL for Windows. Raw field data are defined as those data initially recorded in the field to measure a variable. These data are without modification, calculation, or summation.
2. The database is to be formatted such that each variable defined above is represented by a data field. Within the database, therefore, each observation is represented by a record. The data are to be submitted on compact disks (CD).
3. Mark the sequence of each disk (if more than 1 disk is used) on the external disk label. On the first disk include an ASCII text file labeled README. The README file is to describe the contents of the disk(s) (e.g., file names, file content, etc).

H. MEETINGS/COORDINATION

Within fifteen days following the submittal of the Work Plan a kick-off meeting between the CAA, CATR, Cooperator, the Principal Investigator, and Base Representative will be held to discuss this Agreement and all suggested methodology.

The Cooperator shall be available to attend agency and local pre- and post breeding season meetings when agreed upon with the CATR and Base Representative, and shall be prepared to provide the CATR and Base Representative breeding season data for such meetings.

The Cooperator shall be available throughout the Agreement period for consultation with the CATR and Base Representative on matters involving the California Least Tern and Western Snowy Plover and the nesting sites. The number and timing of these meetings will be determined based on nesting season activities and contractor performance.

The Cooperator shall be available 2 days out of each month during the normal work schedule to escort ant control personnel in to the White Beach tern colony during the normal work schedule.

I. GEOGRAPHIC INFORMATION SYSTEM DATA SPECIFICATIONS FOR DIGITAL DATA

Any maps, drawings, figures, sketches, geospatial data, spreadsheets, or text files prepared for this contract shall be provided in both hard copy and digital form. The hard copy deliverables are defined in another section of this SOW.

A. Text, Spreadsheet, and Database Files:

The Marine Corps standard computing software is Microsoft Office 2003. Final Reports and

other text documents shall be provided in Microsoft Word 2003 format AND Adobe Portable Document Format (PDF). Spreadsheet files shall be provided in Microsoft Excel 2003 format. Databases shall be provided in Microsoft Access format, unless specified otherwise, as approved by the Government. Prior to database development, the Contractor shall provide the Government with a Technical Approach Document for approval, which describes the Contractor's technical approach to designing and developing the database. All text, spreadsheet, and database files shall be delivered on a Compact Disk read-only memory (CD-ROM), Digital Versatile Disc read-only memory (DVD-ROM) or portable external hard drive. Note: should the Marine Corps convert to Microsoft Office 2007 during the study period, the contractor shall submit deliverables in Office 2007 format.

B. Maps, Drawings, and Sketches (Digital Geospatial Data):

1. Geospatial Data Software Format:

Geographic data **must** be provided in a form that does **not** require translation, preprocessing, or post processing before being loaded to the Installation's regionally hosted geodatabase. The Contractor shall validate any deviation from this specification in writing with the Government (GIS Utilities Analyst). Digital geographic maps and the related data sets shall be delivered in the following software format:

- a. **GIS:** Personal or file geodatabase format using ArcGIS 9.3. The geodatabase must be importable to a multi-user geodatabase using ArcSDE 9.3. The delivered data layer(s) shall be provided with x,y domain precision of 1000 (unless otherwise identified by MCB Camp Pendleton).

(NOTE: ArcGIS and ArcSDE are geographic information system software produced by the Environmental Systems Research Institute (ESRI) of Redlands, California.

2. Geospatial Data Structure:

- a. **GIS Data Sets:** When developing/delivering geospatial data, the Contractor shall develop the initial structure consistent with the most current version of the GEOFidelis Data Model. The GEOFidelis Data Model shall be followed for geospatial database table structure, nomenclature, and attributes. The Contractor shall consult with the Government concerning modifications or additions to the GEOFidelis Data Model. The Government may approve modifications to the GEOFidelis Data Model if it is determined that the GEOFidelis Data Model does not adequately address subject datasets. Copies of the GEOFidelis Data Model may be obtained by contacting the MCB Camp Pendleton GIS Offices Utility GIS Analyst via email at mark.riley.ctr@usmc.mil or via phone at 1 760-763-8136

- b. Feature Class Updates:** When delivering updates to existing feature classes, the Contractor shall obtain a copy of the existing subject data in a personal geodatabase to use as a template for all subsequent data collection processes. As Installations sometimes modify the GEOFidelis Data Model structure for many feature classes to accommodate operational needs, the GEOFidelis Data Model structure may not reflect the actual structure used in the live geodatabase. If further modifications to structure are required as a result of this Scope, the Contractor will consult with the Government (MCB Camp Pendleton Utility GIS Analyst) for direction and final approval.

3. Geospatial Data Projection:

Geographic data (regardless of format) shall be provided in U.S. Survey Feet and **projected** into the California State Plane, Zone VI, FIPS 0406 projection system. The maps and data shall use the GRS 1980 spheroid and the North American Datum 1983/World Geodetic System 1984 (NAD83/WGS84). Epoch 1991.35 shall be used. The vertical datum used is NAVD88. This projection requirement applies to all GIS data layer deliverables as well as all CADD drawings such as as-designed and as-built project plans. Each data set shall have a projection file if appropriate based on format.

4. Geospatial Data Collection:

- a. Survey grade Global Positioning System (GPS)** data collection shall be performed when specified in the statement of work or if the project is a MILCON and/or utility project. Survey grade GPS data collection shall at a minimum use the Geoid2003 CONUS epoch and spatial accuracy requirements for survey grade are 95 % of GPS points are within ± 6 centimeter. Every effort shall be made to capture feature locations without using offsets unless obstructions are present. All GPS data collection activities shall be logged with the MCB Camp Pendleton GIS Office prior to initiation. GPS data collection shall tie into the MCB Camp Pendleton GPS Base Station and checks shall be made to existing Survey Control Monuments around the area of work (Control Coordinates, Maps & Monument Record Sheets are available from the GIS Office). All checks made to control points must be recorded and discrepancies noted in the deliverables. Data collected but not verified via this method will not be accepted for submittal.

5. Map Products and Support Files:

Finished map products, regardless of final print size, shall be presented separately in both hard copy and digital formats. The hard copy deliverables are defined in another section of this SOW. Final map products shall be delivered in the following digital formats:

- a. PDF Format:** Resolution of 300 dpi with no image compression. All fonts must be embedded. The Contractor shall only use fonts that are licensed and

available for use by the Government.

- b. **JPG (Joint Photographic Experts Group) Format:** Resolution of 96 dpi with 24-bit true color
- c. **MXD (ESRI Map Document) Format:** All maps constructed shall have the associated MXD delivered to allow for future printing and modification, as necessary, by the Government. MXDs shall use the 'relative paths' option. The Table of Contents (TOC) within the MXD shall be orderly, and contain a logical naming structure.

Map or drawing **scales** will be determined by the Project Manager, if applicable. Mapping **accuracy** for the agreed scales will conform to the American Society for Photogrammetry and Remote Sensing (ASPRS) "Accuracy Standards for Large-Scale Maps", "Interim Accuracy Standards for Large-Scale Maps", and "Geospatial Positioning Accuracy Standards". Copies of these standards can be obtained on the Internet at <http://www.asprs.org>, and/or at <http://www.fgdc.gov>, or by contacting:

American Society for Photogrammetry and Remote
Sensing
5410 Grosvenor Lane, Suite
210
Bethesda, MD 20814-
2160

6. Media for Geospatial Data Deliverables:

Geographic data shall be delivered on a separate CD-ROM or DVD-ROM, or external hard drives. This media shall **contain only the value-added data sets** as designated in the Task sections of the SOW. Do not include the Contractor's working files or original installation data sets that may have been used by the Contractor to develop the deliverables. "READ ME" files may be included on the geographic data media if such files provide explanation of the delivered data sets. However, these "READ ME" files should not be delivered in lieu of standard metadata.

7. Geographic Data Documentation (Metadata):

For each digital file delivered containing geographic information (regardless of format), **the Contractor shall provide documentation** consistent with the *GEOFidelis* Metadata Guidelines, which follow Federal Geographic Data Committee (FGDC) Content Standards for Digital Geospatial Metadata (CSDGM). Both 'Mandatory' and 'Mandatory as Applicable' fields shall be completed for each geographic data set, as well as selected 'Optional' fields. The documentation shall include, but not be limited to, the following:

- The name, description, abstract, and purpose of the data set/data layer.

- The source of the data and any related data quality information such as accuracy and time period of content.
- Descriptions of the receiver and other equipment used during collection and processing, base stations used for differential corrections, software used for performing differential corrections, estimated horizontal and vertical accuracies obtained, and conversion routines used to translate the data into final geographic data delivery format.
- Details of all checks made to existing control points & any discrepancies noted.
- Type of data layer (point, line, polygon, etc.).
- Field names of all attribute data and a description of each field name.
- Definition of all codes used in the data fields.
- Ranges of numeric fields and the meaning of these numeric ranges.
- The creation date of the map layer and the name of the person who created it.
- A point of contact shall be provided to answer technical questions.

Metadata generation tools included in the ArcGIS suite of software (or equivalent technology) shall be used in the production of the required metadata in XML format. Regardless of the tools used for metadata creation, the Contractor must insure that the metadata is delivered in XML format and can be easily imported to the Installation's enterprise geodatabase. Specific guidelines may be found within the *GEOFidelis West Metadata Authoring Guide*. A copy of the guide may be obtained by contacting:

GEOFidelis West
 Building 1160, Lower Level Room 6
 Camp Pendleton, CA
 92055 (760) 763-1891

NOTE: The metadata Point of Contact should be the Contractor's Project Manager. The Contractor shall use language and format consistent with existing Installation metadata.)

8. Geographic Data Review:

The digital geographic maps, related data, and text documents shall be included for review in the draft and final contract submittals. The data will be analyzed for discrepancies in subject content, correct format in accordance with these specifications, and compatibility with the existing GIS system. The Contractor shall incorporate review comments to data and text prior to approval of the final submittal.

C. Ownership:

All digital files, final hard copy products, source data acquired for this project, and related materials, including that furnished by the Government, shall become the property of the Installation and will not be issued, distributed, or published by the Contractor.

D. Contact Information:

For project inquiries, please contact the Project Manager. For specific geospatial questions, upon the approval of the Project Manager, you may contact:

Mr. Beven Harris
Camp Pendleton IGI&S
Manager MCB – Camp
Pendleton, CA Trailer
220102T, Office 105
22 Chappo
beven.harris@usmc.
mil Phone:
760.763.7835
Fax: 760.763.7856

Snail Mail:
ATTN Beven Harris
ES Facilities Public Works
IGI&S Office
Box 555013
Camp Pendleton, CA 92055-5013

J. SCHEDULES AND SUBMITTALS

1. Electronic copies of all submittals/schedules/deliverables (examples include, but are not limited to, draft/interim/final reports, progress reports/monthly reports) will be provided to the Cooperative Agreement Administrator for retention in the official agreement file. Only the CAA has the authority to make changes to review periods or due dates.

Submittal/Deliverable Standards: All submittals/deliverables are expected to be of the highest professional quality and will be rejected if any of the following exists:

- (1) there are typographical errors, spelling, or grammar mistakes; or
- (2) results and discussion are not tied directly and continually to natural resource management concerns of the installation; or
- (3) the document is not organized in a manner that flows well; or
- (4) the document does not provide appropriate context, background, literature review, and comparison to other relevant studies, locations, and similar species.
- (5) The appropriate style guide is not adhered to (in most cases this is the JWM or CSE).

NOTE that the CATR is responsible for identifying the appropriate style if JWM or CSE is not acceptable.

2. Within twenty-five (25) days of this Agreement's award date the Cooperator shall submit a Work Plan. The contents of the Work Plan should include the following:

- a. A site visitation schedule for each nesting site coordinated through the Base Representative. Deviations from this schedule shall be coordinated in a timely manner. However, at no time shall the monitoring schedule cause breeding Least Terns or Snowy Plovers to be unnecessarily exposed to extremes of weather, including, but not limited to, heat, cold, rain or wind.
- b. A comprehensive and detailed summary of the methodology proposed for this Agreement as well as a work schedule for discussion and review in this initial meeting.
- c. A copy of all permits required for the work described in this Agreement at this Scoping Session (if not already submitted with the proposal).
- d. A list of all persons who will be working on the Base under this Agreement including (1) full name, (2) position/job title, (3) vehicle make, (4) vehicle model, (5) vehicle license, (6) vehicle color, (7) year of vehicle, (8) whether vehicle is personal or company-owned.

The draft work plan will be reviewed by the CATR and Base Representative, and the CATR will provide the Recipient a consolidated list of comments, suggestions, or edits (if there are any) within 30 calendar days from receipt of the draft work plan. Only the CAA has the authority to make changes to the 30 calendar day review period.

Final work plan: The Recipient shall incorporate all comments, suggestions, or edits (if there are any) provided by the CATR on the "Draft Work Plan" to the "Final Work Plan", and the Recipient shall submit (electronically via email) the "Final Work Plan" within 10 calendar days from the date the Recipient received the final review comments provided by the CATR. If there are no comments, suggestions, or edits on the draft work plan, the Recipient shall resubmit marked "Final Work Plan". The work plan must be approved by the CATR prior to the initiation of any work on the Installation.

B. The Cooperator shall provide weekly, summary report, USFWS year-end summary, draft final, and final reports to the CATR and Base Representative.

1. Weekly Reports

- a. Throughout the duration of the field investigations the principal investigator will submit a weekly written (or email) checklist of the week's activities to the CATR and Base Representative by 1600 hours (4:00 pm) each Monday. The report will include, at a minimum: names of investigators and observers participating during the month; areas surveyed and a summary of data for each area (total number of nests, and number of new nests for that week; total number of eggs; and total number of chicks), any suspected take and its cause, a summary of predator events, and any other significant event occurring on site or any concerns of which the CATR and

Base Representative needs to be aware.

b. The Cooperator shall keep the CATR and Base Representative informed of all active or potentially active sites so that the Marine Corps is able to avoid take of Least Terns and Snowy Plovers.

2. A preliminary report summarizing the significant accomplishments and early result trends shall be submitted to the CATR and Base Representative by the end of the third week in October.

3. FWS Year-end Summary Report

a. The Cooperator shall submit two year-end summary reports in the format and content identified by the FWS Carlsbad Field Office, one for each species (SNPL, LETE). The purpose of these reports is to meet reporting requirements stipulated in the federal endangered species permit. These reports shall be submitted to the CATR by 9 January 2014 for review and comment.

4. Raw Data

a. The Cooperator shall turn in a CD of the raw data by 1 December. This CD shall include raw data in either an Access or Microsoft Excel format. This CD shall contain nesting data, banding operation data, survey/resight data, mortality data, and disturbance event data. Should the Base Representative have problems loading the data into the Bases' database, or should the data be incorrectly recorded, the Cooperator will work with the Base Representative to correct the problems. Successful loading of the data must be accomplished by the time the final report is submitted.

i. Data for each nest shall include (but not be limited to): Nest location, Initiation Date, Clutch Size, Eggs Lost Prior to Hatch, # Eggs Hatched, Outcome (Success/Fail), Outcome Date, Cause of Failure, Nest Manipulated (Y/N), Manipulation Type (moved/mounded), Total Distance Moved.

ii. Banding data shall include (but not limited to): standard banding data as submitted to the Bird Banding Lab and morphometric measurements taken.

5. Draft Final/Final Report

a. One report for each species shall be drafted and submitted. Three copies of each draft report shall be submitted to the CATR by 1 December 2014 for all work conducted during this Agreement. The government will have a 45 day review period from receipt of the draft report to comment. If required by the CATR due to significant comments and/or changes to draft report, a second draft, incorporating all comments, shall be prepared and submitted within 30 days of the request/receipt of comments. The Government shall submit any changes to the draft final report within 30 days of receipt of the report from the Cooperator. All draft reports

shall be reviewed by the Cooperator before submittal to the CATR. The Final Reports shall be submitted within 30 days of receipt of Government comments. If necessary, the Government will have a 30 day review period from receipt of final reports (with comments incorporated) for government review of documents to ensure comments were adequately addressed. If review and acceptance by government is not completed within the 30 day review period, constructive acceptance will be deemed to have occurred and final deliverables can be submitted. Only the CAA has the authority to make changes to the identified calendar day review period(s).

b. The final report shall contain all of the information contained in the draft report as modified by Government comments. If the Government has requested report modifications to which the Cooperator takes exception, a meeting or telephone conference will be held to settle these differences. If there are unresolved differences, the Cooperator will address these in a separate rebuttal document to the CATR.

c. The final report shall be submitted to the CATR within 30 days following receipt of Government comments to and approval of the draft. The final report is to include photographs documenting all aspects of this work in a 4 x 6 inch or similar-sized format. All original slides or digital images taken or used in the report shall become USMC property and shall be submitted with the final report. All slides and digital imagery shall be appropriately labeled with information to include: date, general location (i.e. beach), specific subject (i.e. adult plover, nest #, chick from nest 3, etc.), ID of any people in the picture and photographer. A total of 8 bound copies and 3 electronic (CD) copies are to be submitted. Reports (8) are to be bound with the report title, date, and author clearly and permanently affixed to the spine of the spiral binding.

d. An electronic copy of the report shall be submitted on a CD with the final in Microsoft WORD 2003 or later. All figures/tables/graphs/appendices are to be included in the electronic copy. In addition, a PDF file of the complete report shall be included on the CD.

e. The Annual Report shall be written in the format for the American Ornithologists' Union, The Auk, be written in active voice, and use the metric system for all units in the report. Sections included (but not limited to) in the report format is to be as follows:

1) Title page showing the title, date, Agreement Number

2) Sub-title page showing,

(a) title

(b) prepared by listing with affiliations, including Agreement number

(c) prepared for listing

(d) date

(e) recommended citation

3) Table of contents, arranged as follows,

(a) table of contents

(b) list of tables

(c) list of figures (photos are considered figures)

(d) list of appendices

4) Abstract

5) Introduction

(a) include an overview of the project including population and distribution trends on Camp Pendleton and a discussion of the threats to the species.

(b) state the project's purpose and objectives and how these relate to Camp Pendleton management goals.

6) Study Species

(a) highlight the natural history of the species

7) Study Areas

(a) a moderately detailed description of each study areas including general topography and vegetation types, man-made structures present, and substrate used/preferred

(b) include a map of the scale 1"=400' or better showing the location of each study area and its components

(c) the observations shall be reported and analyzed separately for each site on the Base

8) Methods

(a) this section should be detailed in nature, including information such as specific hours of the day, days of week, etc. that surveys/observations were accomplished

(b) the methods should be well organized into clear sections that

provide significant detail so that this project could be duplicated by another researcher. Sections could include (but are not limited to) nest surveys, nest monitoring, predator id, banding, productivity (with all possible subsection within this), etc.

(c) each statistical technique used must be accompanied by a justification and explanation as to why that particular test was chosen to analyze the data set

9) Results should follow sections used in methods and be expanded as needed for a clear organization of the data. The results section shall include, but not be limited to the following:

(a) present all data collected from tasks. Data is to be presented using both tables and figures.

(b) statistical analyses on basic topics that are informative for Camp Pendleton management.

(c) total person-hours spent, including time of day, week, site, etc., and any other information that would enable the reader to specifically quantify total time expended.

(d) maps identifying all areas surveyed, including which areas were used for nesting (i.e. "breeding areas"), foraging (both breeding and non-breeding seasons), resting/loafing, roosting or other significant uses; more than one map or figure may be used at the discretion of the Cooperator

(e) Predator data including, any documented predations of adults, juveniles, eggs, and chicks, a summary of predator sightings and signs, and documented egg predations including predator species, if known.

(f) at a minimum, graphically display the following for all nests:

(1) nest initiation dates throughout the season

(2) a figure showing the distribution of nests (total and by "wave") on a grid overlay.

(3) a table summarizing the nesting events for the current breeding season for each site, including the outcome of all nests, egg hatching success, and fledgling success.

(4) a table summarizing the nest and egg data for each active

site

(5) a graph displaying the chronology of major nesting events, including nest initiations and the number of incubating nests

(6) a graph displaying the number of eggs hatching by date along with the number of fledglings observed.

(7) tables listing the nesting success for all the colonies on Base for the past 10 years.

(8) tables listing the nest, egg, chick, and adult predation events for each of the sites, including the predator species, if known, for the past 10 years..

(g) a table listing all banding information collected by site

10) Discussion

(a) the discussion is to be general in nature with respect to previous nesting seasons but specific as to current year results, and shall compare how the current data compares to previous years and why these differences might exist.

(b) discuss the results of the survey data and determine the relative importance of each site to the Snowy Plover and Least Tern, especially as relates to breeding, foraging, roosting/loafing and migratory gathering

(c) discuss the relative importance of the Base to other areas in the county, as a whole, to the Snowy Plover and Least Tern.

(d) discuss the location and distribution, and the influences of nesting with respect to the location of the fence, changes in habitat (year to year, site to site with respect to vegetation, substrate, etc.), topography, human activities; also review how the colonies have shifted their distribution of the nests and nesting area in the past and discuss the most probable locations and directions of future shifts.

(e) evaluate and discuss the impacts of human activities (including, but not limited to Marine Corps and Navy operations, Marine Corps recreational use, public beach use) to the nesting success of the Snowy Plover and Least Tern.

(f) describe Marine Corps and Navy operations and recreational

uses observed and evaluate and rate their respective apparent impacts at each site, if any.

(g) discuss the factors which appear to determine the importance of areas to foraging Snowy Plovers

(h) discuss the factors which appear to determine the importance of areas to nesting Snowy Plovers and Least Terns.

(i) discuss the chronology of nesting on the Base and any factors (environmental or man-caused) which may affect the onset of nesting, if able to be determined.

11) Conclusions and Recommendations. At a minimum, the Cooperator shall:

(a) provide preliminary management recommendations that will allow the continuation of Marine Corps and Naval operations and recreational use on the Base while providing for the successful breeding of Snowy Plovers

(b) identify any gaps in information required to determine which Marine Corps and/or Navy actions, if any, may be impacting the Snowy Plover and Least Tern as required under Section 7 of the Endangered Species Act.

12) In the acknowledgements include the following statement: "This research was funded by the Assistant Chief of Staff, Environmental Security, Marine Corps Base Camp Pendleton."

13) Copies of all tern and plover banding data will be provided as an appendix.

f. All statistical analyses are to be reported following that of Tacha, Warde, and Burnham (1982).

g. The Cooperator shall include photographs, including sites important to the Least Tern and Snowy Plover, survey techniques and methodologies and any other significant events, in the Annual Report. The Cooperator will provide film, camera, and development. Original photographs are to be taken on 35mm color slide film that shall become Marine Corps property. All slides/digital images will be labeled with at least the following information:

subject/activity

location (specific [i.e. nest no.] and Facility)
date
photographer

6. All non-electronic reports shall be submitted on 8 1/2 by 11 inch, recycled paper with folded color maps or tables (when applicable). All original documentation will be reproducible by black and white xerography and bound with hard covers that will allow pages to be easily removed. Bindings will include a label identifying the report, author(s), and the date of completion. When appropriate, all reports shall be printed on double-sided paper. All color copies of photographs must be duplicated by the laser copying process.

K. DATA AND PUBLICATIONS

1. This Cooperative Agreement is subject to, and Recipient shall comply with, 32 CFR Subpart 32.6 concerning "Intangible Property," which includes use of research data. Any information or data protected by federal law will be identified by the Government prior to being provided to Recipient and the Government will notify the Recipient in advance of applicable limitations on such information. Except as to information so identified and limited, there are no restrictions on reporting or publishing reports based upon the fundamental research that is the subject of this Cooperative Agreement.

The Federal Government has the right to obtain, reproduce, publish or otherwise use the data first produced under this Agreement and authorize others to receive, reproduce, publish, or otherwise use such data for Federal purposes. The DoN acknowledges and agrees that the Recipient's fundamental consideration in performing the research under this Agreement shall be Recipient's right to publish the results of such research for academic and scientific purposes. The Recipient shall submit, for review and comment, any proposed professional, scientific or non-scientific report, paper or note published or unpublished or be part of any technical or non-technical presentation or be provided to anyone not a party to this Agreement to the CATR and USMC thirty (30) days prior to the submission of the work mentioned above. The Recipient shall retain lead authorship publication rights to the original research for a period of three (3) years following submission of the final report. These rights shall revert to the USMC should the Recipient fail to do so within the three (3) years. The USMC also retains the right to publish any re-analysis of the data.

2. The acknowledgements for any paper or presentation resulting from this work shall include the following statement: "This research was funded by the *United States Marine Corps* on behalf of the *Command or Installation*."

3. Any publications resulting from this work shall be provided at no cost to the DoN in quantities jointly determined by the CATR and the Recipient at the time of publication.

4. The Recipient shall be responsible for ensuring all personnel participating in activities under this Agreement have read and acknowledged the DATA AND PUBLICATION provisions of this Agreement.

L. RELEASE OF INFORMATION

1. The Recipient shall not respond to any inquiries about this Cooperative Agreement from the news media or non-governmental organizations or other persons during the term of this Cooperative Agreement unless it has first consulted with the Government and a determination appropriately made by the cognizant Government representative concerning release of information pursuant to the authority (Federal or State) cited by the requester. All inquiries shall be directed to the Public Affairs Officer NAVFAC SW through the CATR and the Public Affairs Officer, Marine Corps Base Camp Pendleton, through the CATR.

M. SAFETY

The Recipient will be required to develop a site-specific Health and Safety Plan and Accident Prevention Plan if the work is potentially hazardous. Potentially hazardous activities include, but are not limited to:

- soil boring or digging test pits (excludes manual collection of de minimis surface soil samples)
- all field work on hazardous waste or munitions response sites
- work on, in, or near bodies of water where there a danger from drowning
- use of heavy equipment, e.g. backhoes, excavators, bulldozers, etc.
- excavation, backfilling, and compaction
- use of man lifts, ladders, and other climbing apparatus
- use of weight handing equipment, e.g. crane, forklifts, and hoists
- well drilling and/or well pump repair or replacement
- construction, demolition, or repair of site improvements
- remediation of hazardous material or waste, i.e. asbestos, paint with lead, and PCB
- work within 10 ten feet of high voltage lines, or high pressure gas, steam, or water lines

If the project involves a potentially hazardous activity, the Recipient shall develop an Accident Prevention Plan (APP), Activity Hazardous Analysis (AHA) and site-specific Health & Safety Plan (HASP), and submit the AHA and HASP as attachments to the APP to the CATR.

Include a job hazard analysis in the HASP for all tasks reasonably anticipated to be performed as part of this scope of work. As a minimum, references used to develop the site-specific plan are: EM 385-1-1 US Army Corps of Engineers Safety & Health Requirements Manual, and Local Activity safety plans and standard operating procedures. When developing the HASP, address all sections that are deemed appropriate for performing the work in this Cooperative Agreement, while ensuring a safe work environment for all personnel involved.

The Health & Safety Plan will provide a safe and healthful environment for all personnel involved as well as personnel working near the sites for the DoN. The Recipient shall certify to CATR that Final Health & Safety Plan has been reviewed with each Recipient employee

working on this Cooperative Agreement prior to mobilization and start of fieldwork activities.

A Draft and Final Accident Prevention Plan and Health and Safety Plan will be submitted concurrently with the Work Plan but shall be printed under a separate cover from the Work Plan. The Health and Safety Plan shall be immediately accessible to the Site Safety Officer and Project Manager at all times during the project, and a copy shall be available in every vehicle utilized for work under this Cooperative Agreement.

N. HOLD HARMLESS

1. The Government shall not be responsible for the loss of or damage to property of the Recipient and/or his/her representatives, or for personal injuries to the Recipient and/or his/her representatives arising from or incident to the use of government facilities or equipment. Recipient shall indemnify, hold harmless, defend and save Government harmless and shall pay all costs, expenses, and reasonable attorney's fees for all trial and appellate levels and post-judgment proceedings in connection with any fines, suits, actions, damages, liability and causes of action of every nature whatsoever arising or growing out of, or in any manner connected with, the occupation or use of Government Premises by Recipient, its employees, servants, agents, guests, invitees, and contractors. This includes, but is not limited to, any fines, claims, demands and causes of action of every nature whatsoever that may be made upon, sustained or incurred by the Government by reason of any breach, violation, omission or non-performance of any term, covenant or condition hereof on the part of the Recipient, its employees, servants, agents, guests, invitees, or contractors. This indemnification also applies to claims arising out of the furnishings of any utilities or services by the Government or any interruption therein or failure thereof, occasioned by the negligence or lack of diligence of Recipient or its respective officers, agents, servants or employees. However, this indemnity shall not extend to damages due to the sole fault of the Government or its employees, agents, servants, guests, invitees or contractors. This covenant shall survive the termination of this Cooperative Agreement.

2. In the event of damage, including damage by contamination, to any Government property by the Recipient, its officers, agents, servants, employees, or invitees, the Recipient, at the election of the Government, shall promptly repair, replace, or make monetary compensation for the repair or replacement of such property to the satisfaction of the Government.

O. INSURANCE

1. At the commencement of this Cooperative Agreement, the Recipient shall obtain, from a reputable insurance company or companies satisfactory to the Government, comprehensive general liability insurance. The insurance shall provide an amount not less than a minimum combined single limit of \$1,000,000.00 for any number of persons or claims arising from any one incident with respect to bodily injuries or death resulting there from, property damage or both, suffered or alleged to have been suffered by any person or persons resulting from or related to the presence or operations of the Recipient, its employees, agents or contractors under this Cooperative Agreement. The Recipient shall require the insurance company or companies to furnish the Government with a certified copy of the policy or policies, or certificates of insurance evidencing the purchase of such insurance. Each policy of insurance required under

this Paragraph shall contain an endorsement reading as follows:

“The insurer waives any right of subrogation against the United States of America which might arise by reason of any payment made under this policy.”

2. All insurance required of the Recipient hereunder shall be in such form, for such periods of time and with such insurers as the Government may require or approve. All policies or certificates issued by the respective insurers for public liability and property insurance shall name the United States of America as an additional insured, and shall provide that no cancellation, reduction in amount or any material change in coverage thereof shall be effective until at least 30 calendar days after receipt by the Government of written notice thereof, regardless of any prior act or failure to act or negligence of the Recipient or the Government or any other person concerning such amount or change in coverage.

3. The Recipient at its sole cost and expense, may insure its activities in connection with this Cooperative Agreement by maintaining a program of self-insurance that complies with the requirements of Section O, including coverages specified in Attachment A hereof. Recipient shall also provide a copy of the exempting statute cited in support of its claim of self-insurance. (The self-insurance clause is applicable only to appropriate state and local governments and qualifying institutions of higher education.)

4. During the entire period the Cooperative Agreement shall be in effect, the Recipient shall require its contractors or agents or any contractor performing work at the Recipient's or agent's request on the affected Government Premises to carry and maintain the insurance required below:

“Comprehensive general liability insurance in the amount of \$1,000,000.00.”

5. The Recipient and any of its contractors or agents shall deliver or cause to be delivered promptly to the Cooperative Agreement Administrator, a certificate of insurance or a certified copy of each renewal policy evidencing the insurance required by this Cooperative Agreement and shall also deliver no later than thirty (30) calendar days prior to expiration of any such policy, a certificate of insurance evidencing each renewal policy covering the same risks.

6. In the event that any item or part of the premises or facilities shall require repair, rebuilding, or replacement resulting from loss or damage, the risk of which is assumed under this paragraph, the Recipient shall promptly give notice thereof to the Government and, to the extent of its liability as provided in this paragraph, shall, upon demand, either compensate the Government for such loss or damage, or rebuild, replace or repair the item or items of the premises or facilities so lost or damaged, as the Government may elect. If the cost of such repair, rebuilding, or replacement exceeds the liability of the Recipient for such loss or damage, the Recipient shall effect such repair, rebuilding, or replacement if required so to do by the Government, and such excess of cost shall be reimbursed to the Recipient by the Government. In the event the Recipient shall have effected any repair, rebuilding, or replacement which the Recipient is required to effect pursuant to this paragraph, the Government shall direct payment to the Recipient of so much of the proceeds of any insurance carried by the Recipient and made available to the

Government on account of loss of or damage to any item or part of the premises or facilities as may be necessary to enable the Recipient to effect such repair, rebuilding or replacement. In event the Recipient shall not have been required to effect such repair, rebuilding, or replacement, and the insurance proceeds allocable to the loss or damage which has created the need for such repair, rebuilding or replacement have been paid to the Recipient, the Recipient shall promptly refund to the Government the amount of such proceeds.

P. PAYMENTS

1. Partial payments equal to the amount of work accomplished may be made quarterly during the field work portion; after submittal of the draft report; and after receipt of the final report.
2. The final payment of 15 percent of the Cooperative Agreement overall value shall be paid when the final report and all other submittals listed in Section J have been received and accepted by the CATR.
3. Any requirement for the payment or obligation of funds, under the terms of this Agreement, shall be subject to the availability of appropriated funds, and no provision herein shall be interpreted to require obligation or payment of funds in violation of the Anti-Deficiency Act, 31 USC §1341 *et seq.* Nothing in this Agreement shall be construed as implying that Congress will, at a later time, appropriate funds sufficient to meet deficiencies.

Q. EXECUTIVE COMPENSATION AND FIRST-TIER SUBCONTRACT REPORTING

Section 2(d) of the Federal Funding Accountability and Transparency Act of 2006 (Pub. L. No. 109-282), as amended by section 6202 of the Government Funding Transparency Act of 2008 (Pub. L. 110-252), requires the Contractor to report information on subcontract awards. The law requires all reported information be made public, therefore, the Contractor is responsible for notifying its subcontractors that the required information will be made public.

Unless otherwise directed by the Contracting Officer, by the end of the month following the month of award of a first-tier subcontract with a value of \$25,000 or more, (and any modifications to these subcontracts that change previously reported data), the Contractor shall report the following information at <http://www.fsrc.gov> for each first-tier subcontract:

- (a) Unique identifier (DUNS Number) for the subcontractor receiving the award and for the subcontractor's parent company, if the subcontractor has one.
- (b) Name of the subcontractor.
- (c) Amount of the subcontract award.
- (d) Date of the subcontract award.
- (e) A description of the products or services (including construction) being provided under the subcontract, including the overall purpose and expected outcomes or

results of the subcontract.

- (f) Subcontract number (the subcontract number assigned by the Contractor).
- (g) Subcontractor's physical address including street address, city, state, and country. Also include the nine-digit zip code and congressional district.
- (h) Subcontractor's primary performance location including street address, city, state, and country. Also include the nine-digit zip code and congressional district.
- (i) The prime contract number, and order number if applicable.
- (j) Awarding agency name and code.
- (k) Funding agency name and code.
- (l) Government contracting office code.
- (m) Treasury account symbol (TAS) as reported in FPDS.
- (n) The applicable North American Industry Classification System (NAICS) code.

By the end of the month following the month of a contract award, and annually thereafter, the Contractor shall report the names and total compensation of each of the five most highly compensated executives for the Contractor's preceding completed fiscal year at <http://www.ccr.gov>, if –

- (a) In the Contractor's preceding fiscal year, the Contractor received –
 - (i) 80 percent or more of its annual gross revenues from Federal contracts (and subcontracts), loans, grants (and subgrants) and cooperative agreements; and
 - (ii) \$25,000,000 or more in annual gross revenues from Federal contracts (and subcontracts), loans, grants (and subgrants) and cooperative agreements; and
- (b) The public does not have access to information about the compensation of the executives through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m(a), 78o(d)) or section 6104 of the Internal Revenue Code of 1986. (To determine if the public has access to the compensation information, see the U.S. Security and Exchange Commission total compensation filings at <http://www.sec.gov/answers/excomp.htm>).

Unless otherwise directed by the Contracting Officer, by the end of the month following the month of a first-tier subcontract with a value of \$25,000 or more, and annually thereafter, the Contractor shall report the names and total compensation of each of the five most highly

compensated executives for each first-tier subcontractor for the subcontractor's preceding completed fiscal year at <http://www.fsr.gov>, if

- (a) In the Subcontractor's preceding fiscal year, the Subcontractor received –
 - (i) 80 percent or more of its annual gross revenues from Federal contracts (and subcontracts), loans, grants (and subgrants) and cooperative agreements; and
 - (ii) \$25,000,000 or more in annual gross revenues from Federal contracts (and subcontracts), loans, grants (and subgrants) and cooperative agreements; and

- (b) The public does not have access to information about the compensation of the executives through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m(a), 78o(d)) or section 6104 of the Internal Revenue Code of 1986. (To determine if the public has access to the compensation information, see the U.S. Security and Exchange Commission total compensation filings at <http://www.sec.gov/answers/excomp.htm>).

If the Contractor in the previous tax year had gross income, from all sources, under \$300,000, the Contractor is exempt from the requirement to report subcontractor awards. Likewise, if a subcontractor in the previous tax year had gross income from all sources under \$300,000, the Contractor does not need to report awards to that subcontractor.