

**SCOPE OF WORK  
FY 2020 COOPERATIVE AGREEMENT  
FOR THE MONITORING OF FEDERALLY LISTED BEACH-NESTING BIRDS ON  
MARINE CORPS BASE CAMP PENDLETON, CALIFORNIA**

**A. PURPOSE**

Marine Corps Base Camp Pendleton (MCBCP) is required, per the United States Fish and Wildlife Service (USFWS) Biological Opinion 1-6-95-F-02, Programmatic Activities and Conservation Plans in Riparian and Estuarine/Beach Ecosystems on MCBCP (Riparian BO, see Enclosure 1), to monitor federally listed birds which use MCBCP beaches to nest, breed and rear young.

The purpose of this Agreement is to monitor activity of federally listed beach-nesting birds 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 beach-nesting bird behavior, nesting chronology, and chick banding to evaluate ongoing best management practices specifically concerning military training, predation and vegetation management practices. Species covered under this Agreement shall minimally include the federally endangered California least tern (*Sternula antillarum browni*, LETE). Additional options as outlined below in Section D may be executed in the future, pending funding availability.

Data are to be presented in three formats: a written scientific report (both paper and electronic forms); electronic raw data using 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 beach-nesting birds, minimally LETE, (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 Blue Beach North and Blue 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 Kellie Wilson, Contract Specialist, Naval Facilities Engineering Command Southwest, 1220 Pacific Highway, San Diego, CA, 92132-5190 telephone (619) 532-2090, and email: [kellie.wilson@navy.mil](mailto:kellie.wilson@navy.mil).
2. The Cooperative Agreement Technical Representative (CATR) is DiAnna Abdo, Natural Resources Specialist, Central Integrated Products Team, Naval Facilities Engineering Command Southwest (NAVFAC SW), 1220 Pacific Highway, San Diego, California, 92132-5190, telephone (619) 532-4097, email: [dianna.abdo@navy.mil](mailto:dianna.abdo@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 (BR) is Katrina Murbock, Wildlife Biologist, Environmental Security, Box 555008, Camp Pendleton, CA 92055-5008, telephone (760) 725-3813, email: [katrina.murbock@usmc.mil](mailto:katrina.murbock@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 AND OPTION ITEMS**

1. The duration of this agreement shall be 365 days from award. The additional option periods (Option Items 1 through 8), if exercised, will extend the period of performance by 365 calendar days (or 12 months), Options may overlap, not to exceed 5 years. The total duration of this Agreement, including any modifications shall not exceed five years.
2. 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.
3. OPTION ITEMS:

OPTION 1: Additional Field Season 2021 - The Cooperator will provide a second year of LETE monitoring. Option Item 1 will be subject to the requirements outlined in this Scope of Work and the associated regulatory documents. The Cooperator shall follow the methodology, monitoring and reporting as outlined. Option Item 1 will add an additional 365 days to the Base Item, to cover the field season for 2021. The Government reserves the right to exercise this option within 365 days from cooperative agreement award.

OPTION 2: Additional Field Season 2022 - The Cooperator will provide a third year of LETE monitoring. Option Item 2 will be subject to the requirements outlined in this Scope of Work and the associated regulatory documents. The Cooperator shall follow the methodology, monitoring and reporting as outlined. Option Item 2 will add an additional 365 days from the end of the period of performance of Option 1. Option Item 2 cannot be exercised without exercise of Option Item 1. Option Item 2 will cover the field season for

2022. The Government reserves the right to exercise this option within 730 days from the cooperative agreement award.

OPTION 3: Additional Field Season 2023 - The Cooperator will provide a fourth year of LETE monitoring. Option Item 3 will be subject to the requirements outlined in this Scope of Work and the associated regulatory documents. The Cooperator shall follow the methodology, monitoring and reporting as outlined. Option Item 3 will add an additional 365 days from the end of the period of performance of Option 2. Option Item 3 cannot be exercised without exercise of Option Item 2. Option Item 3 will cover the field season for 2023. The Government reserves the right to exercise this option within 1,095 days from the cooperative agreement award.

OPTION 4: Additional Field Season 2024 - The Cooperator will provide a fifth year of LETE monitoring. Option Item 4 will be subject to the requirements outlined in this Scope of Work and the associated regulatory documents. The Cooperator shall follow the methodology, monitoring and reporting as outlined. Option Item 4 will add an additional 365 days from the end of the period of performance of Option 3. Option Item 4 cannot be exercised without exercise of Option Item 3. Option Item 4 will cover the field season for 2024. The Government reserves the right to exercise this option within 1,460 days from the cooperative agreement award.

OPTION 5: WSP Monitoring for one Field Season – The Cooperator will conduct nest monitoring for the WSP once per week between 1 March and 15 September in the exact same manner as described for the LETE in Section G of this document. In addition, the Cooperator shall conduct visual western snowy plover winter surveys once per week during the non-breeding season (16 September – 28 February) on all potential beaches on Base where roosting flocks might occur. The Cooperator shall follow the methodology, monitoring and reporting as outlined. The Government reserves the right to exercise this option for the duration of the task order. Exercise of Option Item 5 will not result in a task order extension.

OPTION 6: WSP Monitoring for one Field Season - The Cooperator will conduct nest monitoring for the WSP once per week between 1 March and 15 September in the exact same manner as described for the LETE in Section G of this document. In addition, the Cooperator shall conduct visual western snowy plover winter surveys once per week during the non-breeding season (16 September – 28 February) on all potential beaches on Base where roosting flocks might occur. The Cooperator shall follow the methodology, monitoring and reporting as outlined. The Government reserves the right to exercise this option for the duration of the task order. Exercise of Option Item 6 will not result in a task order extension.

OPTION 7: WSP Monitoring for one Field Season - The Cooperator will conduct nest monitoring for the WSP once per week between 1 March and 15 September in the exact same manner as described for the LETE in Section G of this document. In addition, the Cooperator shall conduct visual western snowy plover winter surveys once per week during the non-breeding season (16 September – 28 February) on all potential beaches on Base where roosting flocks might occur. The Government reserves the right to exercise this option for the duration of the task order. Exercise of Option Item 7 will not result in a task order extension.

OPTION 8: WSP Monitoring for one Field Season - The Cooperator will conduct nest monitoring for the WSP once per week between 1 March and 15 September in the exact same manner as described for the LETE in Section G of this document. In addition, the Cooperator shall conduct visual western snowy plover winter surveys once per week during the non-breeding season (16 September – 28 February) on all potential beaches on Base where roosting flocks might occur. The Cooperator shall follow the methodology, monitoring and reporting as outlined. The Government

reserves the right to exercise this option for the duration of the task order. Exercise of Option Item 8 will not result in a task order extension.

## **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 nests
  - b. Informational signs identifying general nest sites
  - c. Aerial photos of the beaches used by beach-nesting birds
  - d. Fencing around tern colonies
  - e. "Keep out" signs around each tern colony

## **F. COOPERATOR GENERAL REQUIREMENTS**

1. The Cooperator and his/her field investigators shall visit the designated area as often as necessary and within the limits stated below to accomplish the purpose of this project as detailed further in this Scope. The Cooperator must comply with all Base security rules, regulations, requirements, and day-to-day operational changes thereto. The Cooperator is specifically prohibited from carrying out any activities not specified in this Agreement unless written approval is obtained from the Base Representative.
2. Due to the complexity of work, the Cooperator 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 relevant experience to comply with the requirements of this Agreement.
  - d. The Cooperator shall ensure that all project personnel must coordinate their work with the Base 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 Base 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 LETE and SNPL 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 LETE and SNPL and must be submitted with the project proposal.
3. All Non-Government personnel working on the Base are required to obtain credentials for entry. Marine Corps Base Camp Pendleton implements the Defense Biometric Identification System (DBIDS), a new Physical Access Control System. Contractors and vendors on official business must obtain a DBIDS credential/pass at Base Access Control (Bldg. 41501T). To apply for a pass, the applicant must present a sponsorship memo (dated within 30-days of application) issued by the Wildlife Management Section, a completed SECNAV form 5512, and a government issued ID (must be a federally compliant REAL ID or passport) to the Base Access Control at the PULGAS GATE for processing. The SECNAV 5512 form and further details can be found at the Base Access website: <https://www.pendleton.marines.mil/Base-Access/Contractors-Vendors/>
4. The Cooperator and his/her field personnel working within training areas on Base are required to obtain and hold a current Administrative Range Safety Officer (RSO) certification. To receive RSO certification personnel must watch three online videos, read appropriate handouts, and then complete a written test administered by the Range Operations Division. Walk-in testing is available every Tuesday and Wednesday from 0900 – 1215 at Bldg. 250166 in the 25 Area. No appointment is necessary. Each RSO tester must bring the following documents to the test: (1) RSO handout (dtd 29 Aug 2019), and (2) CAMPENO 3500.1 w/ch-1 (dtd 18 Oct 2018). Test is open book and questions will come from these documents. May bring either hard copies or electronic documents on a laptop or tablet. Cell phones and cameras are not allowed and documents cannot be shared. Ensure your electronic device is fully charged, power may not be available. These items can be found at: <http://www.pendleton.marines.mil/Staff-Agencies/Assistant-Chief-of-Staff-G-3-5/Range-Operations-Division/>. Prior to taking the exam you must also watch the RSO training videos, which can be found on Camp Pendleton's YouTube page (<http://www.youtube.com/user/PendletonScout?feature=mhee>). There are three parts to the video, titled Range Safety Certification. All personnel should bring photo ID to testing. After the exam, personnel should follow up with the Base Representative after a week to confirm that they have passed. Each attendee will remain in the database for three years pending certification of completion through Environmental Security. Once authorized, personnel will be expected to provide their 4-digit range ID number (assigned or chosen during certification) each time they request access to the range. Identification is confirmed via the radio in Range Control's database and access will be granted based off compliance and scheduling.
5. The Cooperator and his/her field investigators shall follow all Range Control scheduling policies and procedures. The Cooperator and his/her field investigators will contact Range Control prior to entering scheduled training areas via two-way radios to verify access permission, provide Range Safety Officer (RSO) information including name and unique four digit identification number. Two-way radios are available for daily checkout from the Environmental Security at building 22165, between the hours of 0800 and 1100. ***The Principal Investigator/Project Manager will be required to sign form 1348-1A upon issuance of equipment, acknowledging they may be held liable for any damaged or lost equipment.*** A radio must be checked out for each group conducting work on a Camp Pendleton training range. An additional radio is required for any group that will be out of audio/visual range of the first group. Based on availability and the nature of field work, radios may be checked out for longer periods of time in which case the Cooperator will arrange their schedule to perform monthly inspections with Base ES (typically in-person visual checks during the first week of August and February and verbal checks during the first week of other months). Radios must be checked back in to Environmental Security by the due date assigned. Cooperator will take reasonable precautions to ensure radios are protected from damage, including use of a waterproof cover supplied by the Cooperator if necessary. *While in the field, RSOs must carry copies of the Military Installation Map (MIM), Environmental Operations Map (EOM), and Training Area Gas Line Restrictions Map (TAGLRM), or selected pages of the EOM and TAGLRM where they are working (hard copy or electronic).*

6. The Cooperator and his/her field investigators will request training area access through the Base Representative. Training area requests shall be made at least **2 weeks** prior to any scheduled fieldwork. The Cooperator and his/her field investigators will contact the Base Representative to ensure that the training area request has been authorized. The Cooperator may be required to provide route maps or survey overlays in order to facilitate gaining access to highly used training areas.
7. Cooperator employees who will be driving vehicles on the Base shall be required to obtain a Camp Pendleton Range Control Privately-Owned Vehicle (POV) Pass. This pass is in addition to the Base Business Pass. POV Passes are obtained through the Base Representative and must be returned by the date identified during check-out. The POV Pass is valid only during the project's field time and is non-transferable. The POV Pass must be displayed in the Cooperator's /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 DBIDS. *NOTE: Only trucks or truck-like vehicles are permitted to drive on dirt training roads using the POV Pass; use of a sedan on training roads will result in the revocation of the POV Pass.*
8. Some areas of the Base may be inaccessible due to road conditions following heavy and/or prolonged rainfall. Adjustments to the survey schedules due to road/weather conditions shall be coordinated with the Base Representative. Contractors may request the most current Road and River Report from the Base Representative in order to confirm that certain training areas and unpaved roads are open to vehicle traffic.
9. Vehicle operators may **NOT** use cell phones unless the vehicle is safely stopped. Drivers may not hold, dial, text, or adjust the phone while the vehicle is operating. Hands-free systems such as ear buds, Bluetooth, OnStar, and other voice activated or speaker phone systems are **NOT** 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. If a driver accumulates a total of twelve points within a one-year period or eighteen points within a two-year period, he/she is subject to suspension of Base driving privileges for one year.
10. 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.
11. The Cooperator shall work closely with the BR in planning and carrying out field investigations. The Cooperator will have access to all pertinent files, reports, and plans archived at Environmental Security that might assist the Cooperator to accomplish the requirements of this Agreement. The Cooperator will be provided all appropriate aerial photography and Base GIS files upon request.
12. The Cooperator shall conduct field investigations and interviews with experts and authorities as necessary to accomplish the survey described below. They shall particularly attempt to contact and utilize information from local offices and personnel of the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), and other investigators who have conducted same or similar surveys on Base in the past.
13. Throughout the term of this Agreement the CATR and the BR 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.
14. The BR may accompany the Cooperator in the field during surveys in order to accumulate survey hours under supervision of appropriately permitted biologists. The Cooperator and his/her field investigators shall accommodate requests from ES Wildlife Management Section staff biologists to participate in scheduled surveys.
15. Photography and videography is restricted on the Base. Clearance for photography will be obtained from the

BR. If requested by Base security personnel, all photographic equipment, film, and/or digital storage media must be turned over for processing and security inspection. Photographs and videos may not include any training activities, facilities, or tactical vehicles without written authorization from the BR.

16. All digital and/or hardcopy field notes, data, photographs, etc. collected and produced as part of this Scope of Work are the property of the US Marine Corps. 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 BR.
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 is expressly prohibited from conducting any plant or animal collection on the Base not specified in this Scope of Work unless written approval is obtained from the BR. Dead, injured, or sick wildlife will not be removed from the Base by the Cooperator except as allowed by U.S. Fish and Wildlife Service permits. All such wildlife shall be reported immediately to the BR prior to transport from the Base. If the BR cannot be reached, personnel can contact the Camp Pendleton Game Wardens (760-725-3360).
19. No animals will be brought on to the Base and released without the written consent of the BR. Personal pets are not permitted on Base while operating under this Scope of Work.
20. The Cooperator and his/her field investigators is specifically prohibited from carrying out any predator control activities without the prior concurrence of the BR.
21. Smoking is not allowed in the non-developed areas on Base.

## **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 CATR and BR, 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 of the schedule to the BR and 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 BR. However, at no time shall the monitoring schedule cause nests/eggs 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. The surveys are to be conducted as often as necessary throughout the breeding season to gather the required data as discussed further in this Scope. A visitation schedule may need to be changed should the breeding populations fluctuate unexpectedly. However, no additional costs shall be incurred by the USMC as a result of these fluctuations.

The Cooperator shall conduct California least tern surveys by foot and/or vehicle or visual surveys to monitor the nesting activity and success and to document foraging and roosting areas on Base. Monitors will

document courtship behavior and nesting activity sufficiently to be able to describe the breeding season chronology, roosting locations of adults and fledglings, general use of nesting sites by least terns and to document the presence and activity of potential mammalian and avian predators. Breeding surveys are to be conducted **twice per week** from the start of the tern nesting season (mid April) until the departure of terns from the site. . The potential of monitoring only a subsample of nests can be discussed with the BR and to which extent determined in the Work Plan. A shift in the survey time frame or more frequent site visits may be required as a result of unanticipated variations in breeding season events. At times, work may need to be conducted during early morning (0530-0900) and evening (1700-2100) hours.

4. The Cooperator shall 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. 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.
5. The Cooperator is strictly prohibited from carrying out any predator control activities under any circumstances. However, attempts of predation on least terns that are observed shall be documented, and the predator management cooperator contacted as soon as possible to report any incident where tern mortality is imminent. To ensure the Cooperator is utilizing their surveying time within the nesting area efficiently, detected predations by predators not posing an immediate threat to terns can be compiled and submitted to predator management at the end of each survey day. The CATR and the BR shall also be notified of any depredation events by raptors 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:
  - a. Species and number
  - b. Age and sex (when possible)
  - c. Bands - both prey and predator (L leg, R leg, metal, plastic, etc.) or patagial tags (presence/absence, color and number)
  - d. Duration of presence at the colony
  - e. Frequency of visits for that observation period (i.e.: first, second, etc. occurrence)
  - f. Location (including from what direction arrived, what direction departed) and perch sites utilized
  - g. 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).
6. Fence Maintenance. The Cooperator will be responsible for minor maintenance of the colony perimeter fence throughout the breeding season.
7. 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.
8. The Cooperator will completely document all visits to any tern nesting site, noting at least the following: site arrival/departure times, presence/absence of terns (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:

- a. Observed disturbances, or evidence thereof, due to human activities on site.
  - b. Record each disturbance in terms of:
    - i. Estimated distance from the fence or edge of the colony
    - ii. Type of disturbance (vehicle, human, etc.)
    - iii. Numbers of vehicles and people
    - iv. Frequency of occurrence during the nesting season
    - v. Type of evidence (footprint, tire tracks, damage)
    - vi. Location in relation to the nesting site
    - vii. Duration of the disturbance (when observed)
  - c. Document reactions of the terns 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.).
  - d. 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.
9. The Cooperator shall document all sightings of banded terns and report survival and movement data from recaptures of previously banded birds. Careful attention shall be given to observation of adult birds 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.
10. The Cooperator shall conduct the following:
- a. 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:
    - i. site arrival/departure times of observers
    - ii. presence/absence of beach-nesting birds
    - iii. band combinations of any banded beach-nesting birds (L leg, R leg, metal plastic, etc.)
    - iv. any unusual behavior patterns
    - v. inter-specific encounters that appear to significantly affect the beach-nesting birds
    - vi. number of active or potentially active nests and eggs present
  - b. For each nest, record the grid cell containing the nest, the GPS coordinates and the date of first

discovery. Egg chronology shall be recorded for all nests or only a subsample as determined by the BR. Status categories are:

- i. active
  - ii. partially hatched
  - iii. hatched
  - iv. depredated
  - v. partially depredated
  - vi. abandoned
  - vii. destroyed (indicate how destroyed - flooding, take, etc.-if known)
- c. The Cooperator shall band as many 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:
- i. Bird Banding Laboratory (BBL) band number, band color(s), and the positioning of the band(s) (i.e., right/left leg, top/bottom)
  - ii. weight (to nearest .5 gm) and wing cord length (to the nearest millimeter)
  - iii. age class
  - iv. individual general health
  - v. location, grid number and nest number of the chick
  - vi. date of capture
  - vii. person doing the banding
- d. Data recorded for 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 and BR before submitting to the BBL.
- e. 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.
- f. 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.
- g. Conduct fledgling counts in order to develop an accurate fledgling survey methodology. If necessary, utilize alternate methodologies such as mark recapture or chick enclosures to estimate reproductive success.

- h. 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.
- i. Provide methods for and estimate daily fledgling survival rates for both terns and plovers, and identify causes of nest failure.
- j. Provide methods for and estimate rates of tern and plover fledgling production and identify causes of mortality.

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

- a. All raw field data are to be recorded into a database compatible with Microsoft 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.
- b. 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).
- c. 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 BR 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 BR, and shall be prepared to provide the CATR and BR breeding season data for such meetings.

The Cooperator shall be available throughout the Agreement period for consultation with the CATR and BR 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 Cooperator performance.

## **I. 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:

- a. there are typographical errors, spelling, or grammar mistakes; or
- b. results and discussion are not tied directly and continually to natural resource management concerns of

- the installation; or
- c. the document is not organized in a manner that flows well; or
- d. the document does not provide appropriate context, background, literature review, and
- e. comparison to other relevant studies, locations, and similar species.
- f. 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 fifteen (15) 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 BR. Deviations from this schedule shall be coordinated in a timely manner. However, at no time shall the monitoring schedule cause monitors 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.

The draft work plan will be reviewed by the CATR and BR, 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.

3. The Cooperator shall provide weekly reports, a breeding season summary table, USFWS year-end summary, draft final, and final reports to the CATR and BR.

- a. Weekly Reports

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 BR 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 hatched), 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 BR needs to be aware. The Cooperator shall keep the CATR and BR informed of all active or potentially active sites so that the Marine Corps is able to avoid take of least terns and snowy plovers.

- b. A summary table with preliminary numbers from the breeding season shall be submitted to the CATR and BR during the end of season meeting.

c. FWS Year-end Summary Report

The Cooperator shall submit year-end summary reports in the format and content identified by the FWS Carlsbad Field Office for each species monitored. 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 20 January 2021 for review and comment.

d. Draft Final/Final Report

One (1) report shall be drafted and submitted, however, the result and discussion sections shall be separated by species if multiple species were monitored. An electronic copy of the draft report shall be submitted to the CATR and BR by 1 December 2020 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 Report 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 the final report (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).

- i) 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.
- ii) A total of 5 hard copies and 5 electronic (CD) copies are to be submitted. The final report should be a **bound, paperback booklet with double-sided glossy pages**. The page numbers should be located in the upper outside corner of each page with a spinal title displaying project title and year(s).
- iii) An electronic copy of the report shall be submitted on a CD with the final in Microsoft WORD 2013 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.
- iv) 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
      - (i) prepared for listing
      - (ii) date

- (iii) 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:
  - (i) nest initiation dates throughout the season
  - (ii) a figure showing the distribution of nests (total and by "wave") on a grid overlay.
  - (iii) 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.
  - (iv) a table summarizing the nest and egg data for each active site
  - (v) a graph displaying the chronology of major nesting events, including nest initiations and the number of incubating nests
  - (vi) a graph displaying the number of eggs hatching by date along with the number of fledglings observed.
  - (vii) tables listing the nesting success for all the colonies on Base for the past 10 years.
  - (viii) 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.

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

#### 4. Data Deliverables

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

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

b) Photographs

All project-related photographs shall be submitted electronically (CD) and named in the following format:

SpeciesCode\_YYYYMMDD\_Company/AgencyAbbreviation\_NumberInSeries(001)  
Eg: LETE\_20191008\_USGS\_001

Photographs shall include the following information imbedded in the metadata of each file:

- (a) Description: Subject/activity
  - (b) Location:
    - 1. General site location (eg. Camp Pendleton and training area)
    - 2. Specific site location (eg. project-specific survey area)
  - (c) Photographer (at the discretion of the Contractor/Cooperator whether this refers to Company/Agency name or individual person)
  - (d) Names of all personnel featured in photo (if applicable)
- c) The Cooperator shall submit all GIS data generated during the field surveys following the guidelines in SPECIFICATIONS FOR DIGITAL DATA (Appendix A) included in this Scope. GIS data will be reviewed by the BR and not considered finalized until all comments have been incorporated and data accepted by the Base Environmental Security Information Systems Branch in conjunction with the BR.

## J. 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.

## **K. RELEASE OF INFORMATION**

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.

## **L. 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.

#### **M. 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.

#### **N. 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.

## **O. 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.

## **P. 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 Cooperator to report information on subcontract awards. The law requires all reported information be made public, therefore, the Cooperator 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 Cooperator shall report the following information at <http://www.frs.gov> for each first-tier subcontract:

1. Unique identifier (DUNS Number) for the subcontractor receiving the award and for the subcontractor's parent company, if the subcontractor has one.
2. Name of the subcontractor.
3. Amount of the subcontract award.
4. Date of the subcontract award.
5. 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.
6. Subcontract number (the subcontract number assigned by the Cooperator).
7. Subcontractor's physical address including street address, city, state, and country. Also include the nine-digit zip code and congressional district.
8. Subcontractor's primary performance location including street address, city, state, and country. Also include the nine-digit zip code and congressional district.
9. The prime contract number, and order number if applicable.
10. Awarding agency name and code.
11. Funding agency name and code.
12. Government contracting office code.
13. Treasury account symbol (TAS) as reported in FPDS.
14. 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 Cooperator shall report the names and total compensation of each of the five most highly compensated executives for the Cooperator's preceding completed fiscal year at <http://www.ccr.gov>, if:

In the Cooperator's preceding fiscal year, the Cooperator 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

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 Cooperator 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

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

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 Cooperator in the previous tax year had gross income, from all sources, under \$300,000, the Cooperator 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 Cooperator does not need to report awards to that subcontractor.

## **APPENDIX A**

### **GIS AND ELECTRONIC DATA REQUIREMENTS**

It is the responsibility of the Cooperator to ensure that all electronic deliverables are fully compatible and functional based on the current applications used by Environmental Security. The GIS attribute tables shall follow the current Base data dictionaries. The Cooperator will request the Base GIS data set, the current applicable data dictionaries, and the template geodatabases from the Environmental Security GIS Specialist.

Any maps, drawings, figures, sketches, geospatial data, spreadsheets, or text files prepared for this agreement shall be provided in both hard copy and digital form. The hard copy deliverables are defined in another section of this SOW. All GIS submittals shall be coordinated with MCBCP to ensure submittals are compatible with existing MCBCP format.

#### **1. Text, Spreadsheets, and Database Files:**

The Marine Corps standard computing software shall be Microsoft Office 2013, or more current backwards compatible version. Final Reports and other text documents shall be provided in Microsoft Word 2013 format (or more current backwards compatible version) AND Adobe Portable Document Format (PDF). Spreadsheet files shall be provided in Microsoft Excel 2013 format (or more current backwards compatible version). 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 2016 (or more current backwards compatible version) during the study period, the contractor shall submit deliverables in Office 2016 format (or more current backwards compatible version).

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

a. 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 Cooperator shall validate any deviation from this specification in writing with the Government (ES GIS Specialist). Digital geographic maps and the related data sets shall be delivered in the following software format:

- i. GIS: Personal or file geodatabase format using 10.6, or more current backwards compatible version (per fall 2018 requirements). The geodatabase must be importable to a multi-user geodatabase using ArcSDE 10.6 (or more current backwards compatible version). 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)*

b. Geospatial Data Structure:

- i. GIS Data Sets: When developing/delivering geospatial data, the Cooperator shall develop the initial structure consistent with the most current version of the GEO*Fidelis* Data Model. The GEO*Fidelis* Data Model shall be followed for geospatial database table structure, nomenclature, and attributes. The Cooperator shall consult with the Government concerning modifications or additions to the GEO*Fidelis* Data Model. The Government may approve modifications to the GEO*Fidelis* Data Model if it is determined that the GEO*Fidelis* Data Model does not adequately address subject datasets. Copies of the GEO*Fidelis* Data Model may be obtained by contacting the MCB Camp Pendleton GIS Offices Utility GIS Analyst via email at **PNDL\_ENV-Information-Systems-Branch@usmc.mil** or via phone at **1 760-725-9749**.
- ii. Feature Class Updates: When delivering updates to existing feature classes, the Cooperator 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 GEO*Fidelis* Data Model structure for many feature classes to accommodate operational needs, the GEO*Fidelis* 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 Cooperator will consult with the Government (MCBCP Utility GIS Analyst) for direction and final approval.

c. Geospatial Data Projection:

- i. 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.

d. Geospatial Data Collection:

- i. 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  $\pm 6$  cm. Every effort shall be made to capture feature locations without using offsets unless obstructions are present.
- ii. 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.

e. 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:

- i. PDF Format: Resolution of 300 dpi with no image compression. All fonts must be embedded. The Cooperator shall only use fonts that are licensed and available for use by the Government.
- ii. JPG (Joint Photographic Experts Group) Format: Resolution of 300 dpi with 24-bit true color.
- iii. 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.

Note: 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

f. 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 Cooperator's working files or original installation data sets that may have been used by the Cooperator 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.

g. Geographic Data Documentation (Metadata):

For each digital file delivered containing geographic information (regardless of format), **the Cooperator 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 Cooperator 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 should be formatted from the Installation database perspective, not the Cooperator project perspective. Therefore such items as Point of Contact should be the Installation POC currently associated with the data and NOT the Cooperator’s Project Manager. The Cooperator shall use language and format consistent with existing Installation metadata.)*

h. Geographic Data Review:

The digital geographic maps, related data, and text documents shall be included for review in the draft and final agreement 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 Cooperator shall incorporate review comments to data and text prior to approval of the final submittal.

3. 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 Cooperator without the written consent of the Base Representative.

4. Contact Information:

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

**Information Systems Section Head**  
**Environmental Security**  
**Building 22165**  
**Box 555008-5008**  
**Camp Pendleton, CA 92055-5008**  
**Tel: (760) 725-9749**