

Statement of Work (SOW)
For Terrestrial Invertebrate Baseline Biodiversity Inventory
Environmental Security, Land Management Branch, MCI West-MCB Camp Pendleton, California
Fiscal Year 2014 plus Option Years

1. INTRODUCTION

The purpose of this project is to implement a baseline terrestrial invertebrate inventory within several vegetation communities (dune, estuary, coastal sage scrub, riparian woodland, perennial grassland and chaparral) at Marine Corps Base Camp Pendleton. The period of performance for this Cooperative Agreement (base) will be for 12 months starting the date of award. Four additional option years may be exercised with each year consisting of a 12-month period of performance. Any requirement for the payment or obligation of funds, under the terms of this Cooperative 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 Cooperative Agreement shall be construed as implying that Congress will, at a later time, appropriate funds sufficient to meet deficiencies.

2. LOCATION

Marine Corps Base Camp Pendleton (Base) is located in the northwestern portion of San Diego County, California, immediately north of the city of Oceanside (Appendix 1, Figure 1).

3. SERVICES REQUESTED

The Cooperator shall accomplish the following tasks:

A. Task 1: Work Plan

A comprehensive and clear methodology for inventorying terrestrial invertebrates will be developed and approved by the base representative and NTR. It will detail inventory methods, specimen collection, data management, proposed # and dates of visits, and methods for choosing vegetation communities and locations of vegetation communities.

B. Task 2: Data Dictionary

A detailed data dictionary will be developed to maintain long term data through a GIS geodatabase. Work with the Base to assure the data dictionary has to follow the Federal Geographic Data Committee (FGDC) standards. This is due prior to data collection.

C. Task 2: Collect baseline inventory of terrestrial invertebrates:

A baseline survey of terrestrial invertebrates will be conducted based on four intensive sampling periods and at least an additional six opportunistic survey days based on weather conditions and phenology of target vegetational communities. Surveys will be conducted in the following vegetation communities (dune, estuary, coastal sage scrub, riparian woodland, perennial grassland and chaparral). Plot size will be no larger than 500 square feet. Locations of surveys will be coordinated with MCB Camp Pendleton. All material collected will prepared and labeled up to the standards of professionally curated museum material. Material will be deposited in a regional entomology collection.

D. Task 4: Draft and Final report and electronic spreadsheet of results.

Results of these surveys and populated geodatabase will be submitted within 60 days of the end of the field collection. The report will include problems encountered, unusual findings, list of species found per vegetation community, a determination if this project was a thorough baseline before moving into an terrestrial invertebrate phenology monitoring project 2015-2020.

Geographic Information System (GIS) geodatabase will be submitted with the locations of survey localities, species scientific name, vegetation community, etc. The GIS files will be compatible with ArcGIS 9.3.1.

The species, family and Order will be recorded on a spreadsheet with a UTM coordinate, and vegetation community and date of find, temperature, relative humidity, and other climatic information streaming the base's Remote Automated weather stations.

4. MEETINGS AND REPORTING REQUIRMENTS

A. Progress Reports

The progress report shall be submitted electronically as a Word email attachment on a monthly basis. The progress report shall be dated and sent to the Navy Technical Representative (NTR) and the Base Technical Representative (BTR). Project reports are required only during active field work periods. Each report shall reference the Project, Document number, Contract number, as well as a specific project report number. The report shall include the dates of the reporting period. Each report shall include a detailed account of work accomplished and estimated percentage of work completed, costs to date, and the remaining balance. Each subsequent report shall include work from previous months. The report shall include any past or future potential issues. Activities planned for the following month shall be incorporated into the report. Progress report structure and information required shall be amended as requested by the client. Progress reports are only due when work is being conducted.

B. Final Summary Report

The final summary report shall be a culmination of all work conducted on the project and shall follow the guidelines listed below. Please note that a final summary report will be due at the end of each contract year. The Cooperator shall have a technical editor edit the completed draft prior to submission. The editor must be a qualified biologist who has not contributed significantly to the writing of the document.

1. **Title Page:** Title, prepared for listing (Assistant Chief of Staff, Environmental Security, Marine Corps Base, Camp Pendleton), prepared by listing with affiliation
2. **Executive Summary:** This section should summarize the entire document, including background, purpose, results, and discussion.
3. **Introduction:** This section should include project overview, background, purpose, and objectives.
4. **Methods.** This section shall include treatment methodology, mapping/monitoring methodology, and the methods of any other work performed during the course of the contract.
5. **Results:** This section will include a summary of species, families, and orders found per vegetation community and date sampled. Were any range extensions found, new species for the San Diego County?

6. **Discussion:** This section should discuss any problems encountered, any new or unusual species encountered during the course of the contract and how methodologies may be improved for similar projects in the future.
7. **Appendices:** Tabular treatment data, photo points, detailed GIS maps, etc.

C. Electronic spreadsheet

Electronic spreadsheet tabular format

Number	Order	Genus	species	Common Name	UTM	Vegetation community	# specimens	Date collected	

One hard copy and one electronic copy of the DRAFT final summary report shall be submitted no later than 30 days post fieldwork during each year’s work. Within 30 days of receipt of government comments on the DRAFT final summary report, the Cooperator shall submit an electronic copy of the final documenting what changes (i.e., insertions and deletions) will be incorporated into the final report. If the electronic copy is not complete or contains more than 10 errors factual/grammatical/typographical errors it will be rejected. **After obtaining government approval** on the electronic submittal, the Cooperator shall submit 3 full color copies and one electronic copy of the final report in Microsoft Word for Windows.

- A. Microsoft Projects.** Treatment schedule per training area, and reporting requirements provide the Microsoft project treatment proposal as a deliverable in the work plan.

Table 1. Deliverable Timeline

DELIVERABLE	# COPIES	DUE DATE
Initial:		
Draft Work Plan/Data Dictionary	1 hard 1 electronic	45 days post kick-off meeting
Final Work Plan/Data Dictionary	1 hard 1 electronic	Upon government approval of Draft Work Plan
Draft Microsoft Projects	1 electronic	With Draft work plan
Final Microsoft Projects	1 electronic	With Final work plan
Monthly:		
Progress Reports	1 electronic	10 th day of each month
Project completion:		
Draft Final Report	1 hard 1 electronic	60 days post completed annual fieldwork of final year of project
Draft GIS Deliverables	1 electronic	With Draft Final Report
Electronic Draft Final Report with government corrections	1 electronic	30 days after receipt of government comments

Final GIS Deliverables	1 electronic	With Final Report
Final Report	3 hard 1 electronic	Upon government approval of Draft Final Report

6. SECURITY REQUIREMENTS

Cooperator and sub-cooperator employees must comply with installation rules and regulations. The Cooperator is responsible for ensuring that each of its sub-cooperator fully complies with the following provisions, and shall flow down to subcontracts a clause to satisfy this contractual obligation.

The Cooperator is responsible for providing information required to obtain clearances, permits, passes, or security badges that are required for Cooperator personnel or equipment access. This includes information required for police or background checks or investigations.

The Cooperator is responsible for ensuring such clearances, permits, passes, or security badges are promptly returned to the issuing activity upon termination of an employee, completion of a project, or termination of a contract or subcontract.

All Cooperator personnel performing work under this contract who require access to military installations shall obtain personal entry and vehicle passes from the Provost Marshall's Office (PMO) of each base. (For Camp Pendleton, this process currently includes the requirement that employees under a contract of one year or longer obtain a Business Pass or RAPIDGate™ access, which require completion of an application used to conduct background checks.)

The Commanding Officer of each base has broad authority to remove or exclude any person from the military installation to protect personnel and property, to maintain good order and discipline, and to ensure the successful and uninterrupted performance of the Marine Corps mission. In the exercise of this authority, the Commanding Officer may refuse to grant personal entry passes or may bar Cooperator employees, including employees who have been granted a personal entry pass. Refusal to grant an employee a personal entry pass or barment of an employee does not relieve the Cooperator of the responsibility to continue performance under this contract.

The Cooperator's employees shall observe and comply with all base rules and regulations applicable to contract personnel, including those applicable to the safe operation of vehicles, and shall not be present in locations not required for the proper performance of this contract.

Cooperator personnel performing work under this contract shall be readily identifiable as an employee of the Cooperator through the use of uniforms with nametags. The contracting officer may approve alternate methods of ensuring Cooperator personnel are readily identifiable.

Cooperator personnel and equipment entering a military installation are subject to security checks. Cooperator personnel shall follow any direction given by Military Police or other security or safety personnel.

The Immigration Reform and Control Act of 1986 (IRCA), Public Law 99-603 (8 U.S.C. 1324a) requires employers verify the eligibility of individuals for employment to preclude the unlawful hiring, or recruiting or referring for a fee, of aliens who are not authorized to work in the United States. By signing this proposal/contract or by beginning work under this contract, the Offeror/Cooperator certifies it has

and will comply with IRCA, to include that it has verified the identity and employment eligibility of any individual employed who is or may be employed by the offeror and works under this contract.

Application for Vendor/Cooperator Business Passes: The procedures below are the requirements for Camp Pendleton. Other installations will have similar requirements for obtaining business passes.

- A. The Cooperator will obtain a letter of support from the customer that their contract ultimately supports. The letter of support will identify the Company Name, Contract Number, period of performance of the Contract, location of performance, the Drivers license and expiration date of each of the Cooperator's employees, and the point of contact information for the customer that signed the request. The Cooperator's personnel will take the letter of support to request either a business pass or RAPIDGate™ access to Support Services Police Administrative Services Branch (Bldg. 1523) for processing.

- B. Business Passes issued by Support Services Division's Police Admin Services Branch to vendors or Cooperators are effective from the date of issuance, for a period of 60 days or the end of the contract whichever date occurs first. Personnel denied a business pass might appeal in writing to the Commanding Officer, Marine Corps Base, Camp Pendleton (Attn: CMD Inspector). Denial or revocation of a business pass may be made if the applicant:
 - i. Is listed on the National Terrorist Watch List.
 - ii. Is not a U.S. Citizen and is illegally present in the U.S. or whose U.S. citizenship, immigration status, or Social Security Number (SSN) cannot be verified.
 - iii. Is subject to an outstanding criminal warrant.
 - iv. Whose business pass application contains false or fraudulent information.
 - v. Has obtained a felony conviction within the last 10 years.
 - vi. Has obtained a total of three criminal misdemeanor convictions within the last 10 years.
 - vii. Who is a registered sex offender regardless of the date of the criminal offense.
 - viii. Has obtained a criminal misdemeanor or felony conviction for the following types of criminal offenses:
 - 1. Offenses of a sexual nature;
 - 2. Offenses of violence;
 - 3. Offenses related to gang related activity, supremacist, or extremist behavior; i.e., hate crimes;
 - 4. Crimes resulting from the possession, use, manufacturer, introduction, or distribution of any illegal drug listed in the Comprehensive Drug Abuse Prevention & Control Act of 1970, Schedules I through IV;
 - ix. Offenses in which weapon instrumentality (e.g., firearm, knife, or other bladed instrument, club, brass knuckles) was used either as a means of violence, or threat of violence
 - x. Whose military active duty was terminated by the receipt of a dishonorable discharge or bad conduct discharge.
 - xi. Has been issued a debarment order and is currently banned from any military installation.
 - xii. Who has exhibited characteristics, traits, or other indications that cause concern for the safety or welfare of personnel and/or residents aboard the base; or that causes concern for the physical security of the base.

- C. Camp Pendleton has implemented a Cooperator-managed security service, RAPIDGate™. RAPIDGate™ is consistent with and complementary to Homeland Security Presidential Directive 12 (HSPD-12) and the Federal Information Processing Standard 201 (FIPS 201). Participation in RAPIDGate™ is optional, but Cooperator personnel who are not enrolled in RAPIDGate™ will be

limited to gates which can safely accommodate traffic backups. Those gates are San Luis Rey, Las Pulgas, and San Onofre. All gates will be open to RAPIDGate™ registered Cooperator personnel. Under the RAPIDGate™ program, Cooperator 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. Cooperator personnel departure from the installation will be recorded by passive RFID receivers. Contactor 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).

Cooperators who choose not to participate in the RAPIDGate™ program will be required to obtain a 30-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. Cooperator personnel who are issued a Common Access Card (CAC) as a requirement for their positions (specifically access to the Navy Marine Corps Intranet); do not need to participate in RAPIDGate™.

D. Application for Common Access Card (CAC): For personnel that require access to any government computers, the following procedures are required:

- i. The Cooperator will be required to provide proof that a National Agency Check (NAC) or National Agency Check with Inquiries (NACI) has been submitted to the Office of Personnel Management (OPM) for each employee that has a requirement for a CAC Card. During the period between the time that the request is submitted and the time that the investigation is returned, the Government may grant temporary access to the Cooperator's employee. Whether to grant temporary access is within the sole discretion of the Government, and a decision not to grant access shall not be grounds for a request for an equitable adjustment or other contract modification, and shall not constitute an excuse for Cooperator failure to perform. Such temporary access will not exceed 90 days.
- ii. Upon the return of the Investigation Schedule Notice and Certificate of Investigation from OPM, the Cooperator shall provide a copy to the security manager that has overall responsibility for the customer supported by the Cooperator's employees.
- iii. "Report of Agency Adjudication Action" (form 79A) is sent when there are potential actionable issues (s) at the minor, moderate, or substantial level which may be disqualifying under suitability/security considerations. If the Cooperator receives an Agency Adjudication Action from OPM, the security manager shall be consulted before such adjudicative action is determined and returned to OPM.
- iv. The Government will use the Adjudicative Guidelines (CNO ltr 5520 Ser 09N2/6U871220 of Sept 06) to guide determinations on whether access shall be granted.
- v. The Cooperator shall be notified in writing if there is a disqualifying event that prevents the Cooperator's employee from obtaining a CAC. If temporary access was granted it shall be immediately revoked.
- vi. The information required to initiate a background investigation through OPM, as well as a listing of the forms that are required, is contained at the following website: <http://www.opm.gov/extra/investigate/IS-15.pdf>

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

7. RANGE ACCESS

It is the Cooperator's responsibility to obtain security and entrance clearances for himself/herself and his/her personnel. The Cooperator must comply with all Base security rules, regulations, requirements, and day-to-day operational changes thereto. All vehicles providing services under this contract will be subject to 100% search. The Base Commanding General has broad authority to remove or exclude any person in fulfilling his responsibility to protect personnel and property, to maintain good order and discipline, and to ensure the successful and uninterrupted performance of the Marine Corps mission. In exercise of this authority, the Commanding General may bar Cooperator employees. Barring of an employee does not relieve the Cooperator of the responsibility to continue performance under this contract.

A. Vehicle Passes

In addition to obtaining a Business Pass or RAPIDGate™ access, Cooperators driving personally owned vehicles must carry an Environmental Security Vehicle Pass in order to conduct surveys aboard MCBCP. These passes are available through the BTR. All Cooperators must obtain a business pass or RapidGate pass from the PMO.

B. Range Scheduling and Radios

Contract personnel are required to coordinate access to training areas with the BTR at Environmental Security. The BTR must be contacted and informed of scheduled work well in advance (minimum of two [2] weeks advance required). After receiving the necessary clearance for work in training areas, contract personnel are required to communicate with Range Control using two-way radios while in the field. There are a limited number of radios available for check-out from the BTR.

C. Range Safety Training

Additionally, all contracted and subcontracted personnel needing access to training areas shall attend the Non-Live Fire Range Safety Officer (RSO) briefing taught monthly. The course requires passing a written open-book test. The Cooperator will confirm the RSO course time and location by calling Range Scheduling at 760-725-3510 or 725-4277. This requirement shall be discussed and clarified at the kickoff meeting.

8. ADDITIONAL REQUIREMENTS

- A. Privacy Act: Work on this project does not require that Cooperator personnel have access to Privacy Information. Personnel shall adhere to the Privacy Act, Title 5 of the U.S. Code, Section 552a and applicable agency rules and regulations.
- B. Hours of Work: Cooperator personnel are expected to conform to client agency normal operating hours. The client currently utilizes "5-4-9" with coverage Monday through Thursday 7:00 a.m. - 4:30 p.m., and 7:00 a.m. - 3:30 p.m. on alternate Fridays. Actual hours of work shall be agreed upon at project start up. Work outside of normal work hours, if required, shall be discussed and agreed upon between the Cooperator and the Client Representative.

- C. The Cooperator shall be responsible for complying with all applicable Federal Acquisition Regulations (FAR) and the Defense Acquisition Regulations (DFAR) and with the DoD Grants and Agreement Regulations 32 CFR Parts 22, 32, 33 and applicable OMB circulars. In accordance with (FAR 32-702) regarding the Government Policy on contract funding and 31 USC 1341 Anti-Deficiency Act: should the Cooperator work at risk without an official notification from the Government to continue, the Cooperator may not be compensated for the value of work performed while funding had been exceeded.
- D. All main Cooperator personnel working on this project are required to be US citizens. In addition, main Cooperator personnel working on this project shall be fluent in the English language as exemplified in their written and verbal skills.
- E. This project is funded by the United States Government. All intellectual property generated and/or delivered pursuant to this Statement of Work shall be subject to appropriate federal acquisition regulations which entitle the Government to unlimited license rights in technical data and computer software developed exclusively with government funds, a nonexclusive "paid-up" license to practice any patentable invention or discovery made during the performance of the contract, and a "paid-up" nonexclusive and irrevocable worldwide license to reproduce all works (including technical and scientific articles) produced during the contract.
- F. Photography is restricted on the Base, except for requirements outlined in this document. All photographs are the property of the Federal Government and will not remain with the Cooperator once the images are processed. A CD of all photos shall be delivered to the Base at the end of the period of performance.
- G. The Cooperator shall provide all transportation, meals, and lodging for himself/herself and his/her personnel and all equipment and analyses necessary to complete the work. All equipment utilized on the Base is subject to inspection by and approval of the Base safety program.
- H. Some areas of the Base may be inaccessible due to road conditions following heavy and/or prolonged rainfall. Adjustments to work schedules due to road/weather conditions shall be coordinated with the POC. If your vehicles gets stuck or breaks down, military personnel cannot pull or tow your vehicle. Call Mainside service station (760-725-5828) who will refer you to a civilian wrecker service or call information (411) for assistance.
- I. All Cooperator personnel are to be familiar with the Camp Pendleton Fire Danger Rating System (FDRS). Personnel are required to observe all restrictions applicable under the FDRS pertaining to permit activities while on the Base. In particular, vehicles shall be parked only on bare soil/rock. Smoking is restricted to areas of bare soil. Fires of any nature are prohibited.
- J. Do not pickup, remove, or disturb any ordnance (spent or live ammunition, brass, pyrotechnics, etc) found while on Camp Pendleton.
- K. The Cooperator is prohibited from bringing pets to the Base.
- L. The Cooperator is expressly prohibited from doing any animal or plant collection on the base beyond what is covered within this Contract unless written approval is obtained from the Director of Environmental Security.
- M. The Cooperator shall review pertinent files at the Base and shall work closely with the Base Technical Representative in planning and carrying out any necessary field investigations. Recent

color aerial photos of the work areas are available for inspection at the Environmental Security office. These photos may be examined; however, they may not be checked out. GIS information such as raster data and layers may be available upon request.

- N. The Cooperator 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 Statement of Work. It is the Cooperator's responsibility to obtain security and entrance clearances for himself/herself and his/her personnel. The Cooperator must comply with all Base security rules, regulations, requirements, and day-to-day operational changes thereto.
- O. All installation and maintenance activities on MCB Camp Pendleton are subject to approval of and scheduling with the Station Commanding Officer. It is understood that military training activities at the Base will take precedence over all biological surveying. Cooperators shall obtain Base access passes and submit their installation schedules to the MCB Camp Pendleton for approval before beginning work in the field. Provide this information to your POC who will forward the information to Base Range Control. It is understood, however, that primary Base needs may override such schedules for unanticipated activities approved by the Station Commanding Officer.
- P. Insurance: Within 15 days after the award of this contract, the Cooperator shall furnish the Contracting Officer a Certificate of Insurance as evidence of the existence of the following insurance coverage in amounts not less than the amounts specified below. The Certificate of Insurance shall provide for thirty days written notice to the Contracting Officer by the insurance company prior to cancellation or material change in policy coverage. The Cooperator shall procure and maintain, during the entire period of performance under this contract, the following minimum insurance coverage.
 - Comprehensive General Liability: \$500,000 per occurrence.
 - Automobile Liability: \$200,000 per person; \$500,000 per occurrence; \$20,000 per occurrence for property damage.
 - Worker's Compensation: As required by Federal and State worker's compensation and occupational disease statutes.
 - Employer's Liability coverage: \$100,000, except in states where worker's compensation may not be written by private carriers.
 - Other as required by State Law.

9. DESIGNATED GOVERNMENT OFFICIALS

Navy Technical Representative for this task order is David James of NAVFAC LANT. NAVFAC Atlantic, 6506 Hampton Blvd., Norfolk, VA 23508, (757) 322-4883, david.m.james@navy.mil.

The Base Technical Representative for this task order is Deborah Bieber, Land Management Section Head, Environmental Security, MCB Camp Pendleton, CA. (760) 725-9728, Deborah.bieber@usmc.mil.

10. 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 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 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 2007. Final Reports and other text documents shall be provided in Microsoft Word 2007 format AND searchable Adobe Portable Document Format (PDF). Spreadsheet files shall be provided in Microsoft Excel 2007 format. Databases shall be provided in Microsoft Access format, unless specified otherwise, as approved by the Government. Prior to database development, the Cooperator shall provide the Government with a Technical Approach Document for approval, which describes the Cooperator'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 2010 during the study period, the Cooperator shall submit deliverables in Office 2010 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 Cooperator shall validate any deviation from this specification in writing with the Government. 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 Cooperator 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 Cooperator 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:

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

- b. 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 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 Statement of Work, the Cooperator will consult with the Government 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 Cooperator 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 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.

7. 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.)

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 Cooperator shall incorporate review comments to data and text prior to approval of the final submittal.

C. 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
Email: beven.harris@usmc.mil
Phone: 760.763.7835; Fax: 760.763.7856

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ATTN Beven Harris
AC/S Facilities Public Works
IGI&S Office
Box 555013
Camp Pendleton, CA 92055-5013

APPENDIX 1



APPENDIX 2 LIST OF ACRONYMS

ES	Environmental Security
BTR	Base Technical Representative
CDFG	California Department of Fish and Game
CNPS	California Native Plant Society
CONUS	Continental US
DFAR	Defense Acquisition Regulations
DoD	Department of Defense
DoDI	Department of Defense Instruction
EA	environmental assessment
EO	Executive Order
EPA	Environmental Protection Agency
FAR	Federal Acquisition Regulations
FGDC	Federal Geographic Data Committee
GIS	Geographic Information System
GPS	Global Positioning System (generally referring to equipment used for field data collection)
INRMP	Integrated Natural Resources Management Plan
LMB	Land Management Branch
MCBCP	Marine Corps Base Camp Pendleton
MCI West	Marine Corps Installations West
NAVFAC	Naval Facilities Engineering Command
NEPA	National Environmental Policy Act
NRCS	Natural Resources Conservation Service
NTR	Navy Technical Representative
OPNAVINST	Office of the Chief of Naval Operations Instruction
PM	project manager
POC	point of contact
POV	Private Occupant Vehicle / Personally-Owned Vehicle
SOW	statement of work, scope of work
USC	US Code
USDA	US Department of Agriculture
USGS	US Geological Survey
USFWS	US Fish and Wildlife Service